

Final Deliverable

Kosovo Agricultural Opportunities Strategy

Pristina, Kosovo
February 10, 2010

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government



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- ▶ Baseline Analysis of Agriculture Sector
- ▶ Recommendations to Improve Kosovo's Agriculture Sector

The objective of this document is to present details of the Agricultural Opportunities Strategy, including findings from the analysis and recommendations for Kosovo's agriculture sector

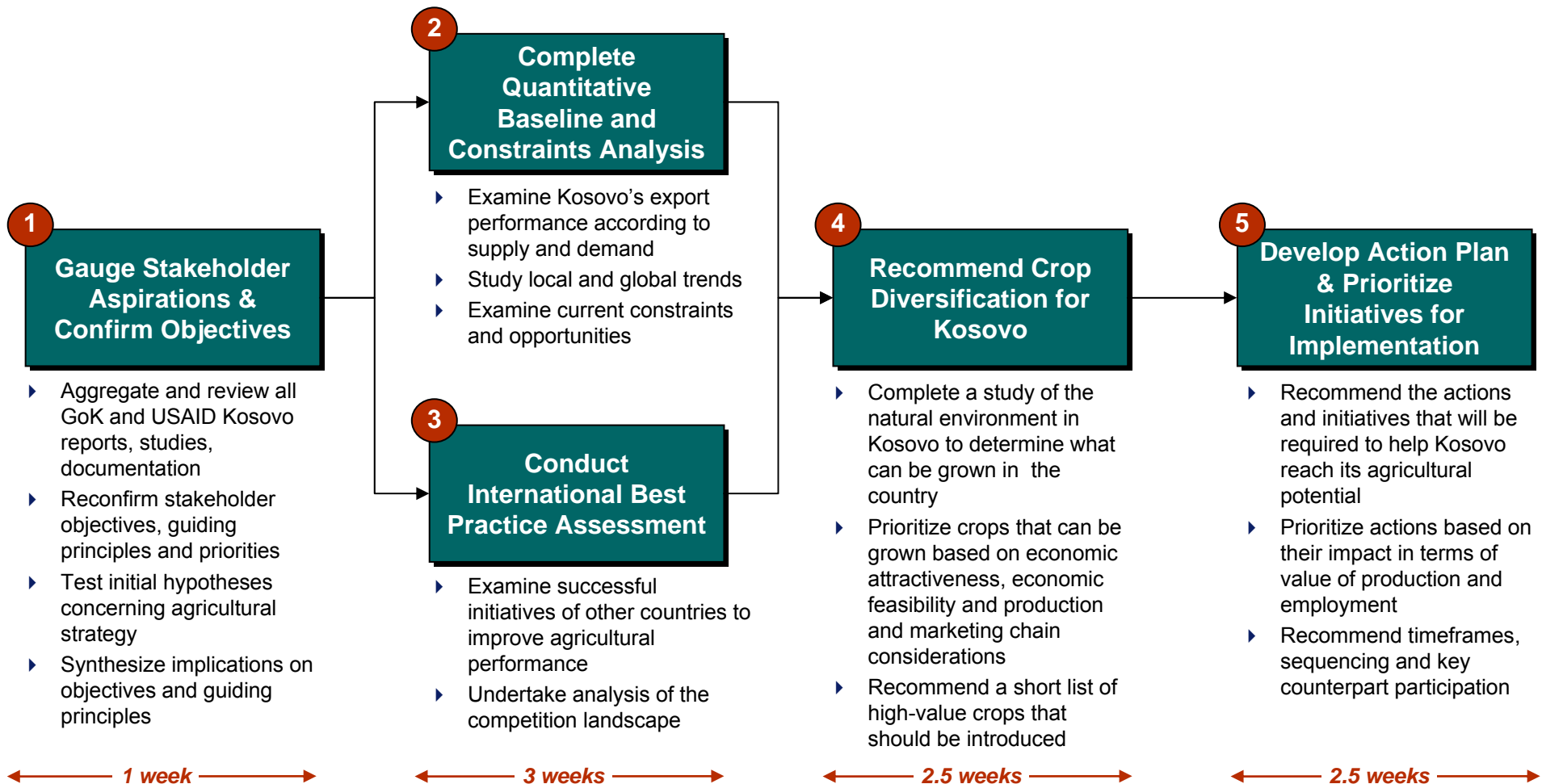
Document Objectives

- ▶ Over the course of nine weeks, the Booz Allen team, including an agronomist, analyzed in detail Kosovo's agriculture sector. The team developed findings along three main areas, including a quantitative baseline of Kosovo's agriculture sector, current constraints facing the sector and an assessment of best practices in agriculture around the world
- ▶ Based on the analysis, the team developed recommendations in three main areas including: 1) a crop diversification initiative, including strategic crops of focus for Kosovo; 2) initiatives to address constraints in Kosovo's agriculture sector; and 3) impact analysis showing the impact of the program on agricultural production and employment
- ▶ The team has briefed the US Ambassador to Kosovo, members of the USAID Mission, "EU Plus" donor group and representatives of the Government of Kosovo on the findings of the analysis

The Agricultural Opportunities Strategy (AgStrat) comprised five steps that spanned a total of nine weeks

Kosovo AgStrat Project Approach

Overall Project Duration: 9 weeks



We interviewed a number stakeholders, reviewed studies, documents and reports...

List of Interviewees & Documents Reviewed

Interviewees	Reports Examined
<ul style="list-style-type: none"> ▶ HE Idriz Vehapi, Ministry of Agriculture, Minister of Agriculture ▶ Rifat Blaku, Ministry of Public Administration, Vice Minister ▶ Hakile Xhaferi, Mediha Halimi, Fetie Muriqi, Xhevat Lushi: Ministry of Agriculture, Forestry and Rural Development ▶ Isuf Cikaqi, Ministry of Agriculture, Director of Plant Protection Department ▶ Syle Tahirsylaj, Ministry of Environment and Spatial Planning, Director ▶ Dr. Shukri Fetahu, University of Pristina, Faculty ▶ Dr. Skender Muji, University of Pristina, Dean ▶ Flamur Kadriu, Food and Veterinary Agency, Chief of Veterinary Public Health Sector ▶ Bujar Haxhidauti, Customs, Manager of Performance and Planning Department ▶ Haki Kurti, Statistical Office of Kosovo, Chief of Agricultural and Environmental Division ▶ Ismet Kastrati, Peja Institute, Director of Agriculture ▶ Bardh Begolli, Peja Institute, Head of Laboratory ▶ Agran Halimi, AGROVET Laboratory, Master of Soil Science ▶ Deme Abazi, Iber-Lepenc, Director ▶ Arberor Prekazi, Iber-Lepenc, Director ▶ Avni Kastrati, Statistical Sector of Kosovo, Director ▶ Maliq Gjyshinca, Intereuropa ▶ Shefqet Kelmendi, Kelmendi Company ▶ Artan Osmani, EU Commission ▶ Anton Selitaj, UNDP, Associate ▶ Luan Hoti, Intercooperation, Marketing Officer ▶ Betim Emra - Manager of Cargo Department, Pristina Airport ▶ Arlinda Arenliu, Pestova ▶ Habil Zeqiu, Ministry of Agriculture ▶ Taulant Koshi, Eurofood ▶ Feim, Rexhepi, Perdrini ▶ Selmon Shala, Agroqyshku 	<ul style="list-style-type: none"> ▶ Agriculture Household Survey, 2007, Statistics Office of Kosovo ▶ Agriculture Land Utilization Project Report, 2008, GFA Consulting Group GmbH / BVVG / DFFE / European Union ▶ The Kosovo Greenbook – A Strategy for Sustainable Agricultural and Rural Development in Kosovo, 2003 ▶ Study on the State of Agriculture in Kosovo, 2006, ARCOTRASS Consortium/European Commission ▶ Kosovo Poverty Assessment, 2007, World Bank ▶ Report on Potential of Greenhouse Industry in Kosovo, 2008, Intercooperation ▶ Horticulture Strategy of Kosovo, 2009-2013 ▶ Output Price Index and Prices in Agriculture, 2008, Statistics Office of Kosovo ▶ The Rapid Rise of Supermarkets in Central and Eastern Europe: Implications for the Agrifood Sector and Rural Development, 2004 ▶ Audit of the Kosovo Fruit & Vegetable Sector (KPEP), 2009 ▶ Horticultural strategy of Kosovo 2009 – 2013 ▶ Horticultural Promotion in Kosovo, 2008 ▶ Profile of the Macedonian Fresh Vegetable Value Chain, 2008 ▶ Profile of the Macedonian Table Grapes Industry, 2008 ▶ Vegetable Value Chain Assessment, 2008 ▶ Training Interns in Milk Quality Field Work (KPEP), 2009 ▶ Audit of the Kosovo Fruit & Vegetable Sector, 2008 ▶ Business Consulting in A Growing Kosovo Workshop Materials, 2009 ▶ Responding to Subsidized Dairy Imports Into Kosovo (KPEP), 2009 ▶ Standards of Identity for Milk and Milk Products, 2009 ▶ Vegco Business Model: A Vegetable Packing, Cooling & Sales Enterprise, 2009

... and compiled a comprehensive agriculture data repository based on cross-reference from multiple sources to ensure data consistency

Data Sources and Guiding Principles

Data Source	Information Extracted
FAOSTAT	<ul style="list-style-type: none"> ▶ Production, Yield, Area Harvested ▶ Export / Import Values and Volumes ▶ Consumption, Feed, Seed and Other uses
UN Comtrade / ITC	<ul style="list-style-type: none"> ▶ Breakdown of Exported/ Imported Value by Destination/ Origin
WDI	<ul style="list-style-type: none"> ▶ Population Data
Int'l Fertilizer Industry Assoc.	<ul style="list-style-type: none"> ▶ Fertilizer Consumption
Statistics Office of Kosovo	<ul style="list-style-type: none"> ▶ Production, Yield, Area Harvested, Fertilizer Use, Irrigation, Local Market Prices
Ministry of Agriculture, Forestry, Rural Development	<ul style="list-style-type: none"> ▶ Production, Yield, Exports/Imports ▶ GIS Irrigation Maps
Customs Office of Kosovo	<ul style="list-style-type: none"> ▶ Imported and Exported Volumes and Values overall as well as for select HS codes
Peja Institute	<ul style="list-style-type: none"> ▶ Soil types and Analysis
Ministry of Environment & Spatial Planning	<ul style="list-style-type: none"> ▶ Temperature Data and Rainfall Data for 7 Meteorological Stations

Core Guiding Principles
<ul style="list-style-type: none"> ▶ Rely as much as possible on one data source to provide consistent and comparable export figures ▶ Cross-check trade, price, and production data with alternative data sources ▶ Prefer mirrored data sets over single-source ▶ Complement missing information with expert opinion and interpolation

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- ▶ Recommendations to Improve Kosovo's Agriculture Sector

Quantitative Baseline of Kosovo's Agriculture Sector

- ▶ Market Definition and Methodology
- ▶ Kosovo Agricultural Commodities Performance
- ▶ Crop-specific Performance and Market Assessment

We started our analysis by looking at the “universe” of agricultural commodities, which fall into twenty-four product chapters

Overview of Agricultural Commodities

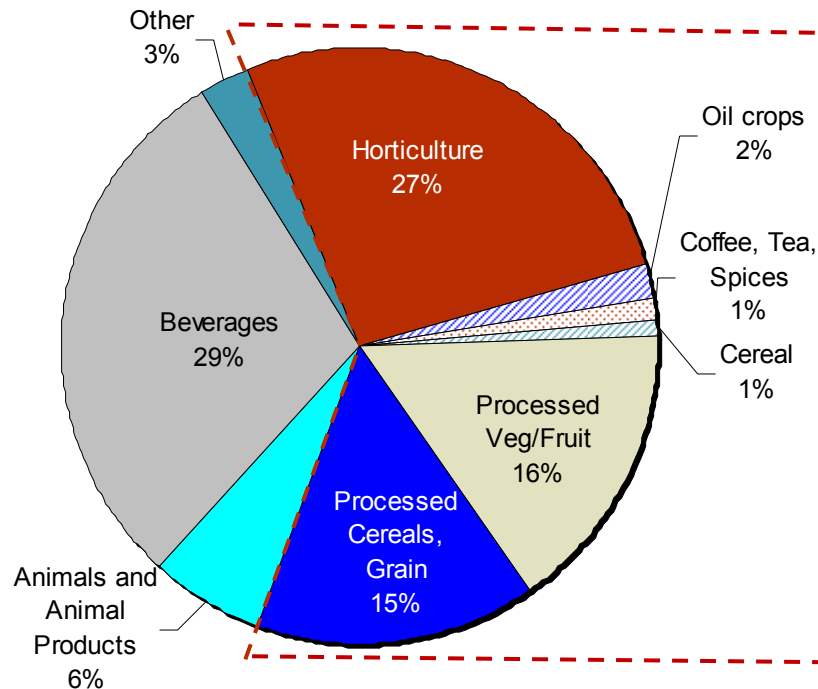
HS Chapter	Name
01	Live Animals
02	Meat & Edible Meat Offal
03	Fish & Crustaceans
04	Dairy, Eggs, Honey, & Ed. Products
05	Products of Animal Origin
06	Live Trees & Other Plants
07	Edible Vegetables
08	Ed. Fruits & Nuts, Peel of Citrus/Melons
09	Coffee, Tea, Mate & Spices
10	Cereals
11	Milling Industry Products
12	Oil Seeds/Misc. Grains/Med. Plants/Straw

HS Chapter	Name
13	Lac, Gums, Resins, Etc.
14	Vegetable Plaiting Materials
15	Animal or Vegetable Fats, Oils & Waxes
16	Ed. Prep. Of Meat, Fish, Crustaceans, Etc.
17	Sugars & Sugar Confectionery
18	Cocoa & Cocoa Preparations
19	Preps. Of Cereals, Flour, Starch, Milk
20	Preps of Veggies, Fruits, Nuts, Etc.
21	Misc. Edible Preparations
22	Beverages, Spirits & Vinegar
23	Residues from Food Industries, Animal Feed
24	Tobacco & Manuf. Tobacco Substitutes

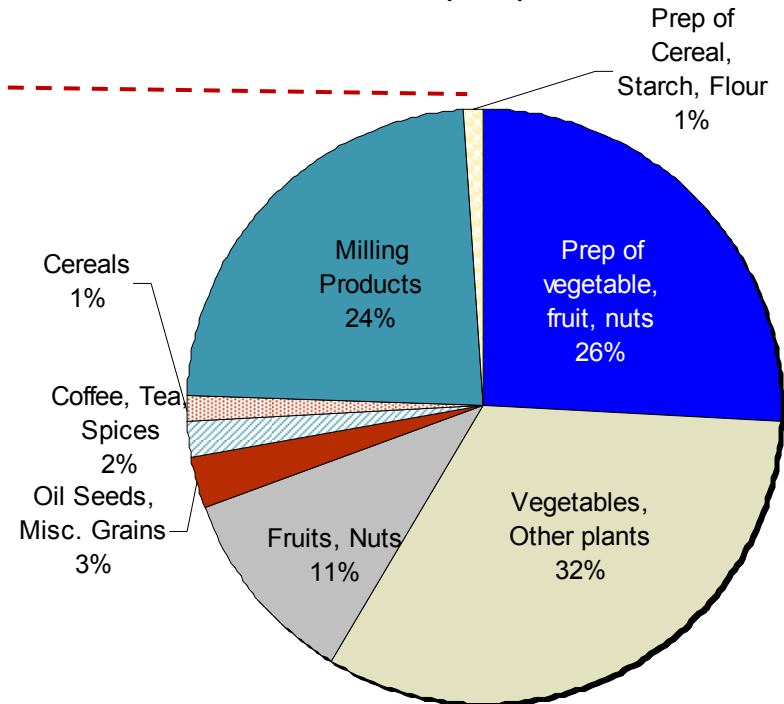
Over 61% of the total value for agriculture commodities exported by Kosovo in 2008 came from primary crops and related processed products

Composition of Primary Crops and Processed Products in Total Export Basket

Total Agricultural Export Value (2008)



Primary Crops and Related Processed Product Export Value (2008)



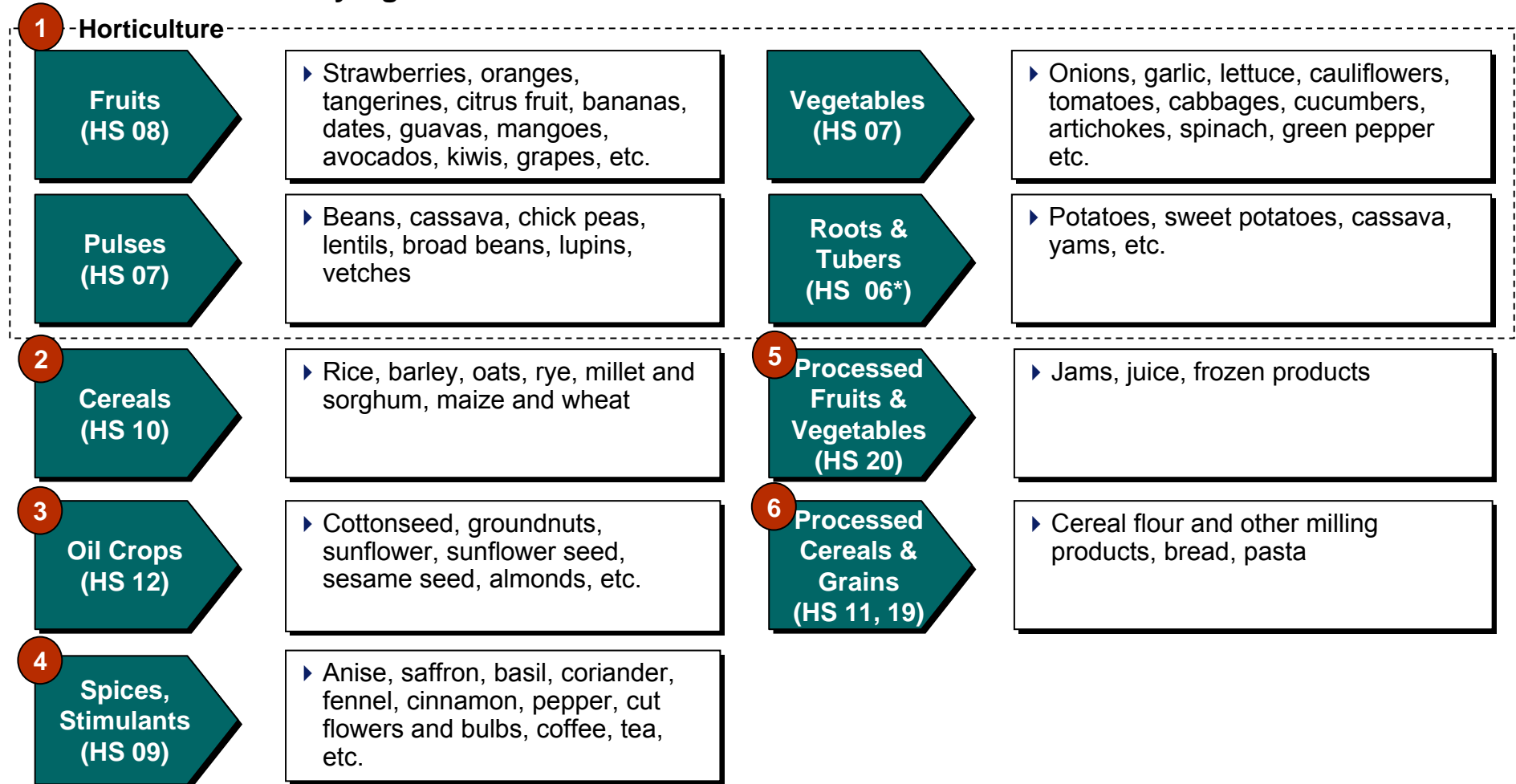
Note: Other includes the following HS chapters: 23,21,17,15,3,18,24

Note: HS codes for the following crops are: Vegetables and Other Plants (HS 6,7); Fruits, Nuts (HS 8); Oil Seeds, Misc. Grains (HS 12); Coffee, Tea, Spices (HS 9); Cereals(HS 10); Milling Products (HS 11); Prep of Cereal, Starch, Flour (HS 19); Prep of vegetable, fruit, nuts (HS 20)

Source: Customs Office of Kosovo; BAH Analysis

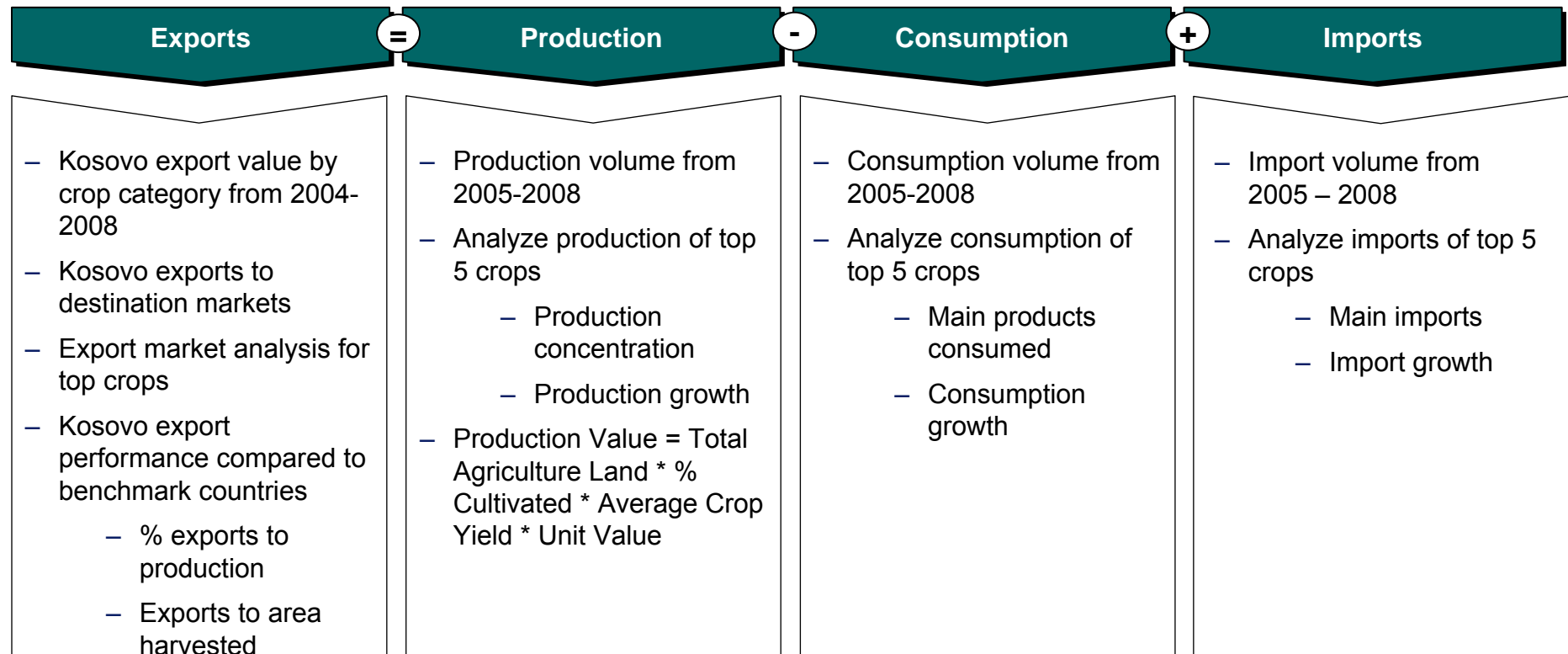
We will focus our baseline analysis on these primary crops including horticulture, cereals, oil crops, and spices/stimulants as well as processed fruits, vegetables, and cereals

Primary Agricultural Commodities and Related Processed Products



The baseline will analyze different aspects of production, consumption, imports, and exports to better understand Kosovo's current agriculture performance

Kosovo Baseline Analysis Components

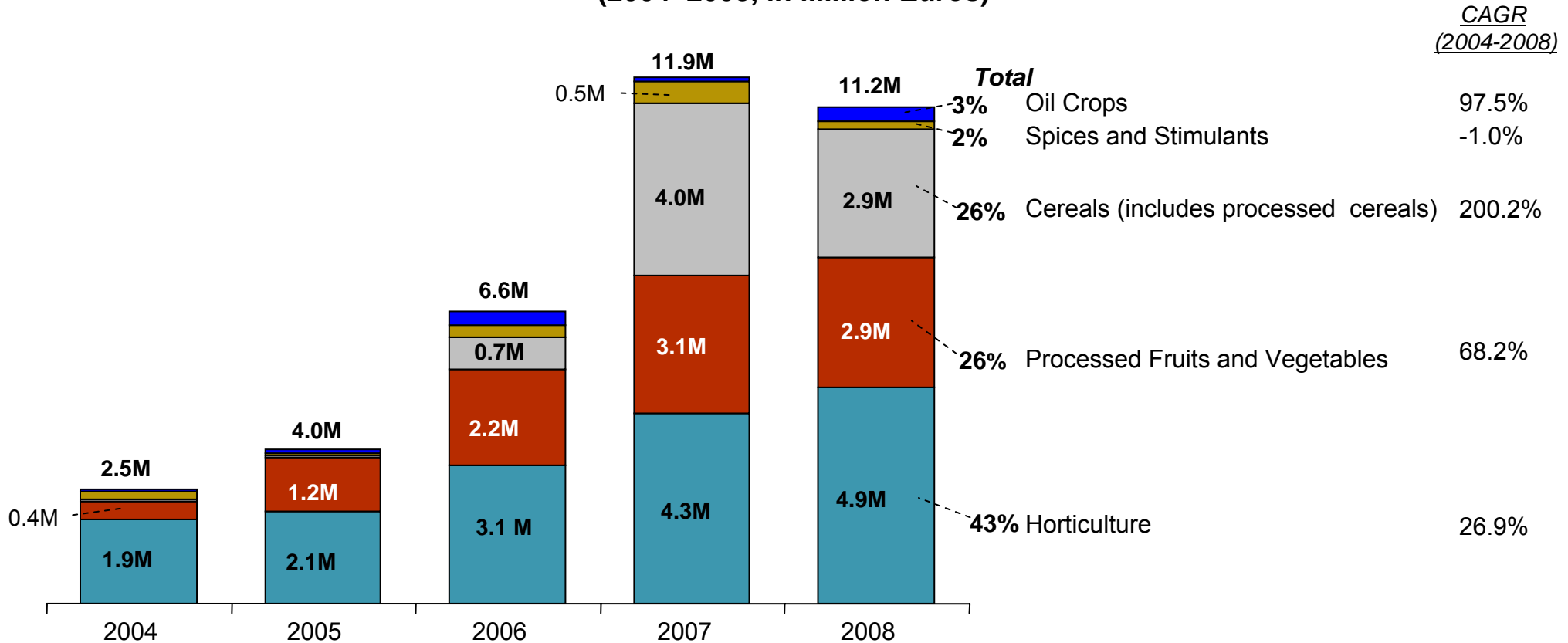


Quantitative Baseline of Kosovo's Agriculture Sector

- ▶ Market Definition and Methodology
- ▶ Kosovo Agricultural Commodities Performance
- ▶ Crop-specific Performance and Market Assessment

Kosovo's exports have grown from 2.5M to over 11M Euros over the past five years with horticulture making up the largest share

Breakdown of Kosovo Agricultural Commodities Exports Value by Commodity Type (2004–2008, in Million Euros)

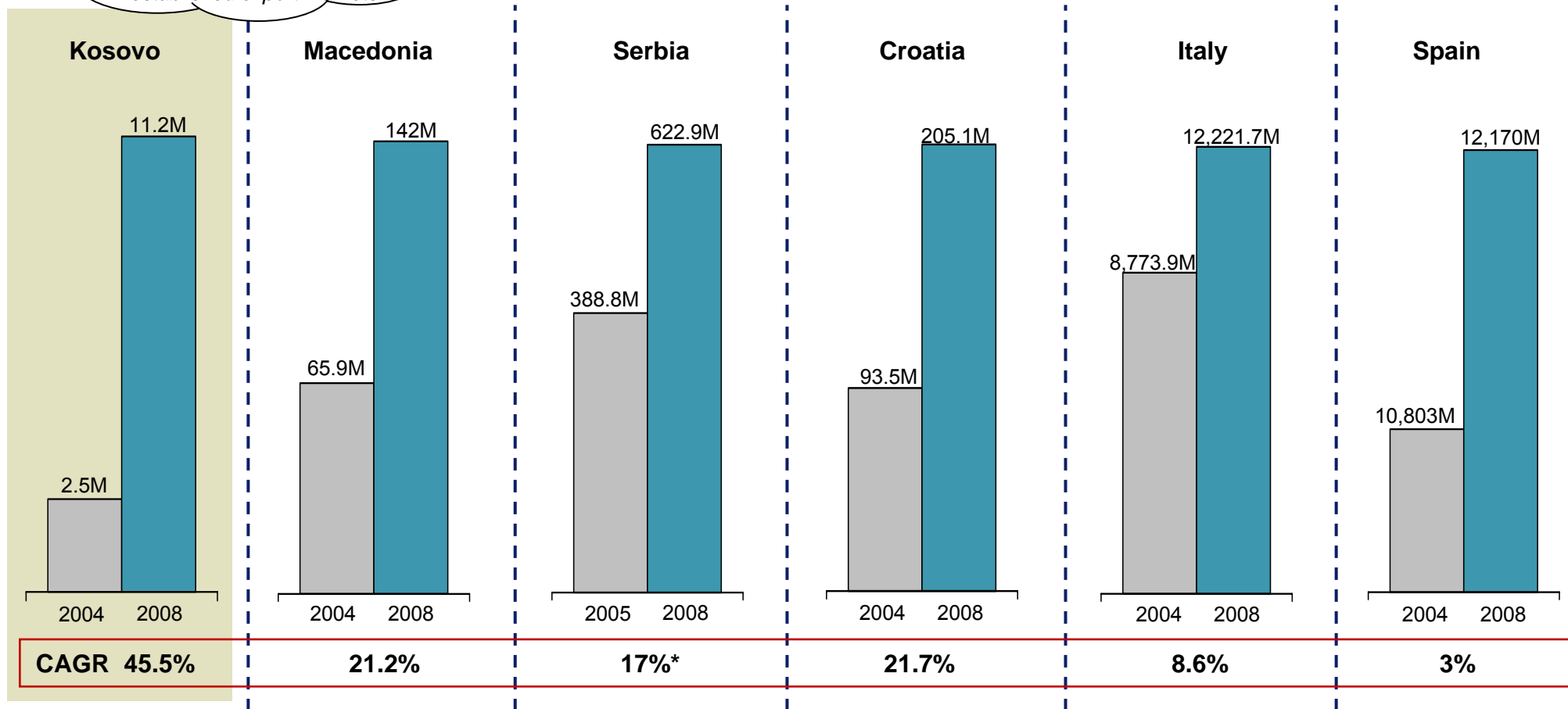


Note: The HS chapters used to determine commodity exports include 6-12, 19, 20
 Source: Customs Office of Kosovo; BAH Analysis

Kosovo has experienced a 45.5% growth in agriculture exports, which is higher than its competitors because of its entry into new markets

Growth rate is higher because Kosovo is entering new markets while other countries have already established export markets

Agriculture Commodities Export Growth (2004-2008, in Million Euros)



Note: CAGR stands for compound annual growth rate calculated by taking the n th root of the total percentage growth rate, where n is the number of years in the period

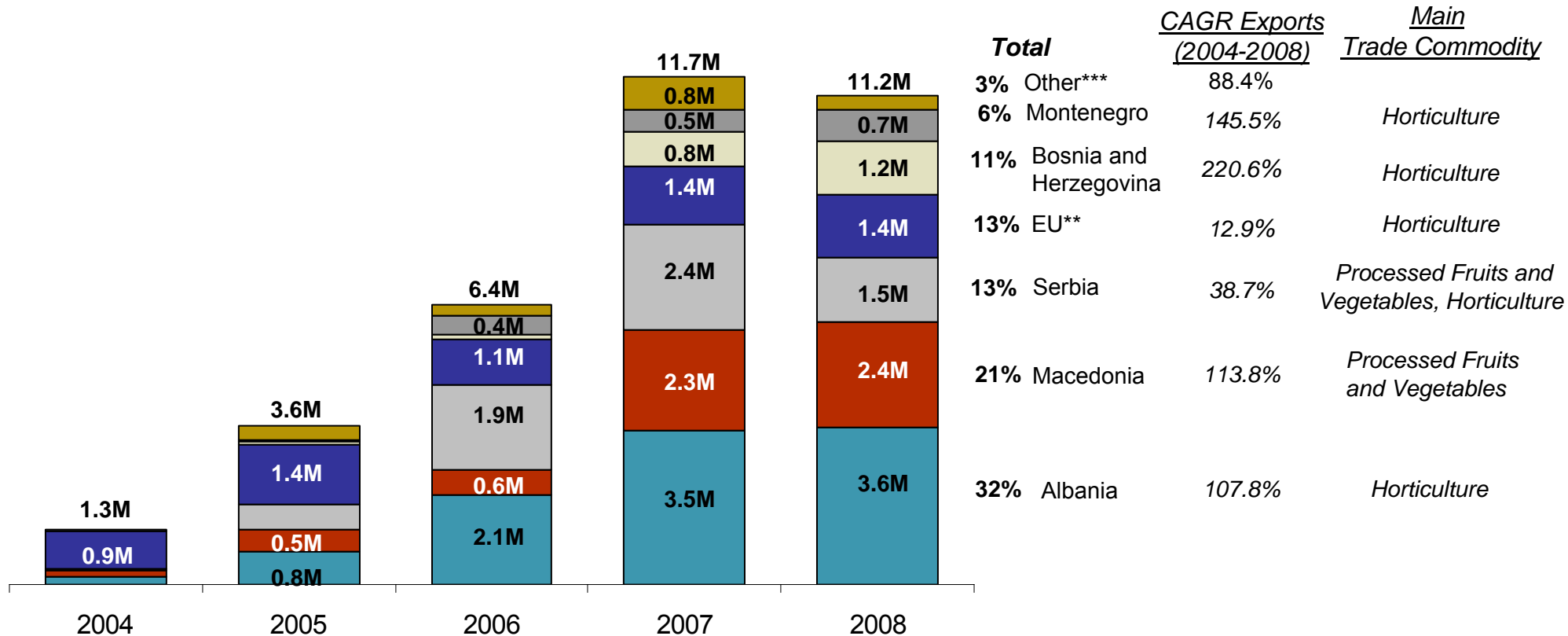
Note: (*) Serbia's CAGR is from 2005-2008

Note: The HS codes used to determine commodities exports include 6-12, 19,20

Source: Customs Office of Kosovo, TradeMap; BAH Analysis

Albania and Macedonia account for over 50% of Kosovo's agriculture commodities destination markets, with the EU also representing a large portion of exports

Relative Share of Destination Markets* for Kosovo Agricultural Commodities Exports
(2004-2008, in Million Euros)



Note: * In 2004, Serbia and Montenegro were recorded as one country, whereas for the other years, they are recorded separately; **EU includes: Austria, Bulgaria, Germany, Italy, Sweden, Switzerland, UK; ***"Other" includes: Australia, Algeria, Jamaica, Turkey, Croatia, Slovenia, Romania

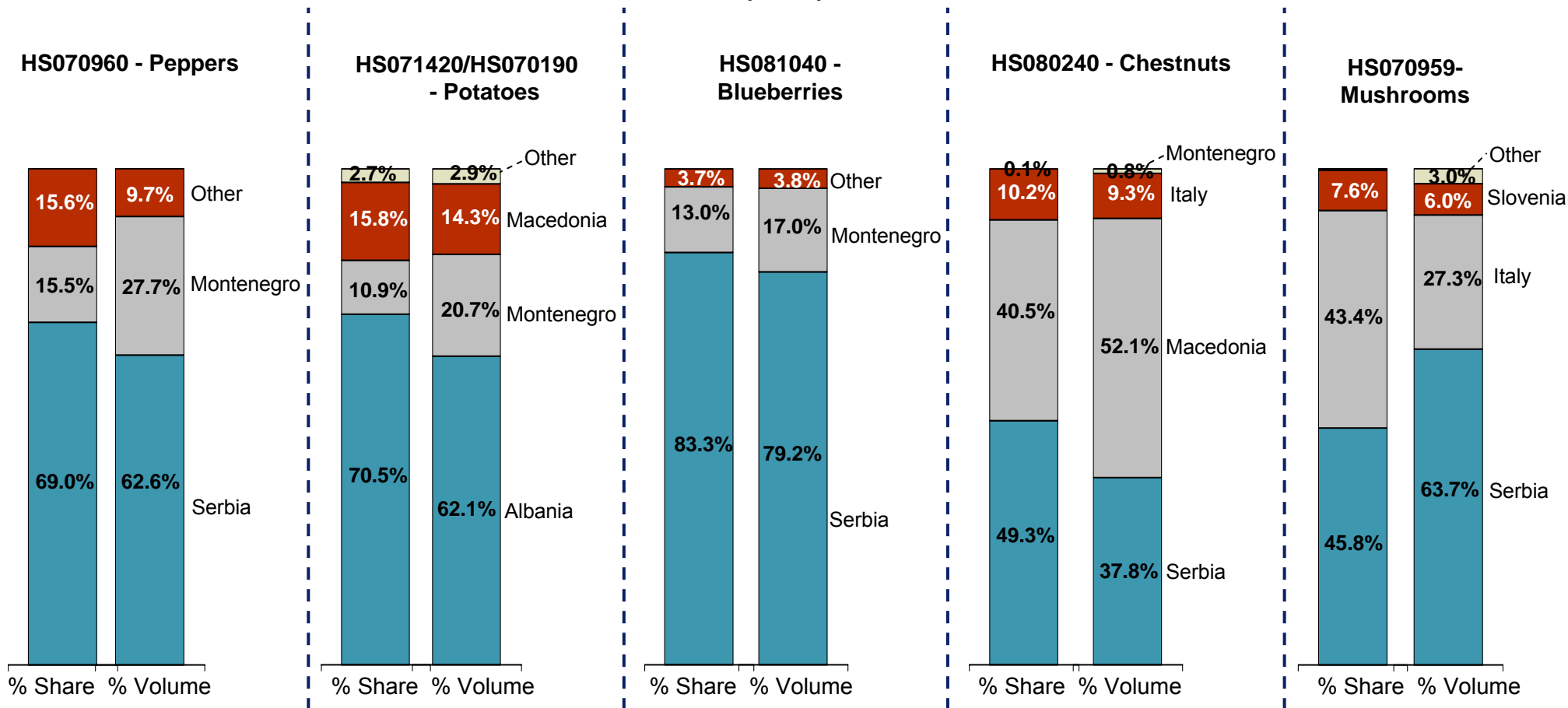
Note: CAGR for Serbia and Montenegro is calculated from 2005-2008

Note: The HS chapters used to determine commodity exports include 6-12, 19, 20

Source: Customs Office of Kosovo; BAH Analysis

Export of Kosovo's five major agricultural commodities are predominantly concentrated in a small number of countries

Market Distribution of Selected Agricultural Commodities in Kosovo (2008)



Note: (*)Exported value for primary crops is determined by looking at HS chapters 6-10,12

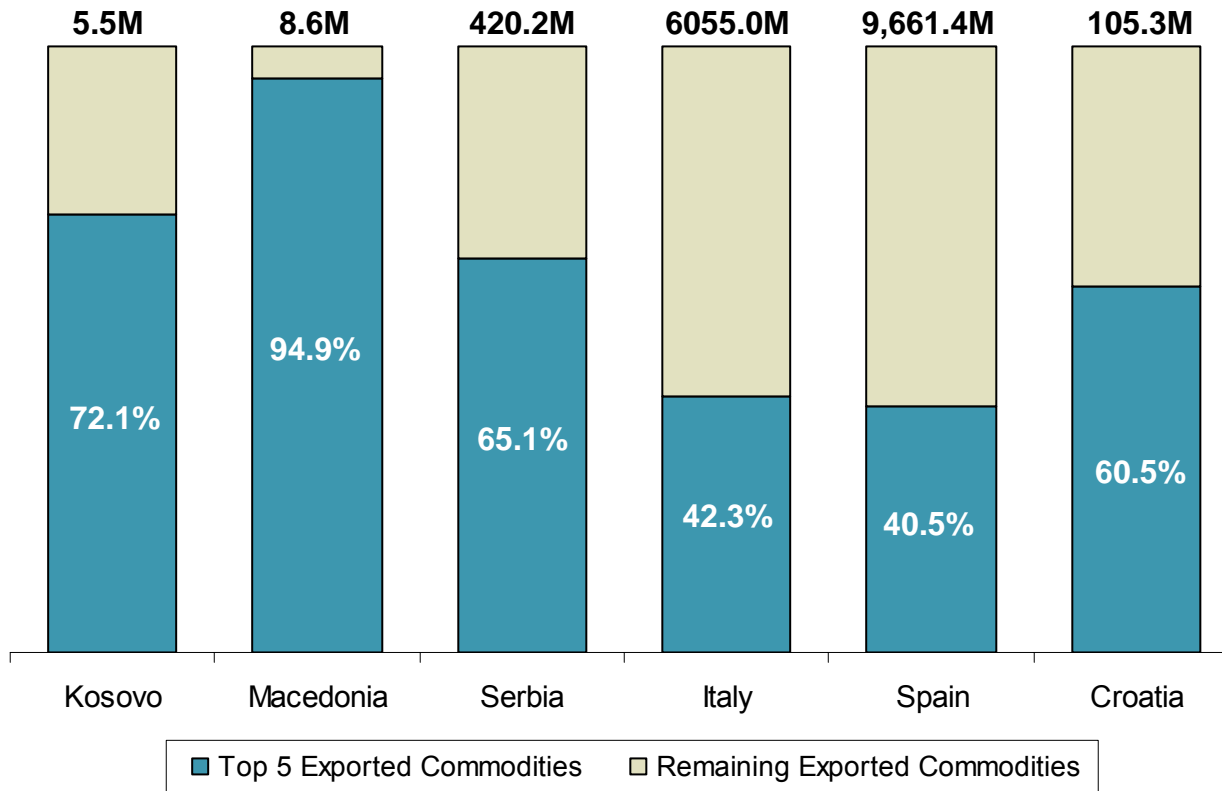
Note: Combined HS071420 (sweet potatoes) and HS 070190 (other potatoes) since assumed potatoes identified as sweet potatoes were misclassified given the significant volume

Note: Numbers may not add to 100% due to rounding

Source: Customs Office of Kosovo

The top five primary crops represented a larger share of exported value compared to benchmarks

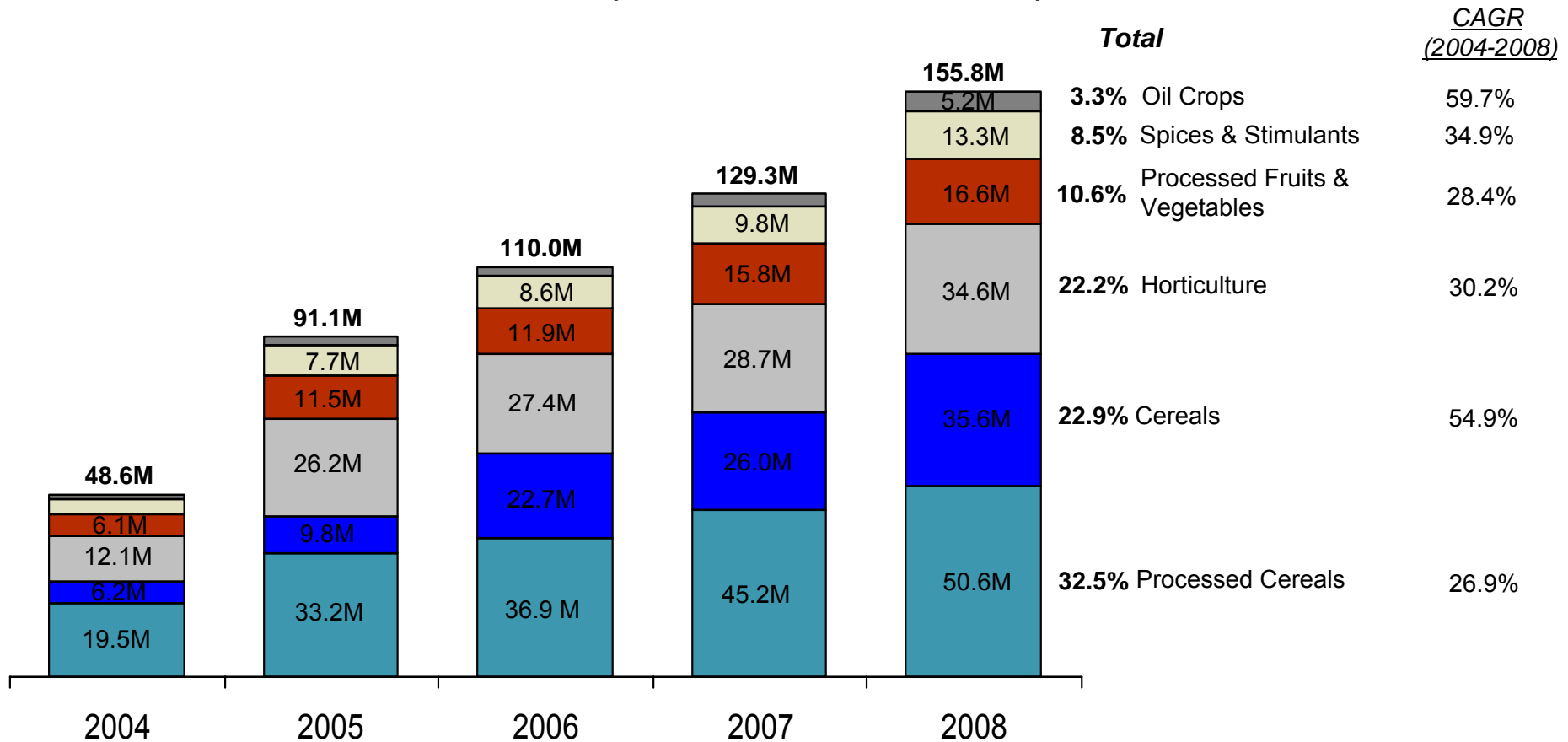
**Top 5 Exports Compared to Total Agriculture Exports
(2008, in Million Euros)**



Country	Top 5 Crop Categories
Kosovo	Peppers, potatoes, blueberries, chestnuts, mushrooms
Macedonia	Fresh mushrooms, dried mushrooms/truffles, cherries, poppy seeds, asparagus
Serbia	Raspberries/mulberries/blackberries/loganberries, maize, maize seed, fruits/nuts
Italy	Coffee, grapes, apples, rice, live plants
Spain	Mandarins / clementines, tomatoes, oranges, peppers, peaches
Croatia	Maize, mandarins/ clementines, sunflower seeds, maize seed, rape/colza seeds

Kosovo's imports have grown from 48M to over 155M Euros over the past five years with processed cereals making up the largest share

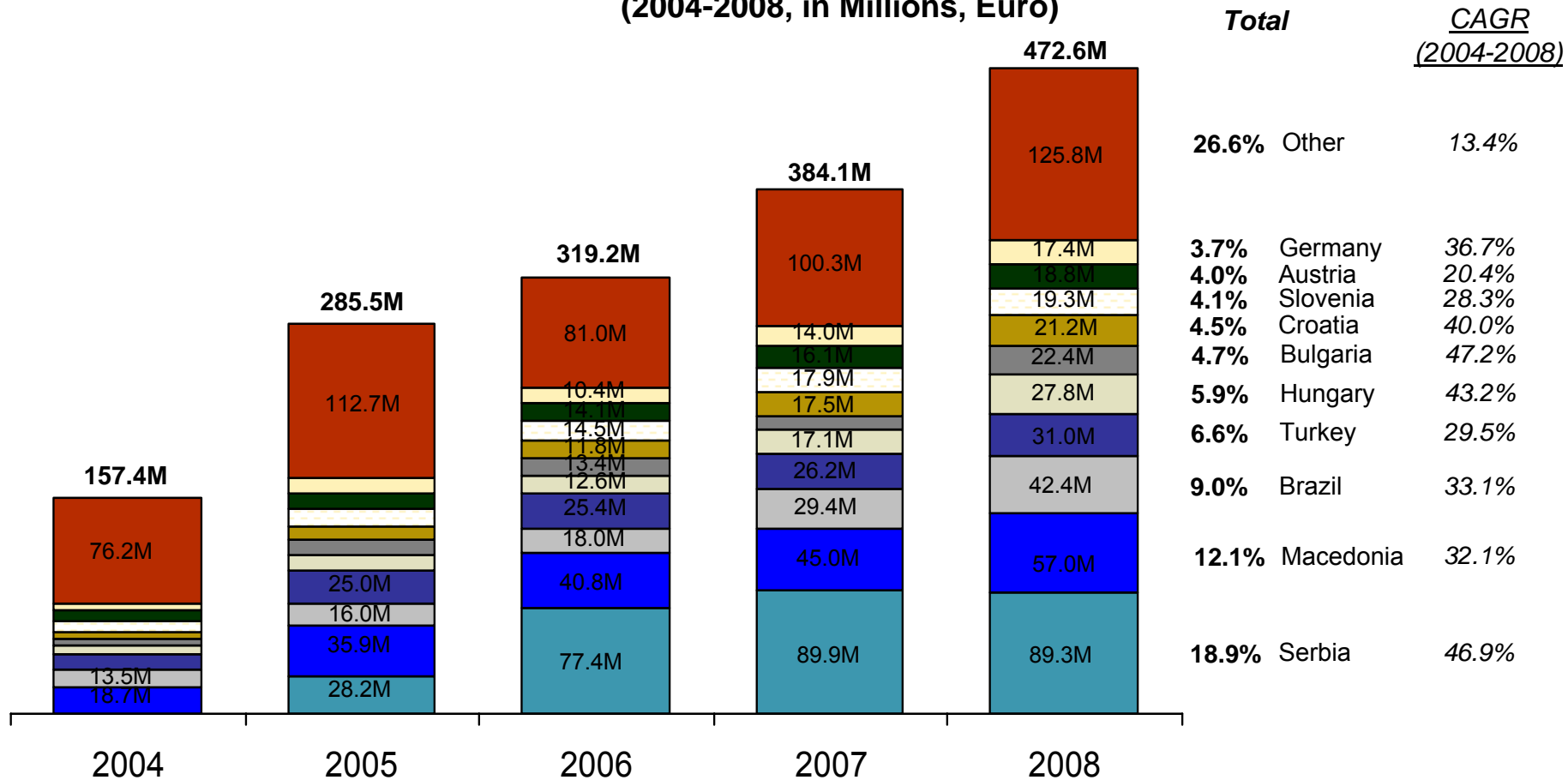
Breakdown of Kosovo Agricultural Commodities Import Value by Commodity Type
(2004–2008, in Millions, Euro)



Note: The HS chapters used to determine commodity exports include 6-12, 19, 20
Source: Customs Office of Kosovo

The agriculture commodities imported from the top ten importing countries account for over 73% of Kosovo's total imported value

Relative Share of Importers of Agricultural Commodities into Kosovo
(2004-2008, in Millions, Euro)

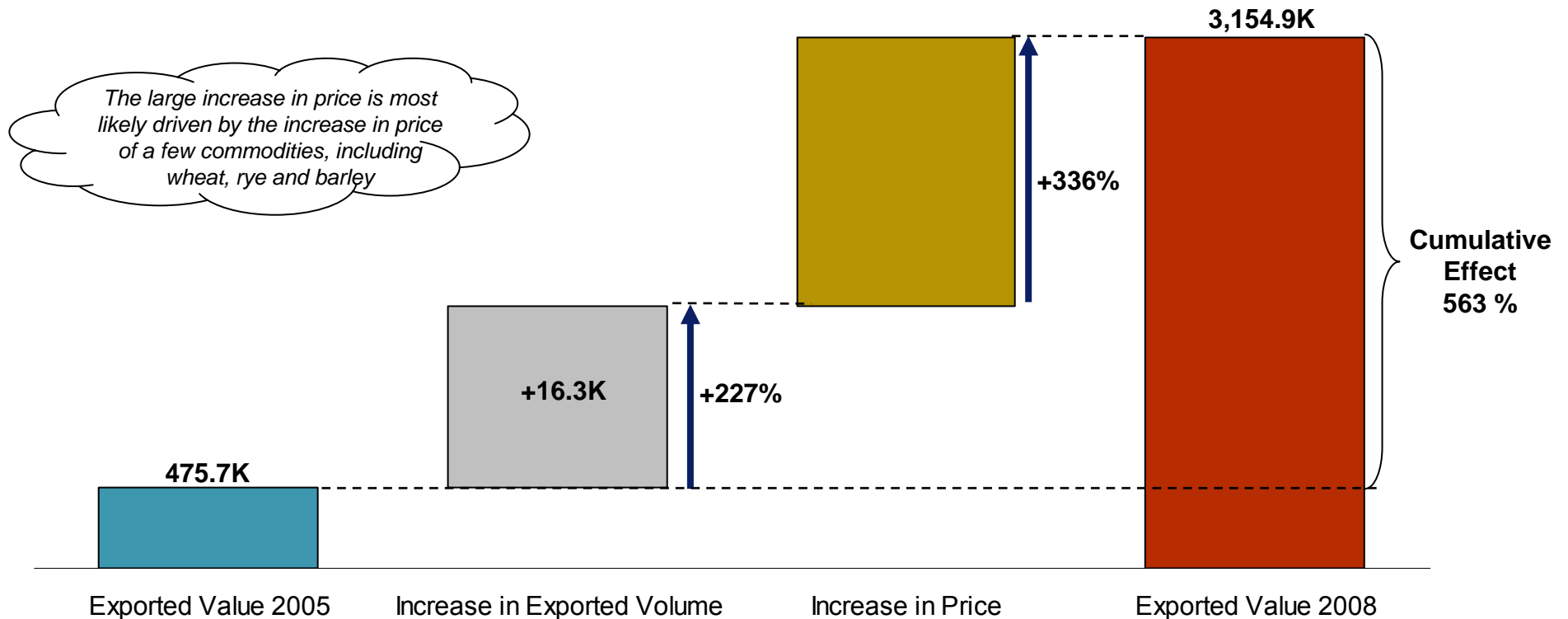


Note: 101 countries imported agriculture commodities into Kosovo in 2008; CAGR for Serbia is calculated from 2005-2008; The HS chapters used to determine commodity exports include 6-12, 19, 20; Total numbers may not add to sum of country totals due to rounding

Source: Customs Office of Kosovo

For a representative basket of crops*, the rise in export value from 475K to 3,154K Euros was primarily driven by growth in price...

**Component Marginal Analysis of Kosovo Agricultural Exports Value
(2005- 2008, in Thousand Euros)**



Note: To determine respective impact of each component, the following mathematical approximation was used: $\Delta EV / EV = \Delta V / V + \Delta Price / Price$; Since farm gate prices were not available, we calculated price from the change in export value and volume

Note: Price increase was impacted by price spikes over 2006-2008 for products like: wheat (+125%), rye (+98%), and barley (64%) (TradeMap World Export Prices)

Note: (*)A representative basket of products with production, import, and export volume were included for this calculation: wheat, rye, barley, oats, maize, potato starch/potatoes, tomatoes, eggplants, pepper, courgettes, mushroom, cucumbers, spinach, leeks, onions, garlic, beans, apples, pears, plums, apricots, peaches, cherries, chestnuts, strawberries, raspberries, blackberries

Source: Customs Office of Kosovo

...while increased export volumes were largely the result of an increase in production, coupled with a decrease in consumption

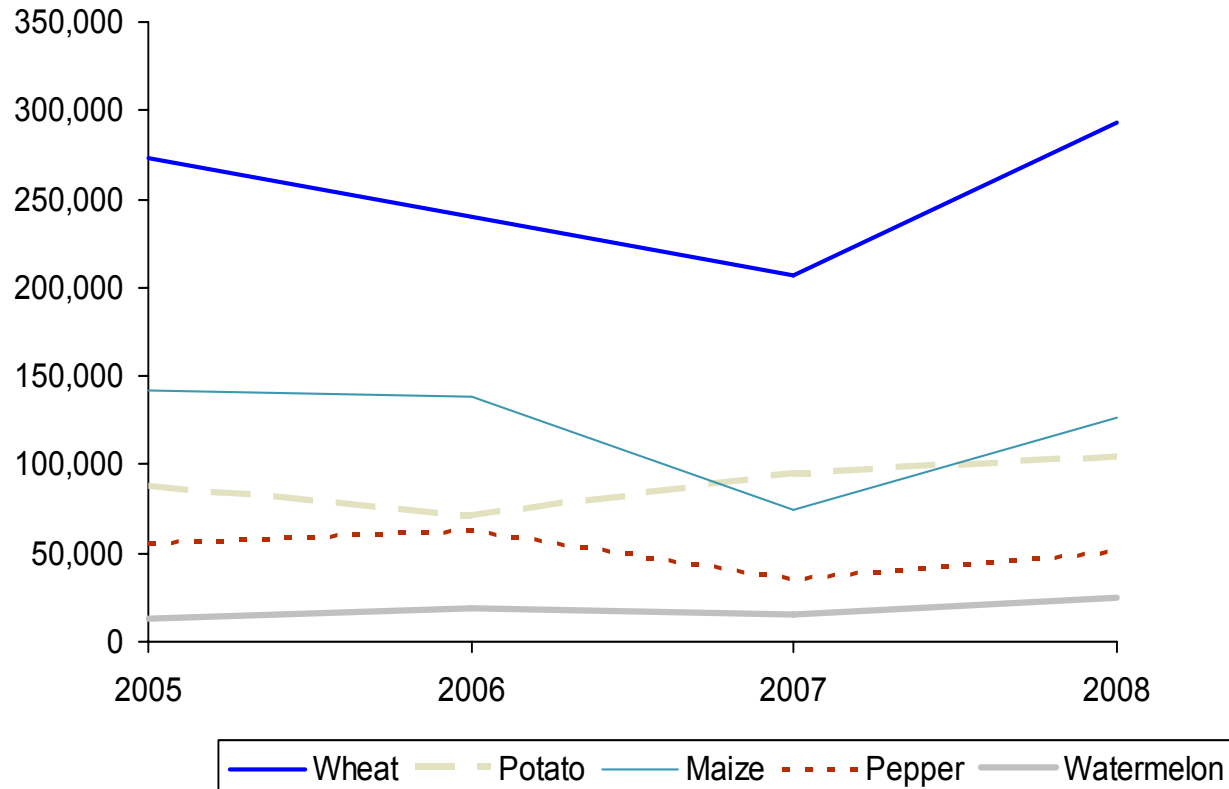
Kosovo Agricultural Commodities Trade Balance
(2005–2008, in Thousand Tons)



Note: A representative basket of products were included for this calculation: wheat, rye, barley, oats, maize, potato starch/potatoes, tomatoes, eggplants, pepper, courgettes, mushroom, cucumbers, melons, cabbages, spinach, leeks, onions, garlic, beans, apples, pears, plums, apricots, peaches, cherries, chestnuts, strawberries, raspberries, blackberries
Note: Consumption volume data not available. Consumption, feed, seed, and other use numbers were calculated by $Production + Imports - Exports = Consumption$
Source: Customs Office of Kosovo, Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study)

Production increase was primarily driven by growth in wheat, potato and watermelon crops

Change in Agriculture Production Volumes for the Top Five Producer Crops (2005-2008, in Tons)

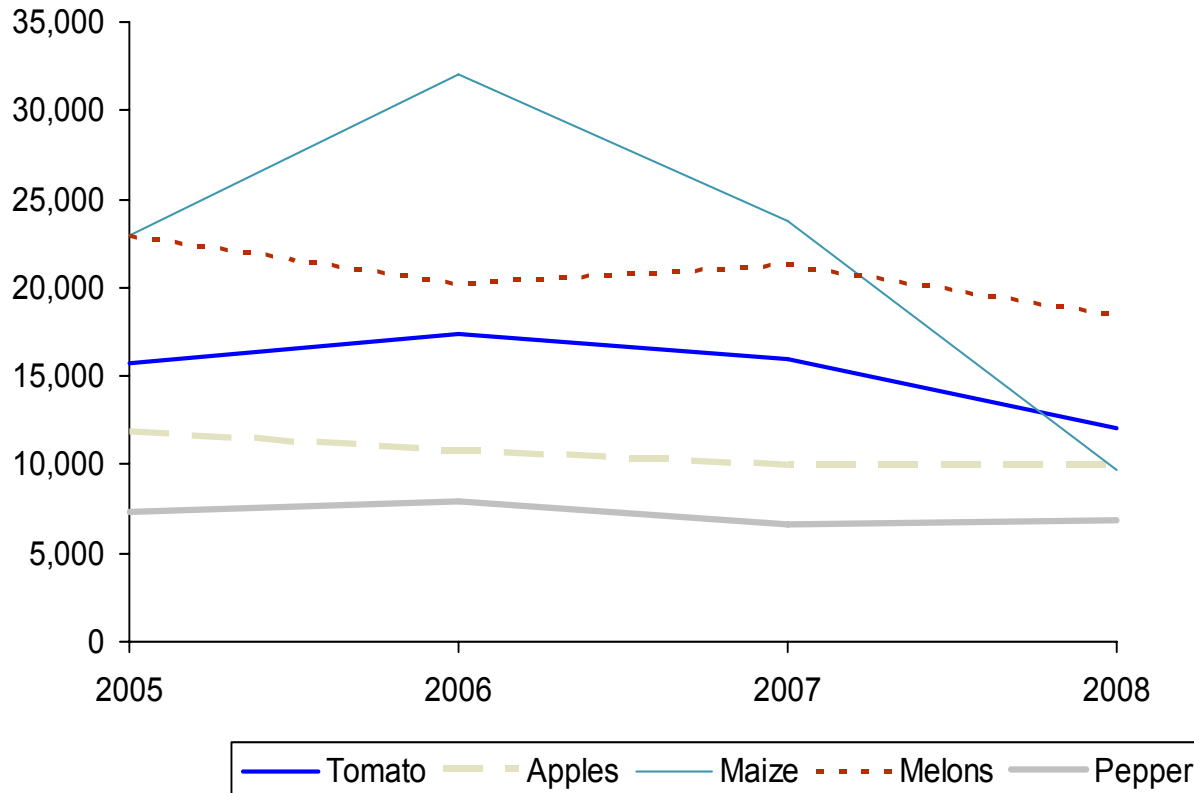


	% of Total Production Volume (2008)	CAGR (2005-08)
Wheat	40.3%	2.3%
Potato	14.3%	6%
Maize	17.4%	-3.7%
Pepper	7%	-2.3%
Watermelon	3.4%	22.5%

Note: The top 5 crops of the representative basket of products were those with the largest production in tons in 2008; They represented over 82% of the total production volume in tons
 Note: The representative basket of products included: wheat, rye, barley, oats, maize, potato starch/potatoes, tomatoes, eggplants, pepper, courgettes, mushroom, cucumbers, melons, cabbages, spinach, leeks, onions, garlic, beans, apples, pears, plums, apricots, peaches, cherries, chestnuts, strawberries, raspberries, blackberries
 Source: Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study)

Across the board, volumes for the most imported crops (tomatoes, apples, maize, melon and peppers) have decreased

Change in Agriculture Import Volumes for the Top Five Imported Crops (2005-2008, in Tons)



	% of Total Import Volume (2008)	CAGR (2005-08)
Tomato	14.4%	-8.6%
Apple	11.9%	-5.5%
Maize	11.6%	-24.9%
Melon	22.2%	-7.1%
Pepper	8.2%	-2.5%

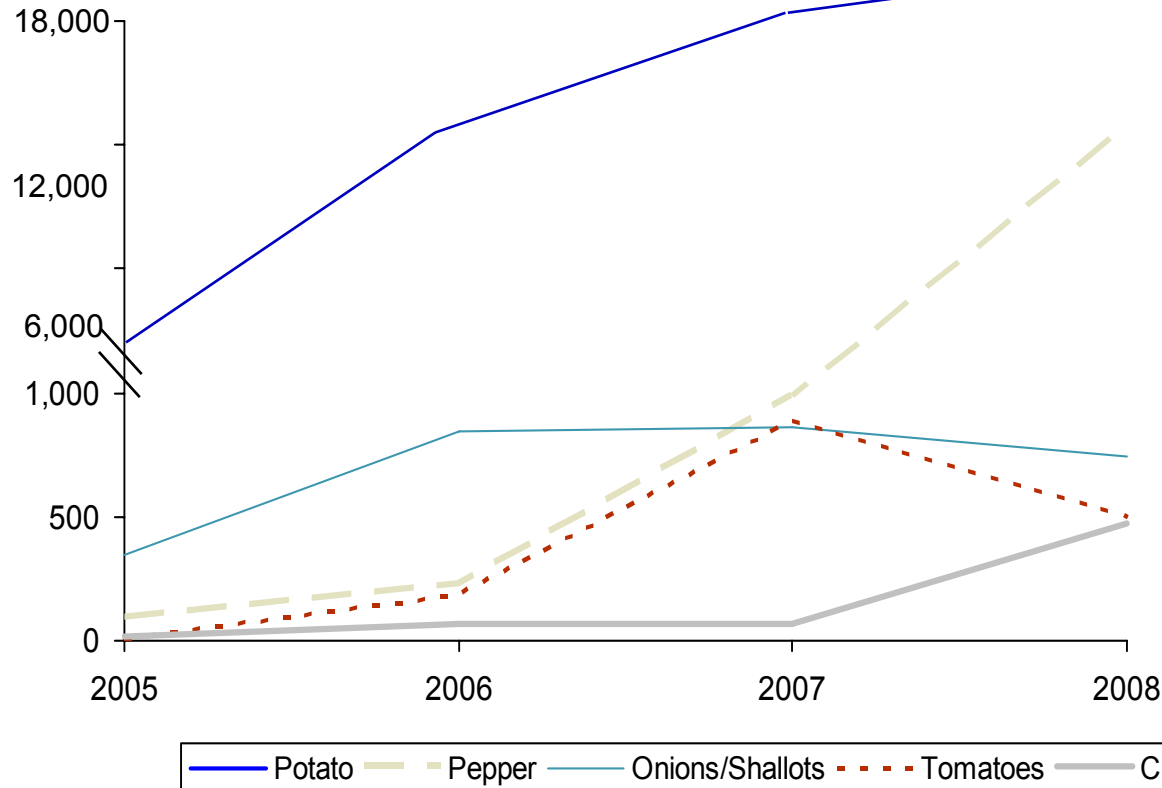
Note: The top 5 imported crops of the representative basket were those with the largest imported volume in tons in 2008; They represented 68.4% of the total tons imported in 2008

Note: The representative basket of products included: wheat, rye, barley, oats, maize, potato starch/potatoes, tomatoes, eggplants, pepper, courgettes, mushroom, cucumbers, melons, cabbages, spinach, leeks, onions, garlic, beans, apples, pears, plums, apricots, peaches, cherries, chestnuts, strawberries, raspberries, blackberries

Source: Statistics Office of Kosovo, Customs Office of Kosovo

Export volume increased for all top five exported crops, resulting in a decrease in the quantity of domestic consumption, feed, and seed crops

Change in Agriculture Export Volumes for the Top Five Exporter Crops (2005-2008, in Tons)



	% of Total Export Volume (2008)	CAGR (2005-08)
Potato	80.1%	47.0%
Pepper	8.8%	185.3%
Onion/Shallot	3.1%	28.4%
Tomato	2.1%	267.2%
Chestnut	2.0%	187.5%

Note: The top 5 exported crops of the representative basket were those with the largest exported volume in tons in 2008 for the smaller representative basket of crops; They represented 96% of the total tons exported in 2008 for the smaller basket of crops

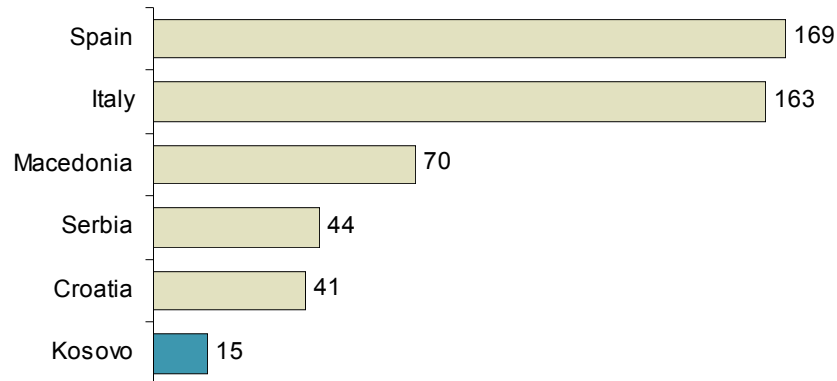
Note: The representative basket of products included: wheat, rye, barley, oats, maize, potato starch/potatoes, tomatoes, eggplants, pepper, courgettes, mushroom, cucumbers, melons, cabbages, spinach, leeks, onions, garlic, beans, apples, pears, plums, apricots, peaches, cherries, chestnuts, strawberries, raspberries, blackberries

Note: Consumption volume data is not available for this basket of crops; Potato (HS070190,071420) uses the 6000-18000 scale. All other crops use the 0-1000 scale

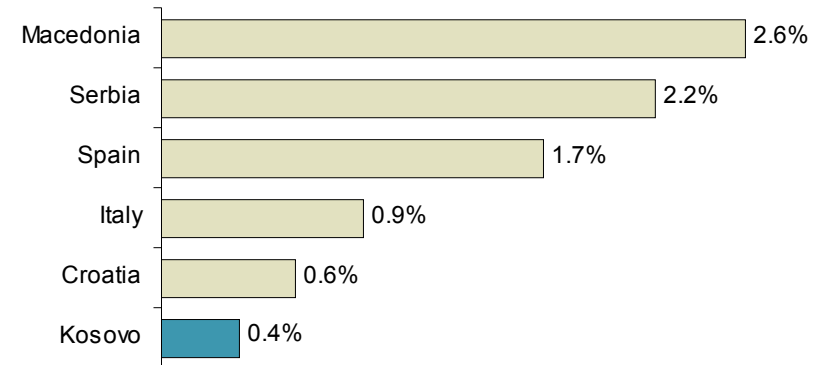
Source: Statistics Office of Kosovo, Customs Office of Kosovo

Kosovo's export performance remains well below its potential compared to benchmarks

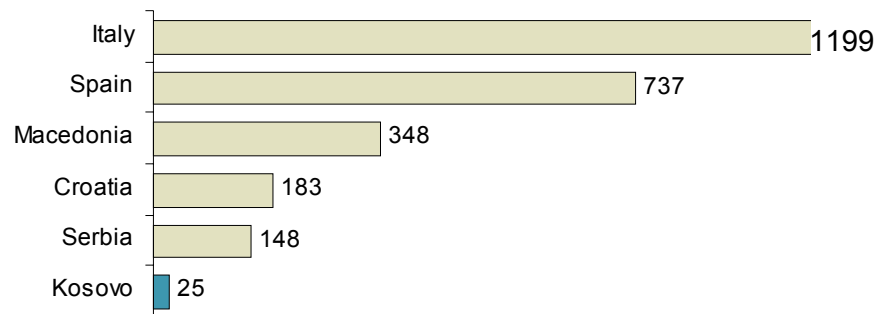
1 Agricultural Commodities Export Value per Ton Produced* (2007)



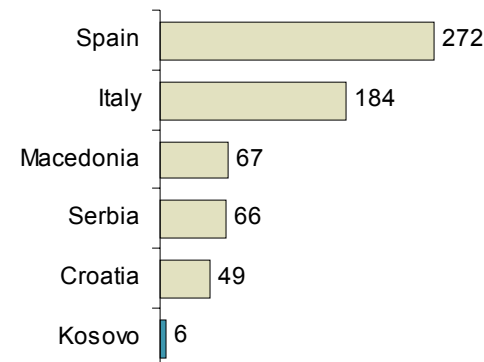
2 Agriculture Commodities Export Share of GDP (2007)



3 Agricultural Commodities Export Value per Area Harvested of Agricultural Land (2007, Euro per Area Harvested)



4 Agricultural Commodities Export per Capita (2007, Euro per Capita)



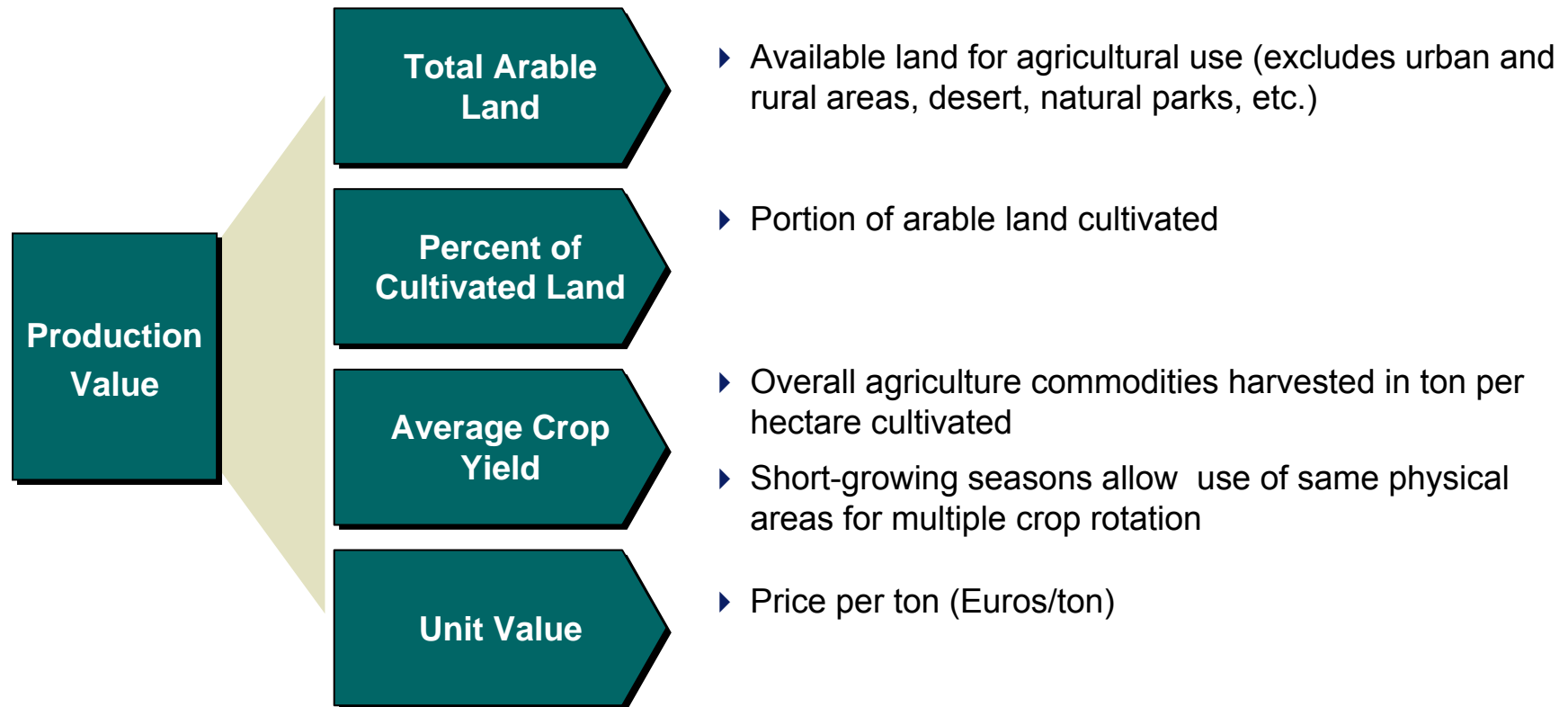
Note: The HS chapters used to determine commodities exports include 6-12, 19, 20

Note: (*) The following categories in FAOSTAT were used to estimate total production per country: cereals, coarse grain, vegetables and melons, fruit excluding melons, roots and tubers, pulses, and oil crops

Source: WDI; FAOSTAT; Population Reference Bureau; TradeMap

Agricultural production value is driven by total arable land, the portion of arable land cultivated, crop yield and value

Agriculture Commodities Production Drivers

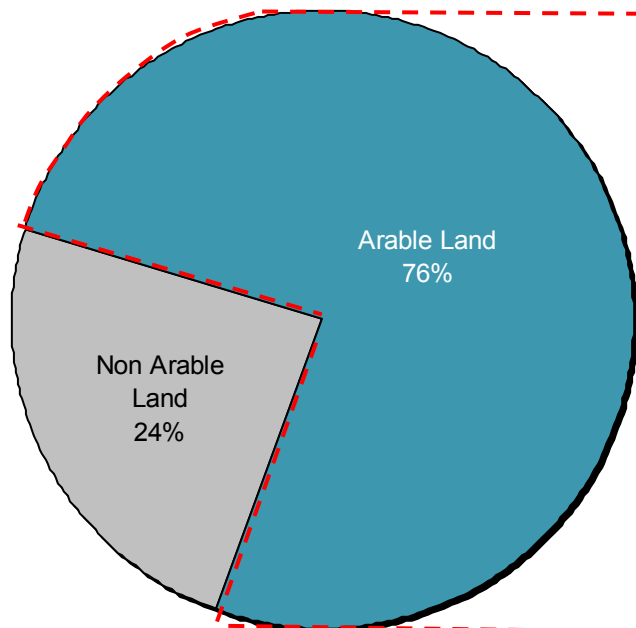


$$\text{Production Value (Euro)} = \text{Agricultural Land (Hectare)} \times \text{Land Cultivated (\%)} \times \text{Average Crop Yield (Ton/Hectare)} \times \text{Unit Value (Euro/Ton)}$$

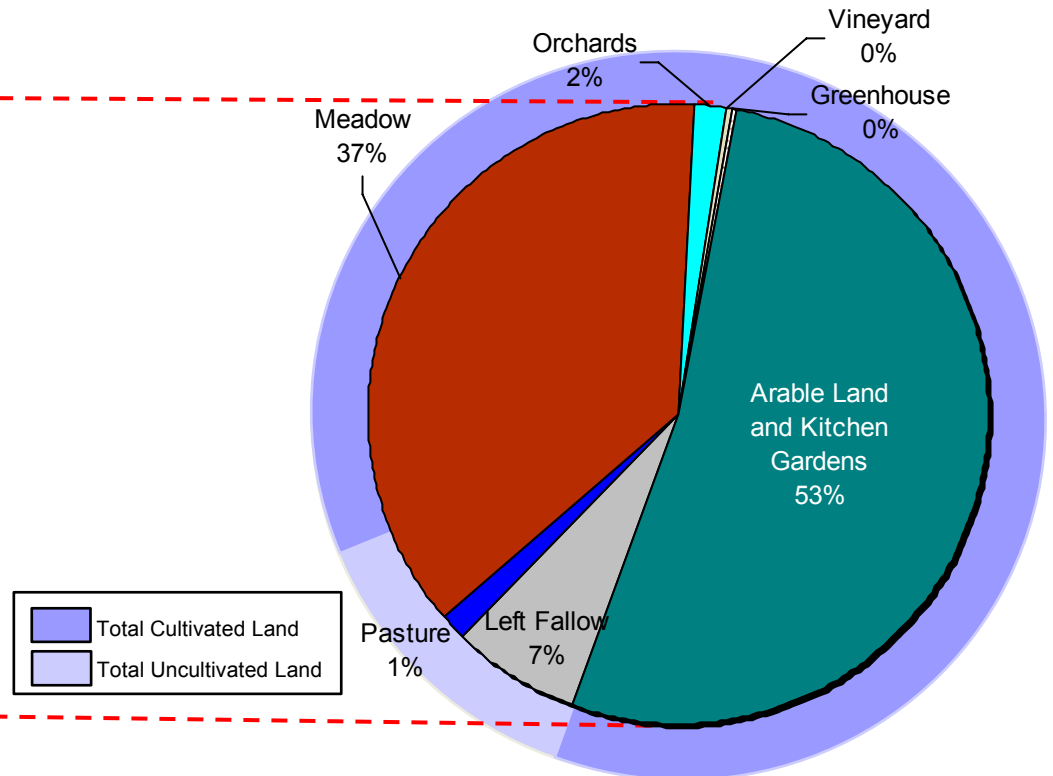
Approximately 76% of total land in Kosovo is arable, of that only 85% is cultivated

Proportion of Arable Land and Cultivation in Kosovo (2008)

Proportion of Arable Land in Kosovo by Hectares (2008)



Total Arable Land Cultivated in Kosovo (2008)



Note: Assume all crops in 2008 are grown in orchards, vineyards, greenhouses, and arable land and kitchen categories with the following exceptions: assume 100% of hay volume (tons) is grown in meadow, 50% of mixed grass (tons) is grown in meadow, and 75% of trefoil (tons) is grown in meadow; Thus 83% of meadows is being cultivated for hay, mixed grass, and trefoil and 6.5% (37.2%-(37%*83%)) of meadows is considered fallow

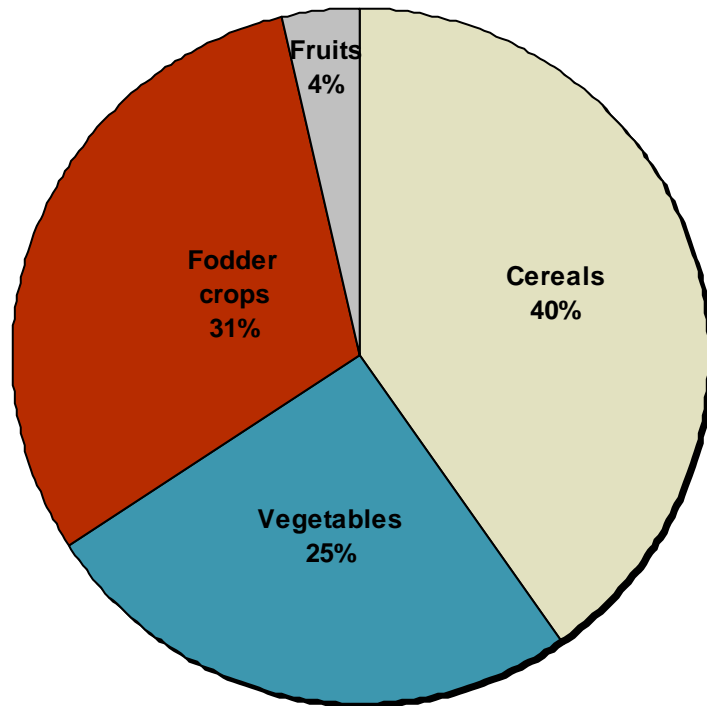
Non Arable Land includes forestry (20%) and houseyard (4%)

Source: Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study)

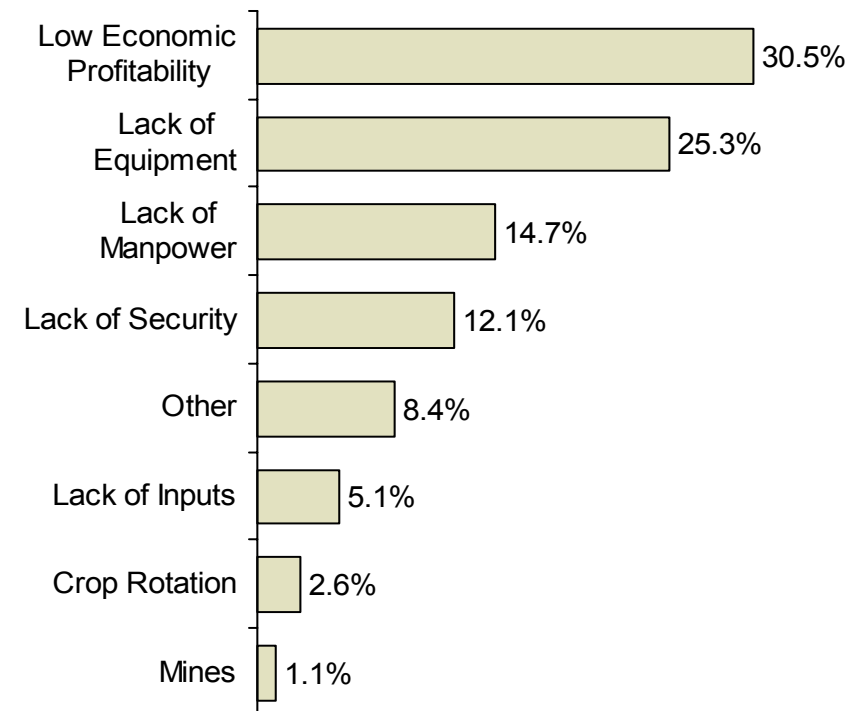
The primary use of cultivated land is to grow cereals, vegetables, fodder crops, and fruits; non-use of land is attributed to low profitability and lack of equipment

Crop Cultivation and Reasons for Fallow Land (2008)

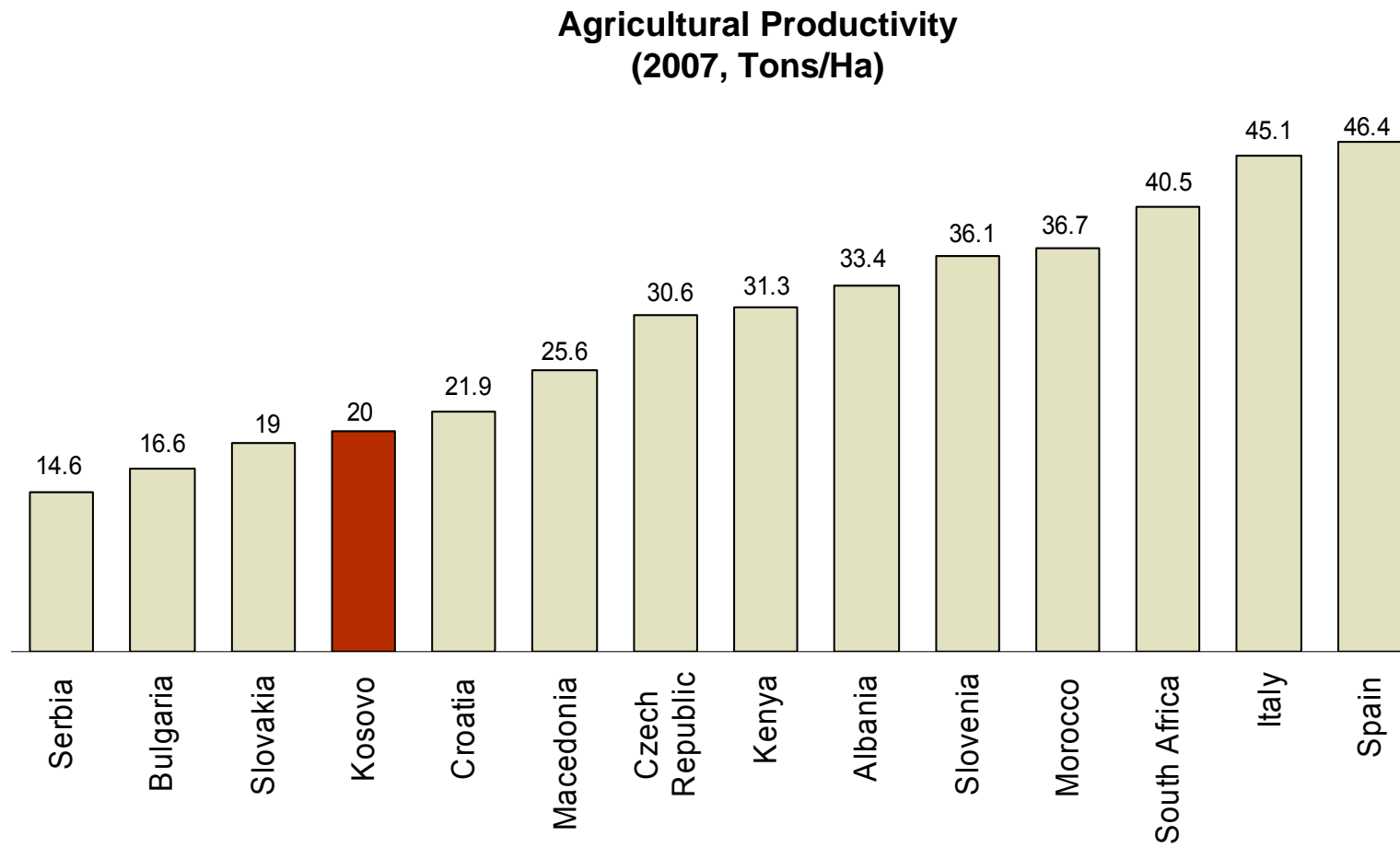
Crop Cultivation Breakdown by Volume (2008)



Reasons for Leaving Land Fallow (2006)

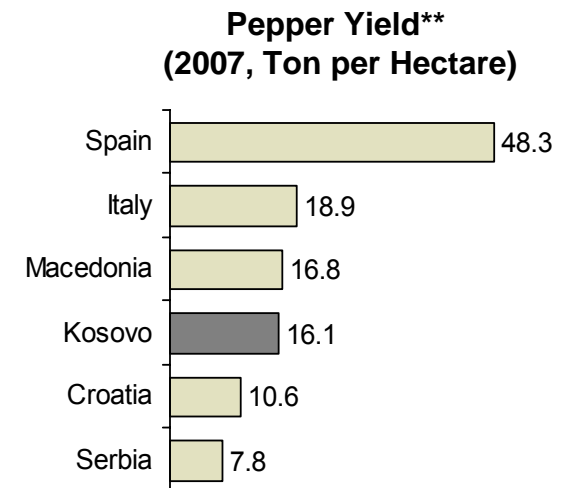
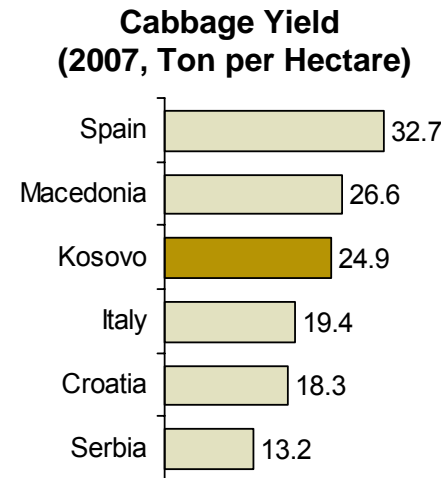
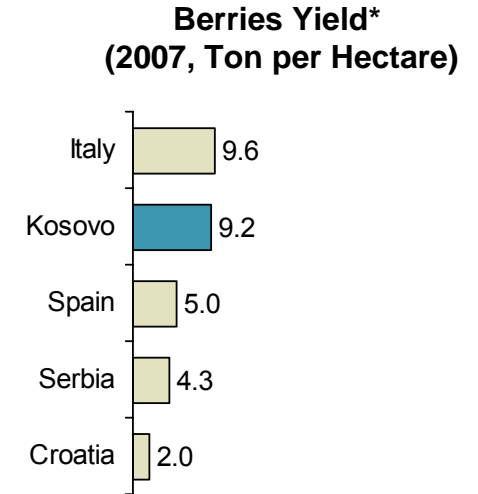
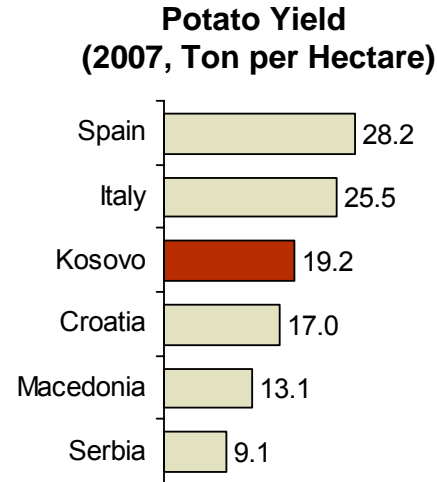
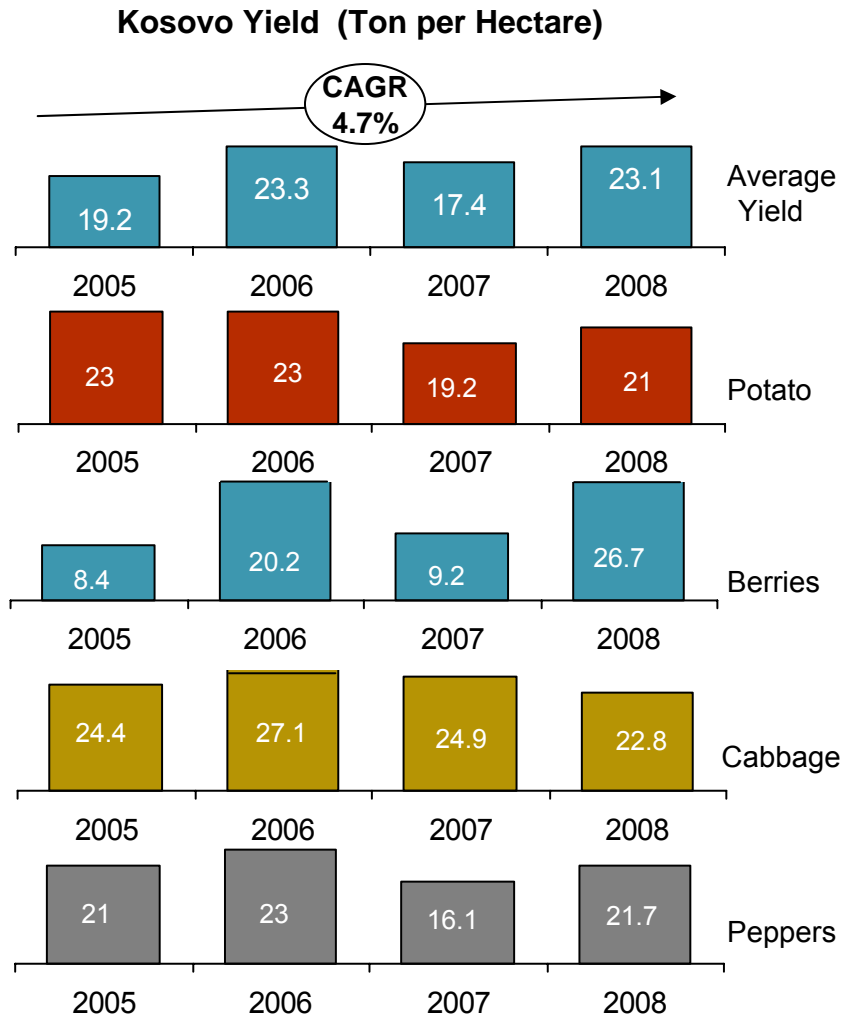


Compared to similar benchmarks, Kosovo ranks low in agricultural productivity although higher than some regional countries



Note: In order to compare productivity across countries, measured overall productivity in cereals, fruit and vegetables commodities
Source: FAOSTAT, Statistics Office of Kosovo

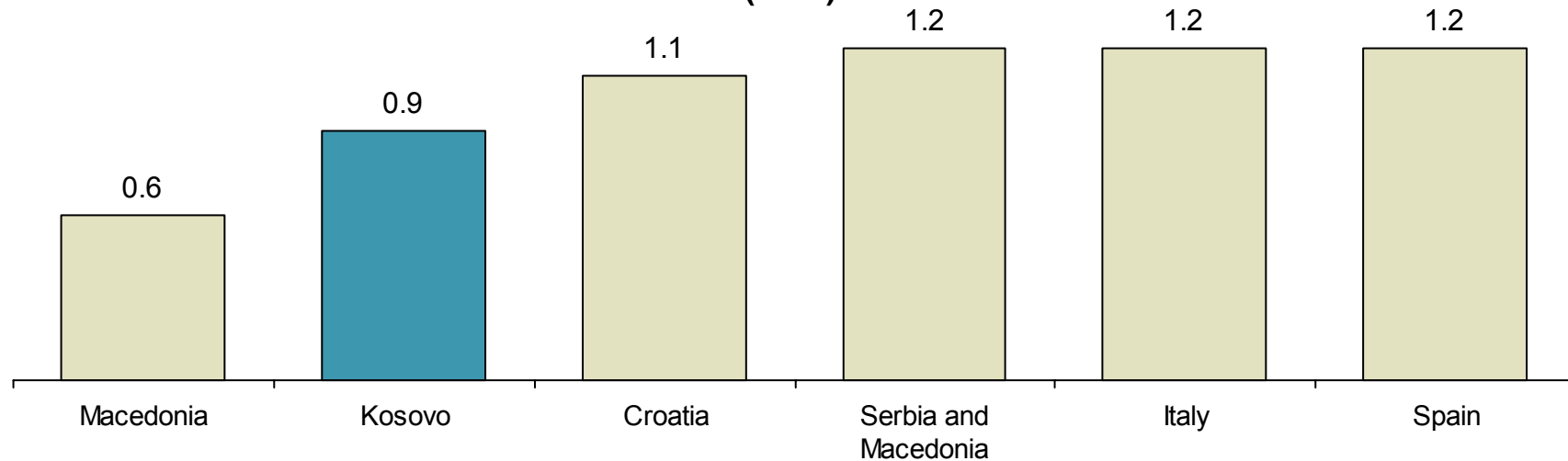
Agriculture yields for select crops have increased since 2005, but still rank lower than international benchmarks



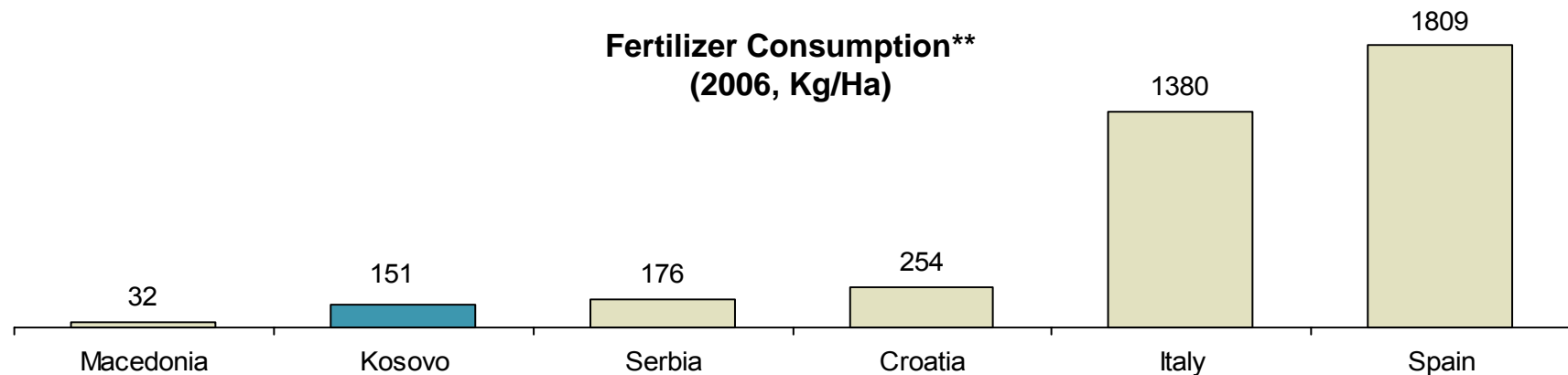
Note: (*) Berries yield not available for Macedonia for 2007; berries include blackberries, strawberries and raspberries
 (**)Peppers and chillies are grouped together for Croatia, Italy, Serbia, Spain and Macedonia, but not for Kosovo
 Source: FAOSTAT, Statistics Office of Kosovo

Kosovo has potential to improve yields by increasing cropping intensity and fertilizer consumption

**Cropping Intensity (Area Harvested by Agricultural Land)*
(2005)**



Fertilizer Consumption
(2006, Kg/Ha)**



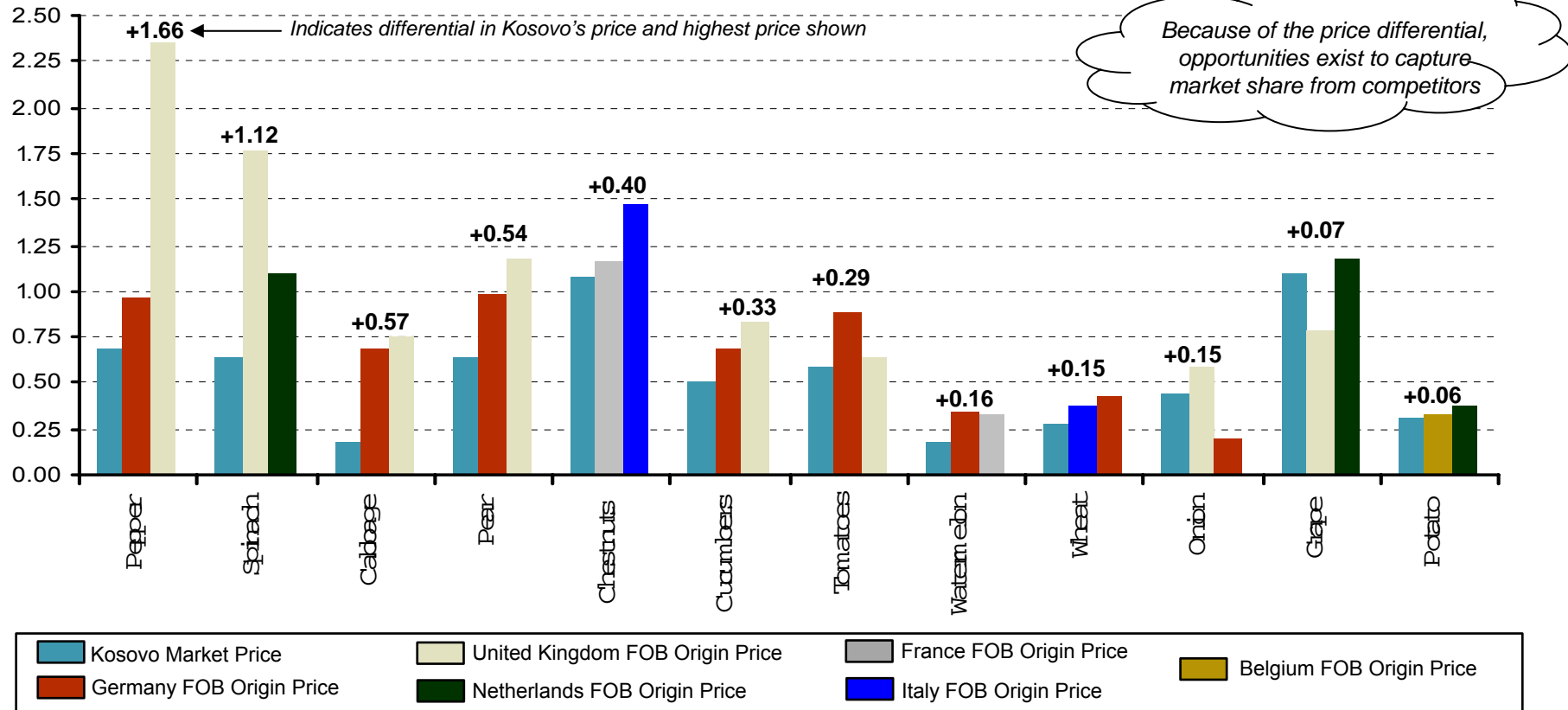
Note: (*) Area harvested refers to the area a crop is gathered, the area is counted as many times as the area is harvested; Agricultural lands (in hectares) refers to arable lands (under temporary crops, meadows), under permanent crops (such as cocoa, coffee planted for several years) and lands under permanent pastures (mainly forage planted for 5 years). Data from 2007 was used to calculate area harvested; however, the most recent data for agricultural land was only available from 2005. Agricultural land data combined Serbia and Montenegro whereas as area harvested data is only for Serbia.

(**)Fertilizers products cover nitrogenous, potash and phosphate (NPK) fertilizers; the metric measures the quantity of plants nutrients used per unit of agricultural land

Source: FAOSTAT for area harvested, WDI for agricultural land and International Fertilizer Industry Association data for fertilizer consumption

Kosovo's local prices for agricultural commodities are relatively low when compared against EU FOB origin prices

Kosovo Market Price Compared to FOB Origin Prices (2008, Euro/Kg*)



Note: (*) Differential was calculated between Kosovo and the country with the largest Euro/Kg gap from Kosovo

Note: Kosovo prices were collected in all seven regions (Peja, Pristina, Prizren, Ferizaj, Gjilan, Gjakova, Mitrovica) on the 15th of each month and reflect prices farmers receive for the production that are sold outside the sector. The price collection was carried out at markets, farms and other places where prices on agriculture products are available.

Note: Pepper (HS070960): Germany FOB Origin for Turkey, UK FOB Origin for Italy; Spinach (HS070970): UK and Netherlands FOB Origin for Italy; Cabbage (HS070490): Germany and UK FOB Origin for Italy; Pear (HS080820): Germany FOB Origin for Turkey, UK FOB Origin for Italy; Chestnuts (HS080240): France and Italy FOB Origin for Turkey; Cucumber (HS070700): Germany FOB Origin for Turkey, UK FOB Origin for Spain; Tomatoes (HS070200): Germany and UK FOB Origin for Turkey; Watermelon (HS080711): Germany and France FOB Origin for Italy; Wheat (HS100190): Italy FOB Origin for Greece, Germany FOB Origin for Italy; Onion (HS070310): UK FOB Origin for Italy, Germany FOB Origin for Turkey; Grape (HS080610): UK FOB Origin for Turkey, Netherlands FOB Origin for Spain; Potato (HS070190): Belgium and Netherlands FOB Origin for Italy; Statistics for Spain's exports are 2007

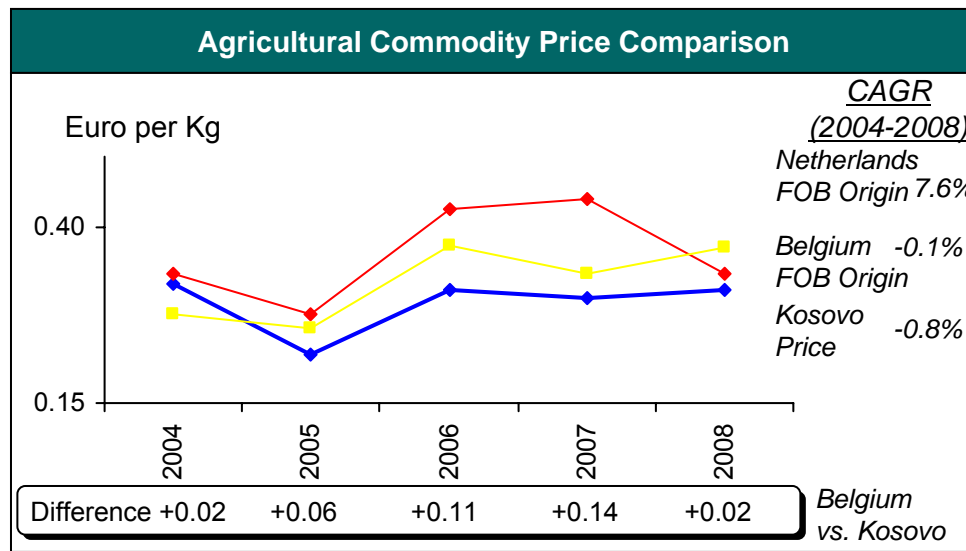
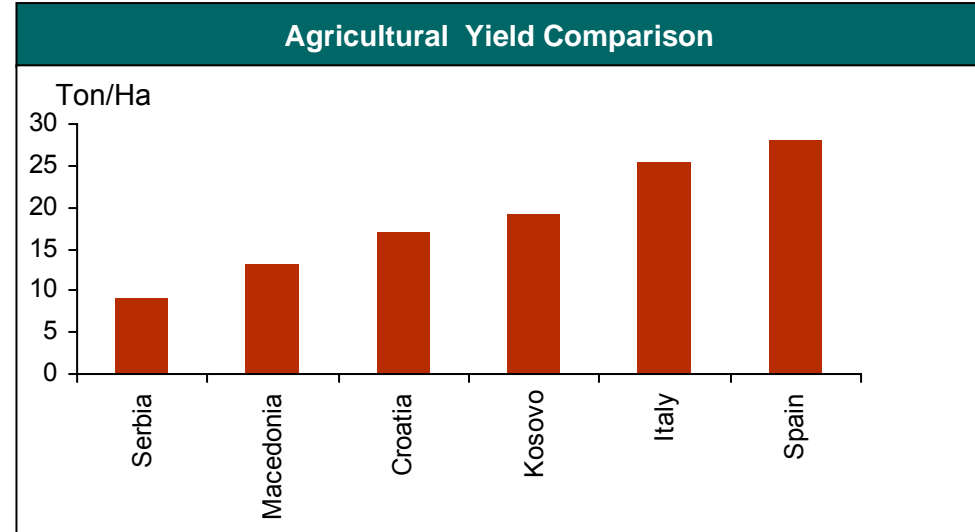
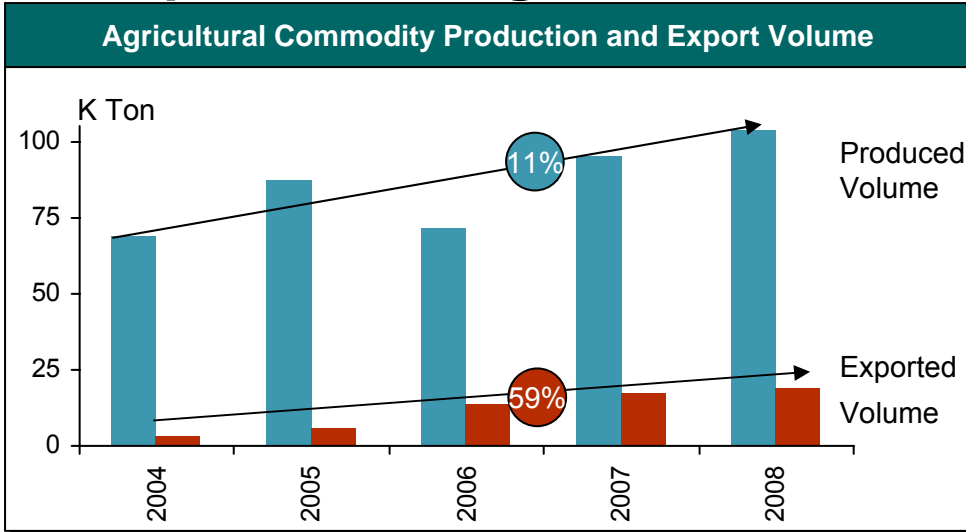
Source: "Agriculture and Environment Statistics Output Price Index and Prices in Agriculture 2008", Statistics Office of Kosovo; TradeMap; UN Comtrade

Quantitative Baseline of Kosovo's Agriculture Sector

- ▶ Market Definition and Methodology
- ▶ Kosovo Agricultural Commodities Performance
- ▶ Crop-specific Performance and Market Assessment



Kosovo's potato sector has competitive yields compared to benchmarks, with small differences in FOB origin prices compared to Belgium and Netherlands



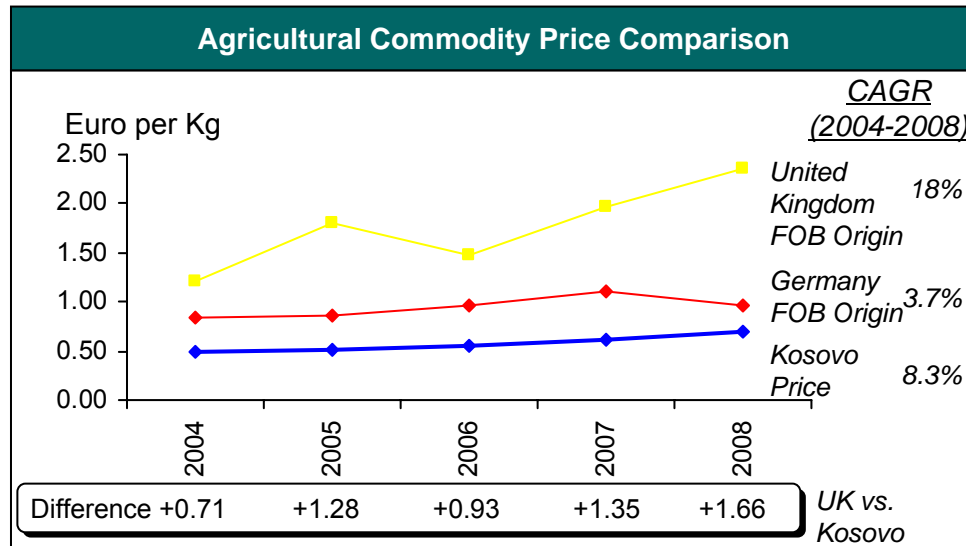
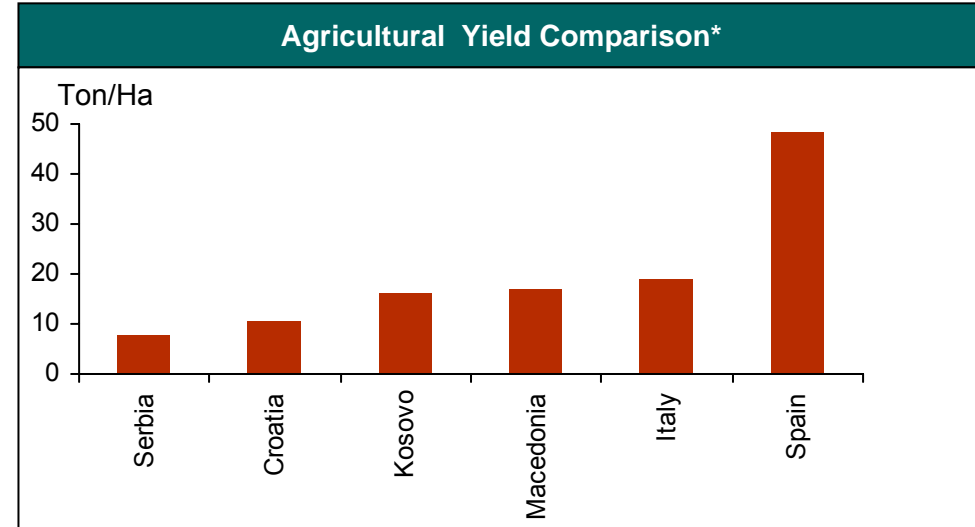
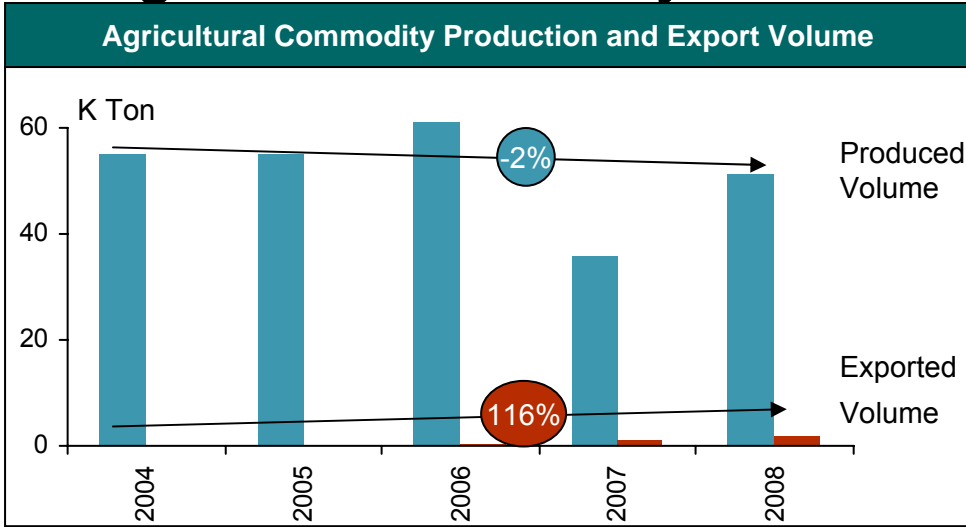
- ### Agricultural Commodity Comments
- ▶ Potatoes are grown in all municipalities* across Kosovo
 - ▶ In 2008, over 100K tons of potatoes were produced while over 18K tons were exported to Albania (62.1%), Montenegro (20.7%), Macedonia (14.3%), Serbia (2.5%)
 - ▶ Kosovo's yield is higher than regional competitors, but lower than best practice producers like Italy and Spain
 - ▶ Kosovo's local market price has been similar to the Netherlands and Belgium FOB origin prices for the past 5 years, indicating that there may be little opportunity to capture market share in these countries

Note: Potato export data is for HS070190,071420; HS070190 used for price comparison; (*) Surveyed Agriculture Offices in 30 Municipalities listed in the 2007 Household survey; Netherlands FOB Origin from Italy; Belgium FOB Origin from Italy

Source: FAO STAT, Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study); Customs Office of Kosovo; Agriculture and Environment Statistics Output Price Index and Prices in Agriculture 2008. TradeMap: BAH Analysis



Kosovo has higher pepper yields compared to benchmarks; FOB origin prices are lower than those of the United Kingdom and Germany

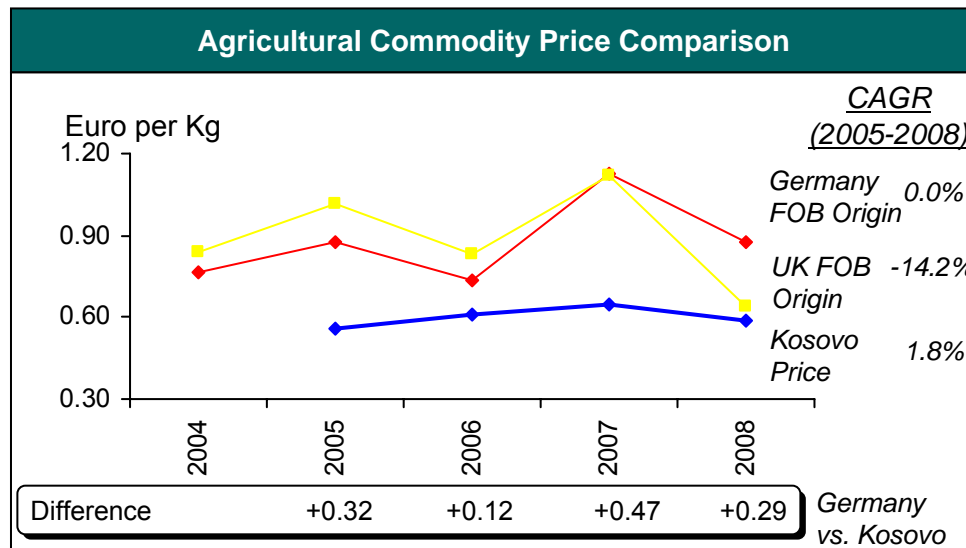
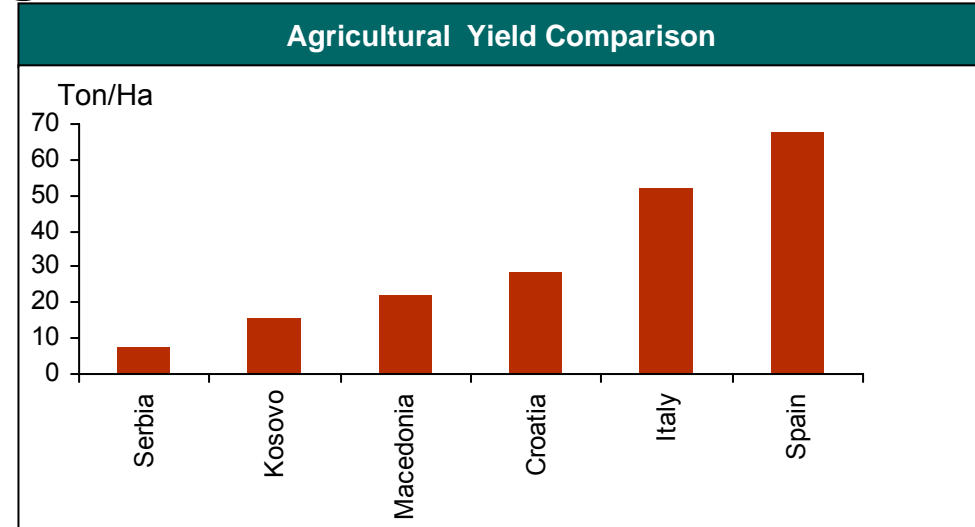
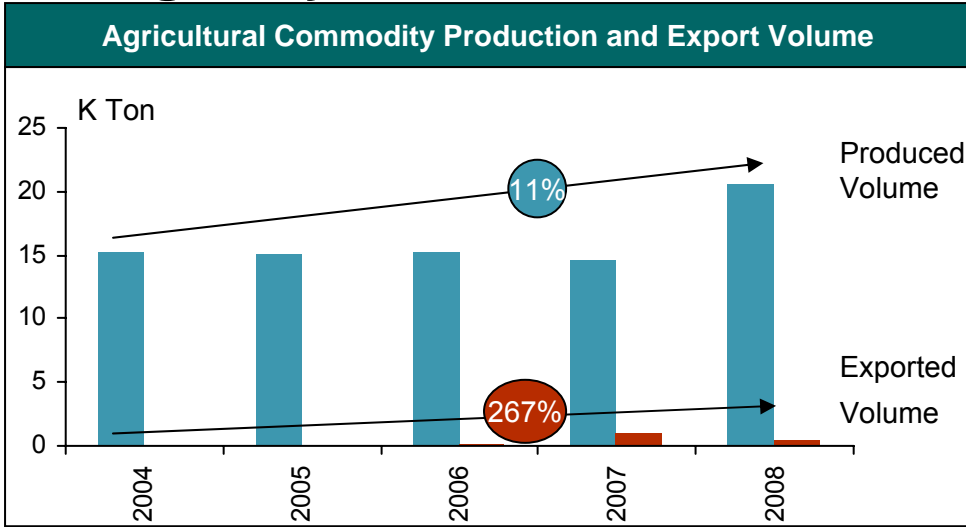


- ### Agricultural Commodity Comments
- ▶ Peppers are cultivated in 26 of the 30 municipalities** listed in the 2007 Household Survey
 - ▶ In 2008, over 51K tons of peppers were cultivated while only 2K tons were exported primarily to Serbia (62.6%) and Montenegro (27.7%) with the remaining volume sent to Albania (5%), Germany (2%), Macedonia (1.2%), Sweden (0.9%), Romania (0.6%), and Italy (0.005%)
 - ▶ Kosovo's yield is competitive with Italy
 - ▶ UK's FOB origin price is significantly higher than Kosovo's local market price

Note: (*)Peppers and chilies are grouped together for Croatia, Italy, Serbia, Spain and Macedonia, but not for Kosovo; (**) Surveyed Agriculture Offices in 30 Municipalities listed in the 2007 Household survey; United Kingdom FOB Origin from Turkey; Germany FOB Origin from Turkey
 Source: FAO STAT, Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study), Customs Office of Kosovo; HS070960 used for peppers
 Agriculture and Environment Statistics Output Price Index and Prices in Agriculture 2008, TradeMap; BAH Analysis



While tomato yields have been comparatively low, Kosovo's FOB origin price is much lower than Germany's, and marginally less than the United Kingdom



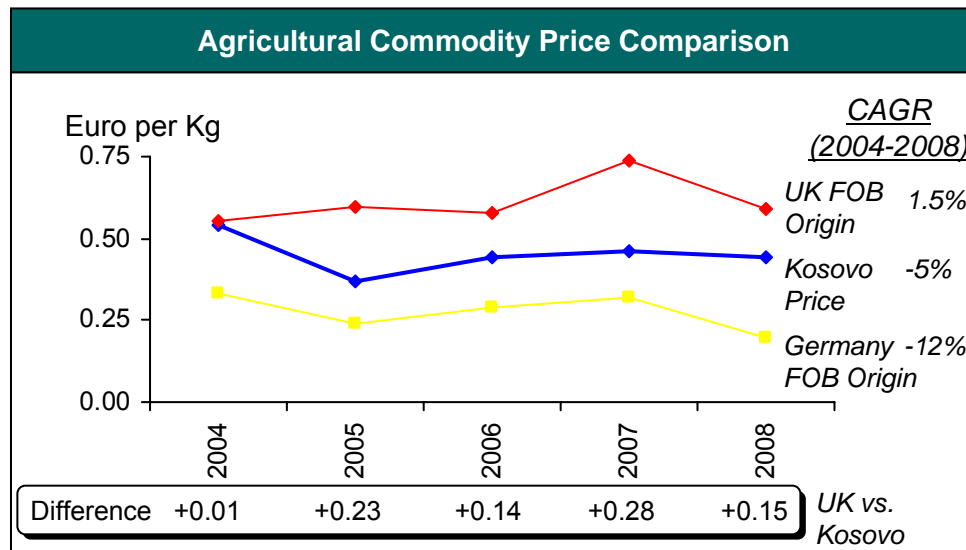
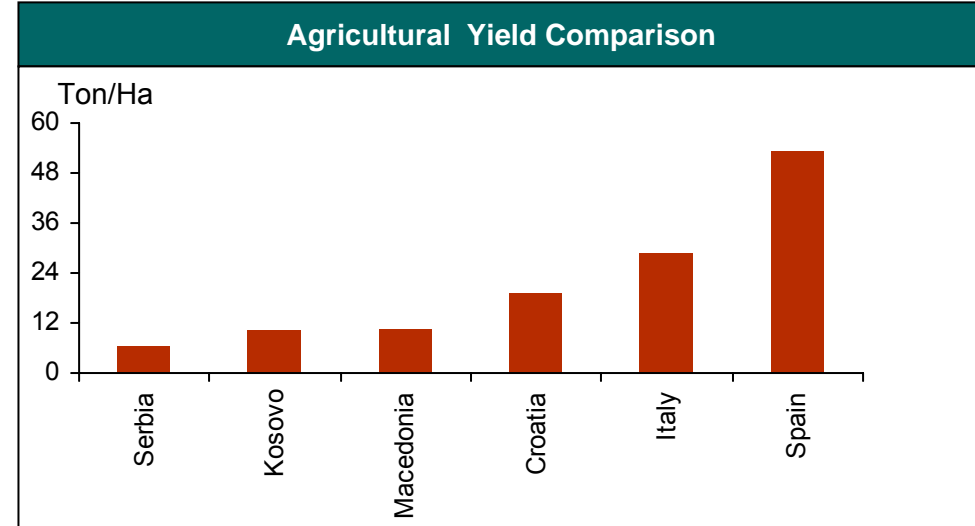
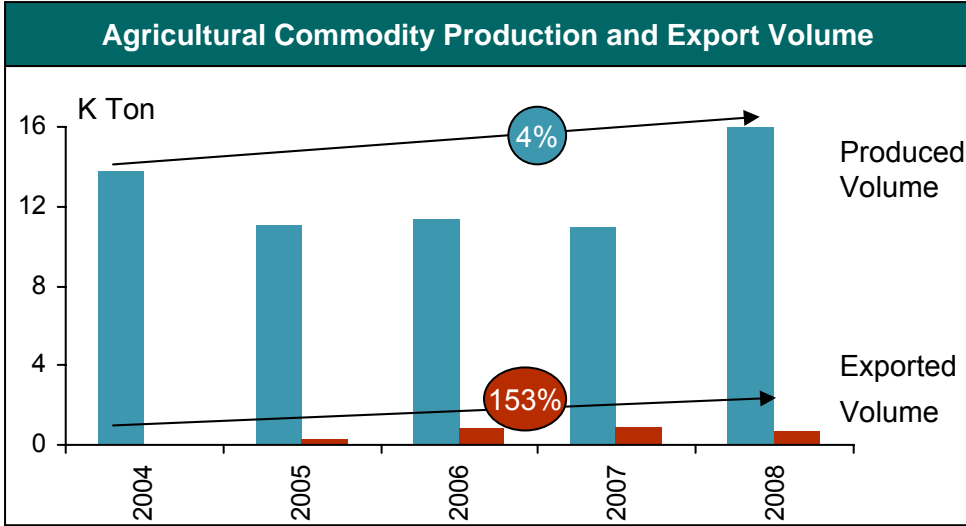
- ### Agricultural Commodity Comments
- ▶ Tomatoes are cultivated in 27 of the 30 municipalities*
 - ▶ In 2008, over 20K tons of tomatoes were cultivated while 500 tons were exported to Montenegro (62.5%), Bulgaria (14.8%), Albania (12.1%), Italy (4.4%), Macedonia (4%), Romania (1.8%), Serbia (0.4%), and Germany (0.01%)
 - ▶ Kosovo has a lower yield in comparison with other regional and best practice countries
 - ▶ Given Germany's higher FOB origin price, Kosovo could be competitive in select EU markets

Note: CAGR is calculated from 2005-2008; (*)Surveyed Agriculture Offices in 30 Municipalities listed in the 2007 Household survey; HS 070200 is used for tomato data; Germany FOB Origin from Turkey; United Kingdom FOB Origin from Turkey

Source: FAO STAT, Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study), Customs Office of Kosovo, Agriculture and Environment Statistics Output Price Index and Prices in Agriculture 2008, TradeMap; BAH Analysis



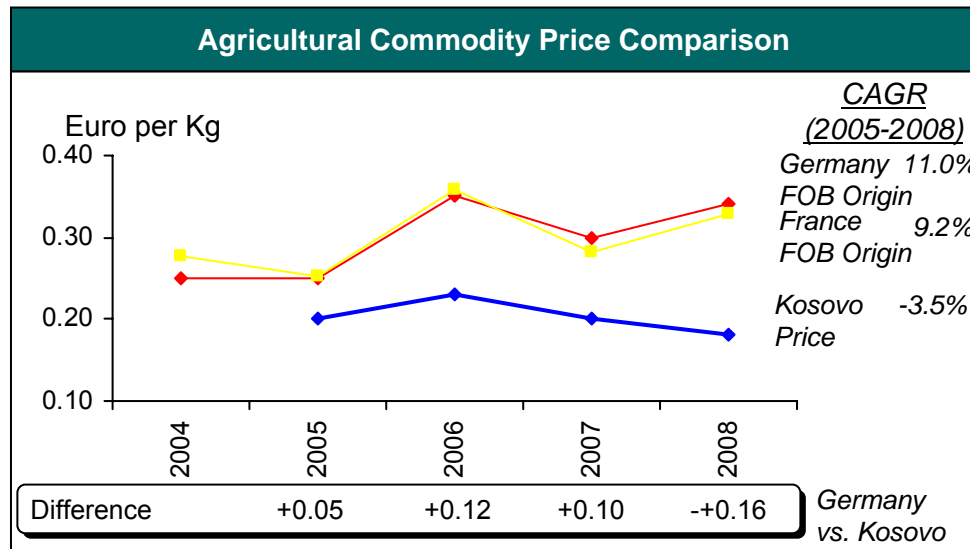
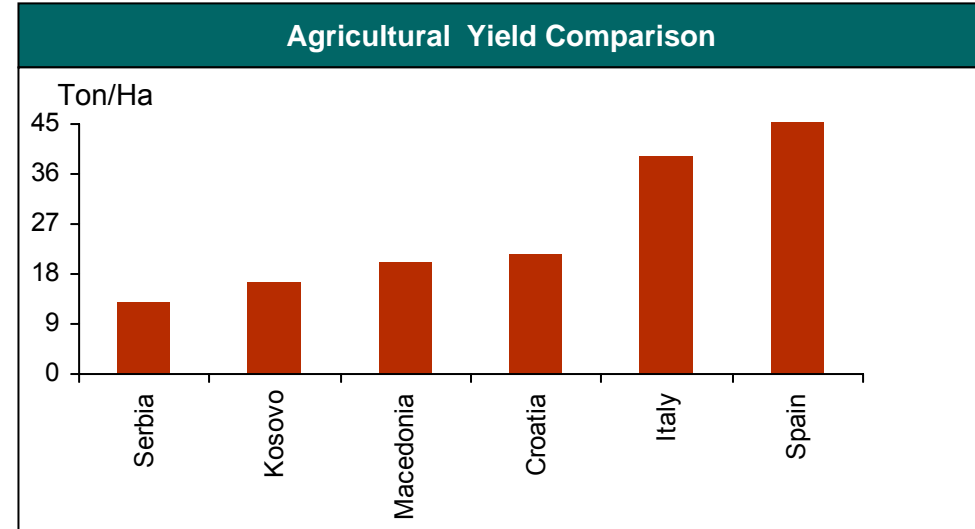
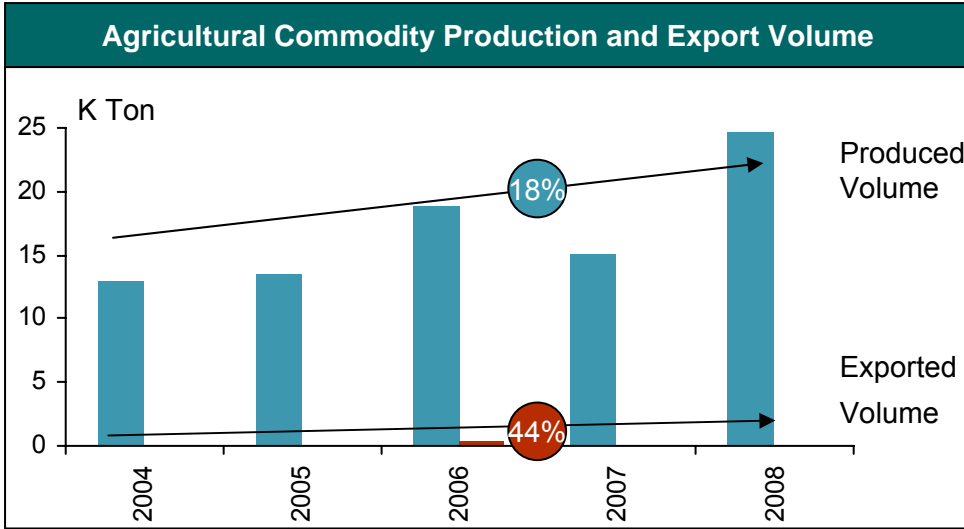
Kosovo's onion sector has experienced lower yields compared to benchmarks and maintains a higher FOB origin price than Germany



- ### Agricultural Commodity Comments
- ▶ Onions are grown in all municipalities* across Kosovo
 - ▶ In 2008, almost 16K tons of onions were cultivated while 740 tons were exported to Montenegro (67.4%), Albania (31%), and Romania (1.5%)
 - ▶ Kosovo has a lower yield in comparison with other regional and best practice countries
 - ▶ Kosovo's market price is similar to or higher than UK and Germany FOB origin prices, making Kosovo uncompetitive; Export growth has been focused primarily on local regional markets

Note: (*) Surveyed Agriculture Offices in 30 Municipalities listed in the 2007 Household survey; HS 070310 used for onion data; United Kingdom FOB Origin from Italy; Germany FOB Origin from Turkey
 Source: FAO STAT; Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study), Customs Office of Kosovo, Agriculture and Environment Statistics Output Price Index and Prices in Agriculture 2008, TradeMap

While watermelon producers have lower yields in Kosovo, FOB origin price is significantly less than Germany and France



- ### Agricultural Commodity Comments
- ▶ Watermelons are cultivated in 25 of the 30 municipalities*
 - ▶ In 2008, almost 25K tons of watermelons were cultivated while just under 45 tons of watermelons were exported to Montenegro (84.2%), Albania (15.7%), and Germany (0.1%)
 - ▶ Kosovo has a lower yield in comparison with other regional and best practice countries
 - ▶ German and France FOB origin prices have consistently been higher than Kosovo's local price

Note: CAGR for price is calculated from 2005-2008; (*)Surveyed Agriculture Offices in 30 Municipalities listed in the 2007 Household survey; HS080711 is used for watermelon data; Germany FOB Origin From Italy; France FOB Origin from Italy

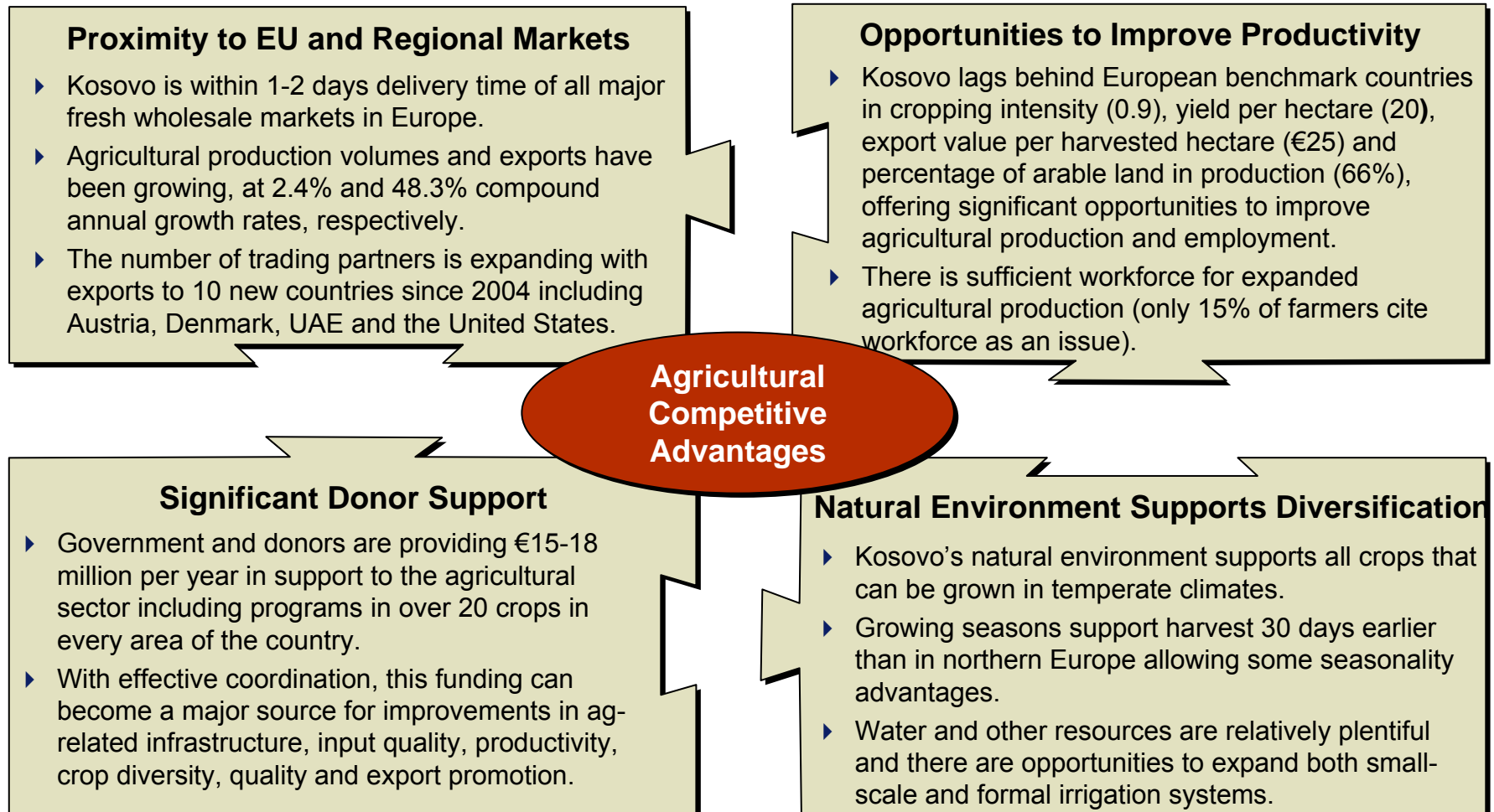
Source: FAO STAT, Statistics Office of Kosovo (2008 data from SoK is preliminary and was being finalized at the time of the study), Customs Office of Kosovo, Agriculture and Environment Statistics Output Price Index and Prices in Agriculture 2008, TradeMap

Table of Contents

- ▶ Overview of Deliverable
- ▶ Baseline Analysis of Agriculture Sector
 - Quantitative Baseline of Kosovo's Agriculture Sector
 - Overview of Constraints and Opportunities
 - International Best Practices Assessment
- ▶ Recommendations to Improve Kosovo's Agriculture Sector

Kosovo has a number of advantages that can be tapped to increase the total agricultural production in the country

Kosovo's Agricultural Competitive Advantages



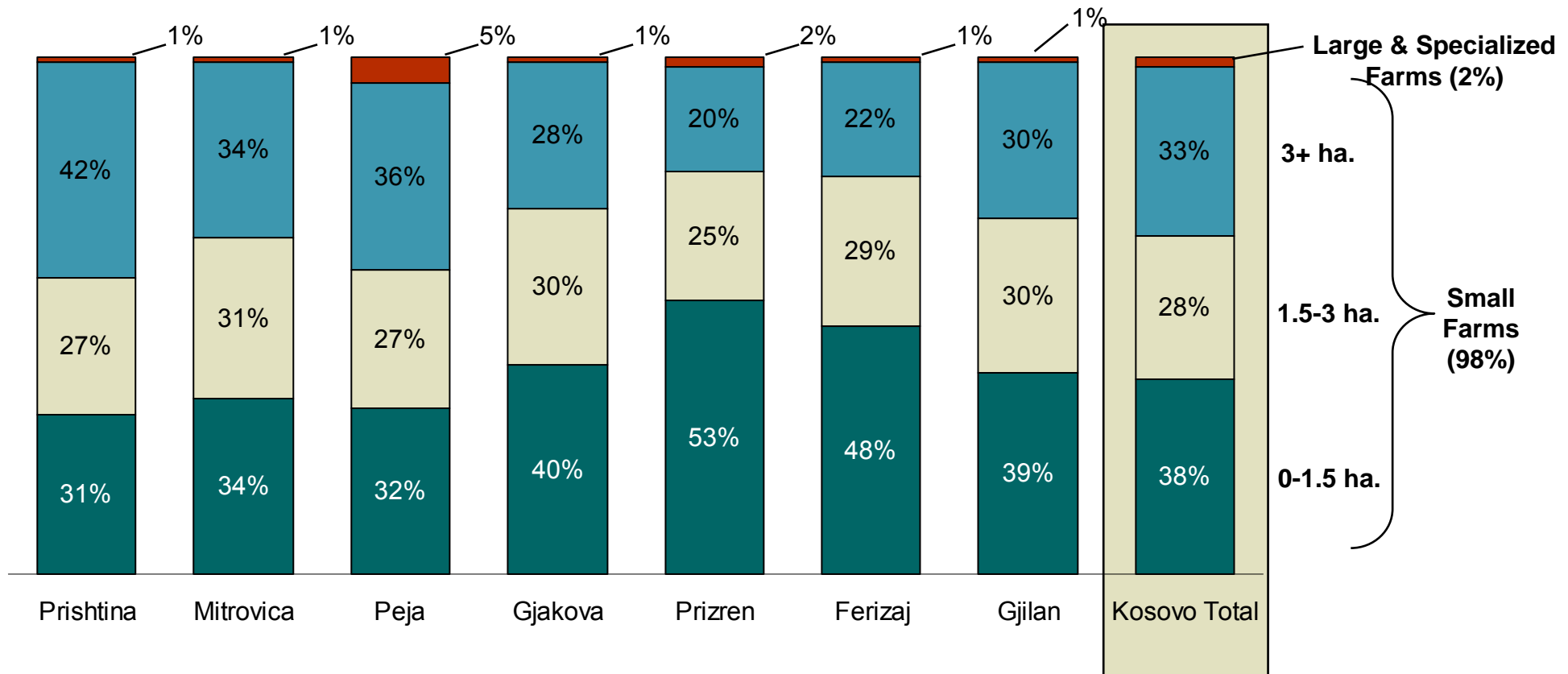
To effectively understand the challenges facing Kosovo's agriculture sector, a constraints analysis has been completed along six dimensions

Overview of Constraints



In Kosovo, small farms account for 98% of all agricultural land with the smallest farms, under 1.5 ha, accounting for 38%

Arable Land by Farm Size and Type
% of Area (2006)

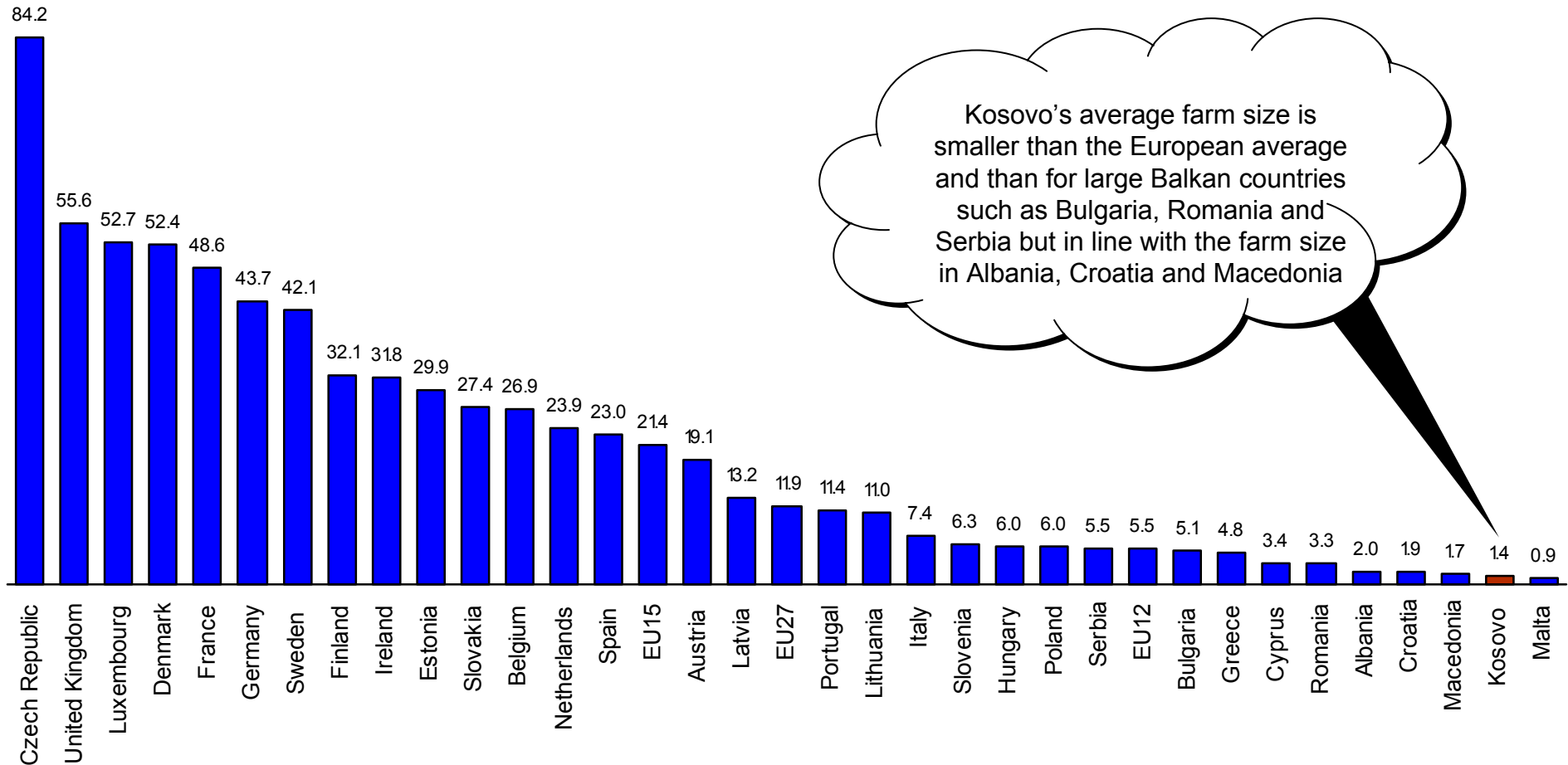


Sources : Statistical Agency of Kosovo (2006)

At 1.4 hectares, Kosovo's average farm size is among the smallest in Europe although several other countries in SEE also have small farm size

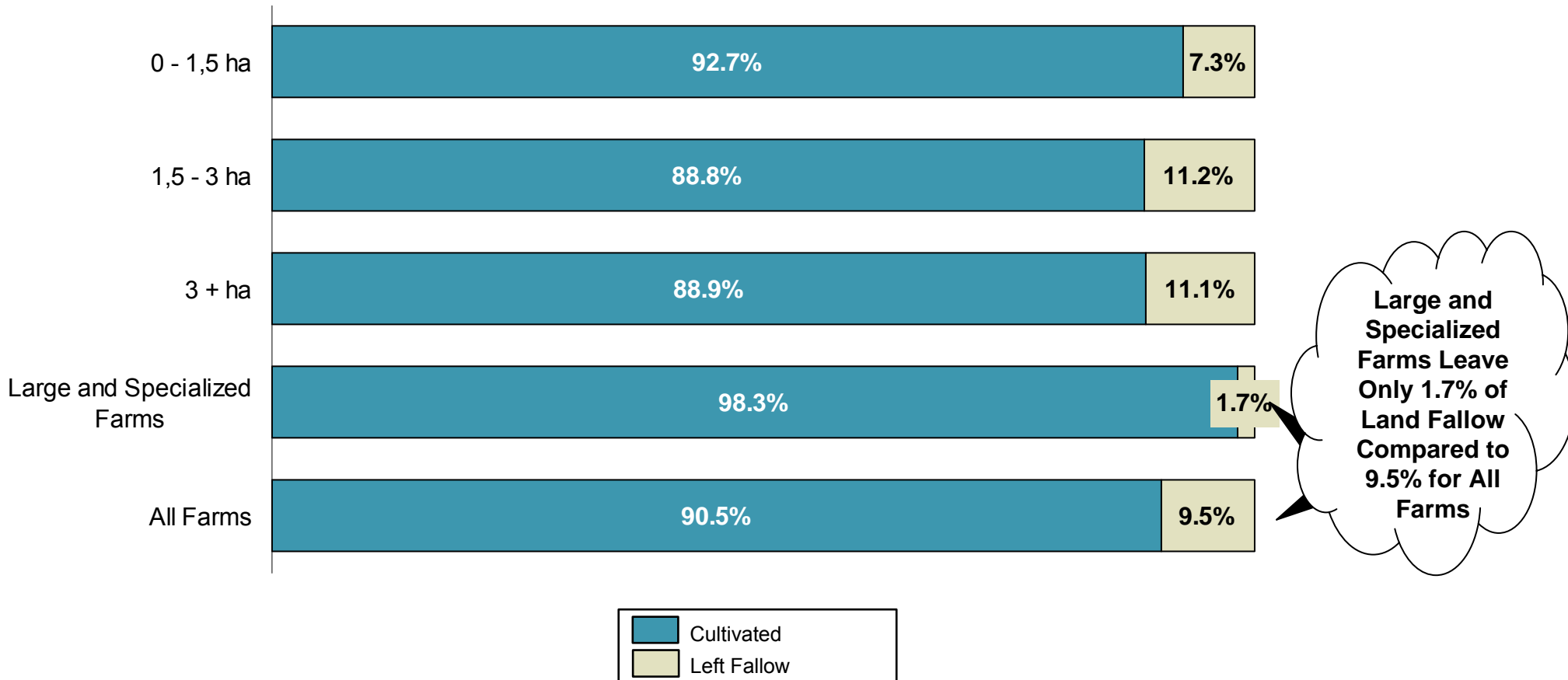
Average Farm Size By Country

Hectares (2003 for Croatia, 2005 for EU, 2006 for Kosovo, 2007 for Serbia, Macedonia and Albania)



Although there is some indication that large and specialized farms make better use of the land, leaving only 1.7% fallow compared to 9.5% for all farms ...

Cultivated Over Total Agricultural Land by Farm Size
% Based on Area (2006)



Sources : Statistical Agency of Kosovo (2006)

Note : Cultivated area includes arable, meadows, orchards and greenhouses. Left fallow includes pastures.

... there are several factors that would limit the feasibility and attractiveness of land consolidation

Obstacles to Consolidation of Agricultural Land

Subdivision of Land Between Family Members

- ▶ Land is traditionally willed to all surviving children. This has led to the division of land into progressively smaller plots, often with one farmer owning several non-contiguous plots. This fact complicates and adds costs to efforts to consolidate land.

Privatization of SOEs and POEs

- ▶ A significant amount of arable land belongs to socially- or publicly-owned enterprises that have not been definitively privatized. Much of this land is subject to claims by previous owners. In addition, much of the land is being farmed by smallholders without formal or indisputable title. Because of this status, sale or consolidation of land on socially-owned enterprises (SOEs) will be complex and time-consuming.

Title Issues Associated with IDPs

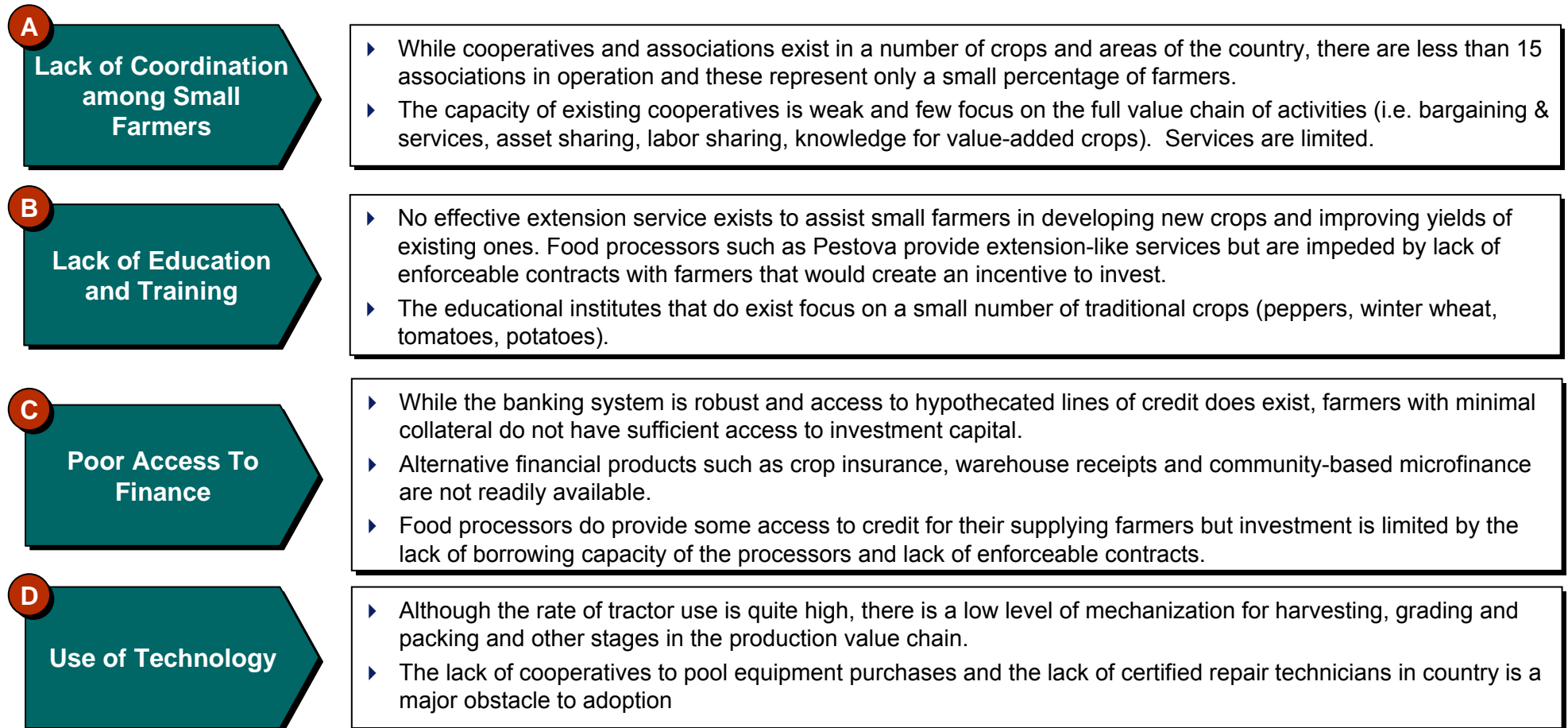
- ▶ Title to agricultural land held by IDPs creates significant complications to change of ownership, sale of land and consolidation. There is a significant amount of arable land that is not held under clear title because of disputes dating to 1999 and from the Yugoslav period. This includes claims by the Orthodox Church in Peja and Decani.

Employment and Rural Livelihoods

- ▶ While larger farm size unequivocally correlates with higher yields and productivity, sources including EuroStat indicate that smaller farms may actually produce more employment per hectare. This indicates that consolidation could exacerbate rural unemployment. In addition, a sense of food insecurity persists which lead families to value smallholder farms as an important safety net in case of instability.

Therefore, it is important for Kosovo's agricultural development to address obstacles in leveraging smallholder farmers

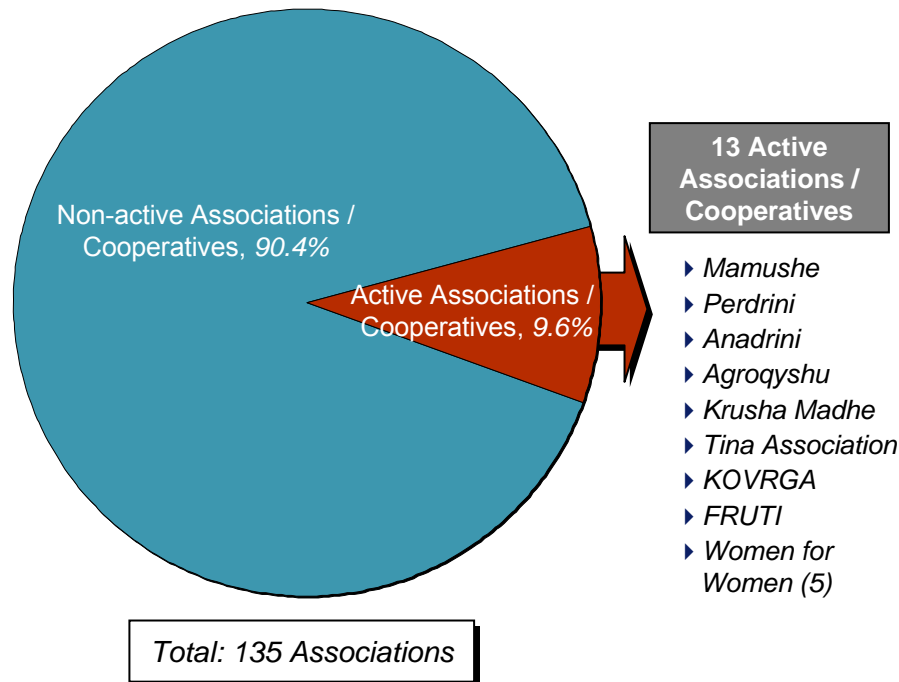
Challenges in Leveraging Kosovo's Small Growers Potential for Export



Approximately 9.6% of all associations and cooperatives in Kosovo are considered active...

Summary of Major Agricultural Cooperatives and Associations in Kosovo

Proportion of Active Associations / Cooperatives Operative in Kosovo

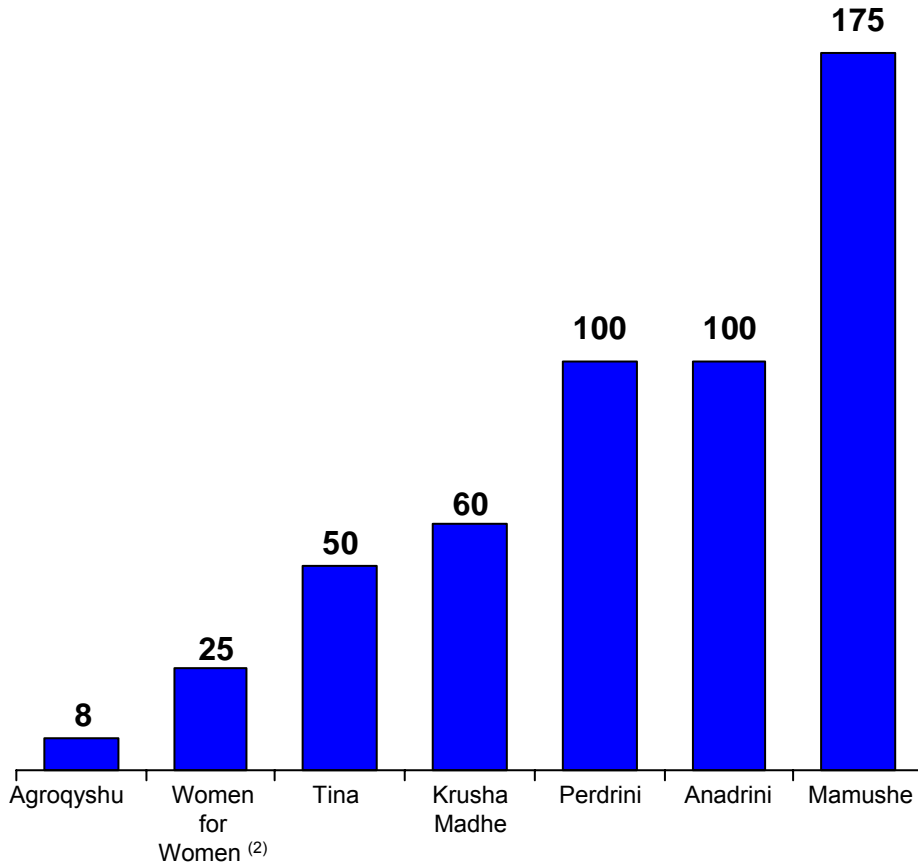


Comments
<ul style="list-style-type: none"> ▶ Only 9.6% of associations and cooperatives in Kosovo are considered active <ul style="list-style-type: none"> – Active associations and cooperatives are defined as entities that have shown a commitment to their members in marketing and that operate as businesses ▶ Historically, associations and cooperatives have not been popular for three main reasons <ul style="list-style-type: none"> – Dependence on the extended family for production relationships and support – Lack of trust in developing business ventures with other association and cooperative members – Producers have not placed as much emphasis on relationships with buyers; if the business model is driven more by attracting buyer attention, then there is greater ability to foster trust among members

... the active associations / cooperatives have varying levels of membership and do not complete many critical activities

Cooperatives in Kosovo By Function, Location and Crop

Number of Members in Active Associations / Cooperatives ⁽¹⁾ in Kosovo



Types of Activities Completed by Active Associations / Cooperatives in Kosovo

	Bargaining for Inputs	Labor Sharing	Asset Sharing	Expertise/ Extension	Crop Collection/ Marketing
Mamushe				✓	
Perdrini			✓	✓	✓
Anadrini				✓	✓
Agroqyshu				✓	
Krusha Madhe			✓	✓	
Tina Association				✓	✓
KOVRGA					✓
FRUTI					✓
Women for Women		✓	✓	✓	✓

■ Gap in Activities

Note (1) : Does not include membership figures for all active associations

Note (2) : Average number of members per cooperative

Source : BAH Analysis; KPEP

While a number of organizations are providing training and extension services in Kosovo, capacity is weak

Extension and Training Organizations in Kosovo

Public Sector

- ▶ **Structure:** The Ministry of Agriculture operates Extension Departments in each of the 33 municipalities, but capacity is limited and activities are focused primarily on data collection for statistical purposes. The Peja Institute manages test plots and conducts testing and limited production of seed for winter wheat, potatoes, peppers and maize. However, there is no effective publicly-funded extension.
- ▶ **Funding:** The Ministry of Agriculture has access to a programmable budget of €5-6M per year, which is primarily used for grants and price supports. In 2009, funds were allocated to purchases of apple rootstock, wheat seed and rehabilitation of irrigation systems and to support a subsidy of €50 per cow for farmers who own at least five cows.

Public-Private Partnership

- ▶ **Structure:** There are no true public-private partnerships involving the GoK and private parties for extension services. However, many of the donor projects function essentially in this way. As an example, Intercooperation has trained and certified 25 private agronomists and is subsidizing their cost to farmers. KPEP is supporting associations such as Perdrini which provide extension services.
- ▶ **Funding:** Intercooperation is cost-sharing payments to agronomists at a rate of 75% in 2009 and 50% in 2010. The cost is €50 per day. Clients include large farmers, associations and informal community organizations.

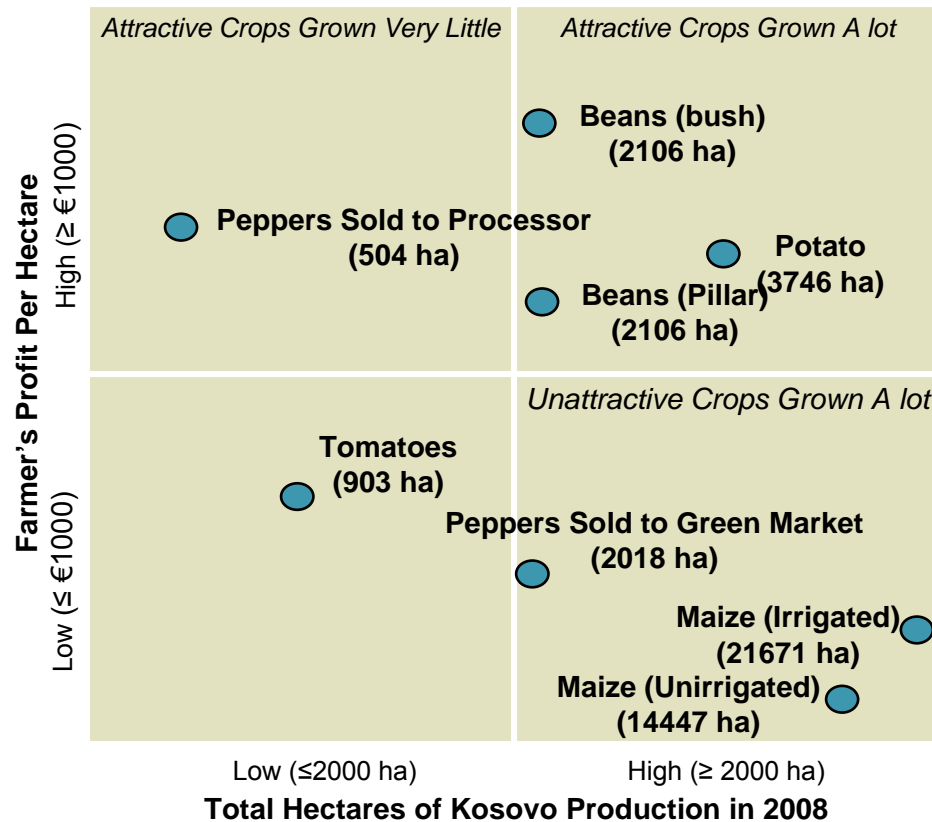
Private Sector

- ▶ **Structure:** Food processors and associations offer extension-like services to their supplying farmers. For example, Pestova provides advice to farmers on quality, varieties and ways to maximize yields in potatoes, Bylmeti works with dairy farmers to improve raw milk quality and animal nutrition.
- ▶ **Funding:** Processing companies typically provide extension services and inputs free of charge in exchange for commitments of product. Investment in these services is limited by the informal nature of the relationships. Associations provide services for a nominal membership fee (€10 per year) and for fees for marketing and sale of crops.

Without effective extension, a large area is dedicated to crops that are unprofitable, produced through poor methods or sold through poor channels

The Role of Extension in Helping Small Farmers Improve Choices and Techniques

Crop Profitability By Total Production






Comments
<ul style="list-style-type: none"> ▶ Kosovo farmers grow large quantities of low-profit crops (maize), make poor production choices (maize without irrigation, white beans on pillar) and choose less-profitable market channels (i.e. selling peppers in the green market rather than for processing) ▶ Extension services can help farmers select better crops, adopt better production techniques and sell through more profitable channels

Source : KPEP, Predrini, Agroqyushu, Mamusha Association; Statistics Office of Kosovo (Note: 2008 data from SoK is preliminary and was being finalized at the time of the study)
 Notes : % of production include horticulture and cereals only; Maize includes maize and mixed maize and beans includes beans and mixed beans
 Assume: 60% of maize is irrigated while 40% is not irrigated; 80% of peppers are sold to green market while 20% is sold to processors 50% of beans are bush while 50% are pillar

There are a number of organizations providing finance to farmers and food processors, but the types of instruments are limited

Financial Products Available to Farmers

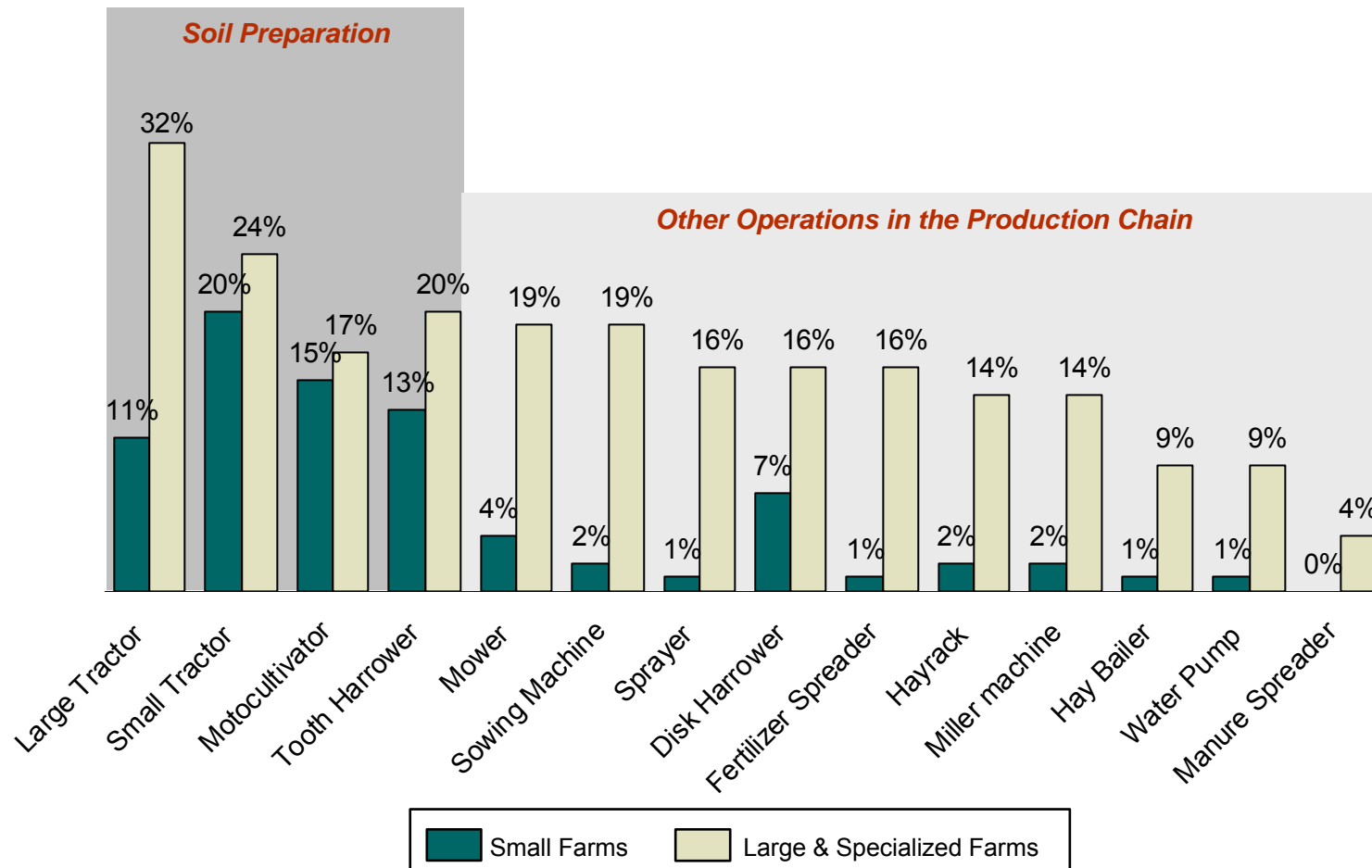
Agency	Product	Term	Suitability to Ag	Comments
Commercial Banks	<ul style="list-style-type: none"> ▶ Line of credit or term loan ▶ 12-14% with preferential rates as low as 9% (including to some ag processors) 	<ul style="list-style-type: none"> ▶ Term loans up to 5 years ▶ Lines of Credit up to 12 months revolving. ▶ Collateral requirements at 1.5 to 3+x loan value. 		<ul style="list-style-type: none"> ▶ Products offered are acceptable for processor and farm working capital needs. However, the revolving nature of loans requires clients to mortgage long-term assets for short-term financing. ▶ Because agriculture is not a target sector for the banks, loan officers do not focus on nor understand clients in the sector. ▶ The \$10M GDA was considered successful although only one bank (Raiffeisen) participated; although all the loans have been made under GDA, Raiffeisen will continue to lend without GDA guarantee
Microfinance	<ul style="list-style-type: none"> ▶ Generally priced on a monthly declining basis with annual rates at 24%+ 	<ul style="list-style-type: none"> ▶ With a few exceptions, under 12 months with some enterprise loans up to 60 months. ▶ Collateral requirements vary - lending on references is common. 		<ul style="list-style-type: none"> ▶ Competition is high in urban and peri-urban areas, less so in villages, with Kosinvest more focused on rural clients than others. ▶ Beginning in 2010, MFIs will be allowed to take deposits, possibly lowering cost of capital and interest rates.
Purchase Order Financing	<ul style="list-style-type: none"> ▶ Purchase order financing ▶ On par with bank interest rates. 	<ul style="list-style-type: none"> ▶ Less than a year. POF is a working capital instrument 		<ul style="list-style-type: none"> ▶ Although not a good instrument for smallholders, it is well-suited for processors and exporters. ▶ Initial CFF capital was only \$1.5M and is fully committed. New loans are based now on reflows. Lendable market estimated at \$20M+.
Leasing	<ul style="list-style-type: none"> ▶ Variable rates and terms. Nascent 	<ul style="list-style-type: none"> ▶ Around current lending rates 	High Potential	<ul style="list-style-type: none"> ▶ Two companies are registered for leasing - Raiffeisen Leasing and CFF - but neither are active yet except in vehicle leasing. ▶ There would appear to be a significant market in agriculture for leasing of tractors and motocultivators (close to 80k units).

Conclusions

- ▶ The financial sector must serve both the smallholder farmer directly as well as the processor or distributor to which he / she sells
- ▶ The current mix of financial products does not serve either segment well because of lack of focus on the sector, relatively short-terms and high collateral requirements. There is an opportunity for alternative products

The overall amount of mechanization is high although small farmers primarily use machinery for soil preparation

Mechanization by Type of Equipment and Size and Type of Farm
% – 2006

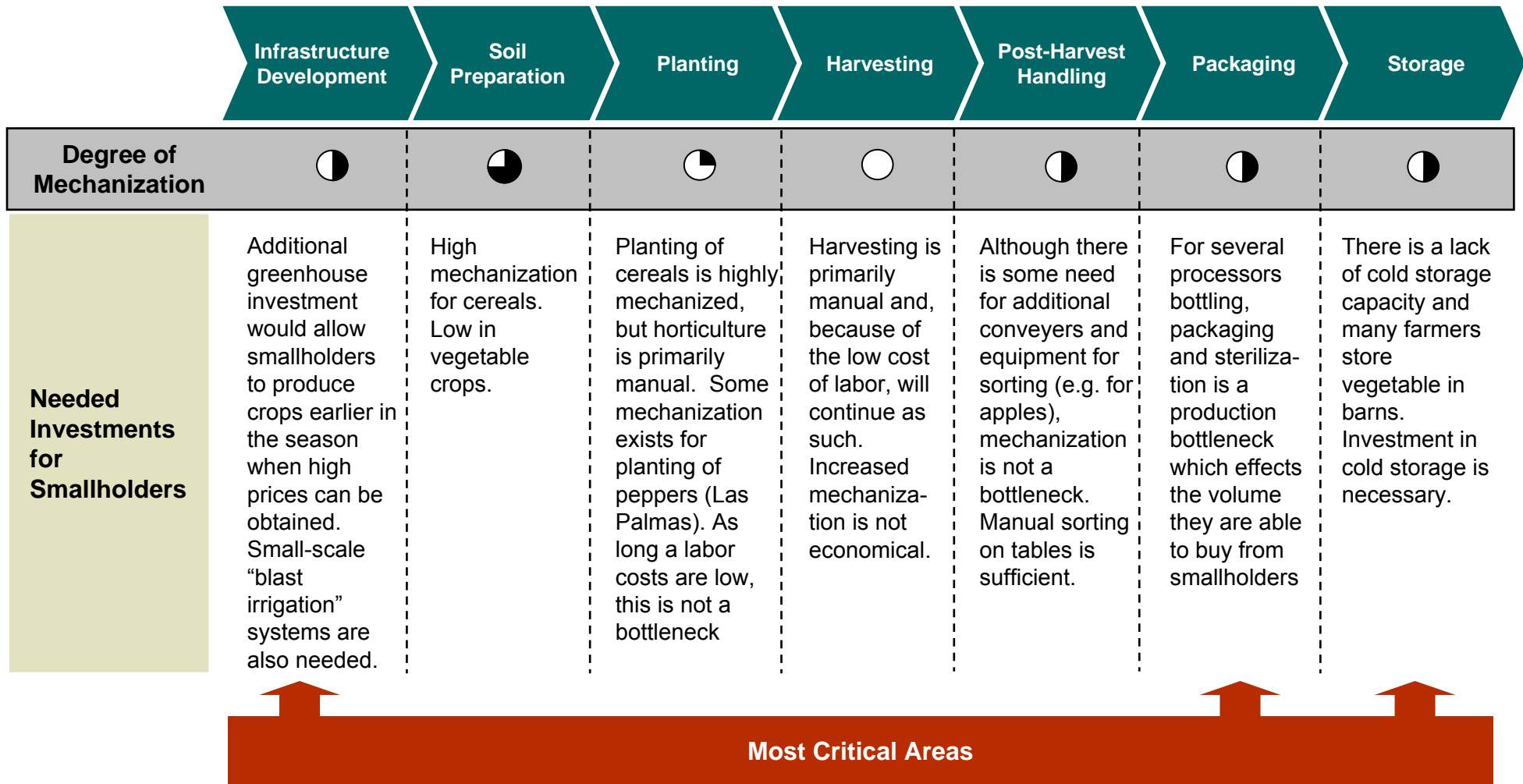


Sources: Statistical Agency of Kosovo (2006)

Note: Data was provided in total numbers. We have estimated a total of 257k small farmers and 276 large and specialized farms based on other land use data in order to calculate percentages. Motocultivators include motocultivators and all categories of "related equipment". Large tractor is defined as over 40hp.

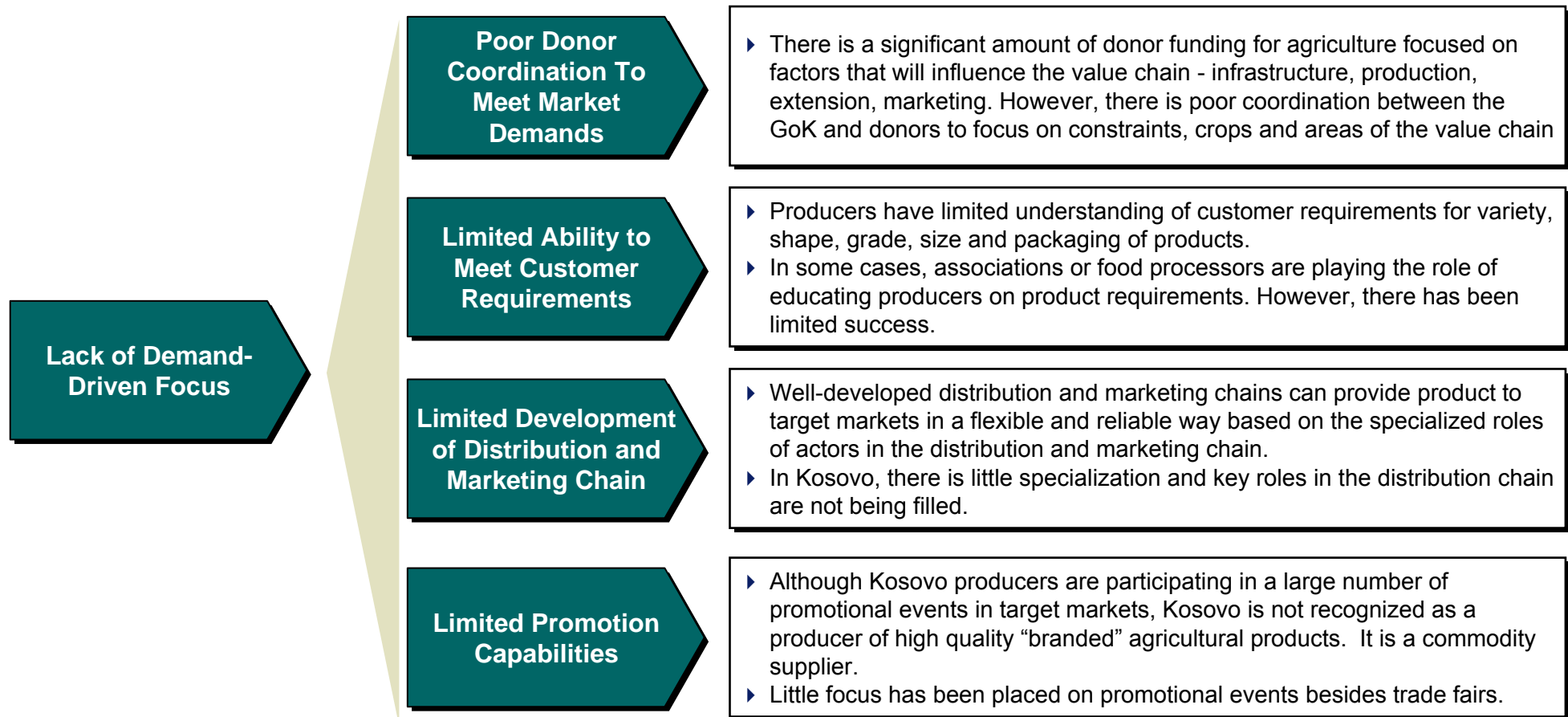
Although many of the production steps will not benefit from mechanization because of the low cost of labor, improvements in several area are critical

Degree of Small Farmer Mechanization Across the Production Chain



There are a number of obstacles to developing a demand-driven focus in agriculture that will maximize the value of production, employment and benefits to farmers

Demand-Driven Strategy Obstacles



Donor support for agriculture is €15-18M per year although coordination between donors and with the GoK is weak

Selected Data on Donor Programs- Estimated Funding in €(Annualized - 2009)

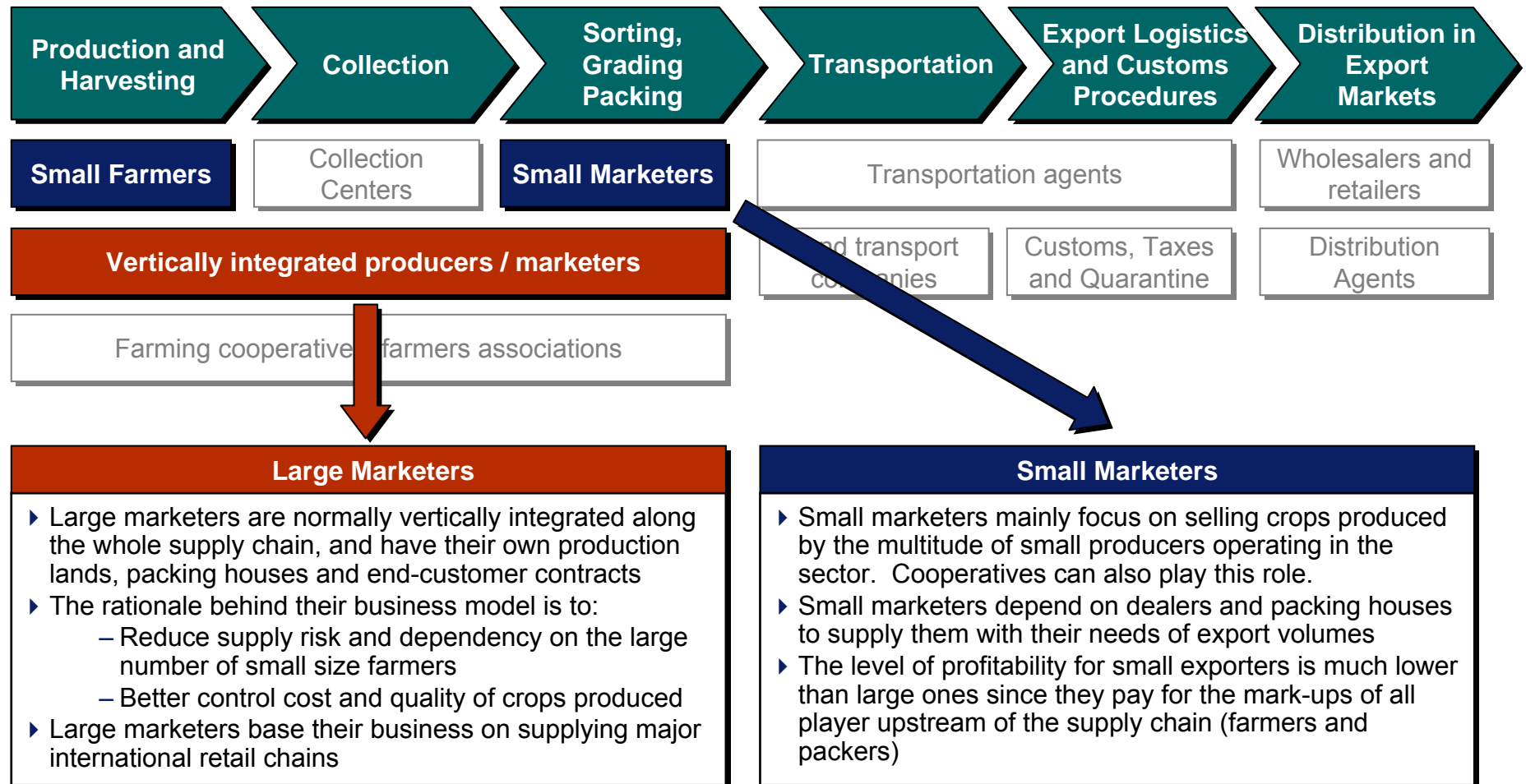
Donor	Funding for Agriculture	Current Focus Areas	Planned Future Focus Areas
European Commission	<ul style="list-style-type: none"> ▶ €65M from 1999-2009 or c. €7M per year 	<ul style="list-style-type: none"> ▶ Institutional Support for MAFRD (Austria, Slovenia, Hungary) ▶ Meeting EU standards on Food Safety and Veterinary Services (Germany and Lithuania) 	<ul style="list-style-type: none"> ▶ Establishing farm register value (€1M) ▶ Land Use €1.5M ▶ Forestry Value TBD ▶ Support for Disease Control €1.5M ▶ Animal Registration €1.5 Million; ▶ Rural Grants in support of Dairy and Fruit & Vegetable Processing €5M
USAID	<ul style="list-style-type: none"> ▶ Annual support estimated at c. €2-3M per year including KPEP (€2.9M Euros per year total value), DCA and other 	<ul style="list-style-type: none"> ▶ Support for dairy, non-wood forest products and fruit & vegetables through KPEP ▶ Develop Credit Authority (DCA) supporting access to finance ⁽¹⁾ 	<ul style="list-style-type: none"> ▶ Development of strategy in progress
World Bank	<ul style="list-style-type: none"> ▶ Annual support estimated at €4-5M per year (loans and TA) including the Cadastre program and the WB-funded MAFRD grants program 	<ul style="list-style-type: none"> ▶ Cadastre Development Program (\$12M/4-year) ▶ Support for the MAFRD Grants Program - \$10M total; €3M dispensed in 2009 for producer supports, purchase of apple root stock, irrigation 	<ul style="list-style-type: none"> ▶ Country Economic Memorandum (CEM) in development. Will allocate \$10-15M from July 2010-July 2013. Areas of focus <ul style="list-style-type: none"> – Improving Public Sector Extension – Improving MAFRD Finance & Budgeting – Supporting Alignment with EU Standards ▶ IBRD support for irrigation possible
European Bilaterals	<ul style="list-style-type: none"> ▶ Annual support estimated at €2-3M 	<ul style="list-style-type: none"> ▶ Intercooperation (€1M p.a.) focused on fruit, veg, MAP ▶ GTZ (€300K) focused on medicinal and aromatic plants ▶ Several Italian funded ag programs ▶ Turkish funding for cold storage capacity in Mamushe 	<ul style="list-style-type: none"> ▶ Not known

Note (1) : DCA program is fully subscribed and no longer lending

Sources: Interviews

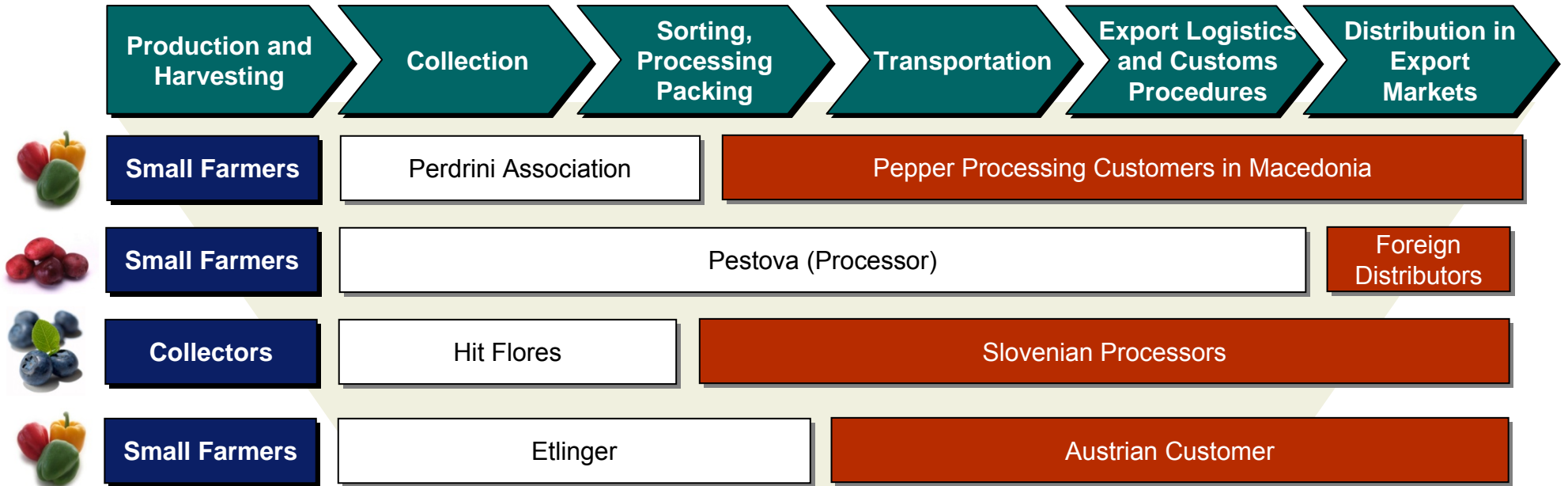
In a well-developed agricultural system, both large and small producers fit within a marketing chain that brings goods to market

Well-Development Marketing Chain




The distribution system in Kosovo lacks specialized intermediaries in the value chain and non-Kosovo customers perform key roles

Marketing Chain in Kosovo



Comments

- ▶ For the majority of export products, the exporter works directly with small producers and do not benefit from vertically integrated production or from a cooperative or intermediary who can perform intermediary steps in the marketing chain.
- ▶ In addition, most exporters rely on foreign customers for critical steps in the marketing chain including final packaging, processing, transportation and sale to distributors and retailers. This both reduces the margins of exporters and makes them dependant on customers with knowledge of the end market.

 Roles performed by foreign customer

Improvements in demand chains have floundered on lack of trust, a “transactional mentality” and a lack of incentives

An Example of Compliance with Customer Requirements

Sale of Peppers to Macedonian Processors

- ▶ **Customer Requirements:** Macedonian processors in Bitola have been purchasing peppers from Kosovo since 2008. There are specific requirements for variety, size (over 30cm), shape (straight) and color (red).
- ▶ **Intermediaries:** Perdrini has participated as an intermediary working with farmers to collect produce that meets the customer specifics. Perdrini has also helped farmers grow the correct varieties.
- ▶ **Problems:** Farmers intentionally try to “game” the system by packing peppers that do not comply with requirements on the bottoms of boxes. Perdrini does not receive a fee for services to incent continued investment and there is no contractual relationship between the farmer and Perdrini or Perdrini and the processor. However, as the third year of the relationship begins, farmer responsiveness to customer requirements is improving.

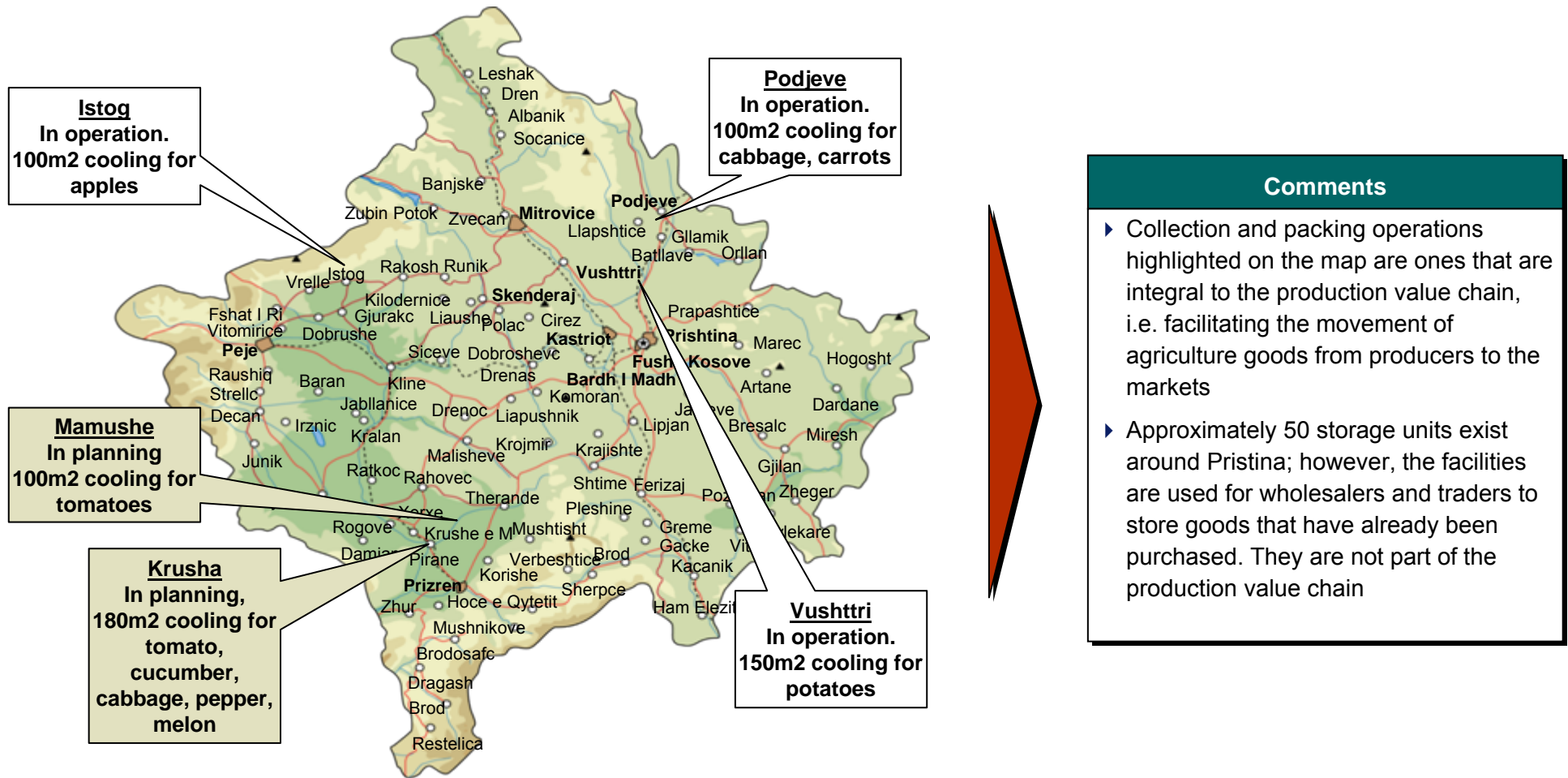
General Issues

- 1 **Lack of trust.** Because farmers do not value the relationship with the customer, they are prepared to game the system to increase volume in the short-term at the expense of the long-term relationship.
- 2 **Lack of knowledge of customer requirements.** Unless an intermediary (such as Perdrini) educates farmers on requirements, there is limited knowledge and ability to meet these requirements.
- 3 **Lack of enforceable contracts.** In most cases, there is no contract between the intermediary (or buyer) and the farmer such that investments in inputs and training cannot always be recouped. This limits the willingness of intermediaries and buyers to invest in helping smallholders understand and meet requirements.
- 4 **Lack of incentives.** In Kosovo, virtually all intermediaries are associations rather than cooperatives. Associations are not able to buy and sell products and, therefore, have no material incentive in expending volumes.



There are a limited number of packhouses and storage businesses in Kosovo although more are in the planning stage

Selected Packhouses and Cold Storage Facilities in Operating and in Planning

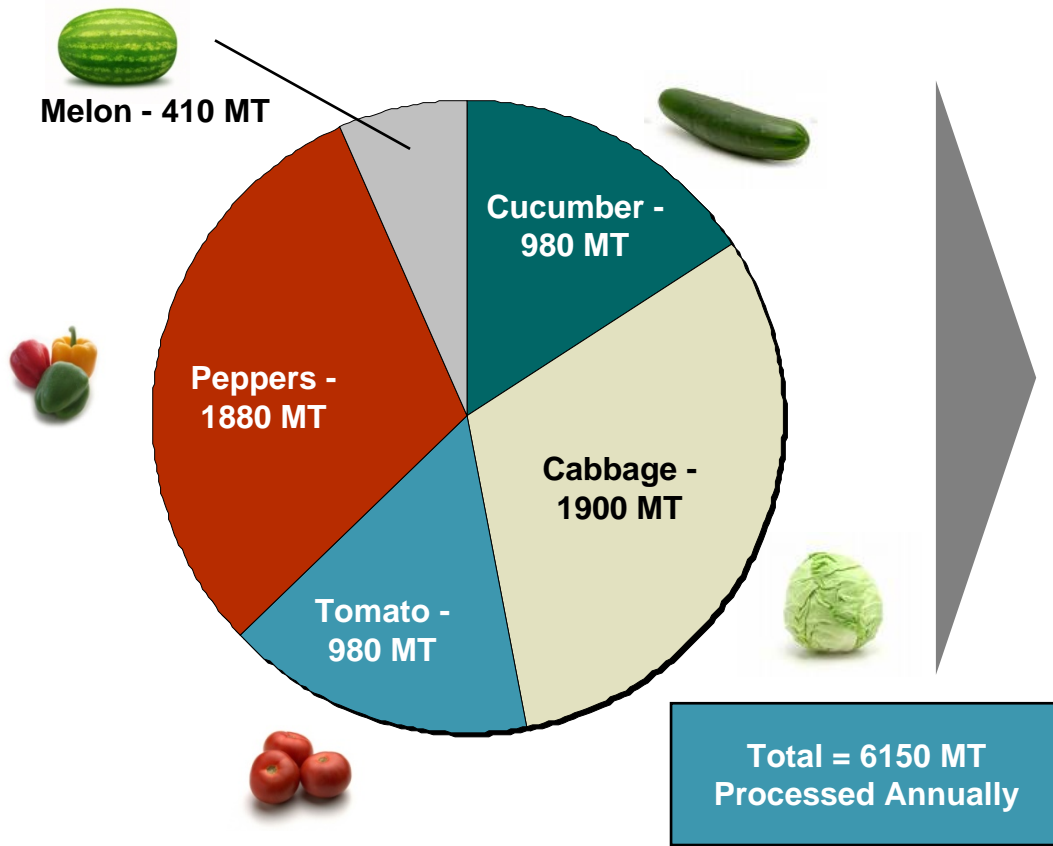


Comments
<ul style="list-style-type: none"> Collection and packing operations highlighted on the map are ones that are integral to the production value chain, i.e. facilitating the movement of agriculture goods from producers to the markets Approximately 50 storage units exist around Pristina; however, the facilities are used for wholesalers and traders to store goods that have already been purchased. They are not part of the production value chain

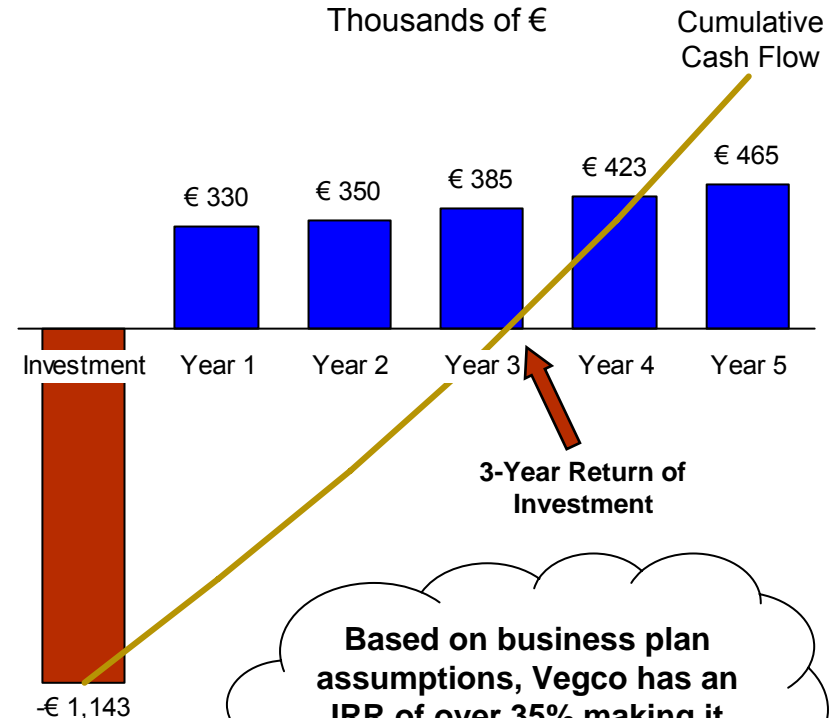
Despite this, packhouses can be profitable and should be attractive for private investment

Data from the Business Plan for a Proposed Packhouse Business in Peja Called "Vegco"

Annual Purchases by Commodity
Metric Ton



Cash Flow Per Year
Thousands of €



Based on business plan assumptions, Vegco has an IRR of over 35% making it potentially a very attractive investment

Sources : KPEP, BAH Analysis

Notes : IRR = Internal Rate of Return, which is a calculation of the overall return of the investment.

Improvements in this area will be necessary to satisfy customer demands for quality and predictable, flexible and reliable delivery

Product and Service Requirements of Agriculture Commodities Importers

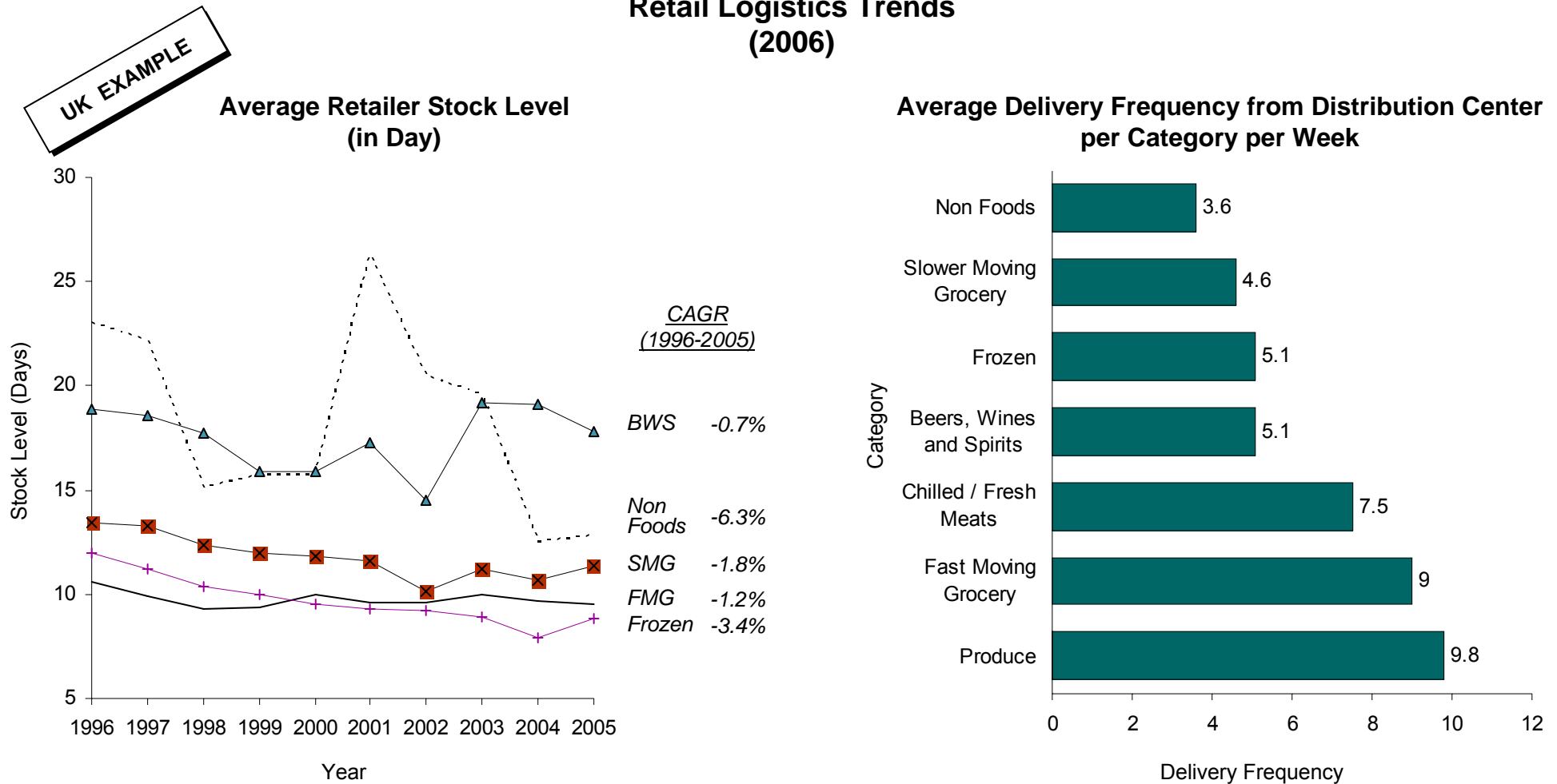
High Quality Product

- ▶ Retailers are increasingly requiring high quality products by imposing certain certification standards (e.g., GlobalGAP, BRC, HAACP, IFS standards)
- ▶ Kosovo is handicapped by the lack of standards compliance of producers and private labs and by lack of compliance of GoK institutions with EU standards.

Predictable, Flexible and Reliable Service Delivery

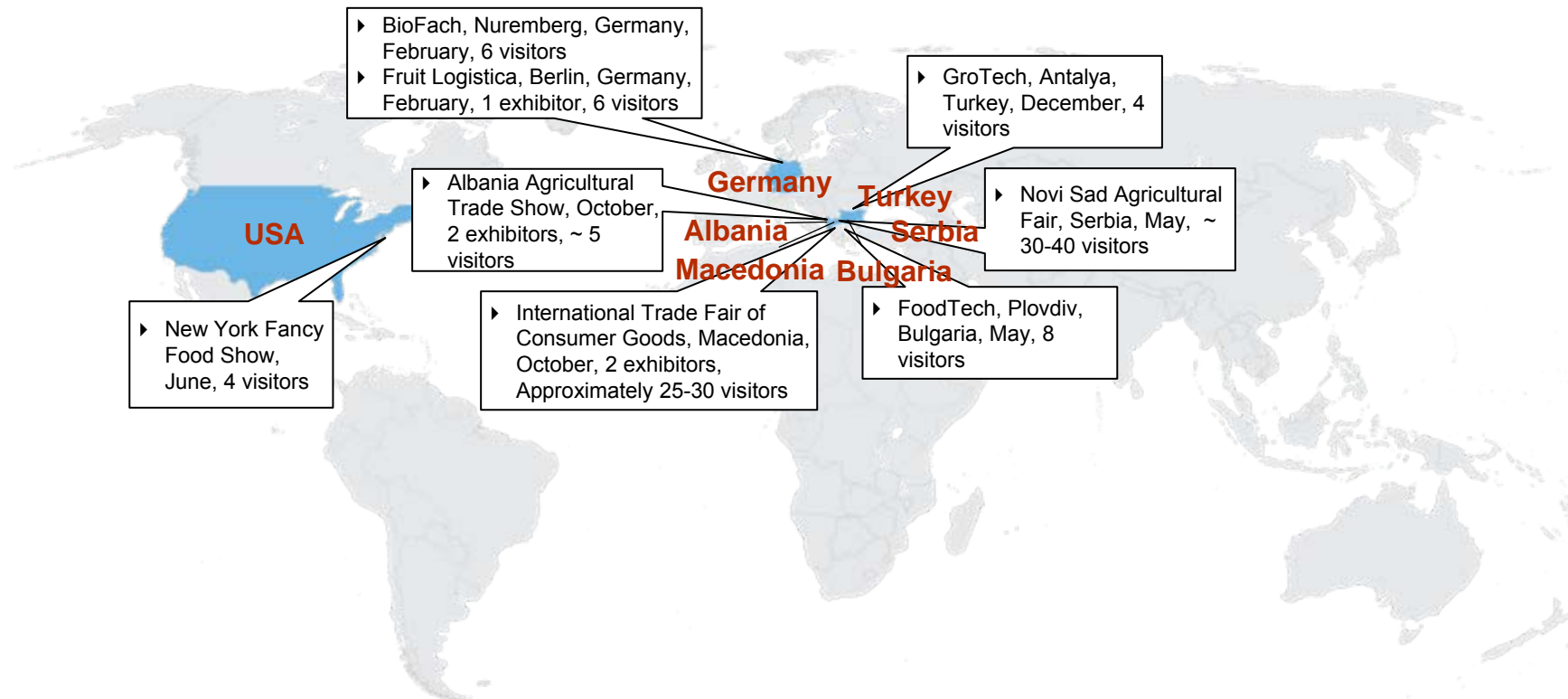
- ▶ **Predictability:** Whereas the demand is variable, irregular, and changes from one day to another, retailers expect that their changing requirements would be predicted by their suppliers
- ▶ **Flexibility:** The retailers prefer not to commit to purchase specific quantities. Retailers such as Carrefour try to order the agriculture crops that they need few days in advance
- ▶ **Reliability:** On-shelf availability is one of the top priority for retailers. Retailers are very sensitive about time. They want to track the status of their crop order, and to make sure that delivery would be on-time

As an example, food produce retailers in the UK are reducing their inventory stock levels and as such require more flexible and frequent deliveries from their suppliers



In 2009, Kosovo producers were represented at approximately eight trade events, primarily as visitors

Kosovo's Trade Show Participation Around the World (2009)



Conclusion

- ▶ Kosovo producers participated in approximately eight trade shows around the world in 2009. Participants attended the fairs either as visitors to learn about the market, competition and commodities, and / or as producers to display their goods
- ▶ The major constraint in the attendance rate is that food processors need to be HACCP certified as a minimum to do business in countries abroad

With few exceptions, Kosovo producers have not managed to promote their products, which are perceived as commodities with poor quality

Promotion Issues Impacting Kosovo Agriculture Production

Weak Branding

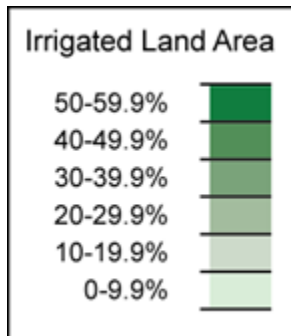
- ▶ Kosovo agriculture exporters are positioning their products on the lowest rung of the supply chain and are used primarily to fill seasonal demand in neighboring markets when domestic products are unavailable.
- ▶ With the exception of Pestova and a few other processors, no exporters have recognized brands and, in fact, products are often relabeled or re-packaged before being shipped to the retailer.
- ▶ Agriculture producers do not brand fresh or processed products as “Made in Kosovo” even in markets (e.g.. US, UK, Albania, Germany) where such branding would be well-received.
- ▶ Agriculture producers are not leveraging Fair Trade trends. They are not associating their products to the natural heritage of specific regions, and not emphasizing the role of small farmers in producing the crop. In addition, few producers are taking advantage of organic, halal or other value-added branding.

Limited Promotion Campaigns

- ▶ There are a relatively large number of export promotion events organized annually to promote exports of field and horticultural crops, mainly handled by donor agencies. However, these events are not executed as part of a clear multi-year campaign to develop specific markets for specific Kosovo products and overall measurement of results from trade programs is weak.
- ▶ There is very little focus on other types of marketing programs that can be both low-cost and highly effective such as “earned media”, advertising and direct marketing to retailers and buyers in target markets.

Overall 17.4% of agricultural land is irrigated with significant differences by municipality

Percent of Irrigated Land by Region
(% of Arable Land - 2007)

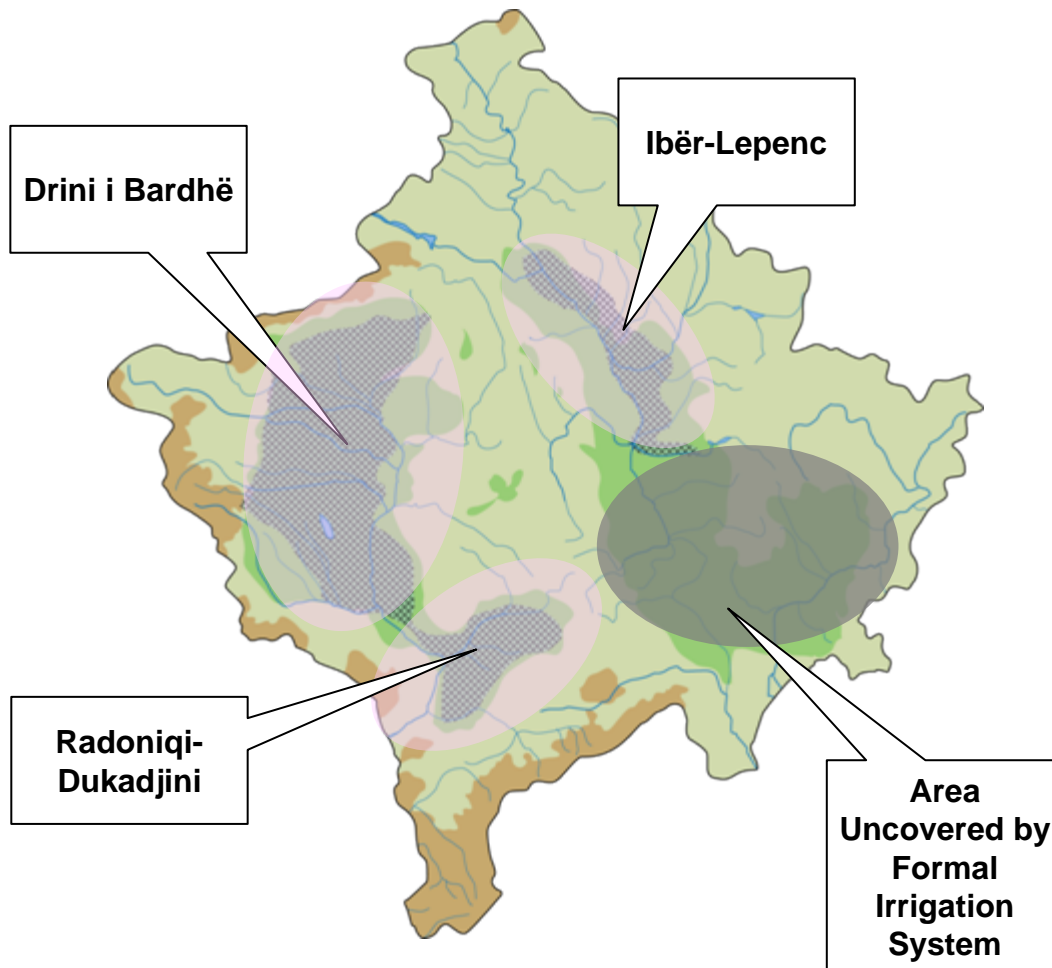


Comments

- ▶ Municipalities like Shtërpca and Zveçani show a high percentage of irrigation because of the relatively small amount of arable land (1168 and 801 ha respectively) and the use of informal pump-based systems.
- ▶ Gjilani, Ferizai and Vitia are also served primarily by informal systems

Three formal irrigation systems cover most of Dukagjini and northern Kosovo-Plains but leave the southeast uncovered

Areas Covered by Formal Irrigation Systems
(2009)

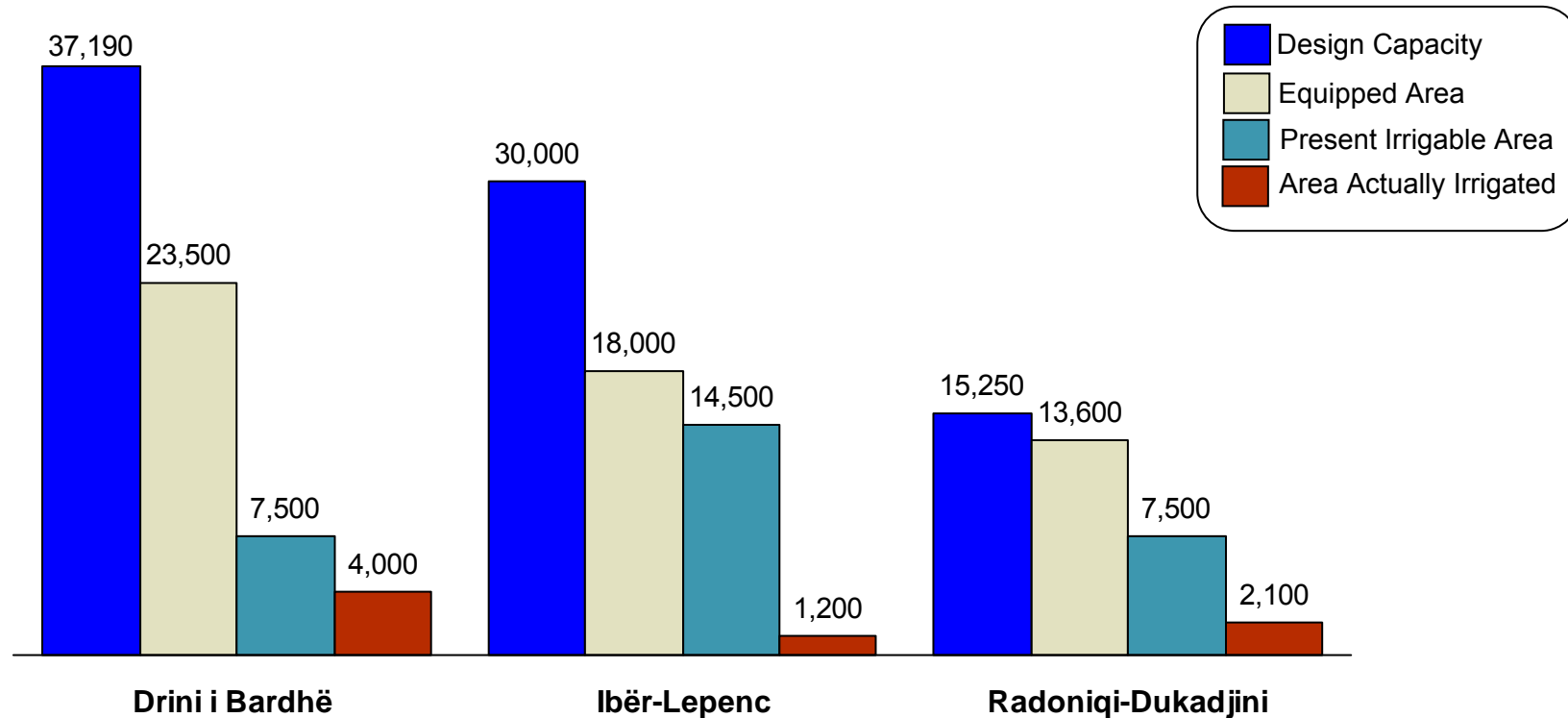


Comments

- ▶ **Ibër-Lepenc** is a sprinkler system supplied by the Gazivode reservoir (Iber River) via the 54 km Pridvorica-Obiliq canal. Although it had an original designed capacity of 30,000ha, less than 1200ha are currently irrigated. At the time of its design, a phase two covering 43,000 ha in southern Kosovo Plains and the Vitina Plain was planned but not completed.
- ▶ **Radoniqi-Dukadajini** consists of two systems. The Radoniqi system (Gjakova) is a sprinkler system built in 1986 with a designed capacity of 10,250 ha and a current irrigated area of 5000 ha. The Dukadajini system (Prizren) is an open channel system built in 1963. Although 3500ha was originally covered by sprinklers, almost 75% has been lost to creeping urbanization.
- ▶ **Drini i Bardhë** was formed from the 2003 consolidation of the three irrigation companies of Peja, Deçani and Istog municipalities. It is an open channel system built in the 1950s. It is considered inefficient and poorly maintained and suffers shortages in July and August.

All of the formal systems are operating below installed capacity due to deferred maintenance and lack of demand

Capacity of Formal Irrigation Systems
(2009 with some 2004 data)

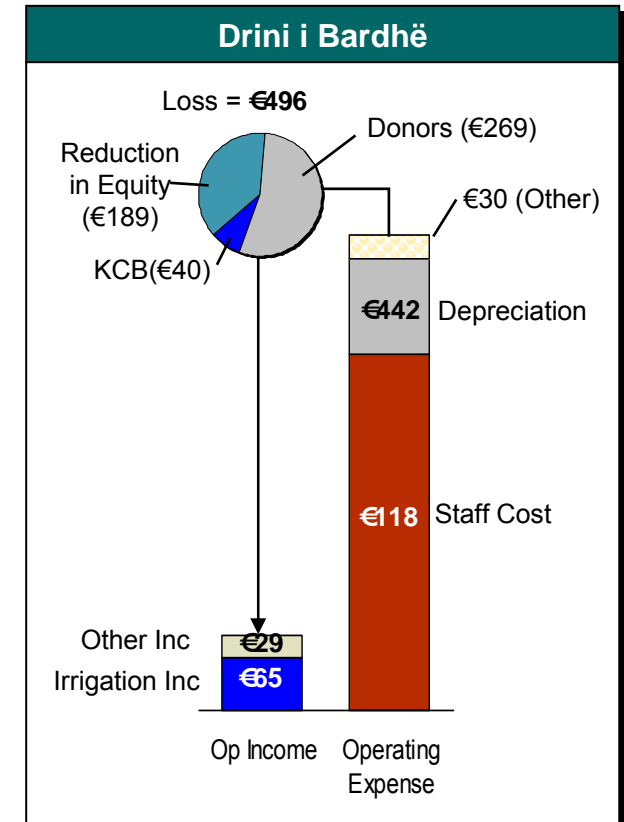
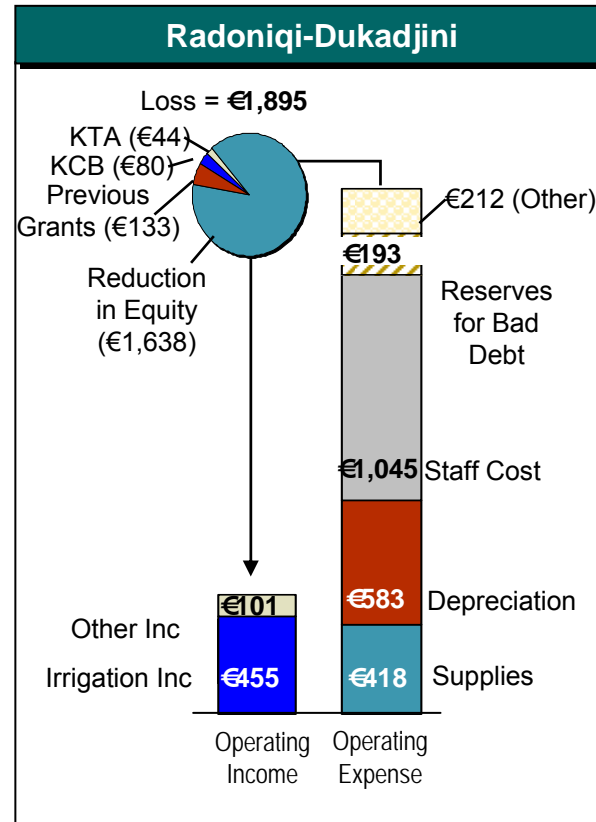
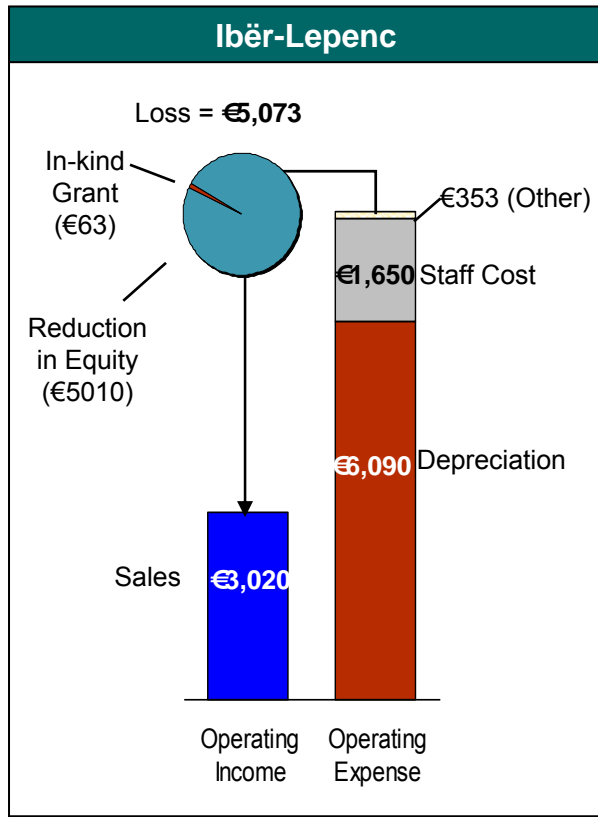


Sources: MESP Irrigation Strategy (2009), World Bank, Interviews

Notes : Ibër-Lepenc Irrigable area requires rehabilitation of the pump network. Area actually irrigated is 2004 for Drini i Bardhë and Radoniqi-Dukadjini and 2009 for Ibër-Lepenc.

In 2006, none of the systems were operating on a financially sustainable basis

Financial Results for Public Irrigation Systems
Thousands of €– 2006

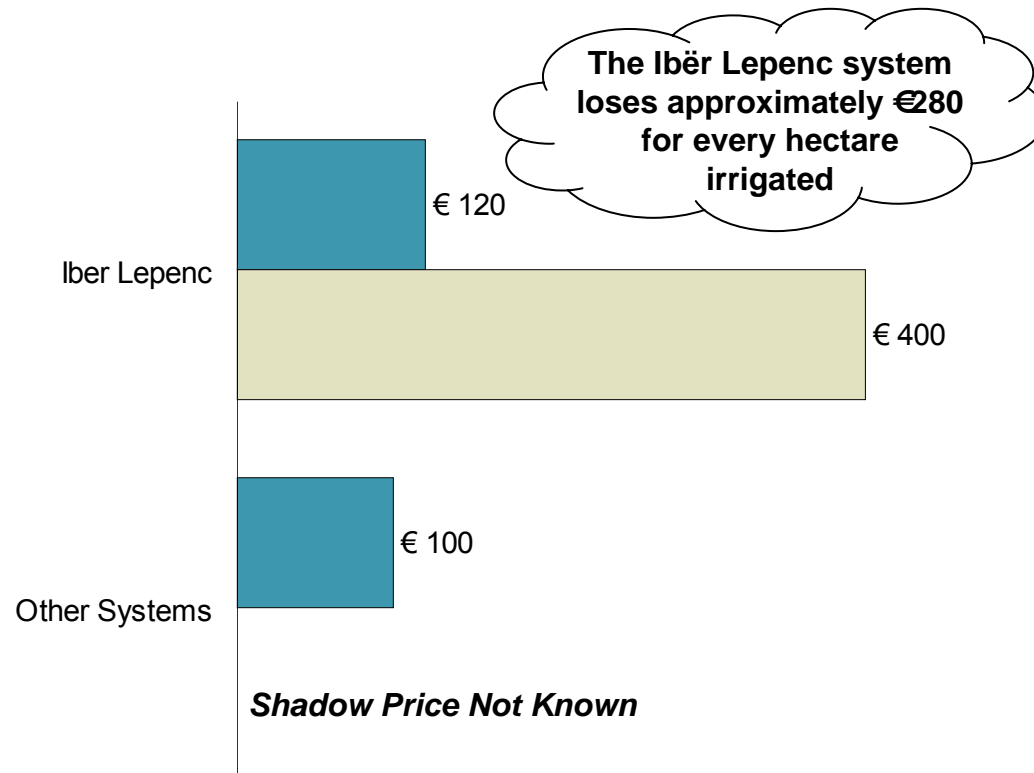


Sources: Audited Financial Statements from KTA website.

Notes : P&Ls show grants as a source of income. For purposes of this analysis, grants have been removed from Income. 2006 is the last year for which financial statements are available.

Fees are charged on a flat per hectare basis and the price is significantly less than the true cost of irrigation

End-user Irrigation Tariff (Price) and Shadow Price (Cost)
€ per Ha per Year (2009)



Comments

- ▶ Ibër-Lepenc charges a flat fee of €120 per hectare per year and loses approximately €280 per irrigated hectare. It compensates for these losses in part through sale of technical water to the Kosovo e Res power station, sale of electricity from the Zuben Potok hydro station and provision of municipal drinking water.
- ▶ The other systems charge €100 per hectare per year. Although costs are less, because the systems require less pumping than for Ibër Lepenc, the shadow price is likely significantly higher than the cost.

Continued investment in the formal systems should be carefully examined for engineering and economic feasibility

Summary of Estimated Investments in Formal Irrigation Systems

Irrigation Provider	Estimated Investment (2007-2013)	Description of Issues
Ibër-Lepenc I	€6.4M	<ul style="list-style-type: none"> Ibër-Lepenc is suffering from low market demand and is currently irrigating only 3% of its installed capacity. Reconstruction of pump stations is being considered. However, improvements must be made in the context of bringing the system back up to a break-even level of demand and considering non-irrigation demands on the reservoir.
Ibër-Lepenc II	€298.5-677.6M (Pending New Study)	<ul style="list-style-type: none"> The Lepenc system (Ibër Lepenc II) was originally designed in the 1960s to irrigate land in Southern Kosovo-Plains and in Macedonia. It was intended to transfer water from the Lepenc catchment and from two smaller catchments on the Drenica and Gracanka rivers. Although a system in southeast Kosovo is required, plans for the Lepenc system must be thoroughly updated to account for political, economic and technical changes over the past 40 years.
Dukadjini	NA	<ul style="list-style-type: none"> Dukadjini has lost almost 75% of the area in its original planned capacity due to unregulated urbanization in Prizren municipality. Of the remaining area, 1500 hectares consists of open channels which are now in poor condition and used in part for urban waste. Continued investment in the system needs to be based on a new plan reflecting current conditions.
Radoniqi	€9.6M	<ul style="list-style-type: none"> Planned investment for the Radoniqi system including rehabilitation of two pumping stations to increase the irrigable area by 3,600 hectares. Of all the systems, Radoniqi is considered the best candidate for expansion based on demand and the current maintenance state of the system.
Drini i Bardhë	€9.6M	<ul style="list-style-type: none"> Drini i Bardhë is an open channel system that has been poorly maintained and suffers from low water efficiency. True water use is hard to gauge because of the large number of private channels drawing water directly from the rivers. Careful analysis is needed before additional investment can be made with the most likely candidate for investment on the Peja system.

Sources: MESP Irrigation Strategy (2009), World Bank

Notes : Estimated investment (2007-2013) is drawn directly from the Irrigation Strategy. Investment estimates for Iber-Lepenc

Overall there are a number of inter-related problems that must be addressed to put the formal irrigation system on a stable basis

Problems Identified in Formal Irrigation



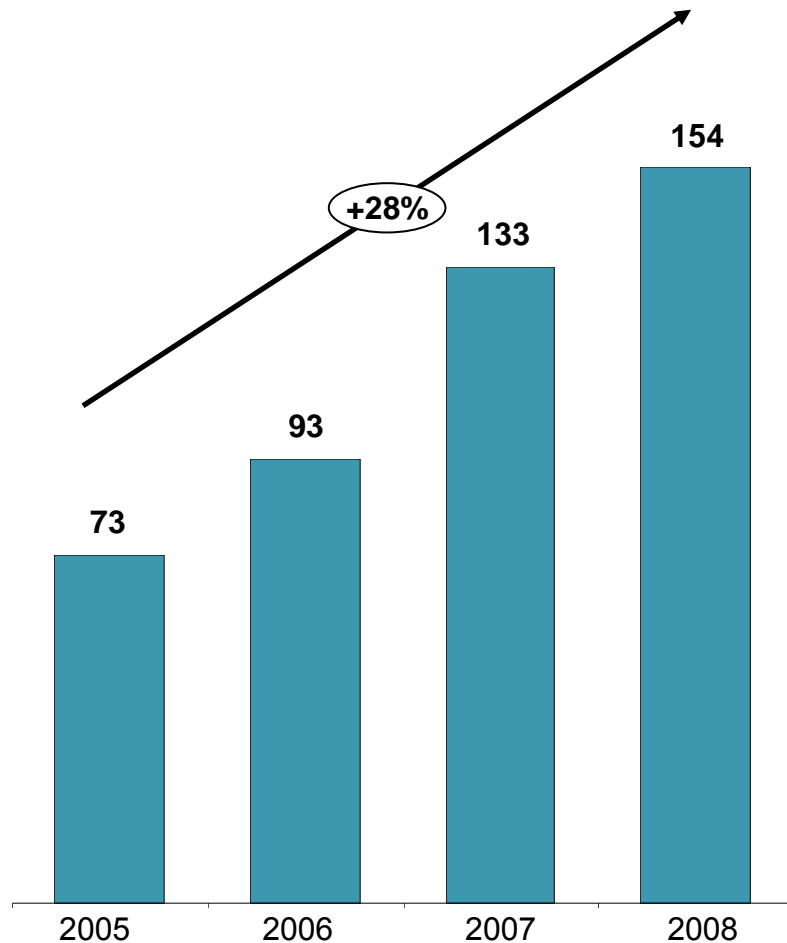
Principles of a Strategy to Improve Formal Irrigation

- ▶ **Cost Effectiveness.** The cost effectiveness of any investments in irrigation must be assessed. Cost-effectiveness depends greatly on the value and types of crops that are and will be cultivated in the irrigated area. For this reason, investment in the IPs must be considered together with development of the sector as a whole.
- ▶ **Demand.** All of the systems, and especially Ibër-Lepenc, irrigate such a small portion of the irrigable area that almost no cost structure could achieve financial sustainability. The key to survival and development of these systems is to improve marketing and pricing and re-build demand to break-even levels.
- ▶ **Integrated View of Water Needs.** Most of the IPs serve other water needs besides irrigation – technical water for industry, potable water, power generation, etc. The evolution of the irrigation system must happen within the context of an integrated water management strategy for Kosovo that considers all uses of the resource.

Starting from a low base, total area under greenhouse almost doubled from 2004-2008

Growth in Greenhouse Area

Ha - 2004-2008

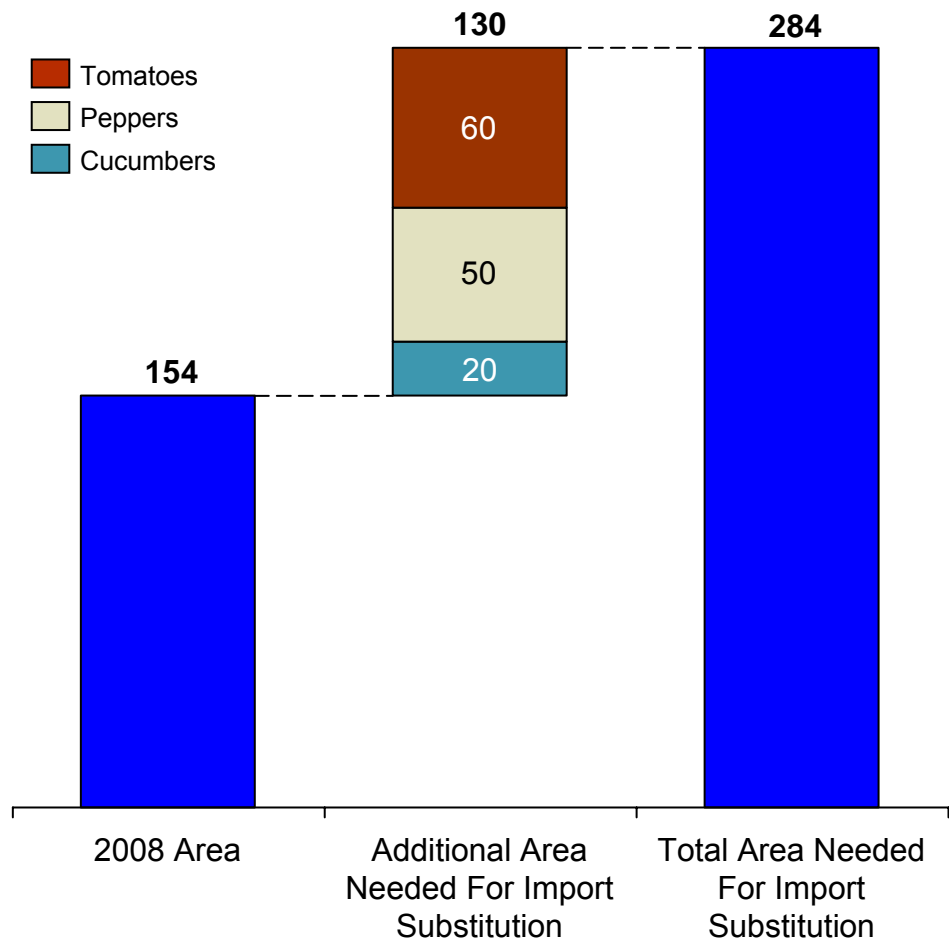


Comments

- ▶ Greenhouses are used primarily production of tomatoes and a small amount of cucumbers. Some lettuce is produced as a second crop in winter. Most other major crops including peppers, white beans, aubergine and melons and produced in open field.

However, the area will need to double again even to meet import substitution goals and by much more to support export crops

New Greenhouse Area Required for Import Substitution
Ha - 2008

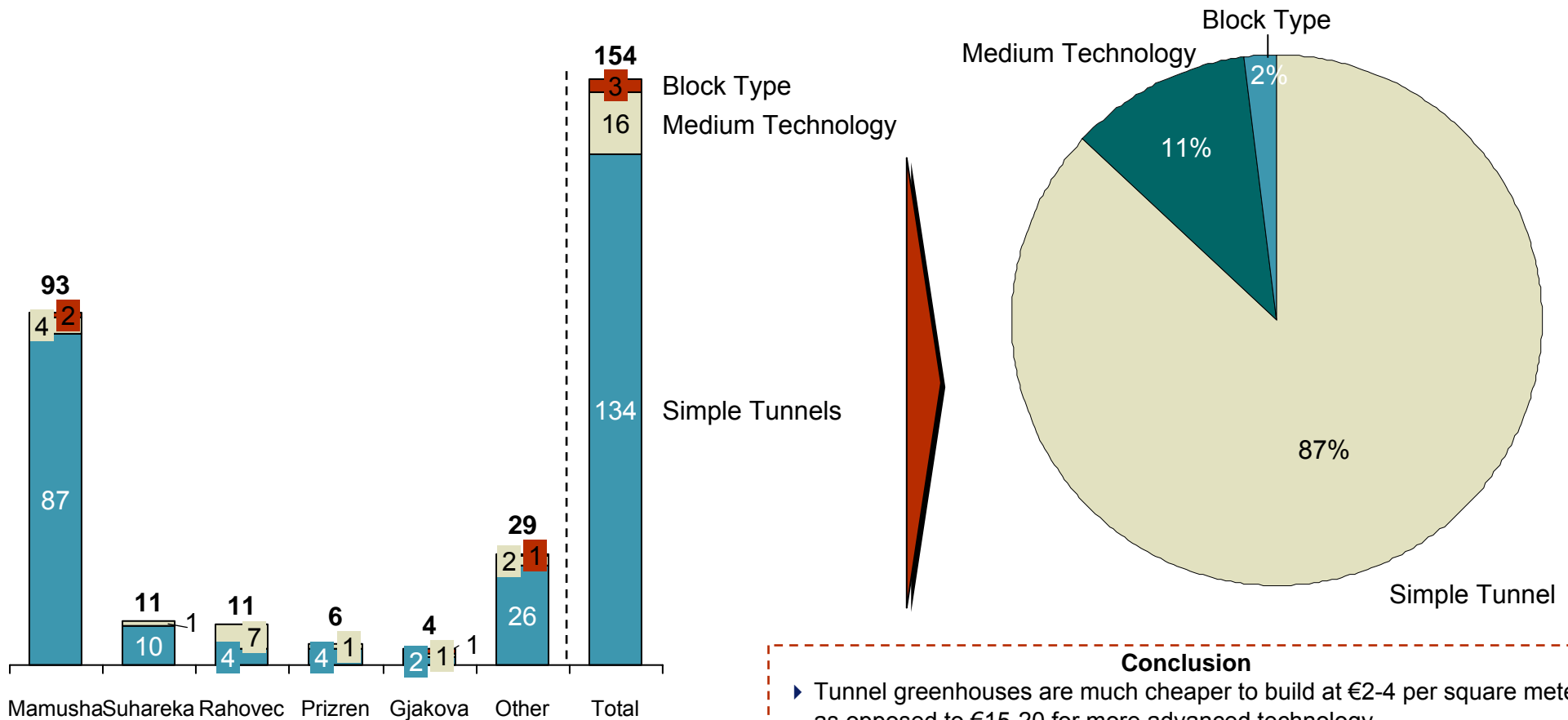


Comments
<ul style="list-style-type: none"> ▶ Analysis concludes that 130 hectares of greenhouse are needed to substitute imports of only three crops - tomatoes, peppers and cucumbers - during the late Spring and Summer which is the peak time for imports. ▶ By improving the quality of greenhouses, tomato harvests could be moved from the last decade of June to the beginning of June and imports could be substituted from June to November. Pepper harvests could be moved from late July (open field) to the second half of May, etc. ▶ Greenhouses could also significantly improve the price and volume of export crops destined for Europe and the region.

Sources: Intercooperation Report (2008)

Almost all greenhouse area is in Dukagjini and 87% is of the simple tunnel variety, which is cheap to build but has relatively low yields

Location and Types of Greenhouses
Ha - 2008



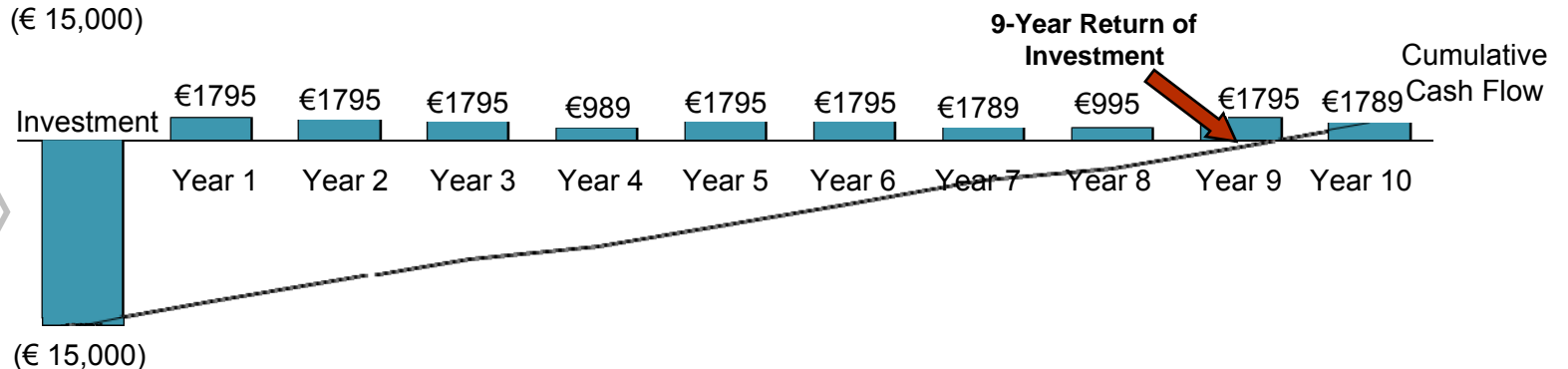
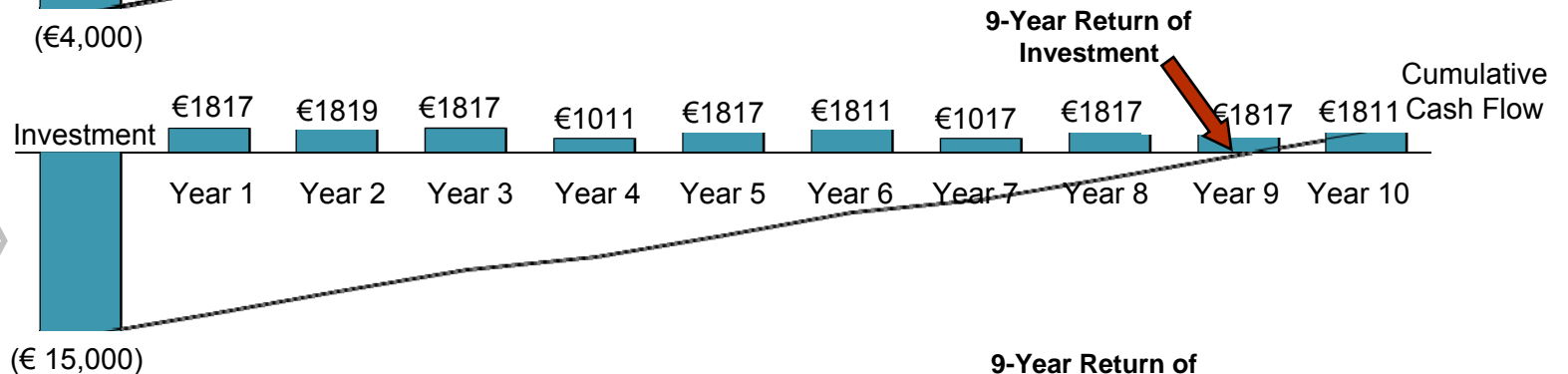
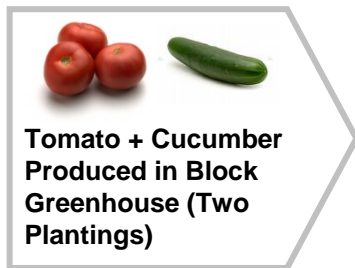
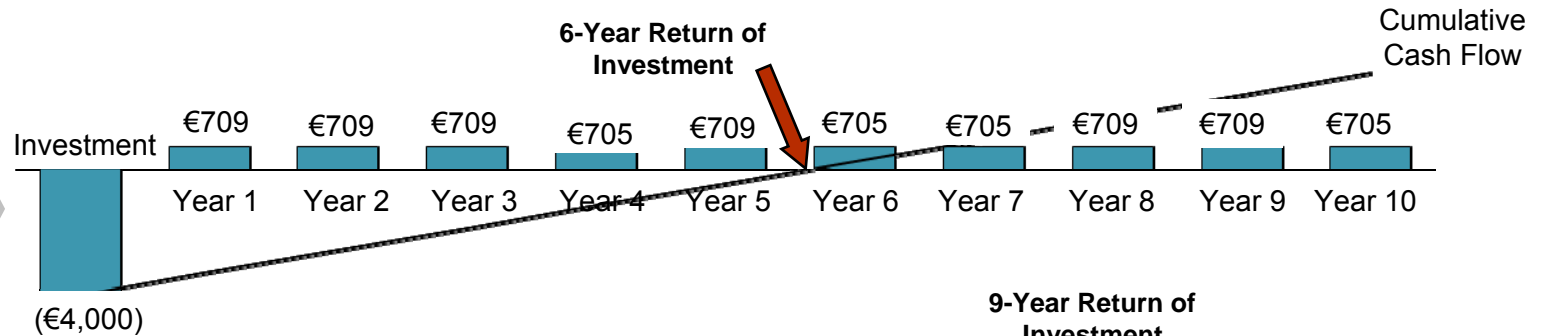
Conclusion

- ▶ Tunnel greenhouses are much cheaper to build at €2-4 per square meter as opposed to €15-20 for more advanced technology.
- ▶ However, tunnels cannot vent heat in Summer allowing only one planting; they have lower yields and do not allow vine plants like tomatoes to grow to heights required for retail quality.

Sources: Intercooperation Report (2008)

Greenhouse cultivation improves yields and incomes, but the payback is long

Return on Investment for Greenhouse Grown Crops
 € per 1000 square meters planted

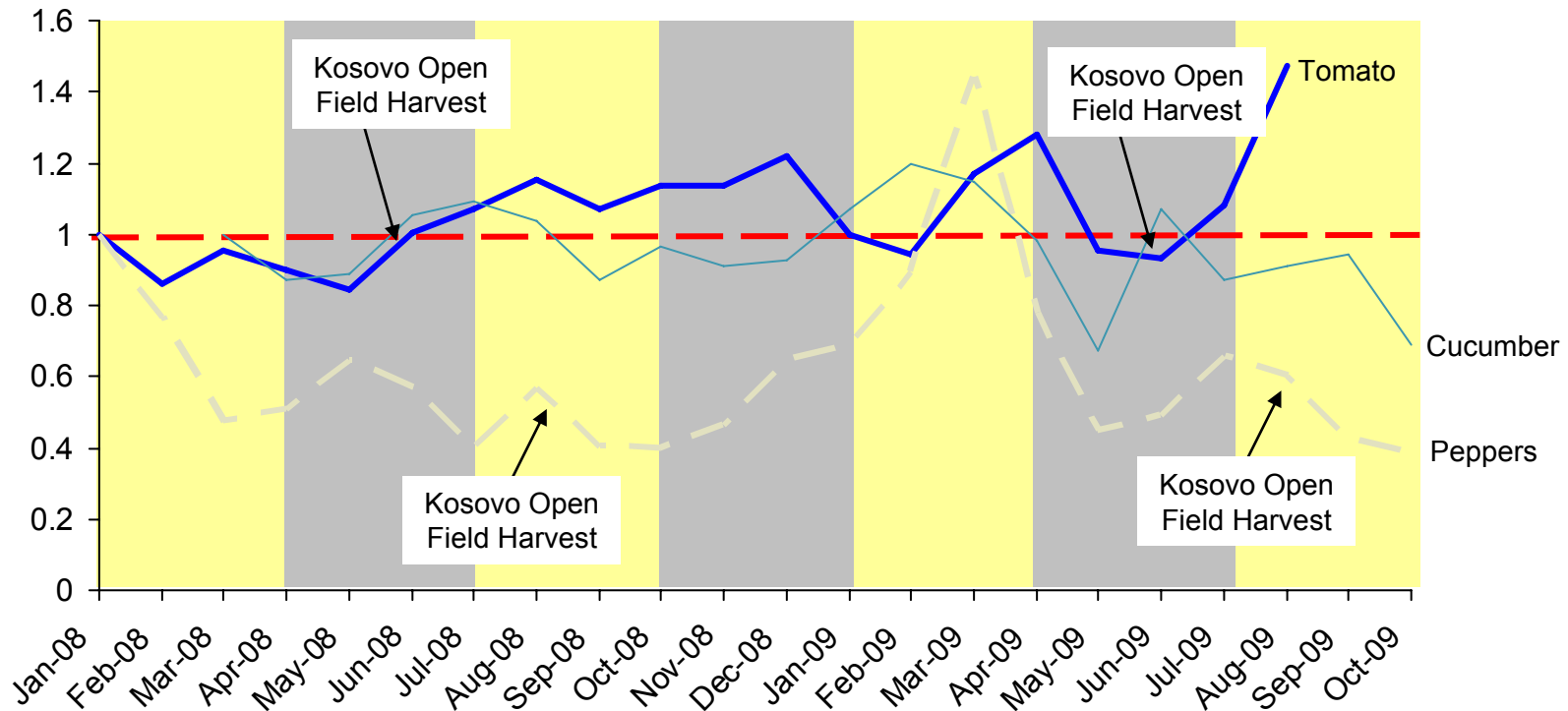


Sources: Intercooperation Report (2008)

Greenhousing enables farmers to take advantage of seasonality to achieve higher prices

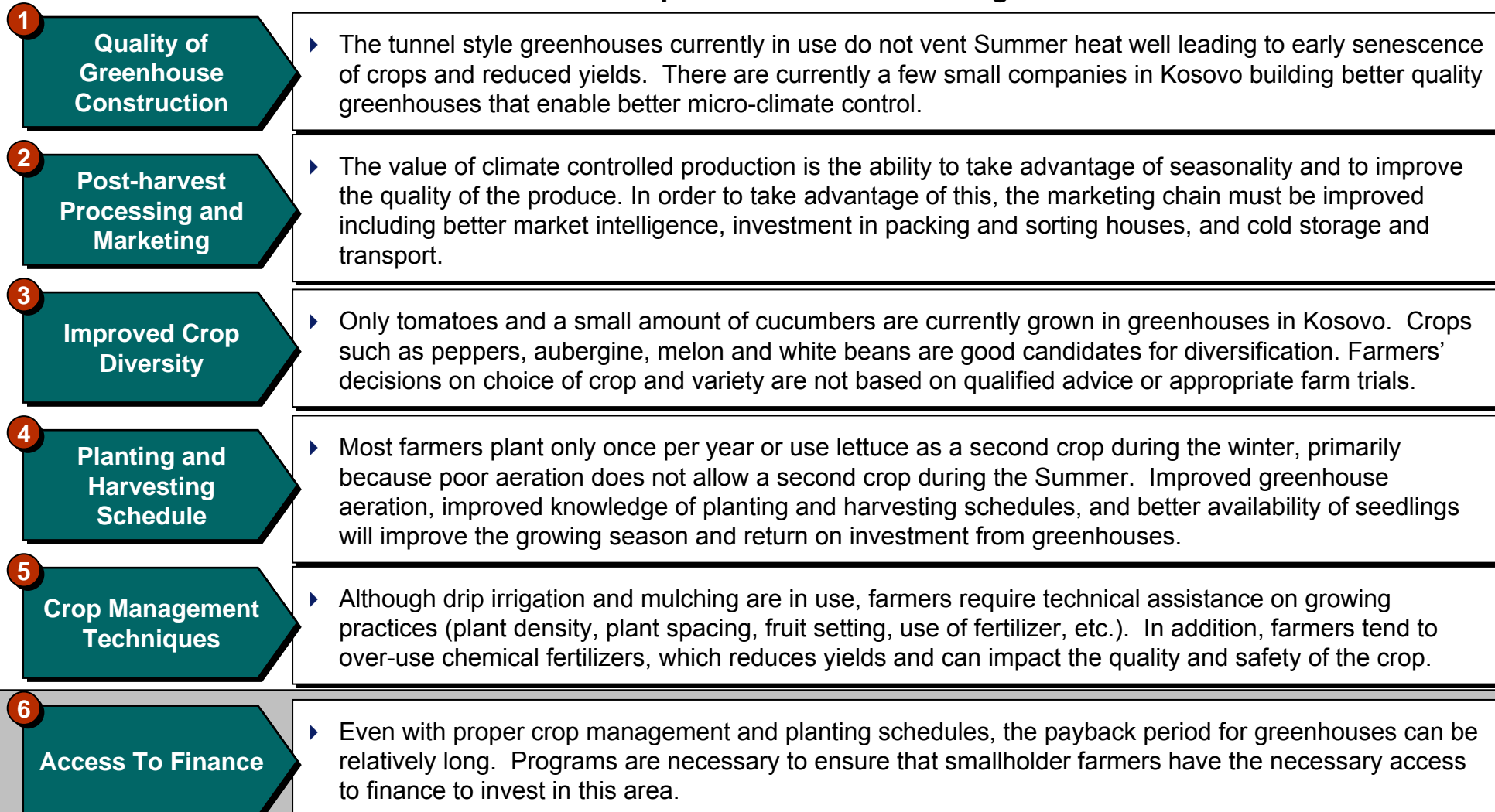
Monthly Price of the Example Ag Commodities

EU Import Prices
(2008-2009) (in €; Series Beginning = 1)



However, there are a number of technical and economic constraints that must be overcome to significantly expand greenhousing, with access to finance the most critical issue

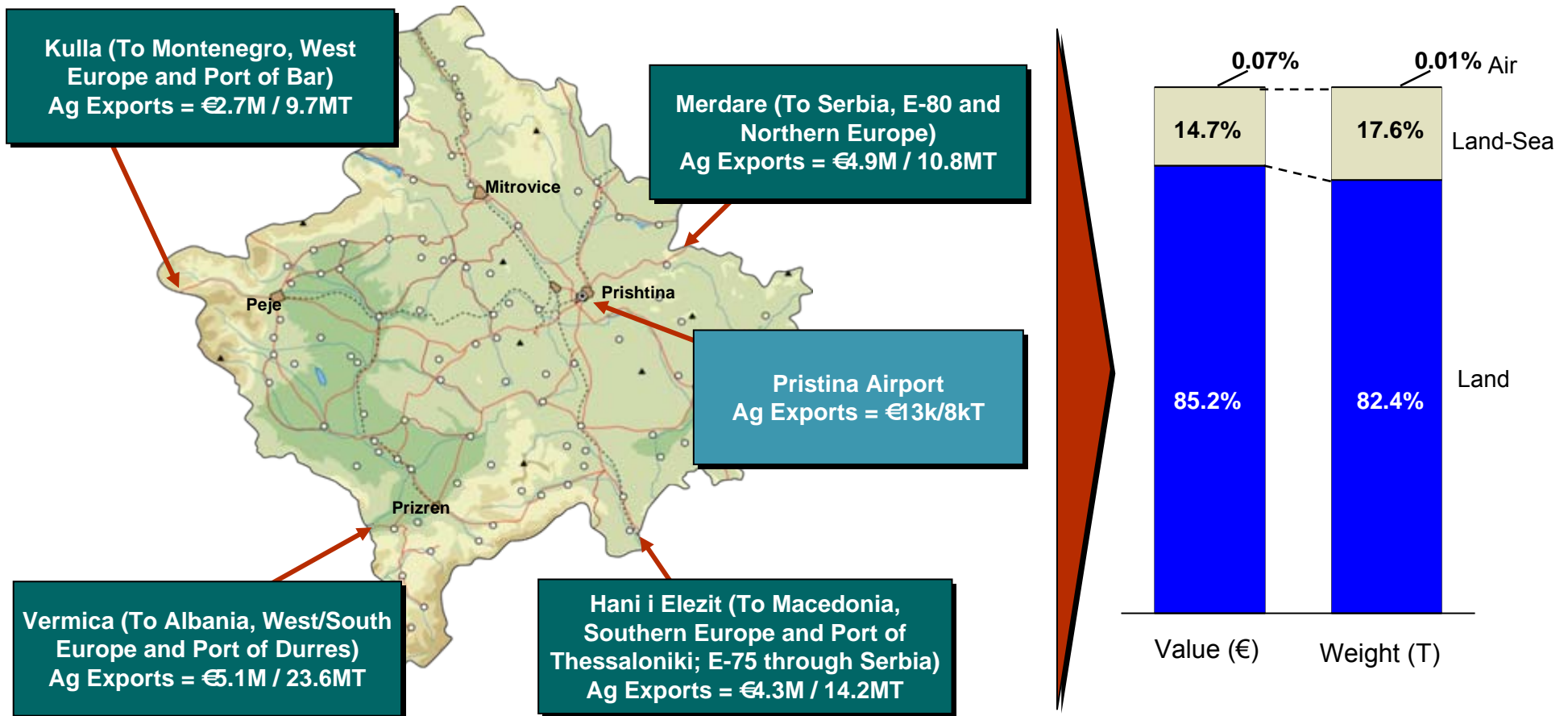
Constraints to Expansion of Greenhousing



Most Critical

85% of Kosovo's agricultural exports travel over land to their final destination through four primary land border crossings

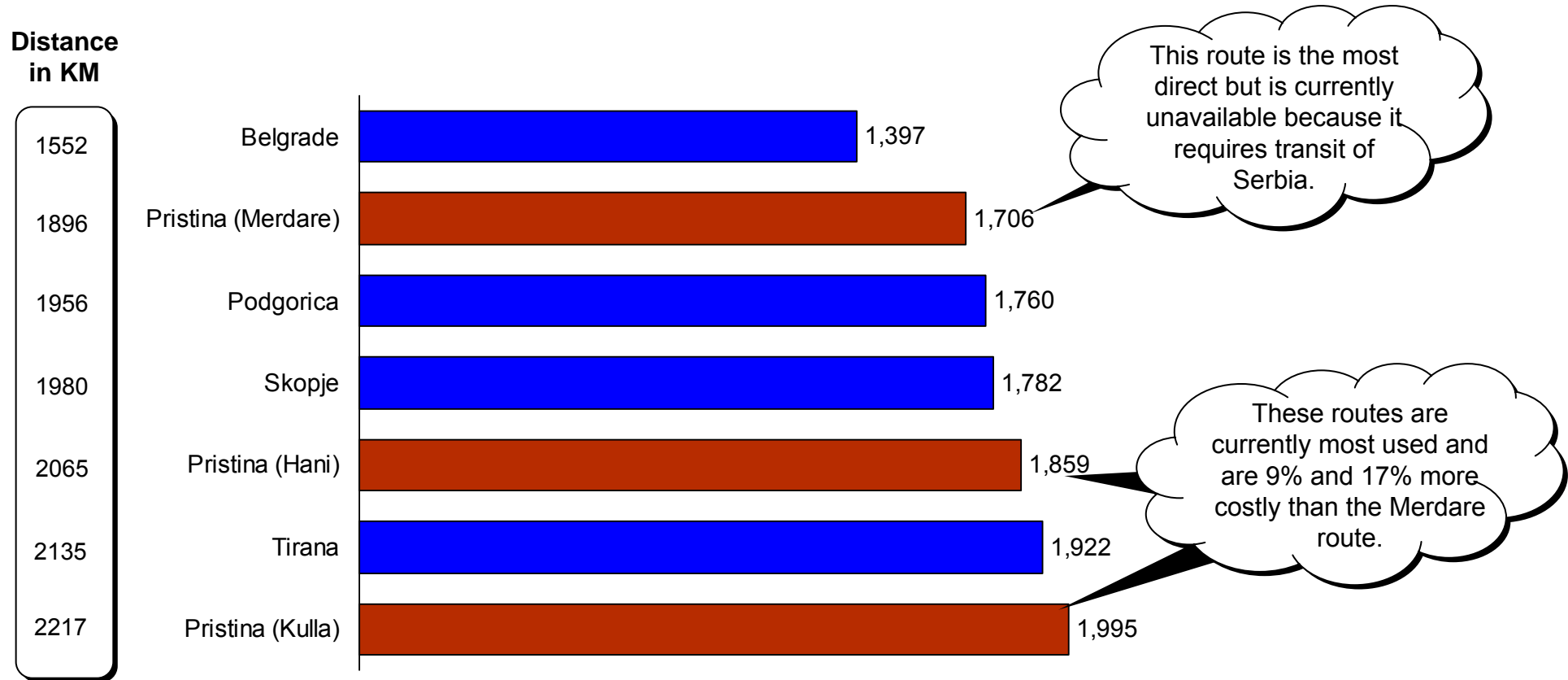
Primary Exit Points for Kosovo's Agricultural Exports (2008)



Sources: Kosovo Customs, Interviews with Transport Companies
 Note: The five border crossings pictured represented 94.25% of agricultural exports in 2008

The unavailability of transiting Serbia makes road transportation 9-17% more costly and disadvantages Kosovo within the region

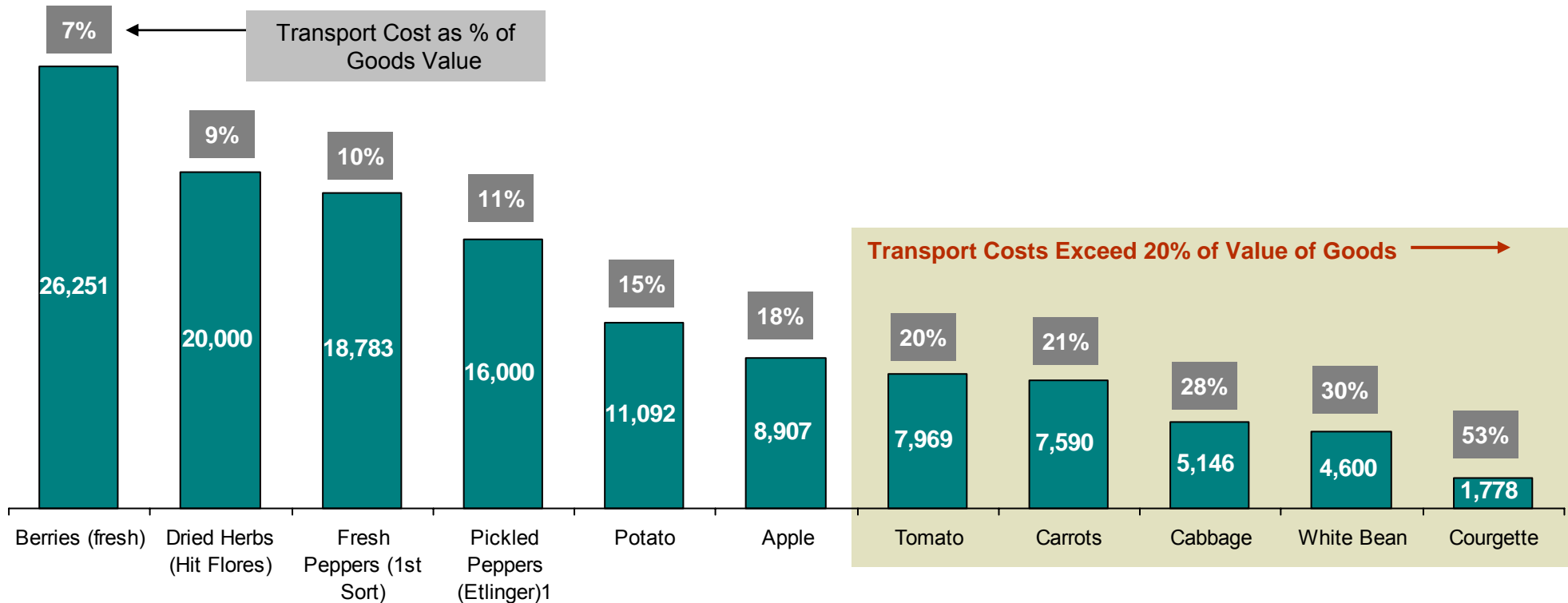
Comparison of Transport Costs for Shipping a 23 Ton Load by Road to Hamburg, Germany
(in €per Truckload) (2009)



Because imports greatly exceed exports, deadhead rates for exports from Pristina are discounted by 12% when a round-trip is provided.

High value perishables and processed goods can overcome the cost of shipping while commodities cannot

Commodity Values and Transport Costs as a Percentage of Value
(€ per 23 Ton Truckload to Hamburg - 2009)



Sources: Kosovo Customs, Interviews with Transport Companies

Note: 1) Etlinger price assumes highest value products in retail packaging. Product in wholesale packaging (2kg) is valued at €8000 per truckload.

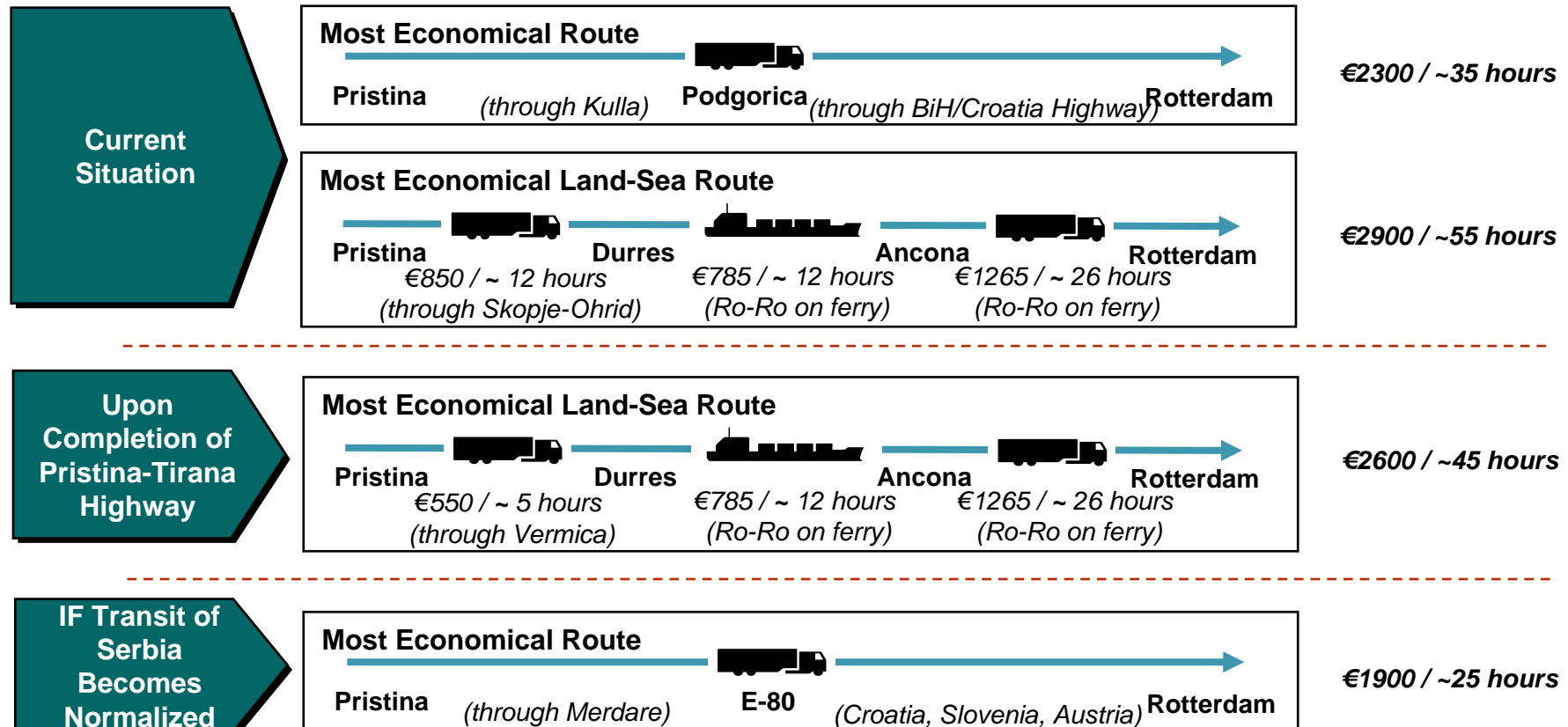
Land-sea routes use three ports – Thessaloniki in Greece, Bar in Montenegro and Durrës in Albania

Primary Handling Ports for Goods from Kosovo



After completion of the Tirana Highway, the land route will remain the most economical compared to other routes

Comparison of Transport Costs for Shipping a 23 Ton Truckload to Rotterdam (2009)



Conclusion

- ▶ Upon completion of the Tirana Road, some traffic will shift to the Port of Durres or to land routes through Albania to compensate for bad weather conditions, to take advantage of warehousing capacity there, or for goods originating in the Prizren area
- ▶ However, the land route through Kulla will remain the most economical overall. If relations are normalized with Serbia, the Merdare route will have significant advantages over all other routes to destinations throughout Europe.

There is currently no dedicated air cargo services to Pristina airport with all cargo travelling on scheduled passenger rates

Air Cargo Operators at Pristina Airport

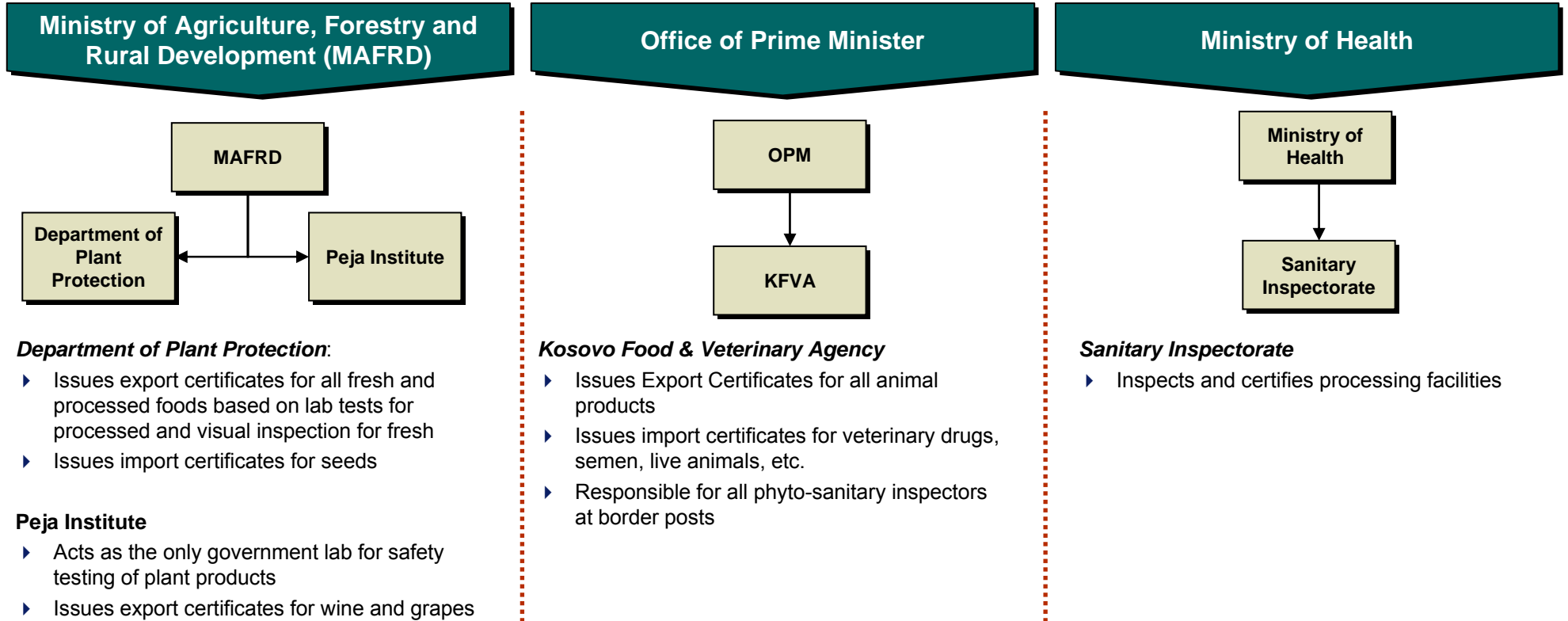
(in € per kg of effective weight assuming 100kg shipment - 2009)

Air Carrier	Description	Approximate Price per Kg to Frankfurt (FRA)
▶ Adria Airlines (Intereuropa)	<ul style="list-style-type: none"> ▶ Operates belly cargo on daily flights from Pristina to Ljubljana ▶ Maximum shipment size of 2 tons ▶ Currently handles c. 500 kg/day 	▶ €2.58 per kg effective weight
▶ Austrian Airlines (MCM)	<ul style="list-style-type: none"> ▶ Operates belly cargo 6 days/wk from Pristina to Vienna ▶ No dedicated cargo flights or charters. Maximum weight of shipment 100 kg 	▶ €1.40 per kg effective weight
▶ Turkish Airlines	<ul style="list-style-type: none"> ▶ Operates belly cargo on passenger planes 5 times per week ▶ A freighter operates 1 time per week IST-PRN- MXP(Milano)-IST but is only used for inbound cargo to PRN 	▶ €1.70 per kg effective weight

Use of the Turkish freighter to carry outbound cargo from Pristina to Milan (MXP) is an opportunity for Kosovo exporters. Re-routed freighter rates are typically 30-50% of full rates. Turkish Airlines requires a license from ICAO to offer this service.

The structure for food safety regulation in Kosovo is disjointed with several different organizations responsible for parts of the issue...

Agencies with Responsibility for Food Safety



Department of Plant Protection:

- ▶ Issues export certificates for all fresh and processed foods based on lab tests for processed and visual inspection for fresh
- ▶ Issues import certificates for seeds

Peja Institute

- ▶ Acts as the only government lab for safety testing of plant products
- ▶ Issues export certificates for wine and grapes

Kosovo Food & Veterinary Agency

- ▶ Issues Export Certificates for all animal products
- ▶ Issues import certificates for veterinary drugs, semen, live animals, etc.
- ▶ Responsible for all phyto-sanitary inspectors at border posts

Sanitary Inspectorate

- ▶ Inspects and certifies processing facilities

Conclusions

- ▶ According to Food Law of April 9, 2009, similar functions from the Peja Institute and the Plant Protection Department will be consolidated into KFVA. However, at present, this has not occurred and there is duplication of effort between the various organizations.
- ▶ KFVA has a plan in place to achieve EU compliance in animal products with a target date of 2011. It is currently in the process of answering the questionnaire and has invited the EU to set up the Food & Veterinary Office (FVO) in Kosovo. Plans at MAFRD are less advanced.
- ▶ The labs at Peja Institute and KFVA do not have any international certification (e.g. ISO, EurepGAP) which has caused recognition issues.

... there are also two private labs, whose scope are limited by lack of certification

Private Food Safety and Quality Labs in Kosovo

	1 Sara & Meti	2 Agrovet
Year Opened	2008	2005
Location	Pristina	Fushe Kosovo (suburb of Pristina)
Area of Focus	▶ Chemical and microbiological analysis in plants, food, fertilizers	▶ Soil analysis but also capable of heavy metal detection in food products
Size	2009 turnover €80,000	2009 turnover €100,000

Conclusions

- ▶ The Peja Institute is the primary body for testing agricultural goods. However, the Institute will use the private labs to complete secondary testing when exporters or producers contest findings that goods have not passed certification standards
- ▶ Neither of the private labs are internationally recognized or have bilateral agreements with governments in other countries

The regulation and use of inputs is perceived to be ineffective for a number of reasons

Issues Related to Regulation of Inputs

Over-Application of Fertilizers and Pesticides

- ▶ Farmers are not trained in the use of fertilizers and pesticides and tend to over-apply relative to the amounts needed for specific crops
- ▶ Over-use is exacerbated by the common availability of poor quality inputs which require application at a rate above what is indicated by the instructions
- ▶ Over-use has been found on a number of occasions to effect the safety of horticultural products, and consignments have been denied export certificates because of contamination by pesticides and fertilizers

Poor Quality of Seed and Other Inputs

- ▶ There is a significant amount of seed and other inputs that are imported and sold illegally and are of poor quality, effecting yields and crop quality. The main entry points are believe to be the open gates in the north.
- ▶ The Peja Institute tests and registers seed varieties, but testing is limited to only four crops (peppers, tomatoes, potatoes, winter wheat) and much seed is sold that has not been registered.
- ▶ No input retailer has developed branding that justifies higher input prices based on input quality. Despite this, several of the larger processors have begun to import higher quality seed and other imports directly.

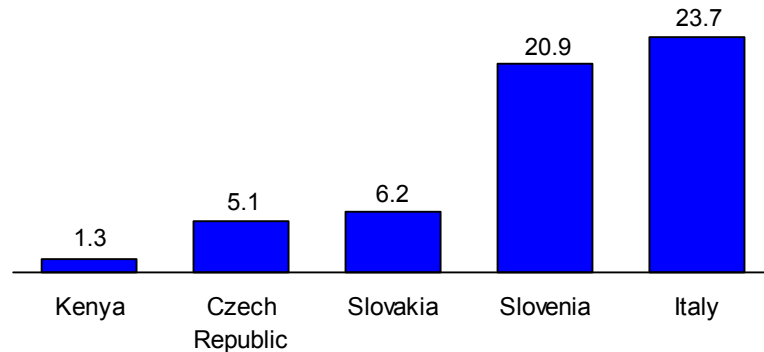
Insufficient Inspection of Input Distributors

- ▶ Input distributors report very infrequent inspections of their products and complain that lack of enforcement makes it difficult to compete with illegal or counterfeit imports.
- ▶ MAFRD admits that their inspection force is insufficient to properly regulate the sale of agricultural inputs at retail and wholesale distribution points.

Pilot studies have shown farmer over reliance on pesticides, which could create serious environmental consequences given the increase use of counterfeit pesticides in the region

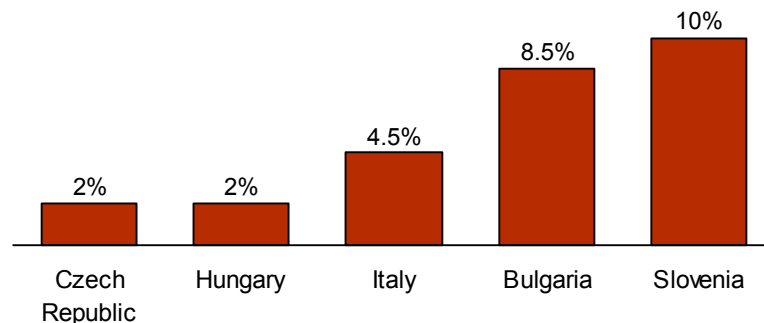
Pesticide Consumption & Use of Counterfeit Pesticides

Pesticide Consumption (Kg/Ha, 2001) ⁽¹⁾



Comments
<ul style="list-style-type: none"> ▶ Pesticide consumption per hectare is higher in countries with more developed agriculture sectors <ul style="list-style-type: none"> – With Balkan countries entering more export markets, pesticide consumption has increased ▶ According to a recent World Bank report, pesticide use has not been monitored in Kosovo. Imported fertilizers and pesticides started being controlled and licensed in 2007, but there are no data on the intensity and extent of pollution ▶ An Intercooperation pilot study in Dugagjini showed that surveyed farmers are heavily dependant on pesticides. Farmers are not aware that large use is not always necessary, and can lead to environmental problems

Portion of Counterfeit Pesticides in Total Market (% , 2007) ⁽²⁾

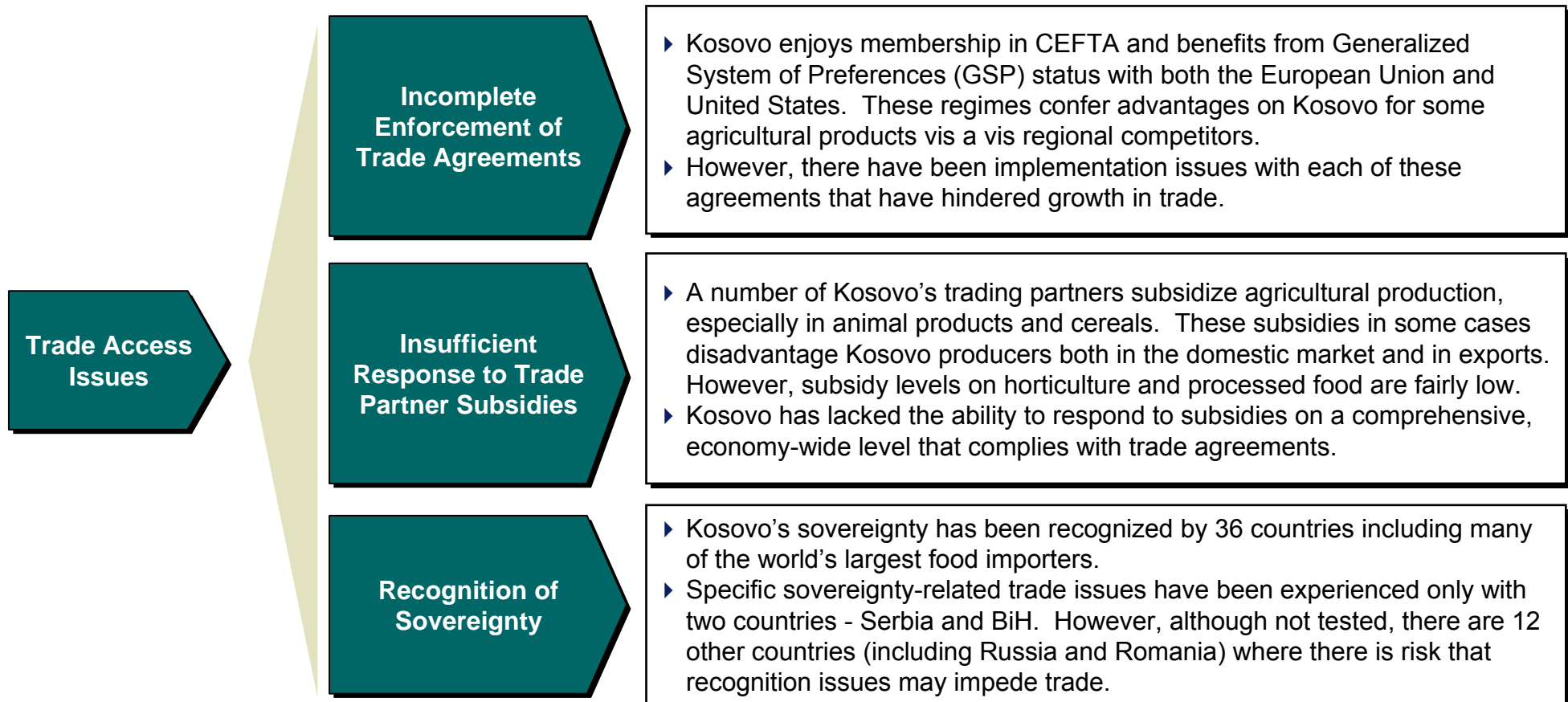


Comments
<ul style="list-style-type: none"> ▶ Studies have shown a rapid growth in counterfeit pesticide use in Eastern Europe. Many of these pesticides come from Asia, especially China ▶ Types of counterfeit and illegal pesticides include fakes, counterfeits and illegal parallel imports ▶ The effects of counterfeit pesticide use include: <ul style="list-style-type: none"> – Harm to the environment, which could be detrimental to subsequent crops – Farmers' economic and reputation damage – Economic and reputation damage for the food value chain

(1) Commodities include cereals, fruits and vegetables; (2) Averages taken for Bulgaria & Italy; Source: FAOSTAT; World Bank; EU- Counterfeit Pesticides Across Europe; Intercooperation- Integrated Pest Management Intervention; BAH Analysis

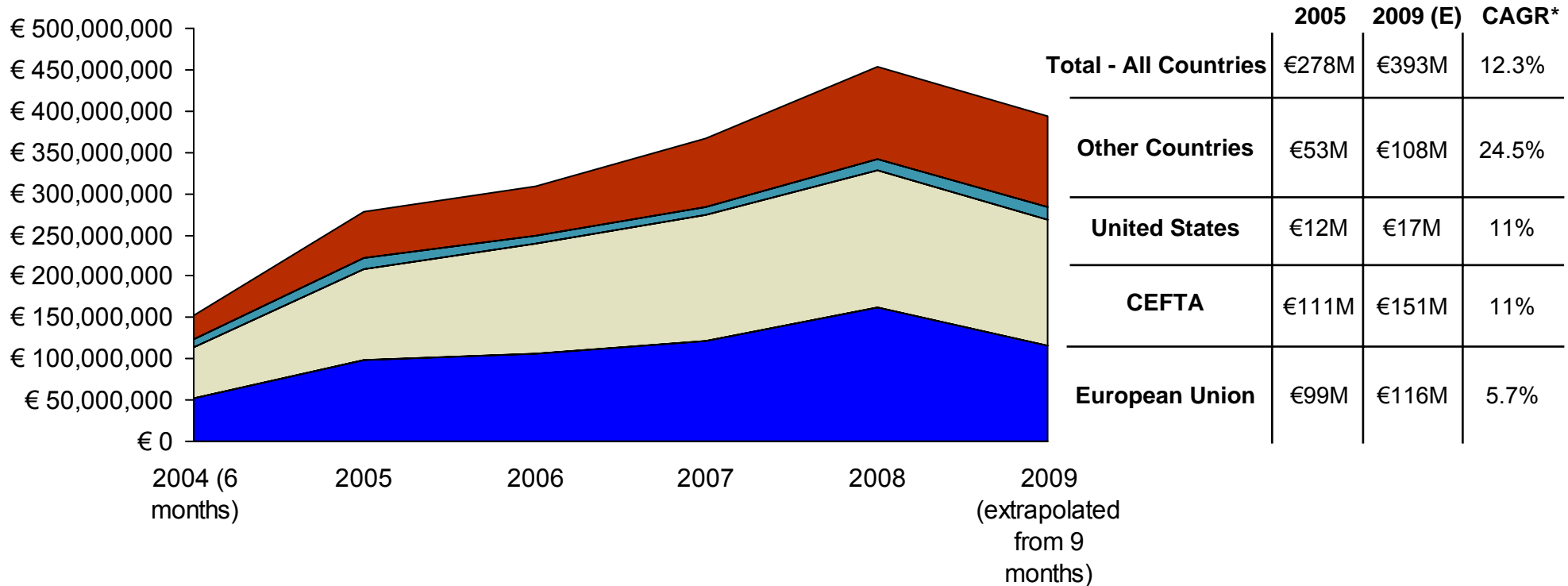
Trade access issues effect Kosovo's agricultural exports in three fundamental ways

Trade Access Issues



Despite preferential trade regimes, Kosovo's trade deficit with CEFTA, EU and the US has widened over the past five years

Trade Deficit Over Time
Agricultural Products Only (Chapters 1-24), 2004-2009, €



Sources: Kosovo Customs

Notes: Trade deficit is represented as a positive number for illustrative purposes. 2009 total is extrapolated on a straight line basis from data through September. CAGR = Compounded Annual Growth Rate

The preferential trade regimes do confer some benefits on Kosovo for major agricultural products

Kosovo's Relative Advantages on Selected Ag Products (2009)


When exporting to:	Kosovo has a benefit over:	For the Following Products:					
			Tomatoes	Cucumbers	Peppers	Mushrooms	Strawberries
Albania	Other CEFTA Members		10%	0%	10% ⁽²⁾	10%	10%
	EU Members		0%	0%	6%	0%	10%
	MFNs ⁽¹⁾		10%	0%	10%	10%	10%
Croatia	Other CEFTA Members		38.5%	35.27% ⁽³⁾	20% ⁽⁴⁾	15% ⁽⁴⁾	28.05%
	EU Members		0%	35.27%	20%	15%	20%
	MFNs ⁽¹⁾		15%	35.27%	20%	15%	28.05%
European Union	Other CEFTA Members		0%	0%	0%	0%	0%
	EU Members		0%	0%	0%	0%	0%
	MFNs ⁽¹⁾		15% ⁽⁵⁾	16%	16% ⁽⁵⁾	12.8%	7.2%
United States	Other CEFTA Members		0%	0%	0%	0%	0%
	EU Members		2.58%	0%	1.96%	0%	0.22%
	MFNs ⁽¹⁾		2.58%	- 3.85% ⁽⁶⁾	1.96%	0%	0.22%

Comments

- ▶ Kosovo's preferential trade regimes give it some advantages in exports.
- ▶ The biggest advantages are with Croatia and Albania which have high tariffs even on other CEFTA members and generally give Kosovo duty free access.
- ▶ Kosovo also has some advantages in the EU vis a vis MFN exporters. However, the EU's trade policy of non-discrimination in the Balkans means that most countries in the region are on a level playing field.
- ▶ Kosovo qualifies for privileges under US GSP. However, little benefits can be reaped as the US has such low tariffs

Sources: ITC Comtrade

Notes: (1) Most favored nation, one which has no special trade regime. (2) The full rate is applied only to Serbia. Macedonia has a rate of 6%. (3) Full rate applied only to Serbia. Macedonia has a rate of 15.87%. (4) Applies only to Serbia. Several countries have preferential rates. (5) The largest exporters, Morocco and Turkey, have free trade agreements with the EU and lower rates. (6) The largest exports have duty free access putting Kosovo at a disadvantage.

 Kosovo has a tariff-related advantage

However, implementation issues have arisen which have made it difficult to take advantage of these trade regimes

Implementation Issues with FTAs and Preferential Trade Regimes

Agreement	Country	Description of Issues
Central European Free Trade Agreement (CEFTA)	Serbia and BiH	<ul style="list-style-type: none"> ▶ Serbia and BiH do not recognize Kosovo and do not allow entry or transit of Kosovo registered goods or vehicles <ul style="list-style-type: none"> – Serbia. Despite the restrictions, significant trade volume exists and a significant amount of trade travels to and from Kosovo via Merdare aboard Serbian registered vehicles. – BiH. Restrictions on transiting BiH are significant primarily because it is required to reach the Croatian coastal highway from Albanian or Montenegro
	Other Countries	<ul style="list-style-type: none"> ▶ All other countries in the Western Balkans provide Kosovo duty-free access under CEFTA. However, trade disputes have arisen over several issues including: <ul style="list-style-type: none"> – Phyto-sanitary Inspection. Montenegro does not recognize Kosovo food safety certifications and often require additional testing and certification. Macedonia at times requires HACCP certification for entry of agriculture products into the country. – Assessment. Albanian Customs has at times assessed the value of goods as higher than the declared value increasing VAT liability.
EU Generalized System of Preferences (GSP)		<ul style="list-style-type: none"> ▶ Exports to the EU require that the exporting country be listed on the “Third Country Eligibility List”. Although Kosovo is not on the list, and exports could technically be rejected, exports of fresh and processed products are entering the EU. ▶ Food shipments have been turned back for quality and safety related reasons. A shipment of wine to Austria was turned back because lab test results were not accepted. A shipment of low alcohol beer to Italy was turned back because the alcohol content was found to be too high.
US GSP		<ul style="list-style-type: none"> ▶ Exports to the US have been minimal and, for this reason, few exporters are knowledgeable of US requirements or able to meet standards. The most important standards are FDA labeling requirements and USDA Prior Inspection of Facility requirements

Many of the implementation issues result from a lack of capacity in trade facilitation

Selected Agencies with Responsibility for Trade Facilitation

Agency	Staff	Role	Issues
Department of Trade, MTI	5-10	<ul style="list-style-type: none"> ▶ Responsible for development and implementation of trade policy. ▶ Chairs CEFTA Committees on Agriculture, Customs and Rules of Origin, and Tariff and Non-Tariff Barriers. ▶ Represents Kosovo to CEFTA Secretariat 	<ul style="list-style-type: none"> ▶ MTI's lack of capacity is crippling. Few of the staff adequately understand CEFTA and general trade best practices. The lack of capacity typically translates into poorly chosen and ineffective safeguard measures. Little donor assistance has been provided.
Kosovo Customs	600	<ul style="list-style-type: none"> ▶ Enforces CEFTA provisions at the border. ▶ Provides advisory opinions on CEFTA rules. 	<ul style="list-style-type: none"> ▶ The Customs Authority has taken its role seriously, and fields specific requests for information from the Private Sector, but does not deeply understand CEFTA rules and lacks resources necessary to broadly provide information.
Dept of Bilateral Affairs, MFA	1-5	<ul style="list-style-type: none"> ▶ Responsible for negotiating bilateral commercial and trade agreements. 	<ul style="list-style-type: none"> ▶ Adequate understanding of its role, but emphasizes political benefits of agreements far more than economic benefits. ▶ Virtually no coordination with other GoK entities or Civil Society.
Office of the President	1-5	<ul style="list-style-type: none"> ▶ Constitutional responsibility for leading foreign policy and signing international agreements. 	<ul style="list-style-type: none"> ▶ Has taken little initiative in articulating trade policy as a component of foreign policy.
Kosovo Food & Veterinary Agency (KFVA)	5-10	<ul style="list-style-type: none"> ▶ Responsible for conducting safety testing and issuing export certificates for animal products. Conducts testing and provides import certificates for agriculture imports (drugs, semen, etc.). ▶ According to Food Law of April 9, 2009, similar functions from the Institute of Agriculture and the Plant Protection Department will be consolidated in KFVA. 	<ul style="list-style-type: none"> ▶ Although consolidation is planned, KFVA handles only animal products. Export certificates for plant and processed products are issued by other agencies. ▶ KFVA is just starting the process of EU compliance. It is hoped that an EU Food & Veterinary Office (FVO) can be established in 2010 and compliance obtained in 2011.

Conclusions

- ▶ An overall weakness of the system is that there is no apex organization or inter-ministerial body to coordinate trade facilitation and examine trade issues on an economy-wide (rather than sector specific) basis. Trade actions often favor one sector at the expense of another. In addition, no organization has the skills or resources to negotiate effectively with trade partners.

Agricultural supports are bound by CEFTA and, for Kosovo's trading partners, also by the WTO Agreement on Agriculture

Treaties Governing Agricultural Supports

Central Europe Free Trade Agreement

- ▶ CEFTA generally provides that trade relations among parties be developed in accordance with WTO rules
- ▶ However, it does not fully follow the WTO agreement on agriculture and is generally more permissive in terms of agriculture subsidies permitted.
 - Members are required to follow the WTO agreements on Sanitary & Phyto-sanitary Measures (SPS), Technical Barriers to Trade (TBT) and Valuation.
 - Members are not allowed to use export subsidies for agriculture, defined as subsidies that create more output than can be absorbed in the local market.
- ▶ Other subsidies are generally permitted.

WTO Agreement on Agriculture

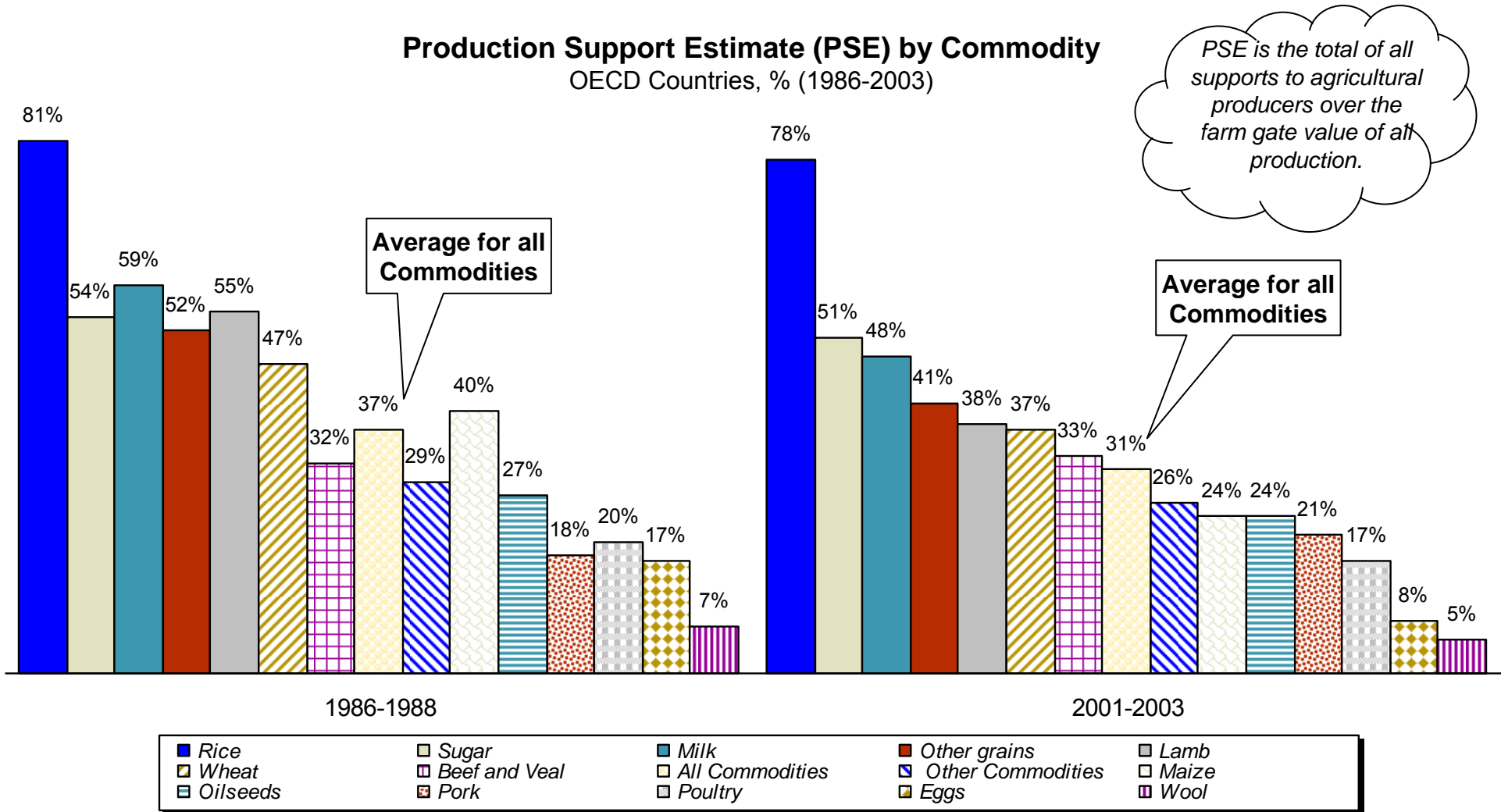
- ▶ Financial assistance to farmers through direct (price support) or indirect means are classified in 3 categories or "boxes":
 - **Green Box**: permitted as minimally trade-distorting. They include direct income support to farmers, rural development and environment programs and should be "decoupled" from production level and should not be targeted to specific products
 - **Amber Box**: discouraged as trade distorting (e.g., measures to support prices, subsidies directly related to production quantities or targeted at specific crops). Levels must be reduced to 15% for developed and 10% for developing countries.
 - **Blue Box**: permitted "with conditions". Refers to any "amber box" program implemented with measures to reduce production. No limits.

Implications for Kosovo

- ▶ All of Kosovo's neighbors are CEFTA members and all except Serbia are WTO members. Kosovo is required to comply with CEFTA regulations on agricultural subsidies and has expressed an intention to comply with WTO requirements.
- ▶ Kosovo's trade policy calls for development of "green box" policies focused on support to poor farmers in remote areas and on the provision of health, water and educational facilities as a way of improving the quality of rural life.

Agricultural supports vary significantly by commodity type with grains and animal products receiving the most

Production Support Estimate (PSE) by Commodity
OECD Countries, % (1986-2003)

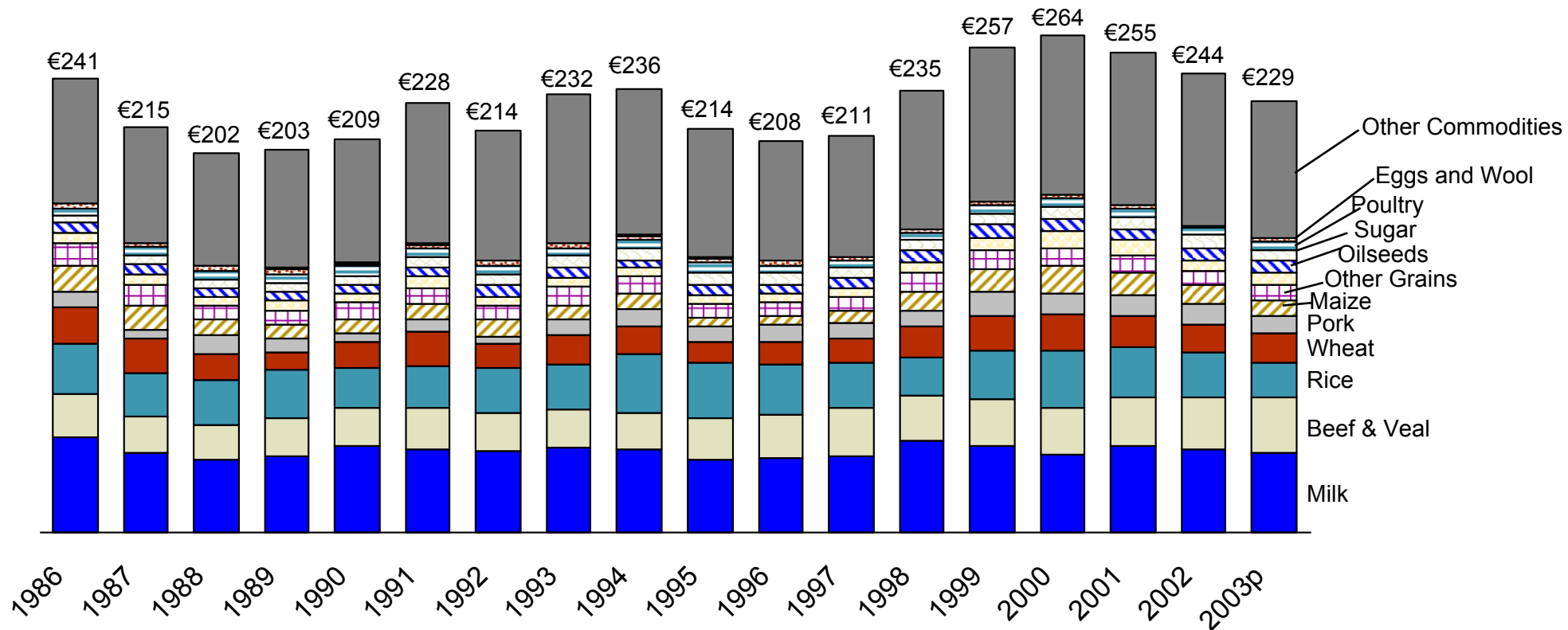


Source: OECD (2003)

Note : PSE is the total of all supports to agricultural producers over the farm gate value of all production.

Overall, OECD countries spent over €229 billion in agricultural supports in 2003 with milk receiving more support than any other commodity

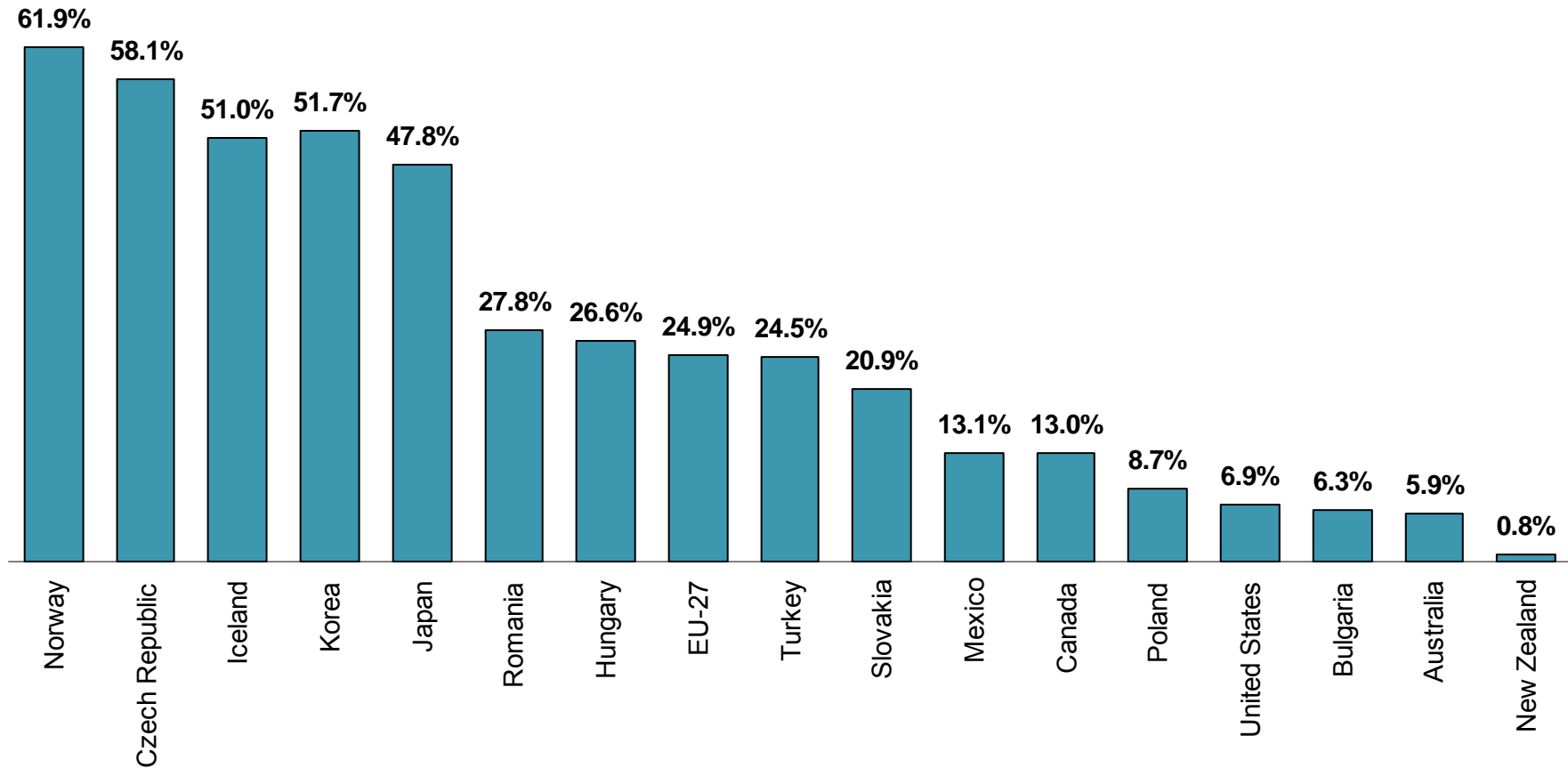
Total Production Supports by Commodity
 OECD Countries, € Billion (1986-2003)



Source: OECD (2003)

The level of support varies significantly by country ...

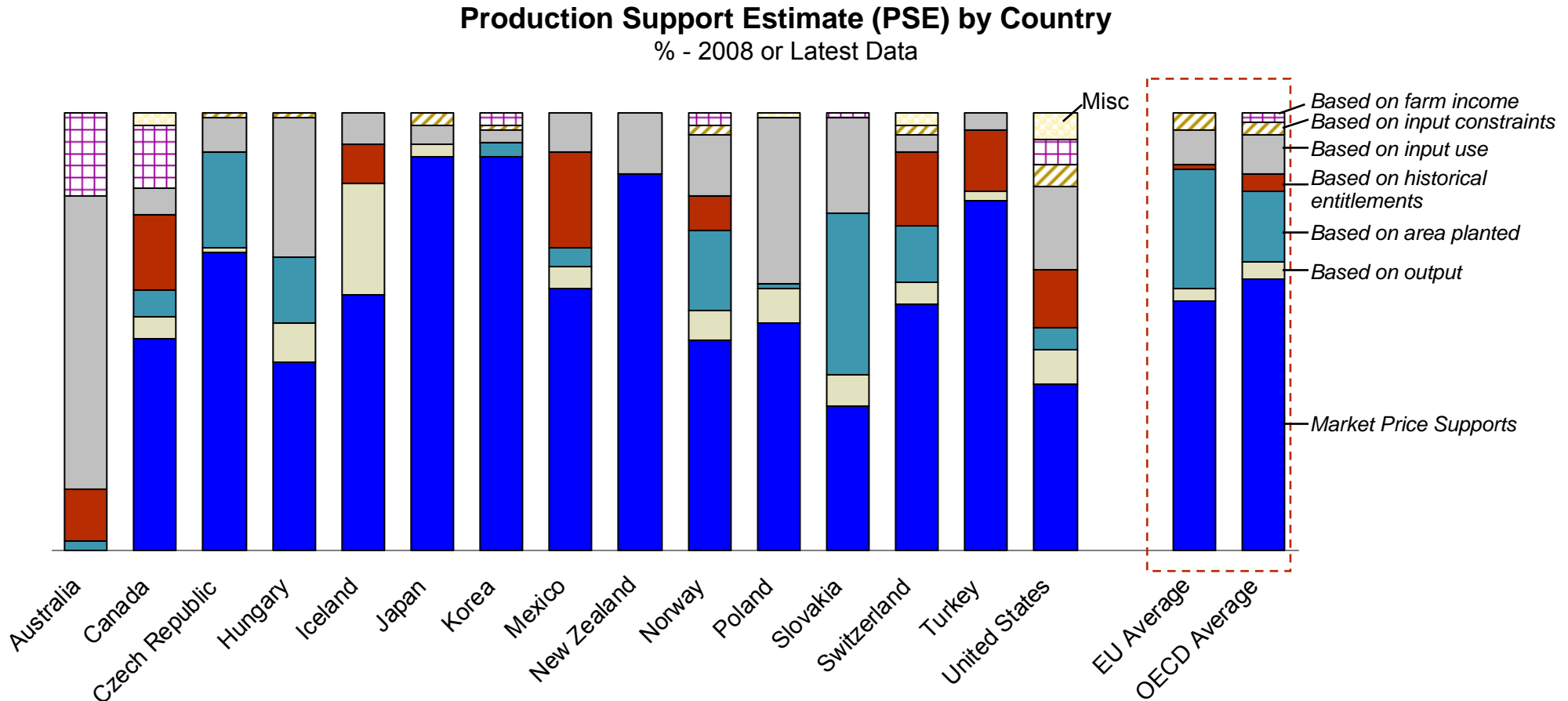
Production Support Estimate (PSE) by Country
% - 2008 or Latest Data



Source: OECD (2009)

Note : PSE is the total of all supports to agricultural producers over the farm gate value of all production. All countries are 2008 except Hungary, Slovakia and Poland (2003) and Romania and Bulgaria (2006). Thereafter, these countries are included in the EU average.

...and, across the OECD, market price supports, considered a minimally-distorting “green box” measure, were the most commonly used



Source: OECD (2004).

Note : EU is EU-12 for 1986-94, EU-15 from 1995. Market Price support is net of producer levies and excess feed costs.

Although there is little data, all of Kosovo's neighbors are employing some kinds of supports for the agriculture sector

Summary of Subsidies in Neighboring Countries



- ▶ Anecdotal evidence exists of subsidies amounting to approximately € 270 per 0.1 Ha and up to 50% of the cost of irrigation systems and cold storage units. Additional per head subsidies may exist for sheep and cattle



- ▶ Anecdotal evidence of questionable reliability of subsidies of €0.04 per kilogram of vegetables produced and of €30 per head of sheep owned. The subsidy on sheep is part of a program to rebuild the size of Macedonia's herd



- ▶ Serbia subsidizes mechanization and marketing of agricultural products directly with a budget of approximately €20M per year



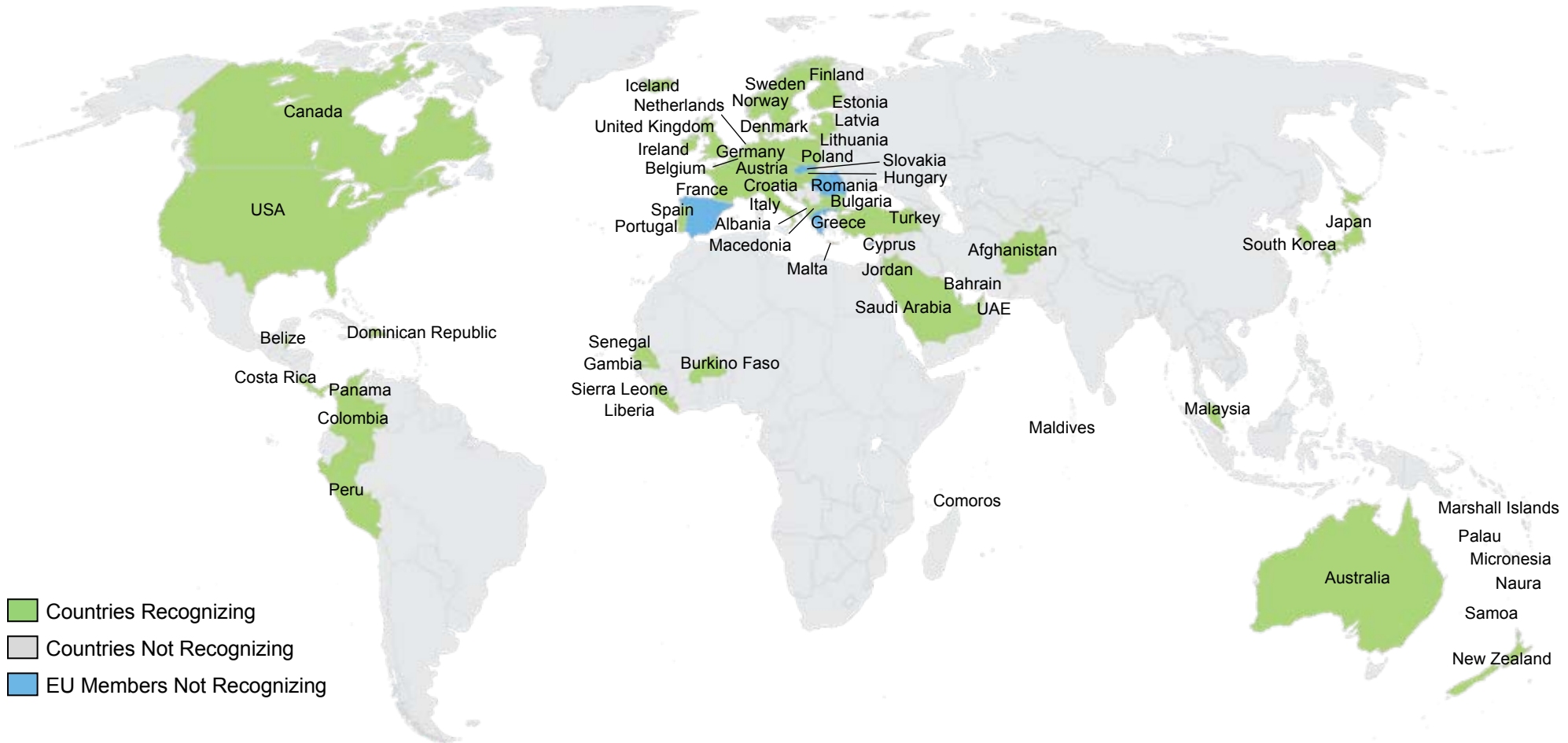
- ▶ Montenegro is openly providing export subsidies on processed foods that are likely in violation of CEFTA requirements

Conclusions

- ▶ Most of Kosovo's neighbors and partners in CEFTA provide some subsidies on agriculture including some that are likely in violation of CEFTA requirements and subject to *de minimis* regulation under WTO rules (amber box). Several industries - notably the milk industry - have made claims that these subsidies damage their competitiveness on the domestic market.
- ▶ At present, though, all evidence is anecdotal. In order for Kosovo to be in a position to take action under CEFTA more detailed information must be requested from the parties or otherwise obtained.

There are currently 63 countries that recognize Kosovo including 22 out of the 27 EU member countries

Countries that Recognize Kosovo's Independent Status

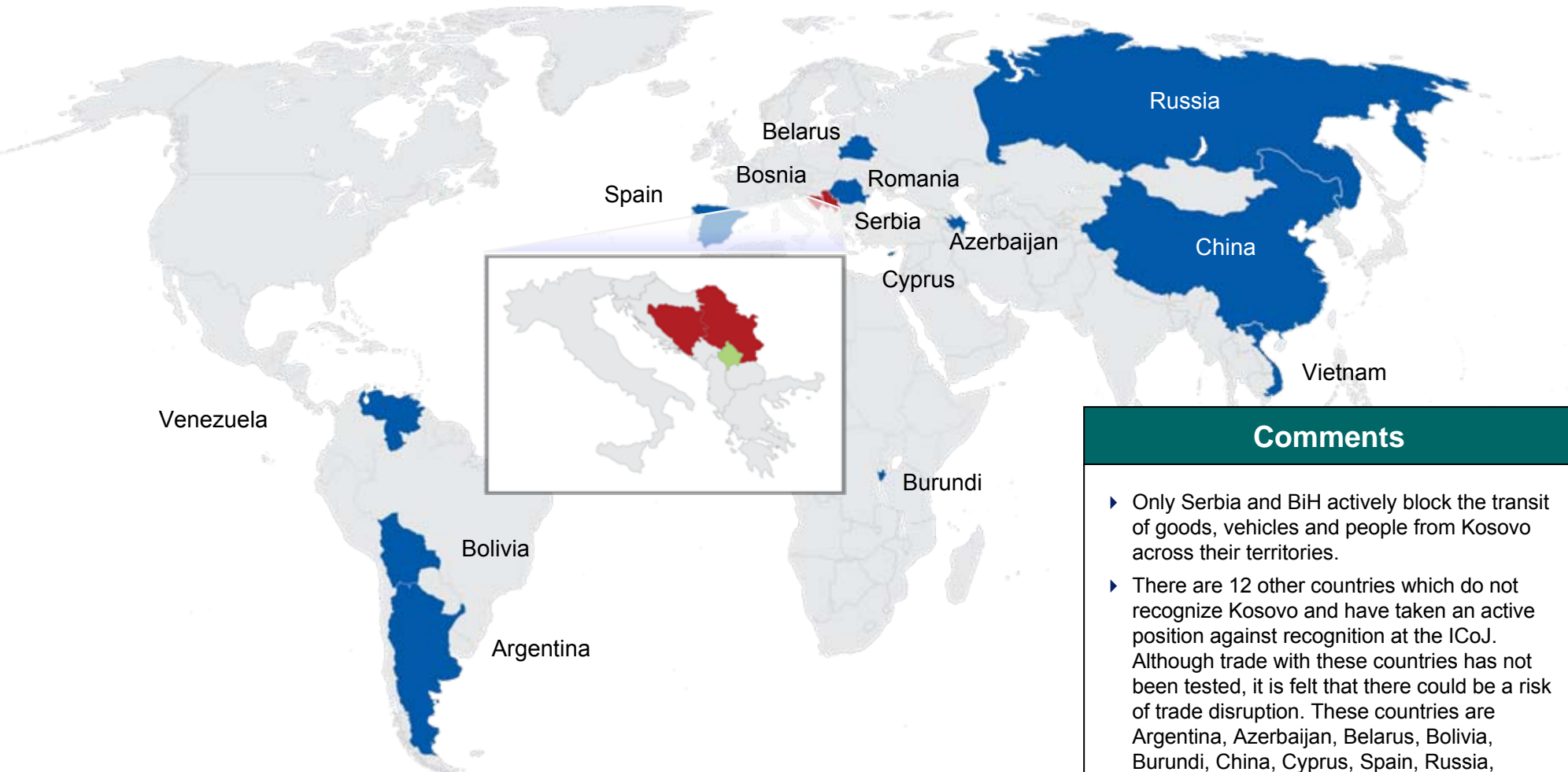


Sources: Ministry of Foreign Affairs, News Sources.

Note : Several countries have not been labeled on the map because of space. They are Czech Republic, Lichtenstein, Luxembourg, Monaco, Montenegro, San Marino, Slovenia, Switzerland.

Only two countries actively block trade with Kosovo although there is a risk that others might also

Countries That Block Trade with Kosovo



Comments

- ▶ Only Serbia and BiH actively block the transit of goods, vehicles and people from Kosovo across their territories.
- ▶ There are 12 other countries which do not recognize Kosovo and have taken an active position against recognition at the ICoJ. Although trade with these countries has not been tested, it is felt that there could be a risk of trade disruption. These countries are Argentina, Azerbaijan, Belarus, Bolivia, Burundi, China, Cyprus, Spain, Russia, Romania, Venezuela and Vietnam.

Table of Contents

- ▶ Overview of Deliverable
- ▶ Baseline Analysis of Agriculture Sector
 - Quantitative Baseline of Kosovo's Agriculture Sector
 - Overview of Constraints and Opportunities
 - International Best Practices Assessment
- ▶ Recommendations to Improve Kosovo's Agriculture Sector

International Best Practice Assessment

- ▶ Benchmarking Methodology

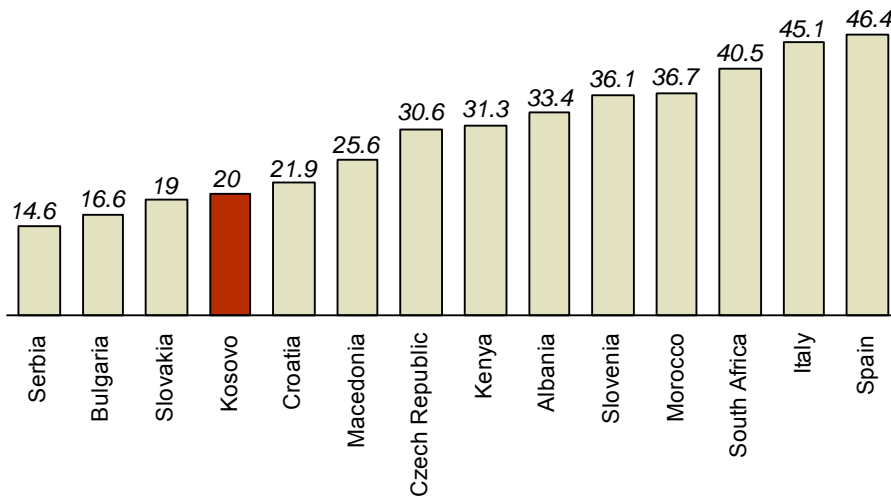
- ▶ Benchmarking Analysis

A combination of quantitative and qualitative criteria were selected to identify relevant countries for benchmarking

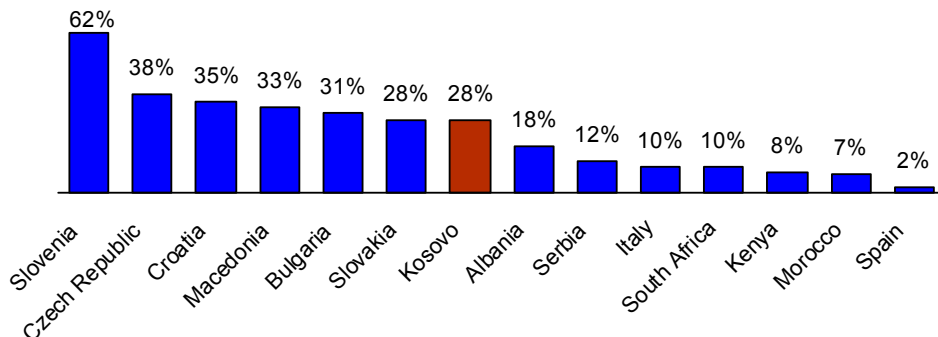
Country Selection Framework

Quantitative

Agricultural Productivity (Tons/Ha, 2007) ⁽¹⁾



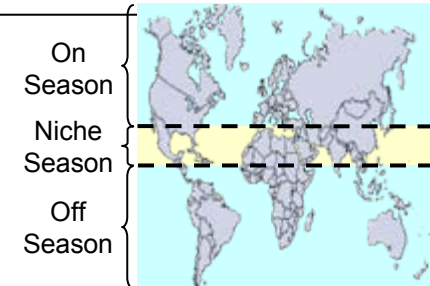
Agricultural Export Value Growth (% , 2004-2008) ^{(1) (2)}



Qualitative

Seasonality and Target Markets

- ▶ Mix of On, Off and Niche agricultural exporters
- ▶ Target market overlap for agricultural exports



Best-In-Class Countries

- ▶ Best in class examples of countries that excel at dealing with challenges relevant to Kosovo
- ▶ Best in class competitors that produce and export agriculture commodities similar to those in Kosovo

Geographic Characteristics

- ▶ Size of the country
- ▶ Location of the country (landlocked vs. coastal)
- ▶ Climate, soil, water, etc.

(1) Commodities include cereals, fruits and vegetables; (2) Figures for Morocco & Macedonia are 2003-2007; Kosovo (2005-2008); Source: FAOSTAT; Trademap; BAH Analysis

As a result, eight countries were selected as primary benchmarking targets – however, when applicable, best practices from other countries were also analyzed

Overview of Benchmark Countries Examined According to Six Dimensions

Countries		Leveraging Small Farmers Potential	Demand-Driven Export Strategies	Infrastructure Capacity Building	Transportation	Government Agriculture Regulations	Trade Access
Primary Benchmarks	Macedonia	✓		✓			✓
	Serbia	✓	✓	✓	✓	✓	
	Morocco		✓			✓	✓
	Italy	✓	✓	✓			
	Spain	✓	✓			✓	
	Kenya		✓		✓	✓	
	Slovakia		✓			✓	✓
	Israel		✓	✓	✓		
Secondary Benchmarks	South Africa		✓			✓	
	United States	✓	✓				
	Croatia					✓	
	Albania			✓			
	Czech Republic					✓	
	Brazil				✓		
	Mozambique				✓		
	Slovenia						✓
	Chile		✓				

Source : BAH Analysis

The benchmarking analysis focused on six key dimensions that are designed to address constraints facing Kosovo's agricultural sector

Overview of Benchmarking Dimensions

Dimensions	Description
<p>1</p> <p>Leveraging Small Farmers Potential</p>	<ul style="list-style-type: none"> ▶ Coordination among Small Farmers: Models of farmer cooperatives; coordination among associations ▶ Extension Services: Models for providing extension services; types of training administered ▶ Lack of Financing for Small Farmers: Access to credit for small-scale farmers; use of crop insurance, purchase order financing, microfinance and other financial products ▶ Land Consolidation: Steps to comprehensive land consolidation; models for land consolidation
<p>2</p> <p>Demand-Driven Export Strategies</p>	<ul style="list-style-type: none"> ▶ Donor Coordination: Export promotion strategies for agricultural commodities enhanced by effective donor coordination ▶ Product Characteristics: Development of new products based on understanding of consumer tastes and preferences ▶ Reliability & Flexibility of Distribution: Improved distribution channels for small volumes; collection centers ▶ Promotion & Branding: Cost effective export promotion strategy; promotion of new products in strategic markets ▶ Pricing: Optimal pricing; methods for addressing seasonality issues for farmers to receive best prices
<p>3</p> <p>Infrastructure Capacity Building</p>	<ul style="list-style-type: none"> ▶ Development of Irrigation Networks: Development of innovative irrigation systems with restricted water access; models of irrigation charging systems ▶ Building greenhouse capacity: Methods to support development of greenhouses; types of extension programs for developing greenhouse capacity
<p>4</p> <p>Transportation</p>	<ul style="list-style-type: none"> ▶ Costs of Road Delivery: Methods to decrease cost of transportation; prioritization of road investments ▶ Facilitated Border Crossing: Development of additional transportation channels to reach destination markets ▶ Air Transport and Shipping: Use of air cargo forwarders and commercial airlines to transport goods to strategic markets ▶ Cold Chain: Improved cold chain systems for small-scale farmers
<p>5</p> <p>Government Agriculture Regulations</p>	<ul style="list-style-type: none"> ▶ Food Safety & Quality: Regulatory models for overseeing food safety and quality; private quality labs ▶ Compliance with Regulations: Comparative costs for farmers to comply with international food safety standards ▶ Regulation of Inputs: Regulations surrounding seed and fertilizer use ▶ Environment: Methods to enforce and implement pesticide regulation to protect the environment
<p>6</p> <p>Trade Access</p>	<ul style="list-style-type: none"> ▶ Trade Facilitation Capacity: Development of trade facilitation capacity measures; donor-funded methods for advancing trade facilitation capacity development ▶ Responses to Subsidies: Interim solutions to subsidies; advanced solutions for subsidies, including export risk guarantee ▶ Recognition of Sovereignty: Methods to increase trade recognition

International Best Practice Assessment

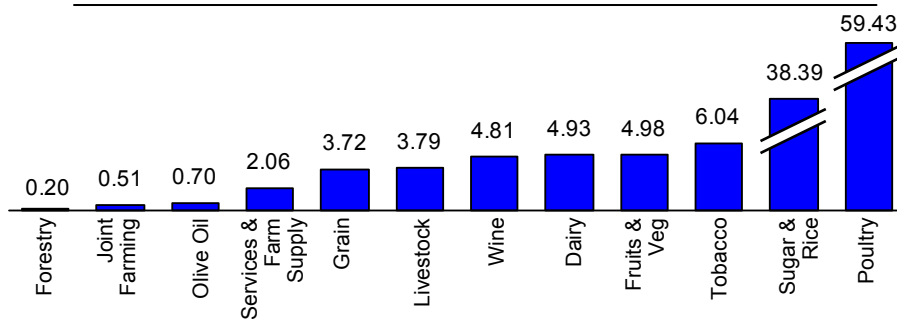
- ▶ Benchmarking Methodology

- ▶ Benchmarking Analysis

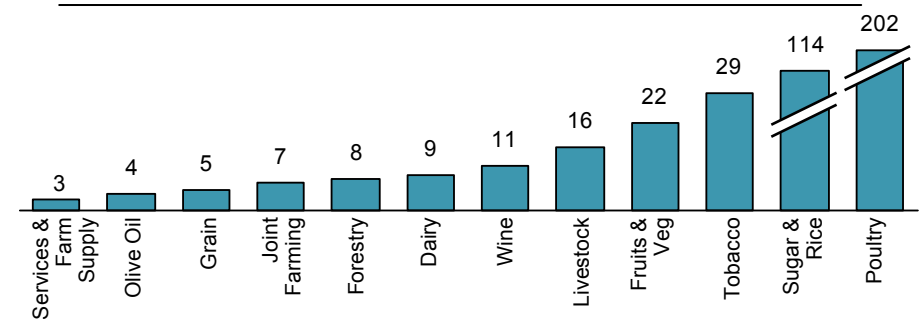
Cooperatives of smallholder farmers have become a common model in Italy to increase their ability to compete on the market and create economies of scale

Overview of Italian Cooperatives by Crop

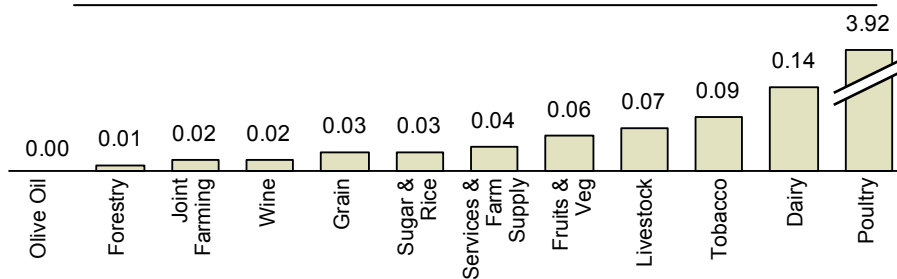
Average Revenue per Coop Type (\$mil)



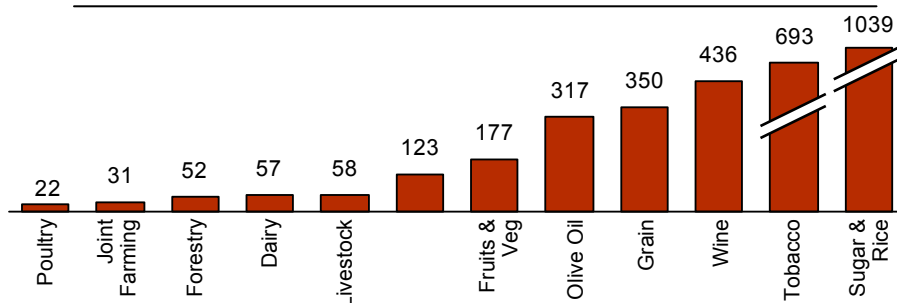
Average Workforce per Coop Type (N)



Average Revenue per Member in Coop Type (\$mil)



Average Number of Members per Coop Type (N)



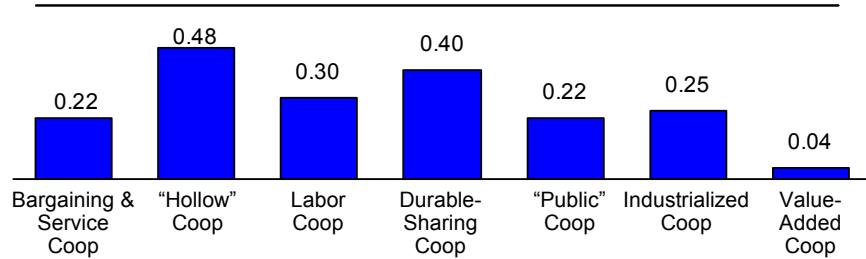
Comments

- ▶ The membership of many Italian cooperatives is comprised primarily of small producers
 - The goal of the cooperative model is to support small farm operations
 - Cooperatives aggregate efforts of farmers who would not otherwise be able to compete effectively on the market
 - In the absence of economies of scale, cooperatives enable small farmers to avoid significant economic losses that could force them to sell their farms

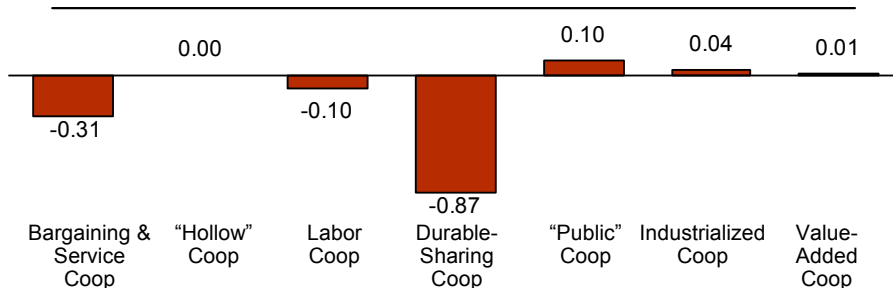
Public cooperatives- those managed by an outside manager- tend to use internal sources of equity extensively

Overview of Italian Cooperatives by Equity Management Type

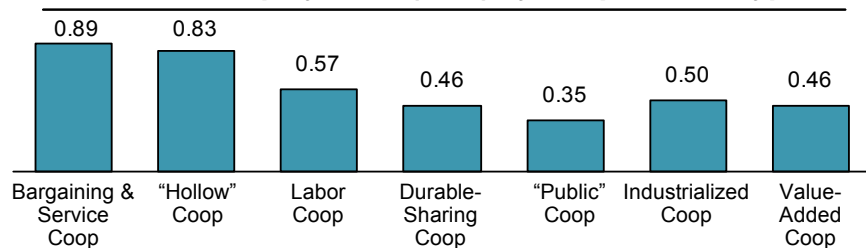
Equity / Asset Ratio (EAR) by Coop Cluster Type



Internal Sources Ratio (ISR) by Coop Cluster Type



Allocated Equity Ratio (AER) by Coop Cluster Type



Overview of Cooperatives by Function

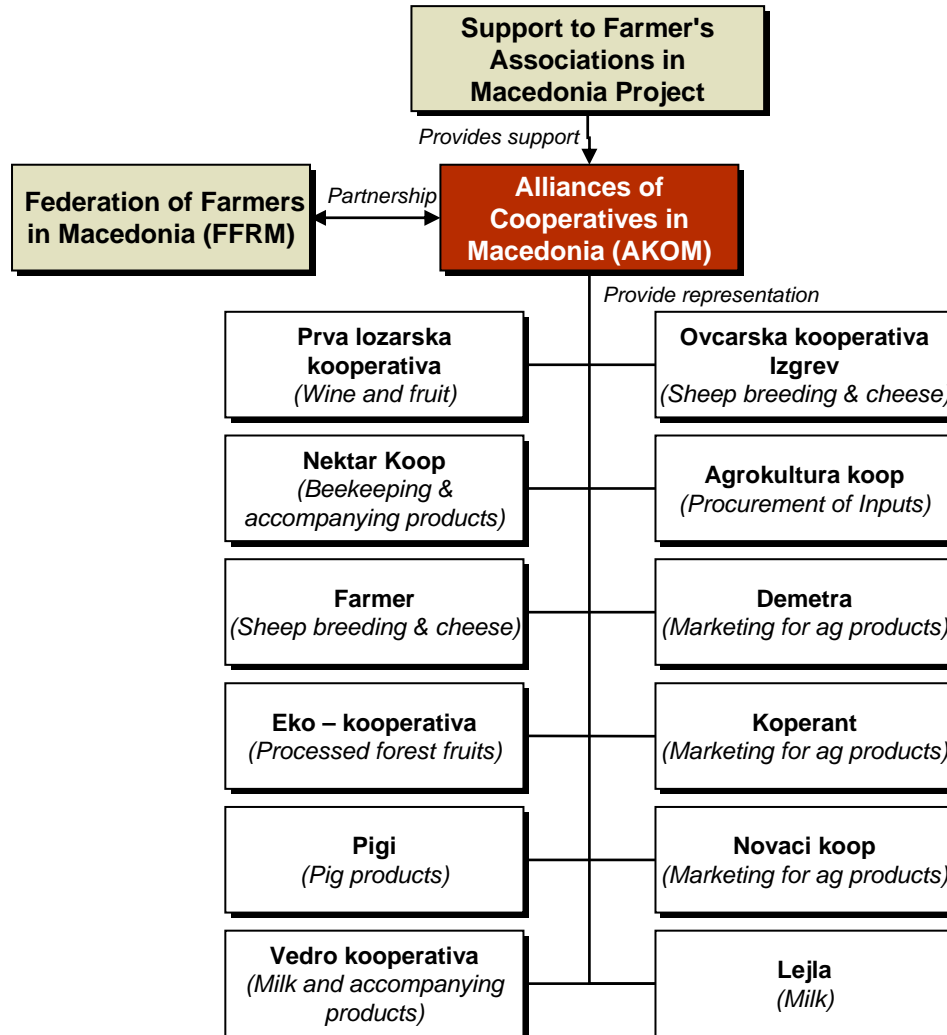
- ▶ Cooperatives can be classified according to function:
 - Bargaining & Service: provide members with “intangibles” services
 - Hollow: more extreme form of bargaining coop
 - Labor: operate mostly in labor-intensive businesses
 - Durable-sharing: allow small farmers to utilize costly fixed assets at a fair price
 - Public: achieve large average scale of operations using products of a large number of small patrons
 - Industrialized: membership comprised of large, professional farmers
 - Value-added: focus on developing high value processed products

Management of Public Coops

- ▶ Public coops are largely supervised by third-party managers hired by the cooperative. The managers instruct farmers on the types and amounts of crops to grow, and manage the capital structure of the coop
- ▶ On average, public coops tend to be leveraged because of the low contribution of farmers' assets
 - The coop is the only one that is using the internal sources of equity extensively
 - On average, 10% of revenues are retained as financial resources, which represents a sizable share

In Macedonia, a number of small agriculture cooperatives have come together under an umbrella association, AKOM, which provides advocacy support

Overview of Alliances of Cooperatives in Macedonia (AKOM)

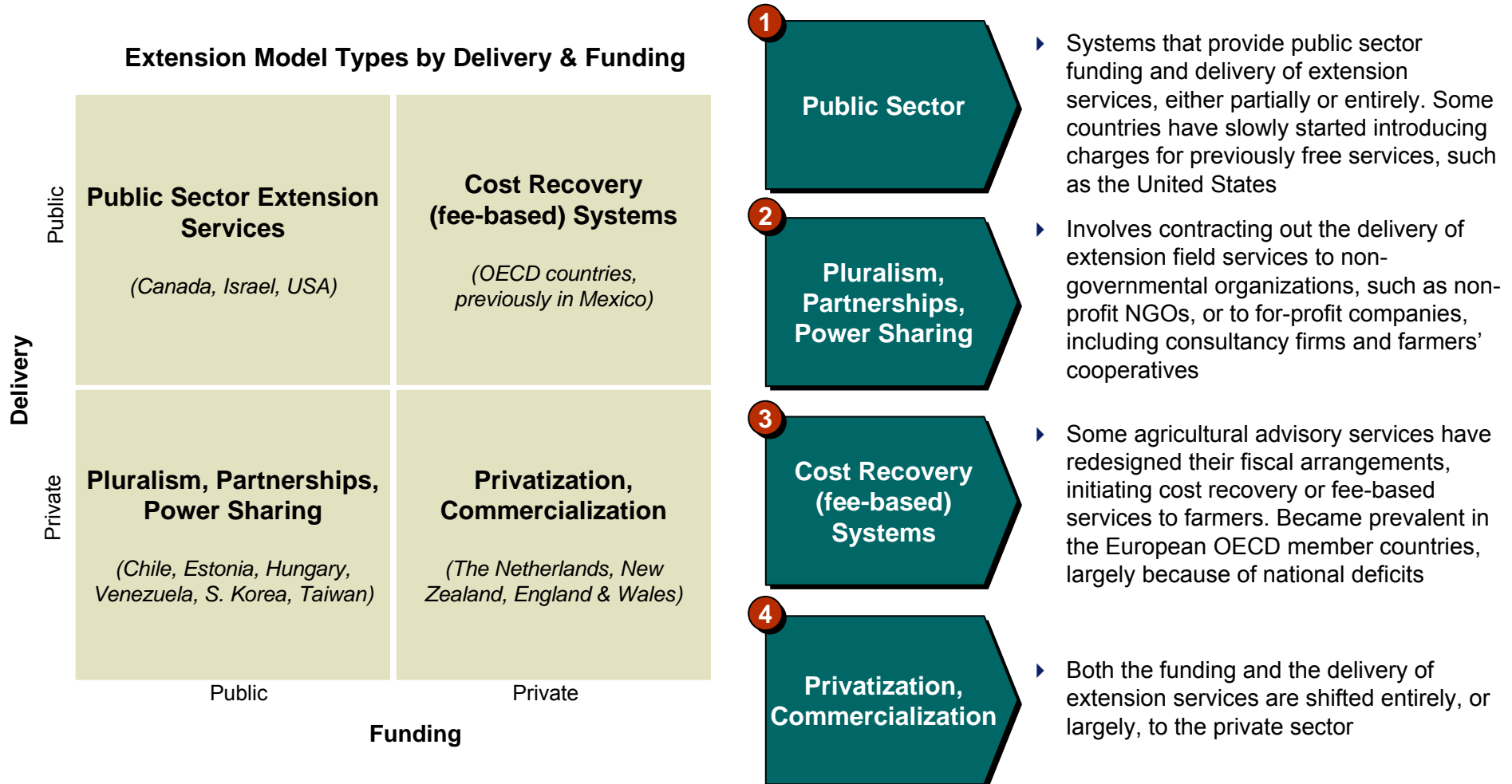


Comments

- ▶ **Function:** Founded in June 2007, AKOM is a non-governmental organization created to unite, represent and serve cooperatives in Macedonia vis-à-vis governmental and non-governmental institutions concerning cooperative issues (policy, economy, finance, legal etc.)
- ▶ **Objectives:**
 - Promote the development of coops
 - Advance information exchange among coops
 - Represent and provide advocacy for coops with NGOs and the government
 - Support promotion and marketing efforts
 - Provide services and expertise to coops
 - Research and provide findings to coops
- ▶ **Sample Activities :** Developed workshops, study trips and consulting services for cooperatives

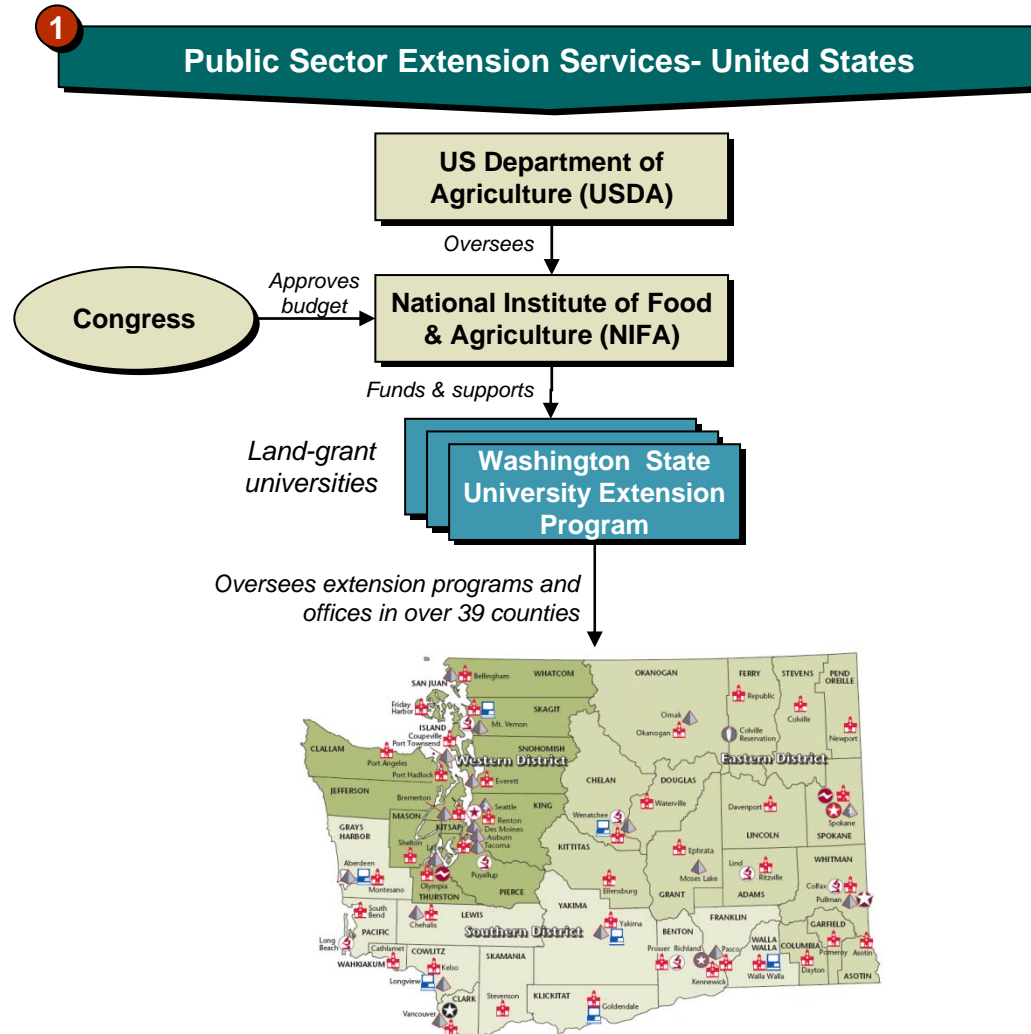
Extension models around the world fall into four main categories: public sector, partnerships, cost-recovery and privatized

Overview of Extension Model Types



The US has established a public land-grant model for funding extension services; the government funds extension at universities, which in-turn provide services to farmers

Example of United States Model: Public Sector Extension Services



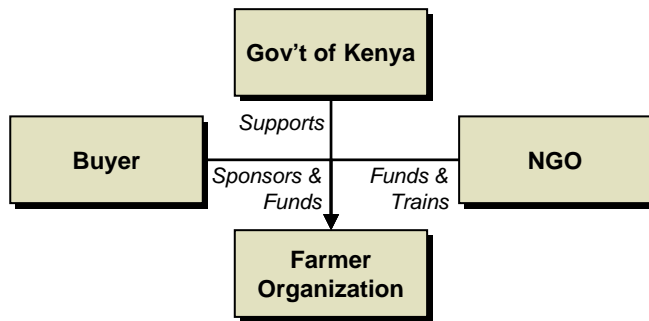
Comments

- ▶ **Background:** The Cooperative Extension System in the United States is a non-formal educational program designed to "reach out," with teaching and research. Land-grant institutions "extend" their resources, solving public needs with college or university resources through non-credit programs in agriculture
- ▶ **Structure:** The USDA oversees the work of NIFA, which funds and supports extension programs at land-grant universities. Programs are largely administered through thousands of county and regional extension offices, which bring land-grant expertise to local levels
- ▶ **Funding:** NIFA distributes annual Congressionally appropriated formula grants to supplement state and county funds to designated land-grant universities
 - The amount of funds provided to each institution is determined by formulae, often statutorily defined, that may include variables such as the rural population or farm population
 - Local or regional university leaders decide which specific projects will be supported by an institution's formula grant allotment

Kenya uses partnership arrangements for training, while Germany has developed a cost-recovery model; the Netherlands has privatized the provision of extension services

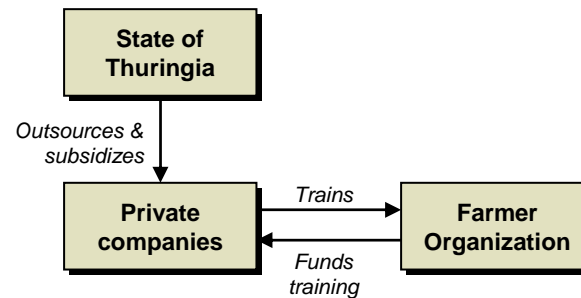
Example of Partnership, Cost-Recovery and Privatized Models

2 Pluralism, Partnerships, Power Sharing- Kenya



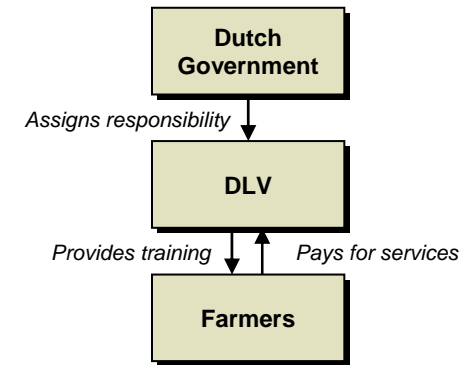
- ▶ **Background:** Public-private partnerships among the government, buyers, farmer groups and NGOs have become more common to support smallholders' compliance of IFSS. Such partnerships focus on providing information, financial support, and capacity building
- ▶ **Structure:** The group's certification is sponsored by the buyer, with the training provided by the NGO. The certification loses validity if the relationship between the buyer and farmer group fail. The government supports the process and relationship
- ▶ **Funding:** Mix of funding is provided by the buyer and NGOs, who provide training

3 Cost Recovery (fee-based) System- Germany



- ▶ **Background:** In Germany, all of the Federal States are responsible for extension services. At one point, 80% of farmers used extension services, creating a drain on the state budget
- ▶ **Structure:** The government has outsourced extension services to private companies since 1998
- ▶ **Funding:** Public funding for extension services dropped over 50%. As a result, part of the extension cost is paid by farmers while the other part is subsidized by the government. With the introduction of the cost-recovery model, demand for extension fell, with only 13% of farmers using the system. Farmers pay for training that they need

4 Privatization, Commercialization- Netherlands



- ▶ **Background:** The Netherlands decided to privatize its public extension agents, at first by transferring them with initial financial support to work with farmer associations
- ▶ **Structure:** More recently, the Dutch government has assigning responsibility for extension services to a private company, DLV, which provides training to farmers in exchange for a fee
- ▶ **Funding:** Farmers pay for extension services which are provided by DLV

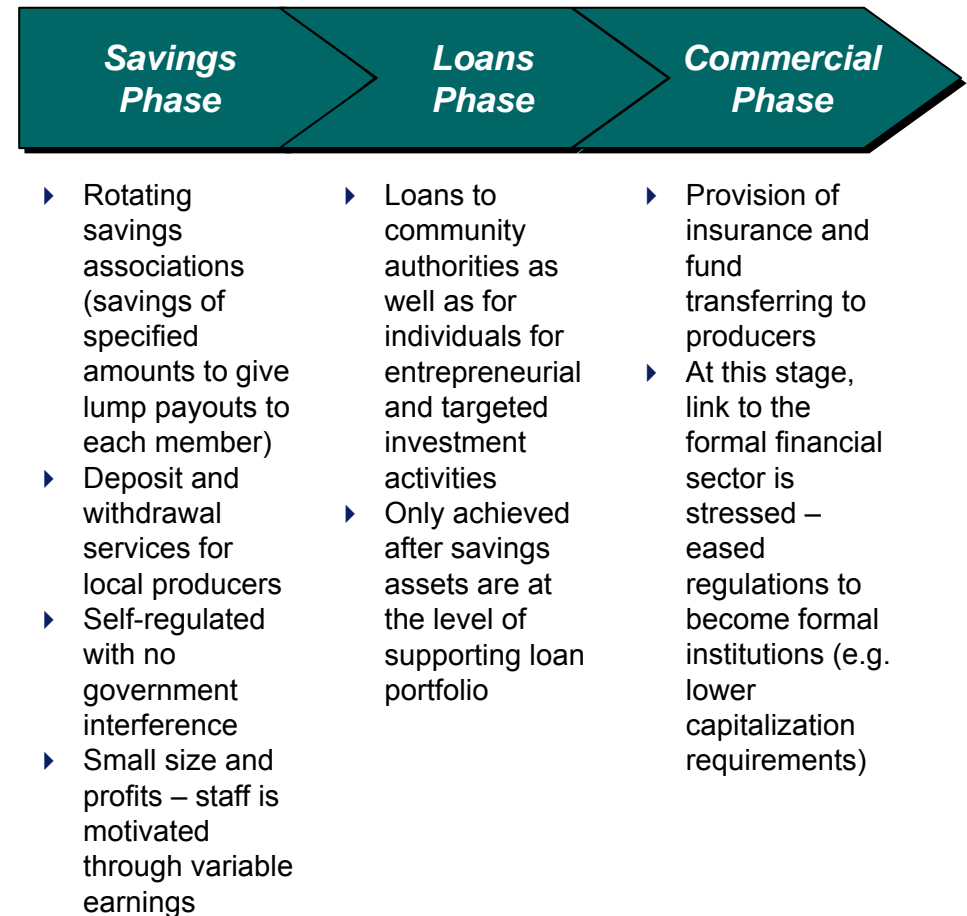
In order to improve farmers' access to credit, South Africa has developed a model based on financial intermediation at the local level through "Village Banks"

Overview of Village Banks in South Africa

South Africa Village Banks

Background	<ul style="list-style-type: none"> ▶ South Africa's farmers had difficulty in accessing credit through commercial banks <ul style="list-style-type: none"> – Distance from branch networks – Lack of collateral – Moral hazard and adverse selection ▶ Government did not offer customized credit lines for small farmers
Overview	<ul style="list-style-type: none"> ▶ Village Banks project was funded by USAID, with additional resources from World Bank ▶ "Savings-first" institutions – concession of credit only when volume of savings allowed it ▶ Institutions owned by member farmers – controlled by local communities ▶ Decentralized services at local level ▶ Typically negligible loss ratio
Service Offering	<ul style="list-style-type: none"> ▶ Different products according to farmer segments (defined by gender and source of income) – e.g. women farm workers, unemployed rural poor, small scale employers, etc. ▶ Bank revenue is generated by interest on loans and depositing of resources in the nearest commercial bank branch ("link bank")

Village Bank Evolution



There are also a wide range of products that comprise the agricultural finance system, including purchase order financing, crop insurance and microfinance payment systems

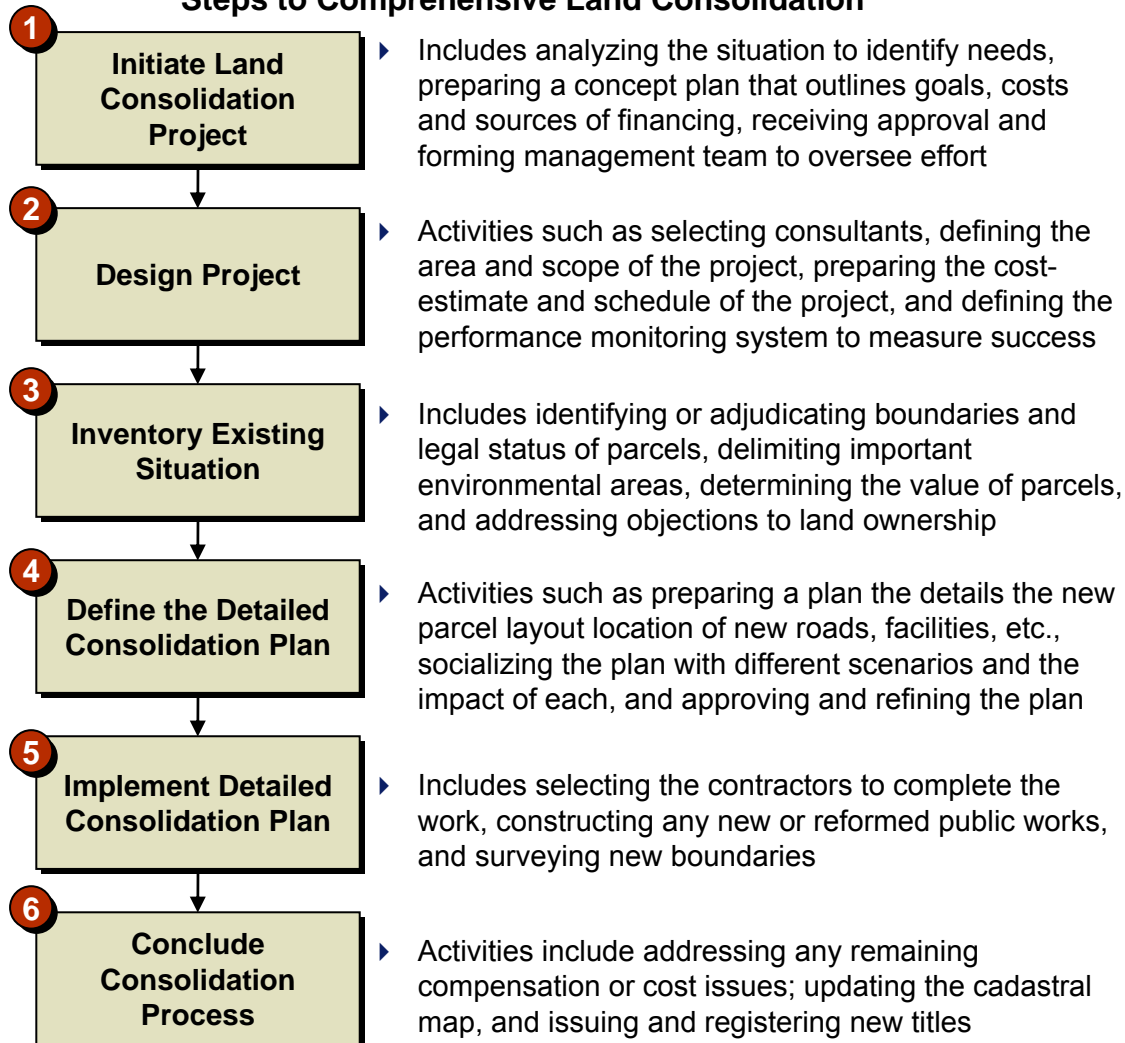
Overview of Financial Products to Increase Smallholder Farmers' Access to Credit

	Purchase Order Financing (POF)	Crop Insurance	Microfinance Payment Systems
Definition	<ul style="list-style-type: none"> ▶ Transaction-based form of working capital financing. <ul style="list-style-type: none"> – When a business receives an order from a buyer, a POF lender advances a loan to the business to cover all the steps necessary (production, purchasing, processing, packaging, etc.) to ship the order – POF allows for a longer horizon that includes production of the commodity to be shipped 	<ul style="list-style-type: none"> ▶ A mechanism that provides insurance for a variety of crop types in the event of loss <ul style="list-style-type: none"> – Different crop insurance types include single-risk, combined, yield, revenue, whole-farm yield, and indirect insurance – Crop insurance can be voluntary or compulsory, depending on the country. However, possible risks of crop insurance include moral hazard, where farmers may take excessive risk or not take enough measures to mitigate risk 	<ul style="list-style-type: none"> ▶ System that enables individuals to perform basic banking functions via mobile phone and SMS <ul style="list-style-type: none"> – Enables users to check status of accounts, make payments of loans and/or transfer funds – Can lower the costs of providing financial services in remote, sparsely populated areas – Continued growth and improved interoperability depend heavily on the regulatory and enabling environment and their impact on product innovation
Example	<ul style="list-style-type: none"> ▶ The purchase order (the contract between the seller and buyer) becomes the collateral for the loan <ul style="list-style-type: none"> – The accounts receivable is transferred to the lending institution and becomes the source of loan repayment – The financial institution collects payment for the loan plus interest and fees from the buyer once the product has been delivered 	<ul style="list-style-type: none"> ▶ Farmers in Central and Eastern Europe hold approximately 3% of the crop insurance in the world. Most insurance premiums are concentrated in the United States and Europe ▶ Donors can play a role in the introduction of crop insurance. For instance, the World Bank provided research support before the introduction of crop insurance in Morocco to ensure success 	<ul style="list-style-type: none"> ▶ In 2000, Kenya's Equity Building Society introduced mobile banking in about 20 of the country's most isolated towns and villages <ul style="list-style-type: none"> – The program offered a range of financial services, including agricultural loans, even in remote rural areas, with full cost recovery. By early 2004, these mobile units were serving 29 locations and about 12,000 clients

According to the FAO, land consolidation is a best practice for addressing rural poverty in Eastern Europe

Overview of Best Practice Land Consolidation Techniques

Steps to Comprehensive Land Consolidation



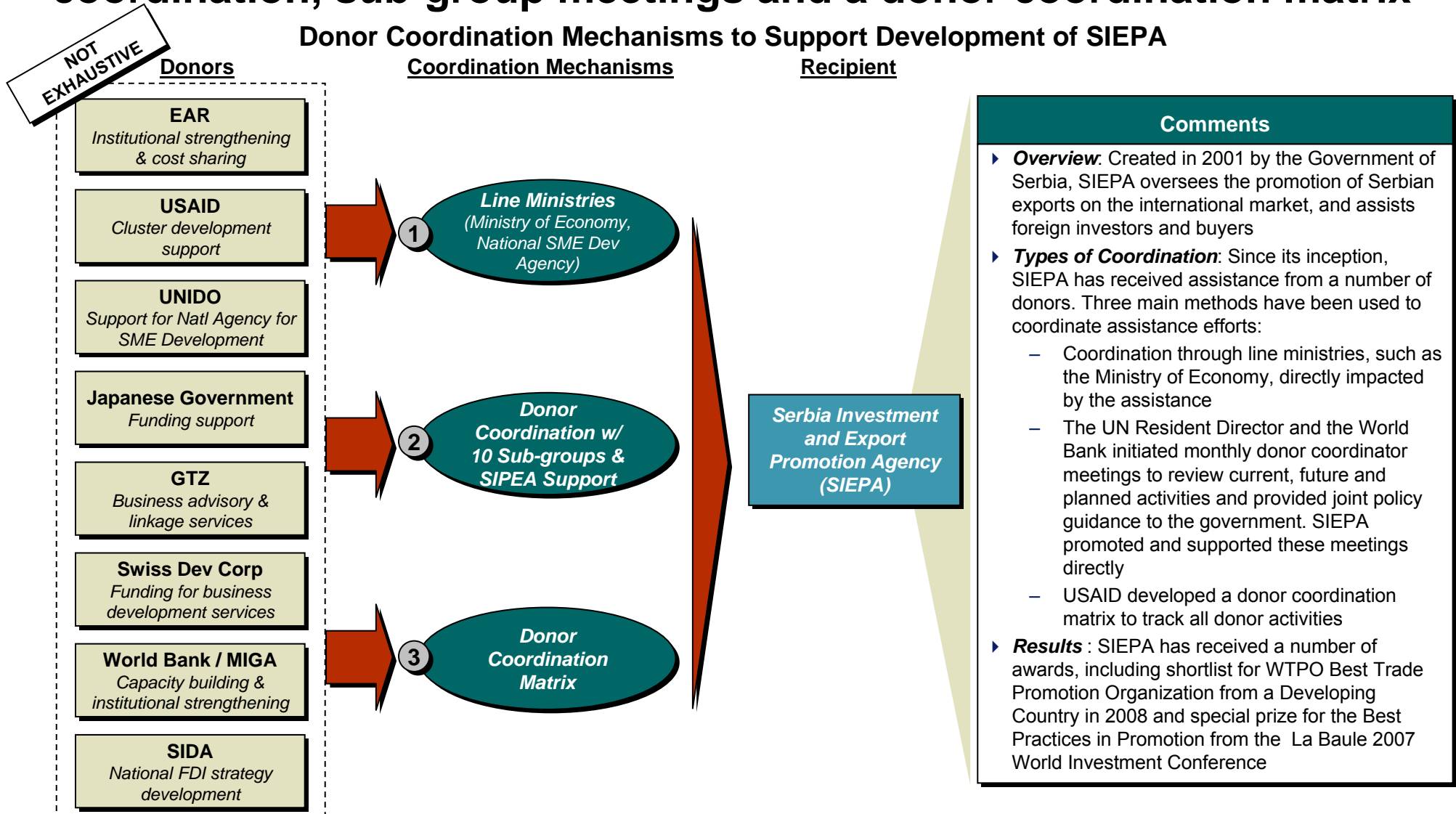
Methods to Land Consolidation

- ▶ Land consolidation can occur in several ways, for example:
 - As consolidated farm, where a farm comprises a number of parcels located some distance from one another
 - As consolidated ownership, where a farmer's holding includes land owned by the farmer as well as land leased from others. The leased land may be owned by a neighboring farmer or it may involve a case of "absentee ownership" with the owner living in a distant city

Advantages

- ▶ Land consolidation can offer benefits:
 - Facilitate the creation of competitive agricultural production arrangements by enabling farmers to have farms with fewer parcels that are larger and better shaped, and to expand the size of their holdings
 - Can offer opportunities for land owners to sell their land to others willingly. The objective is not to make people landless

Three main methods were used to coordinate multiple donor activities to support development of SIEPA in Serbia: line ministry coordination, sub-group meetings and a donor coordination matrix



Source: Lit Search; EAR Action Programme 2006 for Serbia; SEDP Final Report, 2007; Comparative Overview of Local Government Ministries in the Region and Abroad; Transitional Support Strategy Update; SME Development

Kenyan green bean exporters have developed a strategic market in the UK by tailoring production to buyer preferences, using contract farming and developing additional safety codes of practices

Key Success Factors: Development of Kenyan Green Beans to Meet Consumer Needs

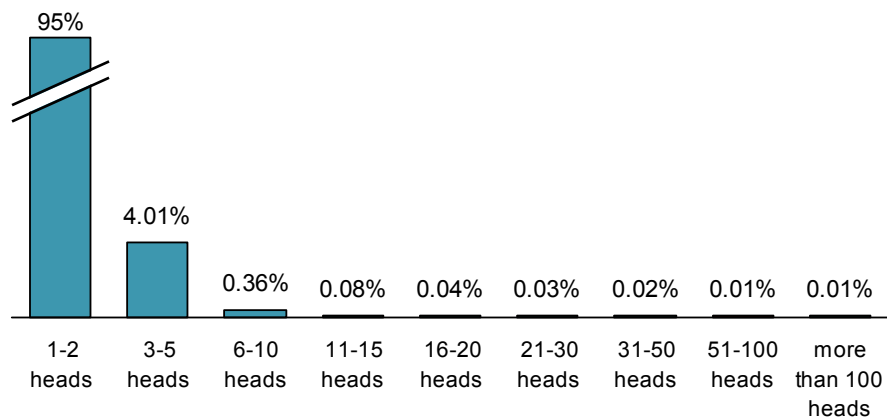


Source: Strategic use of private standards to enhance international competitiveness: Vegetable exports from Kenya and elsewhere; Food Safety Requirements in African Green Bean Exports and Their Impact on Small Farmers; BAH Analysis

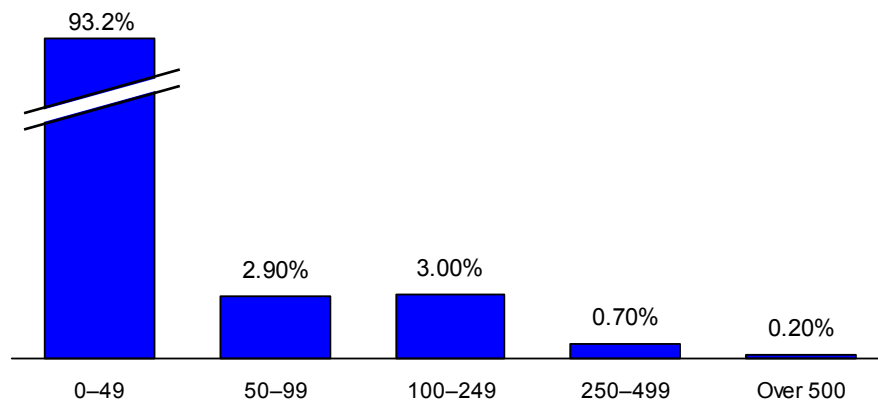
The vast majority of Romanian dairy producers are family farms that have less than two cows, with 21% of milk production going to the milk collection system...

Overview of Romanian Dairy Producers

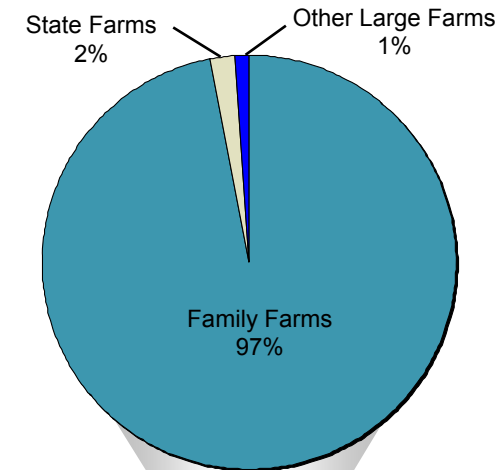
Size Structure of Livestock Farms (2001)



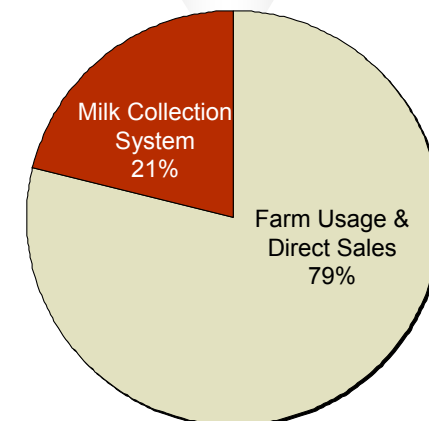
Size Distribution of Dairy Industry, Number of Employees (2004)



Total Raw Milk Production (2001)



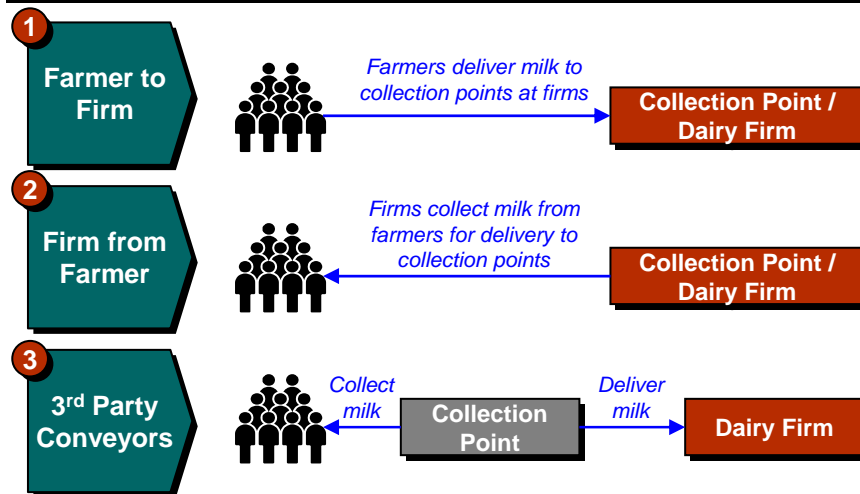
Use of Milk Production (2001)



...however, a recent survey of dairies showed increased use of collection arrangements, payment systems and support mechanisms for smallholder farmers in Romania

Overview of Collection Centers, Payments and Assistance in Romania

Types of Collection Arrangements



Overview of Farm Assistance by Dairies Surveyed

	Danone	Friesland	Promilch	Raraul
Extension services				
Provide good quality inputs financing				
Support to purchases of simple inputs				
Investment support by small loans				
Support in receiving bank loans				

Payment Systems to Ensure Quality

- 1 Payments Proportional to Quality:** Farmers are paid at collection centers according to the fat content and protein content, density and germ counts in milk supplied
- 2 Bonus System:** Farmers are paid a relatively low base price, but bonuses are provided when farmers deliver above-average milk quality, according to protein content, germ count and consistency in delivery
- 3 Penalization System:** Firms measure milk according to a specified number of grades. Farmers delivering milk at the lowest grades are penalized

Comments

- ▶ Examples of extension programs:
 - Friesland sends inspectors in the field, who visit farmers and advise them on milk hygienic circumstances, cleaning practices, and fodder management
 - Promilch distributes leaflets with practical information on cultivating feed, storing milk, cleaning practices, etc.
- ▶ Examples of investment programs:
 - Danone supports farmers who aim to improve their business through small-scale investments. The farmer may apply for pre-financed inputs only after he has delivered good-quality milk to Danone for at least six months.

Effective promotion methods include targeted marketing based on product type and pre-positioning of commodities at agriculture food fairs

Innovative Promotion & Branding Methods

Targeted Promotion Based on Product Type

- ▶ ASOEX / ProChile co-funded an intensive marketing campaign targeting the sale of blueberries in the UK
- ▶ “Eat the Blues – You Have to Eat Them to Beat Them” campaign included a number of efforts:
 - An on-the-street sampling scheme in Yorkshire, with handouts of fresh, free blueberries
 - Free 3-week distribution to premium health spas
 - Aggressive sampling at radio stations and shows
 - A national print and online PR campaign geared to the over-50s with the potential to reach over 3.5 million consumers

Pre-Positioned Distribution at Fairs

- ▶ Agricultural food fairs are important for promoting new products, learning about consumer tastes, and increasing innovation
- ▶ Smallholder farmers may be constrained if they cannot ship and distribute their products readily at international fairs
 - The USAID South African Trade Hub addressed this challenge by sponsoring six regional companies to attend the 2006 Spring Fancy Foods Show in Chicago
 - The program helped pre-position distribution of products so that small farmers could promote and easily sell their products with minimal lag time during and after the food fairs

Overview

Impact

- ▶ Shipments have grown from 1,440 tons in 2005-2006 to 2,307 tons in 2006-2007, an increase of 60 percent
- ▶ Due the success of the pilot program, the marketing campaign has become of yearly event, with possible expansion into other countries

- ▶ Participation helped raise the collective profile of southern Africa as a supply source for specialty foods
- ▶ Three of the six companies sponsored by the USAID Trade Hub have since realized new exports to the U.S. specialty and gourmet food sector



Timeline for Success at Food Fairs



In order to optimize pricing for commodities, best practices point to three solutions: align with market prices, establish a niche product or develop a franchised quality product

Methods to Optimize Pricing for Agricultural Commodities

1

Align with Market Prices



- ▶ The Foreign Agricultural Trade of the United States (FATUS) service provides historical prices for USA's exports and imports, by crop and country of origin / destination
 - User-friendly interface, with updated information
 - Diverse breakdowns, allowing producers to even assess impact of customs and duties on market prices for their crops
- ▶ Service is on-line and free of charge
- ▶ The tool allows producers to check trends and recent development of crops in international markets
 - Monitor competitors' positions
 - Assess and act on seasonal trends

2

Establish a Nice Product



- ▶ Kenyan green bean producers pinpointed a market for “high-care” products to UK supermarkets
 - Customers differentiated value based on quality of the product rather than price
 - Exporters enforced and even developed stringent international food safety standards to meet consumer quality standards
 - Exporters have also developed flexible distribution arrangements to supermarkets, at times decreasing or increasing the size of order hours before delivery. The variability is offset by the continued relationship with the buyer

3

Buy Into A Franchised Product



- ▶ The Pink Lady® trade mark was originally established in Australia for use on apples that met specified quality standards
 - In countries where the trade mark is registered, apples sold under the Pink Lady® brand must meet rigorous and specific standards, and the trade mark can only be used under license
 - License holders pay royalties, which cover management of the trade mark
 - Members span over four continents in countries such as the United States, South Africa, Chile, Japan, Uruguay, etc.
- ▶ Because of the high quality of the Pink Lady brand, producers can expect to receive a premium on price

Despite the lack of water access, the Israeli government has developed innovative irrigation methods to increase productivity while decreasing water use

Overview of Israel's Irrigation System and Impact

Types of Micro Irrigation Methods

Drip Irrigation

▶ Drip irrigation can supply from one liter to 20 liters per hour. With a peak water utilization rate of 95%, this method is suitable for intensive cultivation

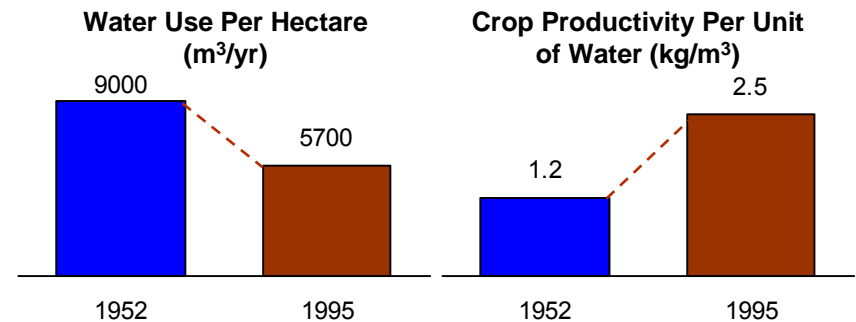
Mini-sprinkler

▶ Sprinklers are designed for crops that require irrigation of an entire area or field. The sprinklers achieve a water utilization rate of 70%-80%

Underground

▶ In an underground drip irrigation system, air valves open when the water is turned off and allow air into the pipe to prevent external dirt from being sucked into the dripper

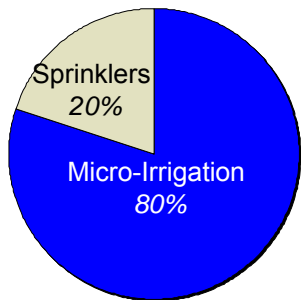
Implementation & Impact



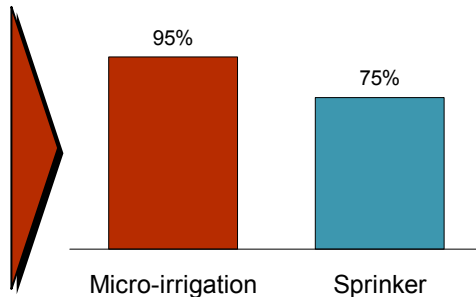
Comments

- ▶ Despite the scarcity of water, the Israeli government has taken a number of steps to increase farmers' access to water
 - According to the Water Law, water is considered a public good and managed by the Water Commissioner, who is responsible for determining the use and allocation of water in all areas, including irrigation for agriculture
 - In 2006, the Israeli government developed the National Program for Promoting Water Technologies - NEWTech. The program invests in human capital, R&D funding and local market implementation for the development of irrigation systems. The Israeli Ministry of Industry, Trade and Labor leads the Program with 10 other government entities

Portion of Israeli Land with Different Irrigation Types (%)



Efficiency Rate According to Irrigation Types (%)



Source: Irrigation and Desertification: Ecological Consequences of Arid Land Reclamation in the Aral Sea Basin and Land Degradation Control; Management of Water Resources in Israel; Israel Agriculture; BAH Analysis

Four main types of irrigation charging systems exist around the world: area-based, crop-based, volumetric and tradable water rights

Types of Irrigation Charging Systems

Area-based

Crop-based

Volumetric

Tradable Water Rights

Description

- ▶ A fixed rate per hectare of farm with a “two-part” tariff designed to cover the fixed costs of the service, or a fixed rate per hectare irrigated
- ▶ A variable rate per irrigated hectare of crop, i.e. different charges for different crops (not based on volume, but the type of crop and area irrigated serve as proxies for the volume of water received)
- ▶ A fixed rate per unit water received, where the charge is proportional to the volume; or, a rising block tariff where the charge is tied to quantity of water, but tiered unit costs can be applied for different farms
- ▶ Entitlements of users in an irrigation project, otherwise known as rights holders, are allowed to buy or sell rights in accordance with specified rules designed primarily to protect third parties’ rights

Incentives for Farmers

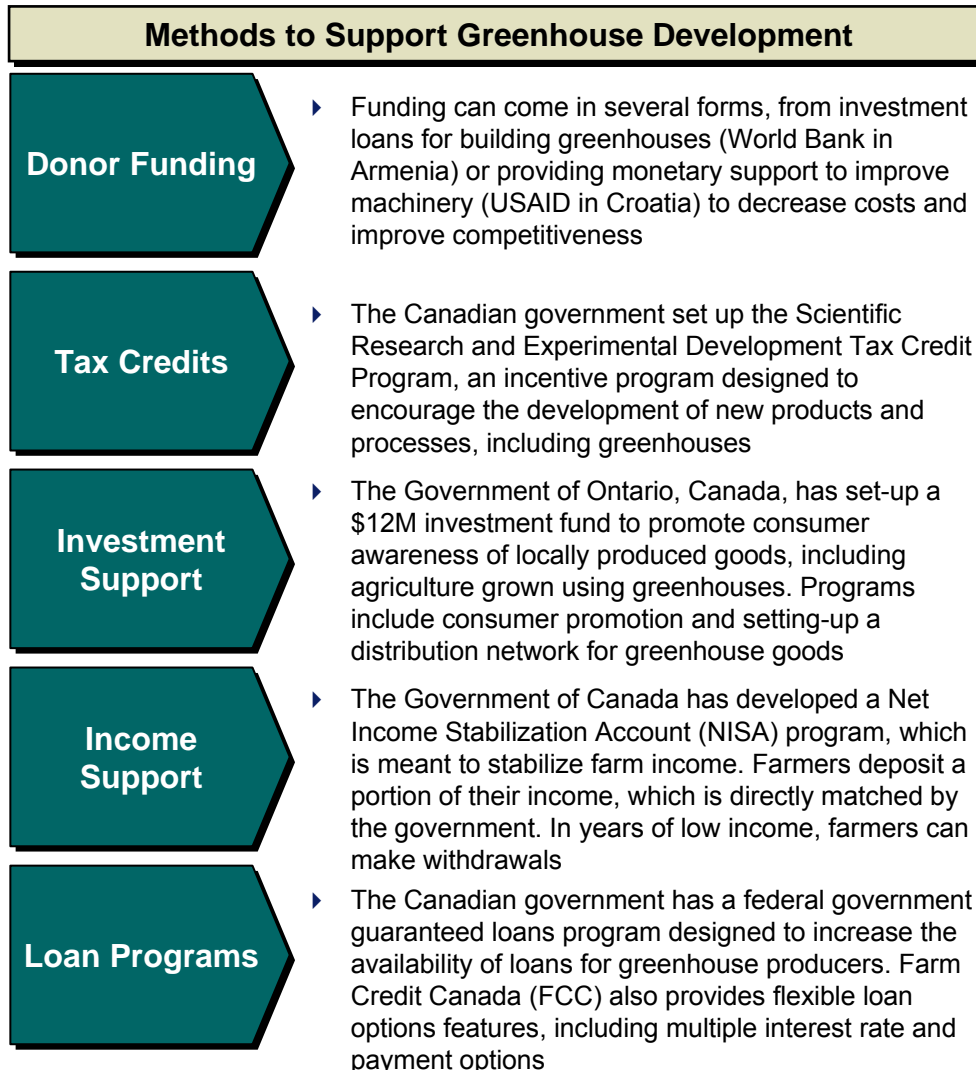
- ▶ The marginal price of water is zero. Farmers take as much water as they would like to consume, but the cost is unaffected by the amount used
- ▶ The marginal price of water is zero. Farmers take as much water as they would like to consume, but the cost is unaffected by the amount used
- ▶ Provides an incentive to save water and has the potential to reduce consumption
- ▶ For block tariffs, low rates are for substantial, initial entitlements and high rates are for additional water beyond threshold. Results in a low total cost and a high marginal price
- ▶ Brings supply and demand into balance. Where water is scarce and rationed, farmers will use water carefully even though the marginal price to them may be zero

Country Example

- ▶ In Spain, the most widespread charging mechanism is a fixed charge per hectare. The variable element is the energy cost associated with pumping and pressurizing water delivery systems
- ▶ In Egypt, several charging mechanisms exist, including the crop based pricing for irrigation
- ▶ In Israel, farmers receive a water allocation for which they are charged on an increasing block tariff according to the percentage of the allocation used
- ▶ Available in the United States, sales require authorization by a licensing authority (most western states) or may require court approval (e.g. Colorado)

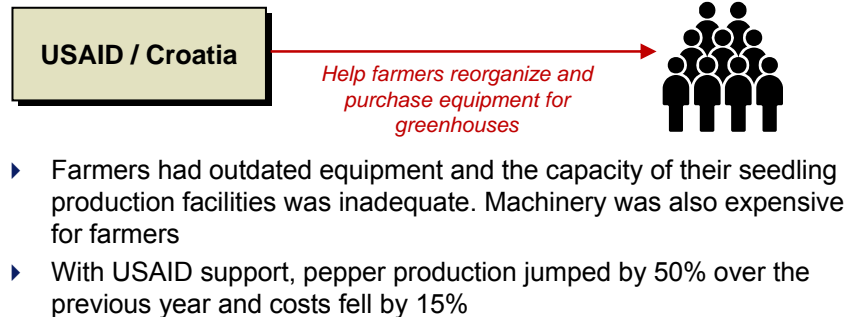
A number of methods exist to support expansion of greenhouses, including donor funding, tax credits, investment support, income support and loan programs

Overview of Methods to Support Greenhouse Development

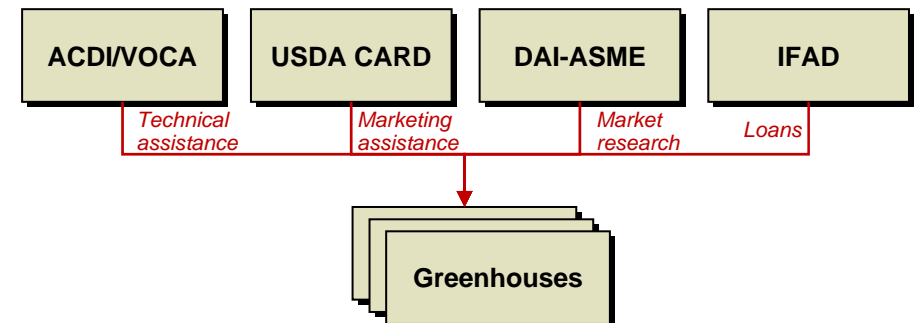


Examples of Donor Support Mechanisms

1 USAID / Croatia: Modernization of Greenhouse Facilities



2 Donor Efforts in Armenia to Improve Infrastructure



- The greenhouse industry received support from multiple donors to improve infrastructure. From 2003-2006, the acreage of greenhouses in Armenia doubled. On average, 10 ha of greenhouses were constructed annually

Extension programs for irrigation can be provided through universities, governments or public-private partnerships

Delivery Types of Extension Programs for Irrigation

University

- ▶ In the **United States**, universities provide tailored extension services in greenhouse development
 - In Colorado, major crops grown in greenhouses are container-grown plants, including potted color, bedding and foliage plants, cut flowers, and tomatoes
 - The **Colorado State University Floriculture and Greenhouse Extension** program offers a number of tools for farmers, including 1) **publications** in areas such as disease management and water reuse; 2) **presentations and workshops**; 3) **access to in-house professors** who are experts in greenhouse; 4) **access to an online Cooperative Extension Greenhouse Listserv** that serves as a discussion list and a point of exchange for greenhouse farmers

Government



- ▶ In Alberta, Canada, the Ministry of Agriculture and Rural Development has developed a number of resources to support and promote greenhouse vegetable production
 - **Online guides include information** on industry statistics, regulatory requirements, market basics, production knowledge, investment and capital requirements
 - **Publications** about starting and developing greenhouses in Alberta
 - **Access to technical advisors in the Ministry** who are greenhouse specialists, horticulture specialists and economic analysts

Public Private Partnerships

- ▶ In the **United States**, a **regional public-private coalition** was established to promote Integrated Pest Management (IPM) for the greenhouse industry in Northern New England
 - The coalition included **growers, researchers, extension specialists and educators**, socio-economists, bio-control and pesticide suppliers, state agricultural personnel and other key industry representatives
 - The main objectives of the program are to 1) **develop workshops** on IPM 2) develop an analysis of the **needs of growers to improve productivity** and reduce chemical pesticide inputs; 3) **create a coalition of stakeholders in the greenhouse industry** which will serve as the foundation for preparing collaborative research and extension activities

In Brazil, access to road infrastructure was a major challenge for small farmers – one of the country’s largest states developed a prioritization model to invest specific “logistical” funds

Increasing Road Access for Small Farmers in Brazil

Small Farmer Accessibility Studies	Description
<p data-bbox="109 389 296 843" style="writing-mode: vertical-rl; transform: rotate(180deg);">Baselining</p> 	<ul style="list-style-type: none"> ▶ Small farmers’ accessibility to major logistics network in Brazil was evaluated through studies funded by government <ul style="list-style-type: none"> – Assessment of time and distance to main transportation backbones helped determine which areas required investments – Qualitative aspects, such as pavement conditions, were also considered ▶ Results of baselining stage were a set of logistics infrastructure interventions required to enhance accessibility of small farmers to transportation backbones, with cost estimates and eventually forecast of return rates (based on production and trade flow estimates)
<p data-bbox="109 886 296 1336" style="writing-mode: vertical-rl; transform: rotate(180deg);">Prioritization</p> 	<ul style="list-style-type: none"> ▶ Portfolio was prioritized considering a “cost per capita” metric – projects with lower cost per capita were the first to be completed ▶ Indicators for completion of projects were incorporated to the state’s overall performance metrics – accessibility of small farmers to logistics network became part of the state’s strategy and has specific budget allocation ▶ A letter of commitment was signed by local representatives and state’s authorities, so as to ensure continuity of projects past government mandates (4 years)

Both the Serbian and Mozambique governments effectively used donor support to find ways to decrease the costs of ground transportation and facilitate road delivery for agricultural goods

Types of Donor Assistance to Decrease Ground Transportation Costs

	Serbia- EBRD Roads Technical Assistance	Mozambique- MCC Road Sector Investments
Overview	<ul style="list-style-type: none"> ▶ While the road network in Serbia provided adequate coverage and communication, routes needed to be improved to meet increase in traffic volume ▶ The responsible government agency, Serbian Roads Directorate, needed assistance in developing a Road Recovery Plan to determine the investments required to improve road conditions, which would best improve economic conditions 	<ul style="list-style-type: none"> ▶ Almost two-thirds of the population in Mozambique depends on agriculture for their livelihood <ul style="list-style-type: none"> – Success of the agriculture sector is dependent on the availability of reliable ground transport – Studies showed that the Northern provinces (Cabo Delgado, Niassa, Nampula, and Zambézia) lacked the road density to sustain transport of goods
Types of Donor Support	<ul style="list-style-type: none"> ▶ The Serbian government used donor assistance in two ways: <ul style="list-style-type: none"> – US Trade and Development Agency (USTDA), who funded and oversaw development of the feasibility study for roads assistance – The World Bank, which developed the Highway Development and Management Tool (HDM-4) to analyze the current road system, create a cost / benefit analysis of improvements to be completed under the Road Recovery Plan 	<ul style="list-style-type: none"> ▶ MCC Mozambique worked with the National Road Administration and the Road Fund to: <ul style="list-style-type: none"> – Conduct an extensive study of the road network (5,231 km in the four provinces) to determine areas of improvement and the costs required – Use the Road Economic Decision model to simulate the economic effects of road interventions based on costs, resources, and road conditions
Results / Impact	<ul style="list-style-type: none"> ▶ Based on the recommendations of the Road Recovery Plan, the Serbian government developed three types of budget scenarios (pessimistic, moderate, optimistic) <ul style="list-style-type: none"> – The government, along with USTDA, determined the optimal amount of funding that would be required – Amount of improved road conditions and increased economic development were projected 	<ul style="list-style-type: none"> ▶ MCC Mozambique made a final selection of road improvements that would facilitate delivery of agriculture goods <ul style="list-style-type: none"> – The study estimated that the net value of new production for both cash and food crops would produce USD 37.7 million in value add – Smallholder farmers producing maize and cash crops would benefit from better market access and reduced import and transport costs

Israel's largest exporter of produce, Agrexco, found a cost effective method to bypass borders by developing specialized reefer vessels to directly transport goods to Europe

Agrexco's Specialized Reefer Vessels – Key Facts

Overview

- ▶ Agrexco has two specialized reefer vessels bearing its name, delivered in 2003 based on a 15-year usage contract with owner
- ▶ The ships feature new technologies that allow flexibility in capacity usage – cars can be loaded into the refrigerated area, providing an important asset for back-haulage
- ▶ During peak seasons, Agrexco charters two additional vessels, along with support ventilated liners

Economics

- ▶ Average speed is 22 knots – almost twice as fast as any other reefer vessel
- ▶ Capacity of 880 TEU (~60,000T)
- ▶ Return business consists of cars back to Israel (to Israeli and Asian markets)

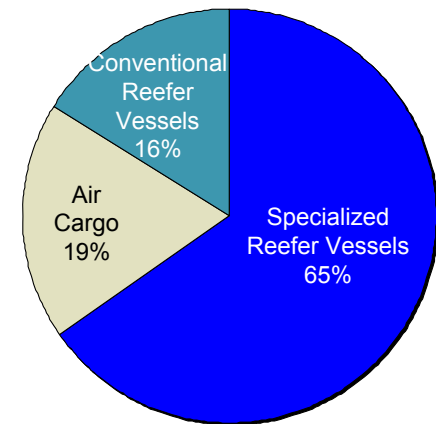
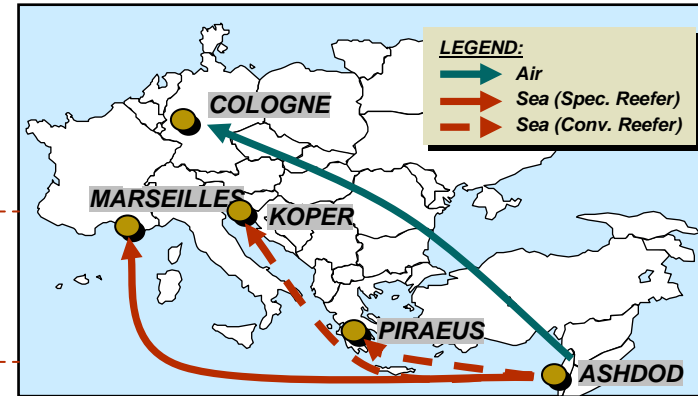
Routes and Markets Served

- ▶ Agrexco products set sail from Haifa and Ashdod towards Europe (Marseilles and Valencia)
 - From Ashdod (loading port) to Marseilles, ships usually take 3 days
 - 80% of the produce go to the company's distribution center in Marseilles where Agrexco has a distribution center
 - At Marseilles, new containers and cars are loaded into the vessel - two day-shifts for cargo loading
 - Ship heads to Valencia (additional cars are loaded) and after 14 days of departure, arrives back at Ashdod

Time and Capacity Mgmt.

- ▶ The 14-day timetable is composed so that there is time to make up if delays occur due to bad weather – ships can be loaded at night, for an extra cost that rather than paying fuel and other additional costs
- ▶ Agrexco also charters capacity to 3rd party companies (round-trip contracts)

Agrexco's Routes and Breakdown of Exports

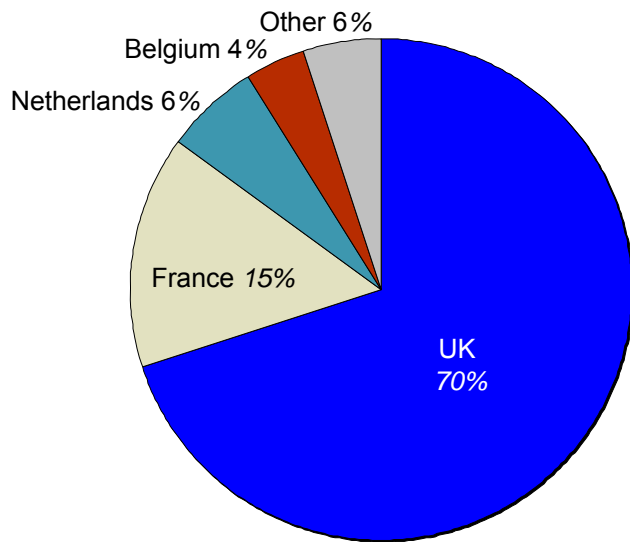


Kenya has successfully developed a strategic export market for green beans to the UK using air transport

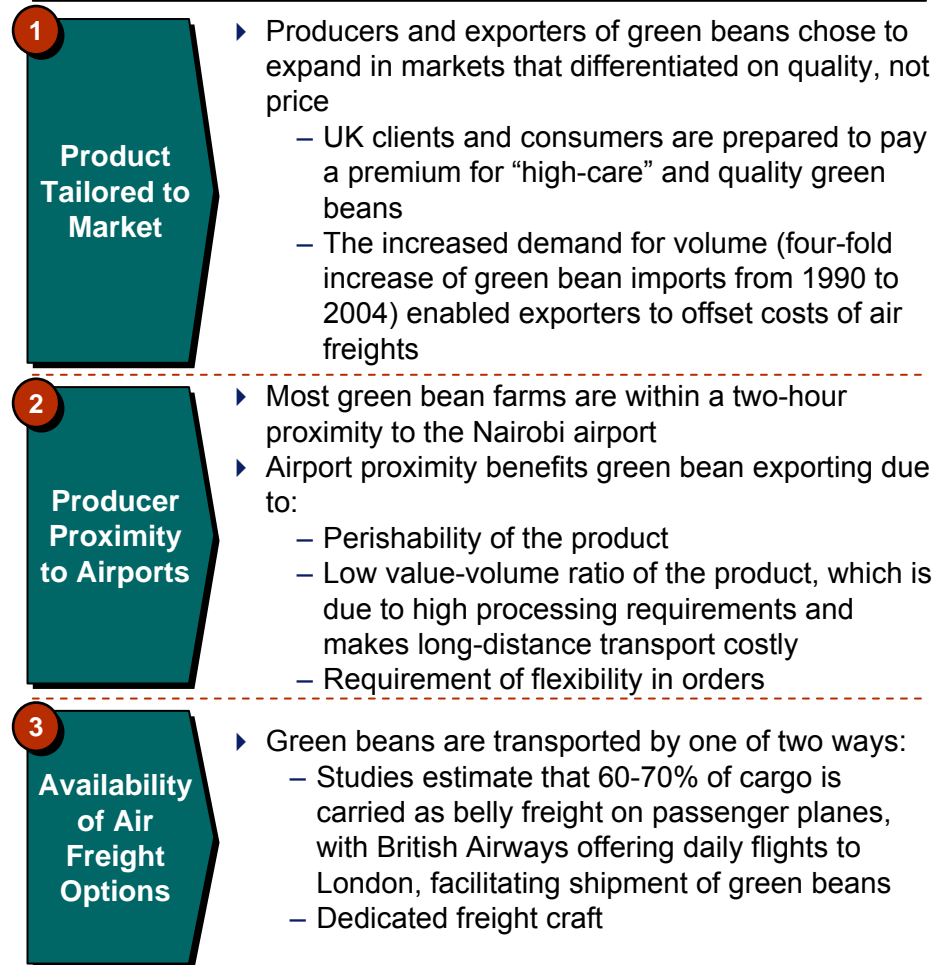
Kenya: Using Air Freight to Develop Strategic Green Bean Market

Reasons Behind Success of Green Bean Market

Kenyan Green Bean Exports Using Air Transport by Destination, 2004



Total: 32,441 Tons

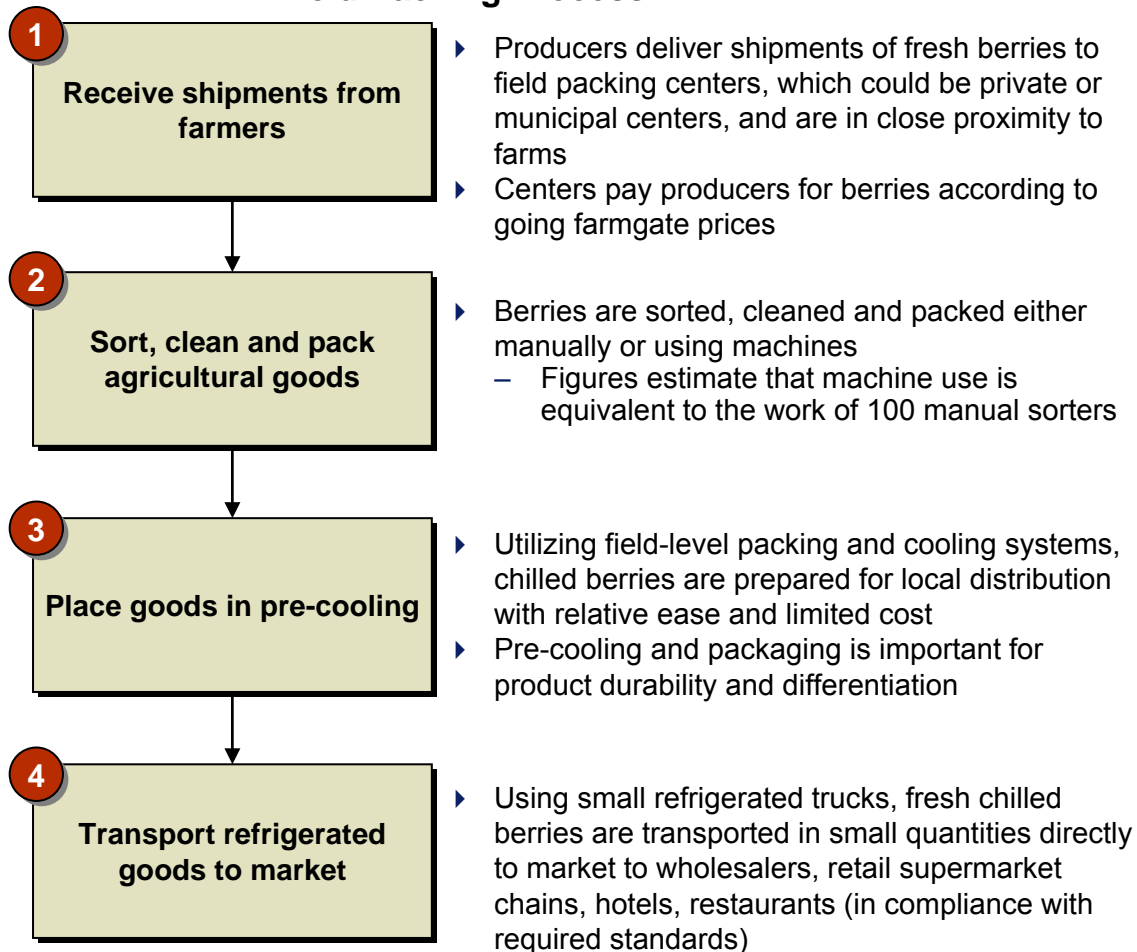


Source: A life cycle analysis of UK supermarket imported green beans from Kenya; Strategic use of private standards to enhance international competitiveness; Vegetable exports from Kenya and elsewhere; Food Safety Requirements in African Green Bean Exports and Their Impact on Small Farmers; BAH Analysis

A recent study in Serbia recommended the development of field packing areas to enable vertically integrated cold-chain distribution of berries for small-scale farmers

Overview of Recommended Field Packing System for Smallholder Farmers

Field Packing Process



Advantages

- ▶ Integrates purchasing locations into cold storage and processing facility systems by applying vertical integration
- ▶ Costs arising on the way from producers to cold stores are decreased
- ▶ Products have extended shelf life capabilities, possibly double existing limits
- ▶ Consistent presentation and packaging for enhanced marketability

Disadvantages

- ▶ Smallholder farmers may not have means to transport goods to field packing centers
- ▶ Producers are dependent on the center to give determine the cost for goods, which may not be the best price they could receive on the market
- ▶ Field centers focus on domestic consumption, which is small in comparison to export quantities

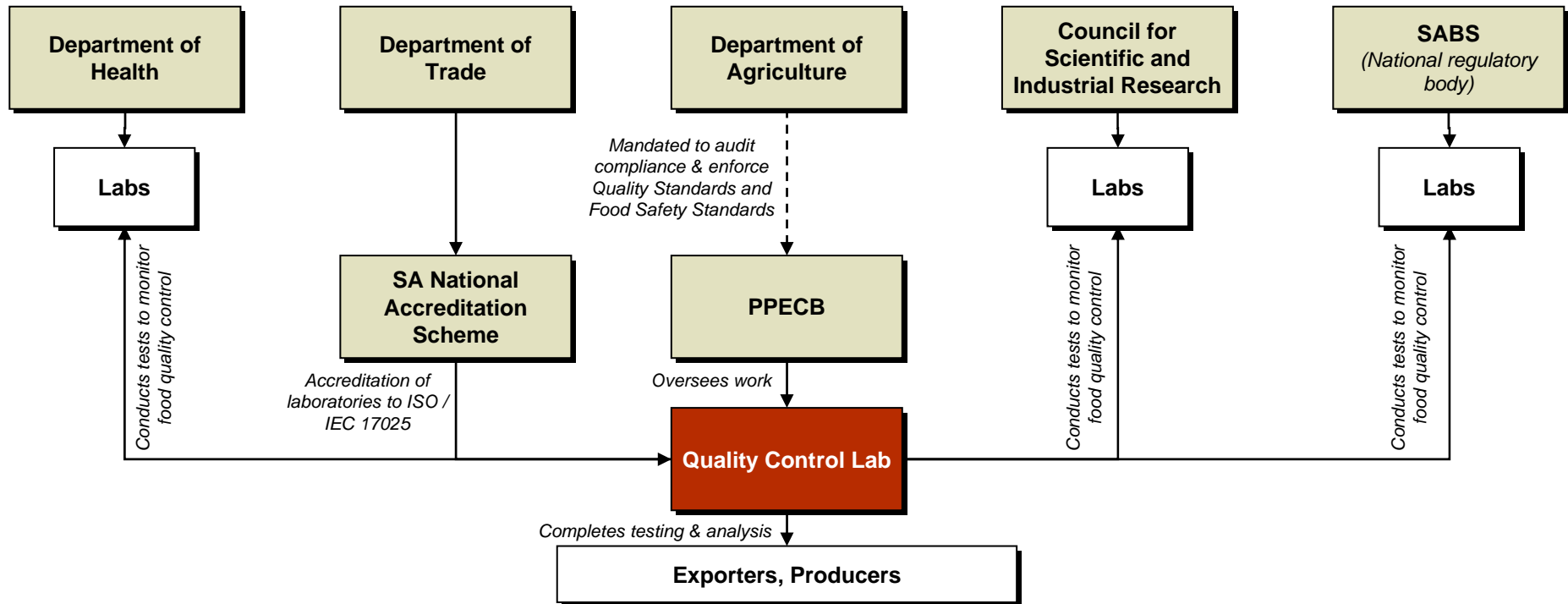
While the PPECB operates as a quasi-private quality control body for South Africa, the EACCE is a government body in Morocco that ensures exports meet international food safety standards

Overview of Quality Control Agencies

	Perishable Products Export Control Board (PPECB)	L'Etablissement Autonome de Contrôle et de Coordination des Exportations (EACCE)
General Description	<ul style="list-style-type: none"> ▶ South Africa's official export certification agency for perishable products – mandated by the Government of South Africa – controls all agriculture and animal exports from the country <ul style="list-style-type: none"> – Defines rules and impose penalties – Negotiates with producers, shipping companies and other stakeholders ▶ Independent service provider of quality certification and cold chain management services for producers and exporters 	<ul style="list-style-type: none"> ▶ Morocco's official institution overseeing quality control and coordination of exports, as mandated by the Government of Morocco <ul style="list-style-type: none"> – Ensures that all agriculture and food products exported out of the country meet international food safety and standard guidelines – Coordinates food exports through development and execution of sector strategies and support of bilateral and multilateral export agreements
Organization	<ul style="list-style-type: none"> ▶ Board comprised of representatives of main crop producers and largest exporter companies ▶ 30 offices located in 11 production regions, reaching 1,500 locations ▶ Matrix accreditation units – crop-specific and functional specialization 	<ul style="list-style-type: none"> ▶ Financially and legally autonomous, the EACCE is overseen by a President, 10 members from the government, a member from the Marketing and Exports Association, and eight members representing the exporters and producer ▶ 21 regional offices located across the country ▶ Three types of labs are located in regional offices: microbiological, phyto-sanitary and packaging
Services	<ul style="list-style-type: none"> ▶ Two main service streams, reflected in the organizational structure <ul style="list-style-type: none"> – Statutory services (Inspection & Cold Chain): government-mandated activities – Non-Statutory Services (Customized Services): independent and profit-oriented service providing, with tailored solutions ▶ Funds are acquired through a legislated levy placed on all exporters (fixed cost per carton exported, migrating to a differentiated levy by product type) 	<ul style="list-style-type: none"> ▶ Services are provided in three main areas: <ul style="list-style-type: none"> – An export development unit, which oversees marketing efforts, data collection, and coordination of exports – A technical division that oversees quality control of infrastructure, processed products and fresh foods – A laboratory division that oversees analysis of products ▶ Funds are acquired through a mix of government funding and a levy placed on imports

The PPECB maintains a nationally and internationally recognized lab which provides testing for government and private entities to ensure safety and quality

PPECB Quality Control Lab Interactions



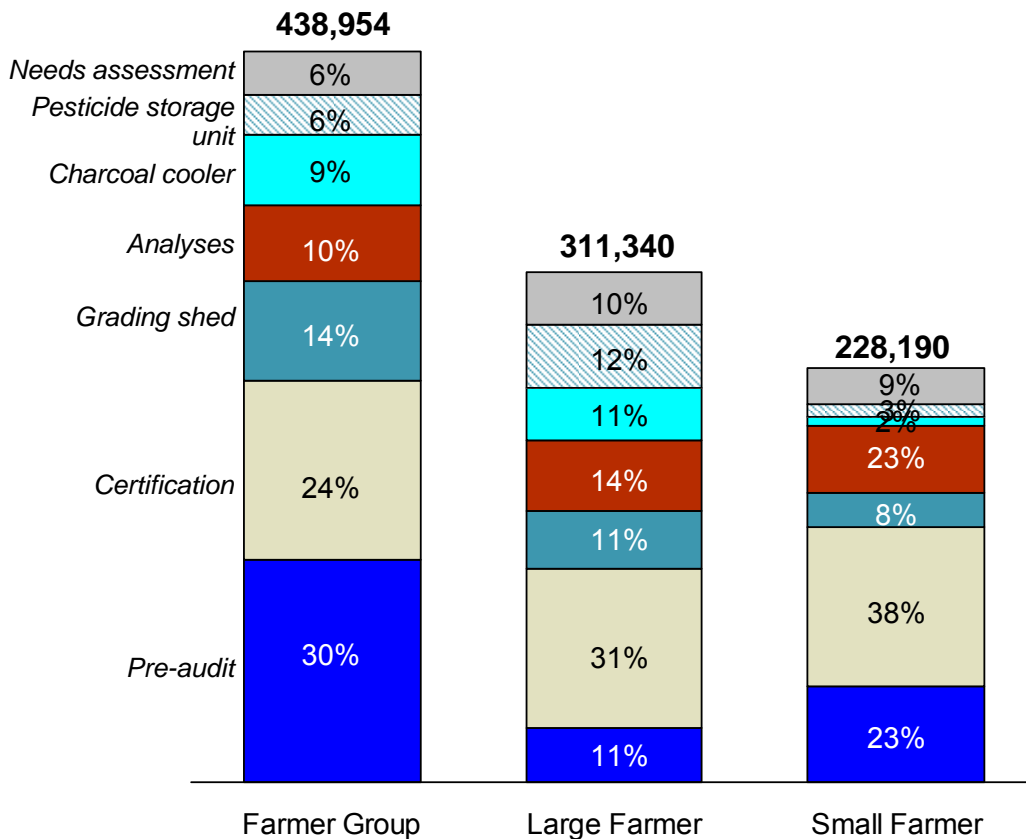
Comments

- ▶ The PPECB maintains a private lab that oversees testing for three areas: Mycotoxin Analytical Program, Fats Analytical Program, Labeling Analytical Program
 - In addition to government labs under the Department of Health, CSIR and SABS, the PPECB lab completes third party analyses
- ▶ PPECB has been accredited according to international standards, such as **the ISO / IEC 17025**, and has also developed a **cross-accreditation with the United Kingdom Accreditation Standards**. As a result, South African and the UK recognize each other's accreditation standards

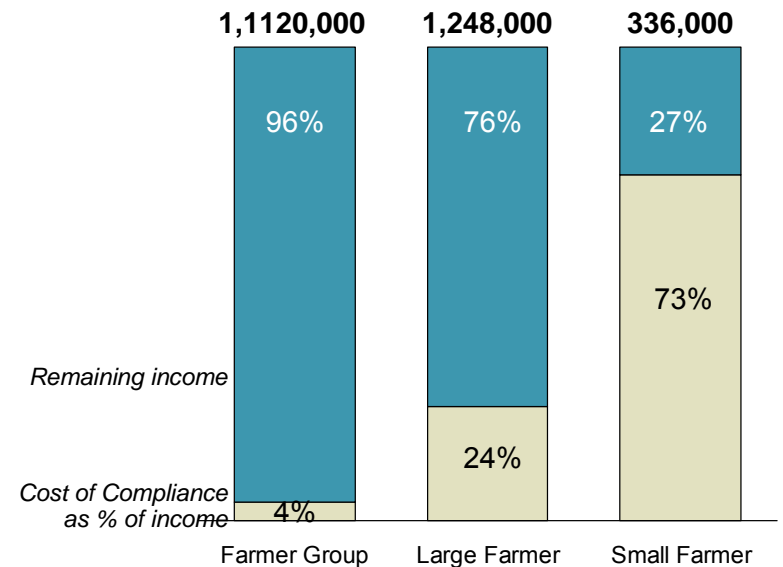
Studies on Kenyan green bean producers show that costs for international food safety standard (IFSS) compliance are significantly lower for farmer groups versus small or large farmers

Overview of Farmer Costs for IFSS Compliance

Costs (in Kenya shillings) associated with IFSS compliance and certification by grower type, 2006 (*)



Total Income by grower type, 2006



Comments

- ▶ Cost per unit income is smaller for the farmer group, with each farmer paying only 29,264 shillings for compliance
- ▶ Income increases as more farmers work together to increase productivity and innovation

Note (*): Does not include costs for toilet or disposal
 Source: Food Safety Requirements in African Green Bean Exports and Their Impact on Small Farmers; BAH Analysis

Spain's seed import regulations work under "certified origin" schemes – other countries also adopt solutions to regulate inputs of seeds and fertilizers

Overview of Input Regulations in Benchmark Countries

	Seed Import Regulations	Fertilizer Import Regulations
Spain	<ul style="list-style-type: none"> ▶ Spain works under a "certified-origin" scheme. For varieties registered in the EU, some countries have (for specific types of seeds) same treatment as EU countries ▶ Internal trade of imported varieties must be communicated to the Ministry of Agriculture (database of imported seed sellers, buyers and transactions) ▶ Spain also adheres to OECD-sponsored seed scheme that harmonize regulations in order to facilitate the import and export of seed; typically through removal of technical trade barriers with recognized labels (e.g., passports for trade) 	<ul style="list-style-type: none"> ▶ For fertilizers, imports also work under "certified-origin" and positive list approval <ul style="list-style-type: none"> – Fertilizers have to be previously registered at the Ministry of Agriculture to be allowed to enter Spain – Only fertilizers from certified plants are accepted – for countries outside the EU, importers are required to send Certification of Approval in country of origin and related legislation to be vetted by Spanish Authorities
Other Countries	<ul style="list-style-type: none"> ▶ Serbia: Ministry of Agriculture provides a pre-approval process – new seeds are imported within 7 days, and, unless stated otherwise, pre-approval is considered final after 6 months ▶ Croatia: The Institute for Seeds and Seedlings enforces seed laws set by the OECD, and conducts all DUS and VCU testing to determine domestic movement and imports of seeds. The Institute follows additional regulations set by the Ministry of Agriculture Forestry and Water Management 	<ul style="list-style-type: none"> ▶ Australia: fertilizer imports must also meet strict Australian Quarantine regulations administered by the Australian Quarantine Inspection Service (AQIS). Most fertilizer products require an import permit and are required to conform to import conditions

Protection of the environment against pesticide misuse is supported by bans, as well as awareness and monitoring on use and distribution of pesticides

Best Practices to Protect the Environment Against Pesticide Misuse

Prohibit use of specific pesticides

- ▶ **Croatia** uses a mix of bans and restrictions on pesticides
 - Certain pesticides (Alachlo) cannot be applied with sprayers
 - Pesticides, such as Atrazine, are limited to areas according to specific humidity levels (1.5 kg ai/ha in humid and 1 kg ai/ha in arid areas)
 - Other pesticides are restricted according to the type of agriculture commodity (endosulfan banned for oil-seed rape and forestry; trifluralin use is not permitted in post-harvest sown soya bean and sunflower)

Encourage proper use of pesticides

- ▶ In **Croatia**, the **Ministry of Agriculture, Forestry and Water Management** has organized an extension service which provides non formal education, training and knowledge transfer to farmers on pesticide use. The **costs of this service are covered by Ministry of Education**. Short courses (one day or several hours) are provided by experts to farmers in villages or in smaller municipalities

Monitor the use and distribution of pesticide

- ▶ In the Czech Republic:
 - All professional pesticide users **have to keep spray records for 3 years**
 - Farms larger than **10 ha are required to submit pesticide use summaries** to the Department of Information. Farmers report on amounts applied by formulated product, crop and geographical region
 - Pesticide **sales data are also collected by the Czech Crop Protection Association**
- ▶ In Slovakia:
 - All **traders are required to report sales data annually**, including manufacturer, importer, distributors and retailers. They are required to report the name and amount of formulated products for agricultural and non-agricultural pesticides
 - All **farmers have to keep detailed records of their pesticide use** and are required to submit summaries to the Central Control and Testing Institute of Agriculture

The Macedonian government's increased trade facilitation capacity stemmed from four key success factors...

Success Factors for Trade Facilitation Capacity Building in Macedonia

Multi-Pronged Capacity Building in the Government

- ▶ In an effort to accede to the WTO, the Macedonian government undertook trade facilitation capacity building simultaneously at multiple agencies:
 - Training for government officials at agencies such as the Ministry of Economy to develop WTO agreements for the accession process
 - Technical assistance provided to Customs Administration personnel to support compatibility of customs regime with international standards

Interventions at National & Regional Levels

- ▶ Capacity building has been targeted at the national and regional levels:
 - **National:** Targeted technical assistance to Ministry of Economy, Customs Administration, and the Ministry of Finance
 - **Regional:** Participation in regional initiatives, such as the regional seminars on trade facilitation for the Southeast European countries

Political Will & Commitment

- ▶ The Minister of Economy mobilized support for trade facilitation capacity building for WTO Accession and developed the required technical expertise through the accession process with the support of donors
 - Since its accession in 2002, the government has continued capacity building, through implementation of the New National Customs Declaration Processing System and improved management at border crossings

Execution of Other Trade Agreements

- ▶ In laying the foundation for strengthened trade capacity, Macedonia has been able to take advantage of CEFTA
 - Macedonia has instituted a CEFTA office in the Ministry of Economy and has spent considerable effort in increasing capacity through training programs
 - The government has also taken advantage of UN / WTO technical assistance to promote capacity in trade best practices

Benefits for Macedonia

- ▶ By taking steps to accede to the WTO, the government was able to strengthen trade facilitation capabilities
 - As a result, the process of accession, as much as accession itself, was beneficial to improving capacity in multiple government agencies

... as well as country-focused and regional donor-funded projects

Donor-Funded Methods for Trade Facilitation Capacity Building in Macedonia

Method	Description	Impact
Country-Focused	<ul style="list-style-type: none"> ▶ USAID provided expert technical assistance drafting documentation, identifying inconsistencies in the Macedonian trade regulations, training Macedonian officials to extend their understanding of WTO agreements and preparing them for negotiations ▶ The United Nations Economic Commission for Europe provided workshops on trade data harmonization and the Single Window system 	<ul style="list-style-type: none"> ▶ Accession process was completed in less than three years of negotiations and Macedonia became the 146th member of the WTO in 2003 ▶ Following the workshop, the Macedonian government started implementation of Single Window for agencies, exporters, importers, carriers, brokers and freight forwarders
Region-Focused	<ul style="list-style-type: none"> ▶ Led by the World Bank and the United States, the Trade and Transport Facilitation in Southeast Europe (TTFSE) program provided customs services procedures reform, support to integrated customs information systems, and improvement of roads and border-crossing facilities for eight countries, including Macedonia ▶ Through the Southeast Europe Regional Cross-Border Trade Facilitation, USTDA provided technical assistance to develop a regional “single window” entry system for the Customs Administrations of Macedonia, Serbia and Bulgaria 	<ul style="list-style-type: none"> ▶ Reduced nontariff costs to trade and transport, decreased smuggling and corruption at border crossings, and improved customs administrations and other border-control agencies ▶ Simplified transit documentation requirements to facilitate and increase trade among the three countries

A number of interim solutions exist for responding to competitor subsidies...

Interim Responses to Subsidies for Developing Countries

Exercise Allowed Information Gathering & Dispute Resolution Provisions under CEFTA

- ▶ CEFTA focuses on transparency in trade rather than free trade, and therefore contains information requirement provisions
 - For example, any subsidies that are executed by other countries should be made public (Art 44)
 - CEFTA allows arbitration if parties do not feel they have received satisfactory information or remedy (Art 43)

Develop Legitimate Barriers Based on Quality & Packaging

- ▶ Legitimate methods exist to keep products that violate basic food safety provisions from being imported into Kosovo
 - Recently, a non-milk product was being imported as a milk product into the country. In response, Kosovo Customs added labeling requirements that required foreign companies to specify the ingredients of the import
 - All measures must be allowed under the WTO Technical Barriers to Trade Agreement

Execute Legitimate Tariff Provisions Under CEFTA

- ▶ Article 23 provides that where domestic producers of a product are suffering serious economic injury due to imports, the CEFTA member has the right to take safeguard measures, including increased tariffs, so long as the measure meets CEFTA disclosure requirements

Develop Export Risk Programs with Donor Financing

- ▶ Countries can enter into agreements with foreign governments or donors to provide support for export risk guarantee programs and finance programs through loans. Donor support aims at decreasing the perceived risk from foreign companies and governments

Donor Funding for Export Risk Programs

- ▶ Foreign governments and donors have helped countries in the region establish export risk guarantee programs
 - The Ministry of Economy in the Netherlands developed a governmental program that aims to encourage Dutch investments in Serbia and assist SMEs that are establishing cooperation with Dutch partners by co-financing risk insurance and exports (up to 50% cost-share)
 - The Serbia and Montenegro Export Credit Agency (SMECA) was established in 2001 through a World Bank loan of \$11.5M. Products for national and foreign businesses include export credit insurance, exporter performance insurance and import credit insurance

...more advanced solutions include export risk insurance & guarantee programs, which can be provided through public, private or semi-private entities

Organizational Models for Advanced Export Risk Insurance and Guarantee Programs

	Germany <i>(Private institution operating under government)</i>	Switzerland <i>(Independent government agency)</i>	Turkey <i>(State-owned bank)</i>
1 Organizational Overview	<ul style="list-style-type: none"> ▶ Mandate: The Federal Government has entrusted the management of the Official Export Guarantee Scheme to a consortium of two private companies, Euler Hermes and PWC AG ▶ Structure: Governed by an inter-ministerial Committee with representatives from several ministries ▶ Resources: Federal Government grants cover within an exposure limit on total commitments fixed annually by Parliament ▶ Relations with State: Consortium acts only in the name and for the account of the state and is governed by the Federal Budget Law ▶ Relations with Private Sector: Steps in when privately owned insurance industry does not provide sufficient cover 	<ul style="list-style-type: none"> ▶ Mandate: Established by the Swiss Government, Swiss Export Risk Insurance (SERV) offers an extended range of export credit insurance products ▶ Structure: Governed by a management board with members appointed by the Federal Council ▶ Resources: Capital is structured in three main areas: risk bearing capital, core capital, and balance carried forward ▶ Relations with State: Established under the supervision of the Federal Department of Economic Affairs and governed by the Federal Council ▶ Relations with Private Sector: Complements, does not compete with private sector 	<ul style="list-style-type: none"> ▶ Mandate: Turk Eximbank offers specialized financial services through a variety of short-, medium- and long-term credit, insurance and guarantee programs ▶ Structure: Managed by a Board of Directors, which provides supervision principles for the General Directorate to follow ▶ Resources: The sole shareholder, Turkish Treasury, makes capital contributions to the Bank; receives domestic and foreign loans ▶ Relations with State: As a state-owned bank, maintains close co-operation with related government entities ▶ Relations with Private Sector: Almost 70% of the commercial risk is delegated to reinsurance companies
2 Examples of Services Provided	<ul style="list-style-type: none"> ▶ Export guarantee schemes: <ul style="list-style-type: none"> – <i>Wholeturnover Policy</i> for safeguarding trade receivables – <i>Manufacturing Risk Cover</i> for production costs of exports – <i>Supplier Credit Cover</i> for amounts receivables – <i>Revolving Specific Policy</i> ▶ Other <ul style="list-style-type: none"> – Constructional Works Cover – Contract Bond insurance 	<ul style="list-style-type: none"> ▶ Exporter insurance and guarantee schemes: <ul style="list-style-type: none"> – <i>Supplier Credit Insurance</i> covers political risk, transfer risk, commercial risk – <i>Manufacturing Risk Cover</i> for inability to continue production – <i>Confiscation Risk Cover</i> for political risk and force majeure – Contract guarantee insurance 	<ul style="list-style-type: none"> ▶ Exporter insurance and guarantee schemes: <ul style="list-style-type: none"> – <i>Short-term export credit insurance</i> provides companies with whole turnover insurance cover for one year for exports sold on short-term credit – <i>Medium- and long-term export credit insurance</i> is offered to protect against commercial and/or political risks ▶ Export finance programs: <ul style="list-style-type: none"> – Short-term export credit – Medium- and long-term export credits

Four methods exist to help countries increase recognition of sovereignty: transit, corridor development, harmonized documents & procedures, and automated customs procedures

Methods to Increase Recognition of Sovereignty

	Transit	Corridor Development	Harmonized Documents & Procedures	Automated Customs Procedures
Description	<ul style="list-style-type: none"> ▶ Allows temporary suspension of customs duties or other taxes payable on goods originating from and/or destined for a third country while under transport across the territory of a defined customs area 	<ul style="list-style-type: none"> ▶ Development of a tract of land (such as a system of roads) that allows a individuals from a country to pass through another to facilitate trade and access a port 	<ul style="list-style-type: none"> ▶ Use of common customs declaration documents, such as the electronic transmission of data ahead of the arrival of cargo at the transshipping point ▶ Harmonization with other countries creates greater access to trade with partner countries 	<ul style="list-style-type: none"> ▶ By developing automated customs procedures, countries will avoid delays that are endemic to paper-backed transit systems, thereby increasing efficiency in the movement of goods
Example	<ul style="list-style-type: none"> ▶ TIR Convention, used by more than 32,000 transport companies in over 50 countries in Europe, central Asia and the Middle East, allows road transport operators to cross borders in international and transit traffic without involving major procedures and costs 	<ul style="list-style-type: none"> ▶ A PPP was established among transport operators in co-operation with the public authorities and governmental institutions (as the transport regulators) in Namibia to establish the Walvis Bay corridor for landlocked neighbors countries to have access to the Atlantic Ocean 	<ul style="list-style-type: none"> ▶ Baltic Common Transit Procedure signed between Latvia, Estonia and Lithuania to allow facilitated transit of cargos carried by road transport 	<ul style="list-style-type: none"> ▶ COMESA and SADC have launched programs that aim at the consolidation and extension of computerized customs procedures and transport information systems

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- ▶ Baseline Analysis of Agriculture Sector
- ▶ Recommendations to Improve Kosovo's Agriculture Sector
 - Overview
 - Recommended Diversified Crop Mix for Kosovo
 - Initiatives & Action Plan for Implementation
 - Reaching Kosovo's Overall Potential

The final deliverable for AgStrat covers three interrelated areas: crop diversification, initiatives & action plan to address constraints and projected impact for the program

Overview of Recommendation Types in AgStrat Study

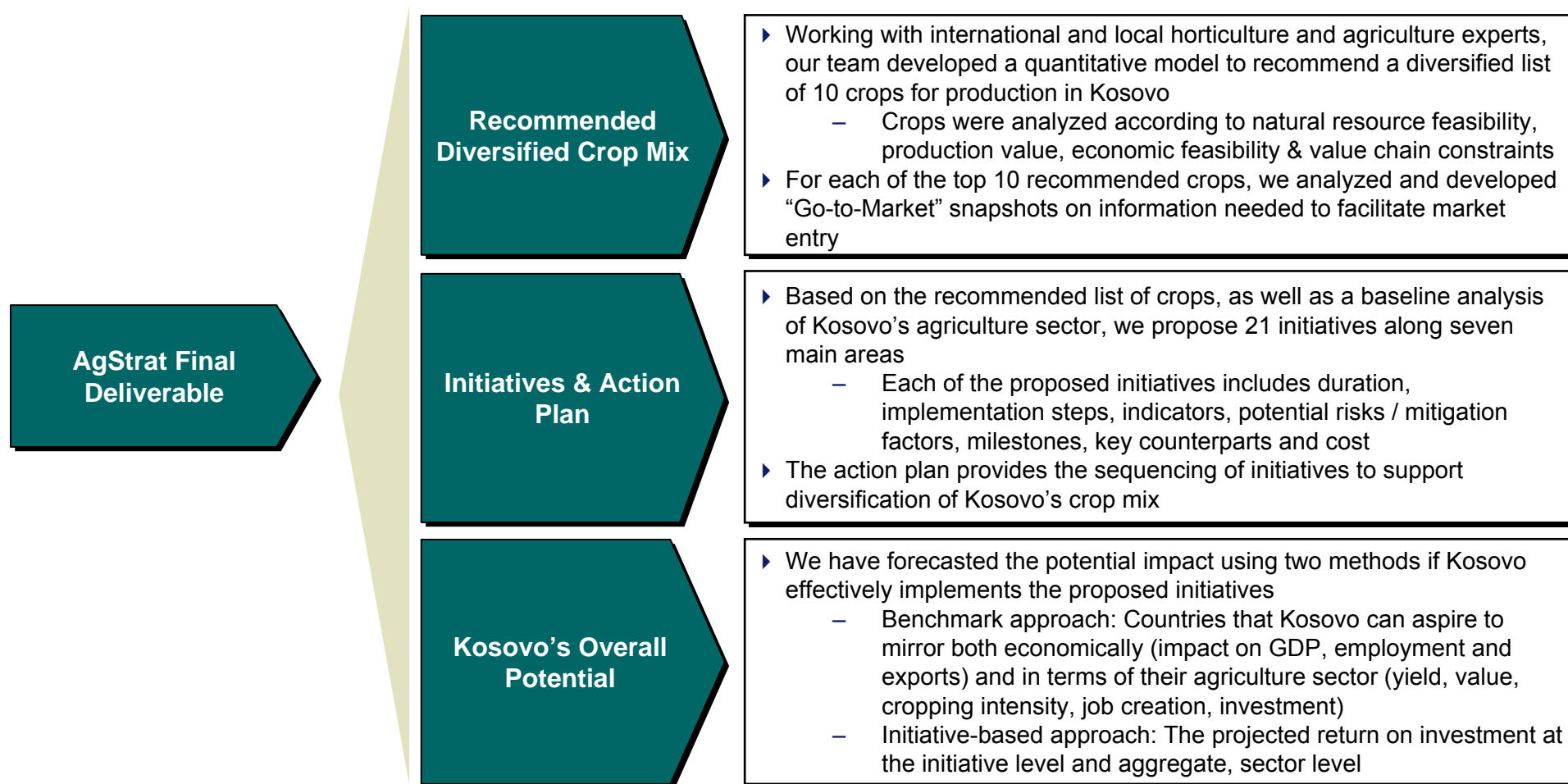
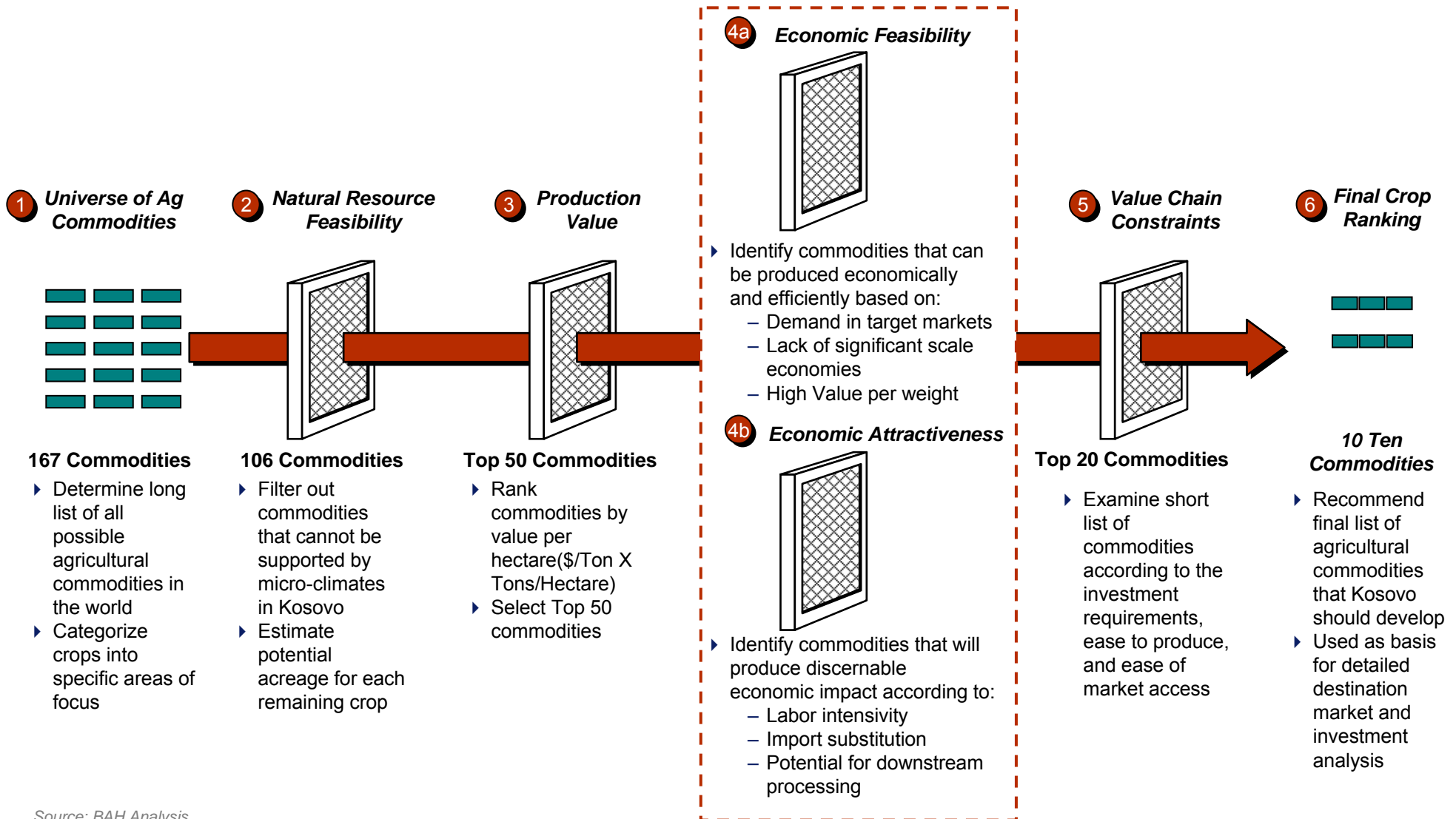


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We have developed a six step process for identifying Kosovo's diversified crop base

Process for Identifying Kosovo's Diversified Crop Base



For the first filter, we developed a list of 167 potential crops for Kosovo focusing on four main categories of agricultural production...

Primary Agricultural Commodities*

1 Horticulture	2 Cereal	3 Oil Crops/Nuts	4 Spices, Stimulants		
<ul style="list-style-type: none"> ▶ Apples ▶ Apricots ▶ Arecanuts ▶ Avocados ▶ Bananas ▶ Blueberries ▶ Blackberries ▶ Mulberries ▶ Carobs ▶ Cashew apple ▶ Cherries ▶ Cranberries ▶ Dates ▶ Figs ▶ Gooseberries ▶ Grapefruit ▶ Kiwi ▶ Durian ▶ Tamarinds ▶ Jackfruit ▶ Passion fruit ▶ Pomegranate ▶ Lychee ▶ Carambola ▶ Lemons, limes ▶ Mangoes, guavas ▶ Oranges ▶ Other melons ▶ Papayas 	<ul style="list-style-type: none"> ▶ Peaches ▶ Pears ▶ Persimmons ▶ Pineapples ▶ Plantains ▶ Plums ▶ Medlar ▶ Quince ▶ Tangerines ▶ Watermelon ▶ Vinegrape ▶ Bambara beans ▶ Beans, dry ▶ Lentils ▶ Lupins ▶ Peas, dry ▶ Pigeon peas ▶ Vetches ▶ Cassava ▶ Chicory roots ▶ Potatoes ▶ Sweet potatoes ▶ Taro ▶ Yams ▶ Yautia ▶ Juniper berries ▶ Table grape ▶ Tomatoes ▶ Leeks 	<ul style="list-style-type: none"> ▶ Artichokes ▶ Asparagus ▶ Beans, green ▶ Cabbages ▶ Carrots, turnips ▶ Kale ▶ Kohlrabi ▶ Brussels sprouts ▶ Cauliflowers, broccoli ▶ Chillies, peppers ▶ Celery ▶ Kidney beans ▶ Cucumbers, gherkins ▶ Eggplants ▶ Radish ▶ Garlic ▶ Kapok fibre ▶ Lettuce, chicory ▶ Mushrooms ▶ Truffles ▶ Okra ▶ Onions ▶ Caper ▶ Peas ▶ Courgette ▶ Pumpkins ▶ Spinach 	<ul style="list-style-type: none"> ▶ Barley ▶ Canary Seed ▶ Fonio ▶ Maize ▶ Millet ▶ Oats ▶ Quinoa ▶ Rice ▶ Rye ▶ Sorghum ▶ Triticale ▶ Wheat ▶ Buckwheat ▶ Flax fibre ▶ Jute ▶ Manila fibre ▶ Ramie ▶ Sisal ▶ Alfalfa 	<ul style="list-style-type: none"> ▶ Almond ▶ Brazil nuts ▶ Cashews ▶ Chestnuts ▶ Hazelnuts ▶ Kolanuts ▶ Pistachios ▶ Macadamia nuts ▶ Walnuts ▶ Castor oil seed ▶ Coconuts ▶ Groundnuts ▶ Hempseed ▶ Hops ▶ Kapokseed ▶ Karite nuts ▶ Sunflowers ▶ Linseed ▶ Melonseed ▶ Mustard seed ▶ Oil palm fruit ▶ Olives ▶ Poppy seed ▶ Rapeseed ▶ Safflower seed ▶ Seed cotton ▶ Sesame seed ▶ Soybeans ▶ Sunflower seeds 	<ul style="list-style-type: none"> ▶ Saffron ▶ Anise ▶ Chamomile ▶ Parsley ▶ Cinnamon ▶ Cloves ▶ Cocoa beans ▶ Coffee ▶ Ginger ▶ Mate ▶ Nutmeg ▶ Peppermint ▶ Pyrethrum ▶ Tea ▶ Tobacco ▶ Vanilla ▶ Turmeric ▶ Thyme, bay leaves ▶ Curry ▶ Basil

Note (*): Not all crops listed; Horticulture includes fruits, vegetables, roots & tubers, and pulses
Source: FAOSTAT; UN Comtrade

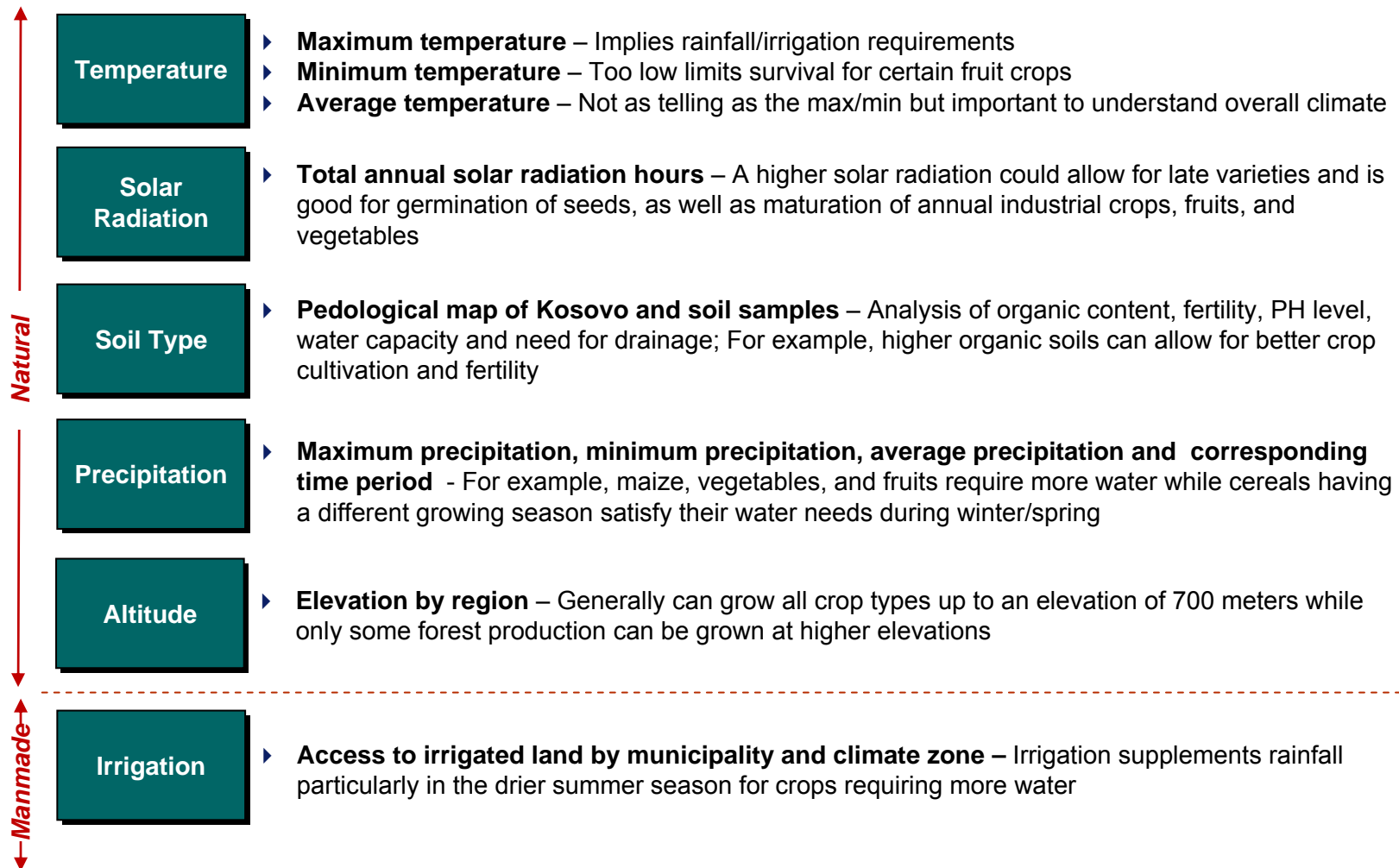
...and also mapped the type of historical agricultural production by municipality

Snapshot of Agricultural Commodities Produced by Municipality

	Ferizaj				Gjakova		Gjilan			Mitrovica					Peja			Pristina					Prizren						
	Kacaniku	Shtirnja	Shtërpeca	Ferizaji	Deçani	Gjakova	Rahoveci	Gjilani	Kamenica	Vitja	Mitrovica	Leposaviqi	Skenderaj	Vushtrria	Z. Potoku	Zvegani	Istogu	Klina	Peja	Gilgovi	F. Kosova	Lipjani	Novobërda	Obiliqi	Podujeva	Pristina	Dragashi	Prizreni	Suhareka
Wheat	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
Rye	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Barley	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
Oats	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Maize	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potato	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tomato	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
Aubergine		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
Pepper		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Pumpkin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mushroom	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cucumber		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
Water melon		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
Cabbage		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓

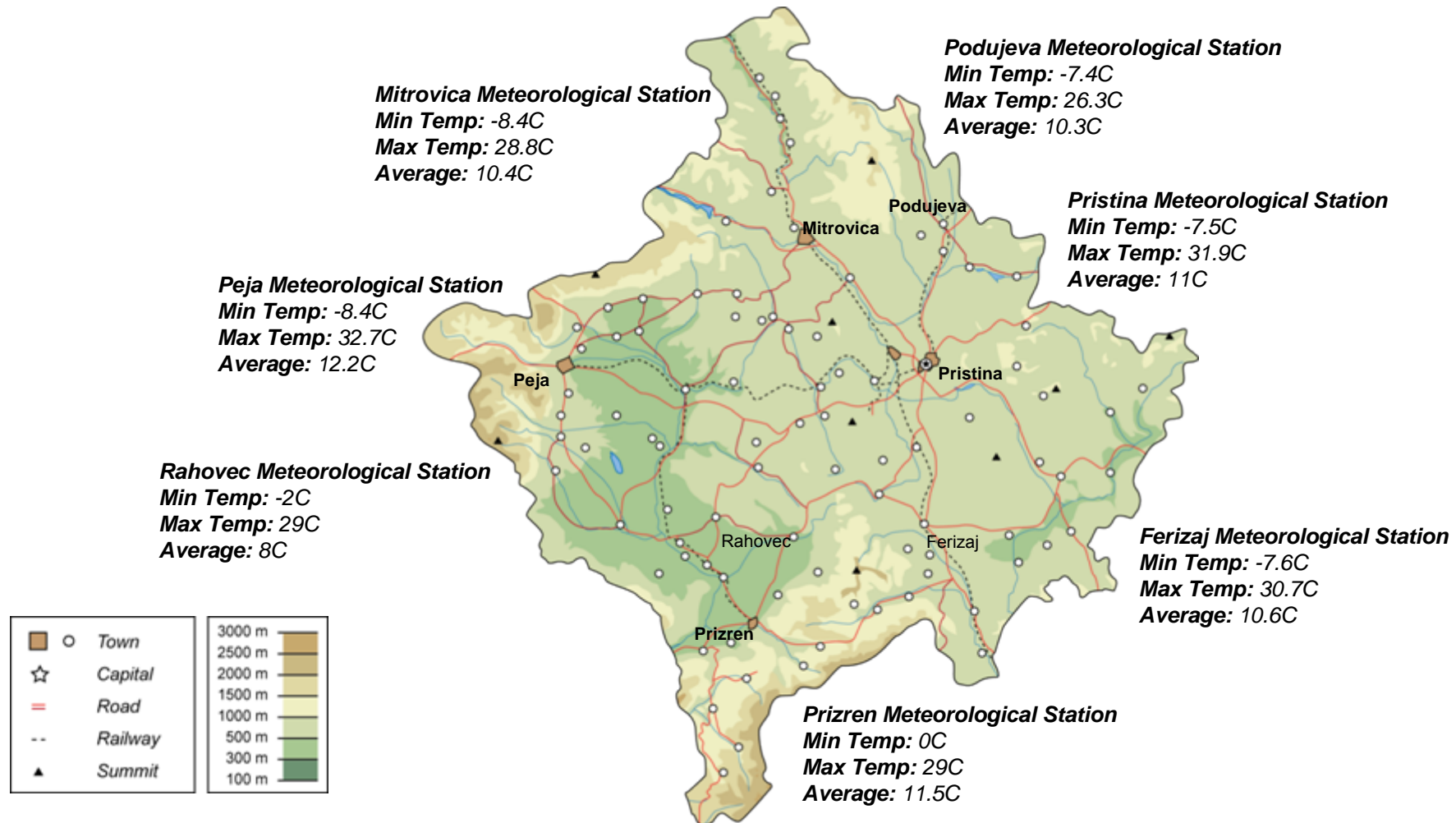
The natural resource feasibility filter is based on an in-depth examination of six natural and manmade factors to determine the different climate zones in Kosovo

Climate Zone Determination Factors



Relatively small temperature variation exists across Kosovo with Peja experiencing both the highest and lowest temperatures

Temperature Variation Across Kosovo



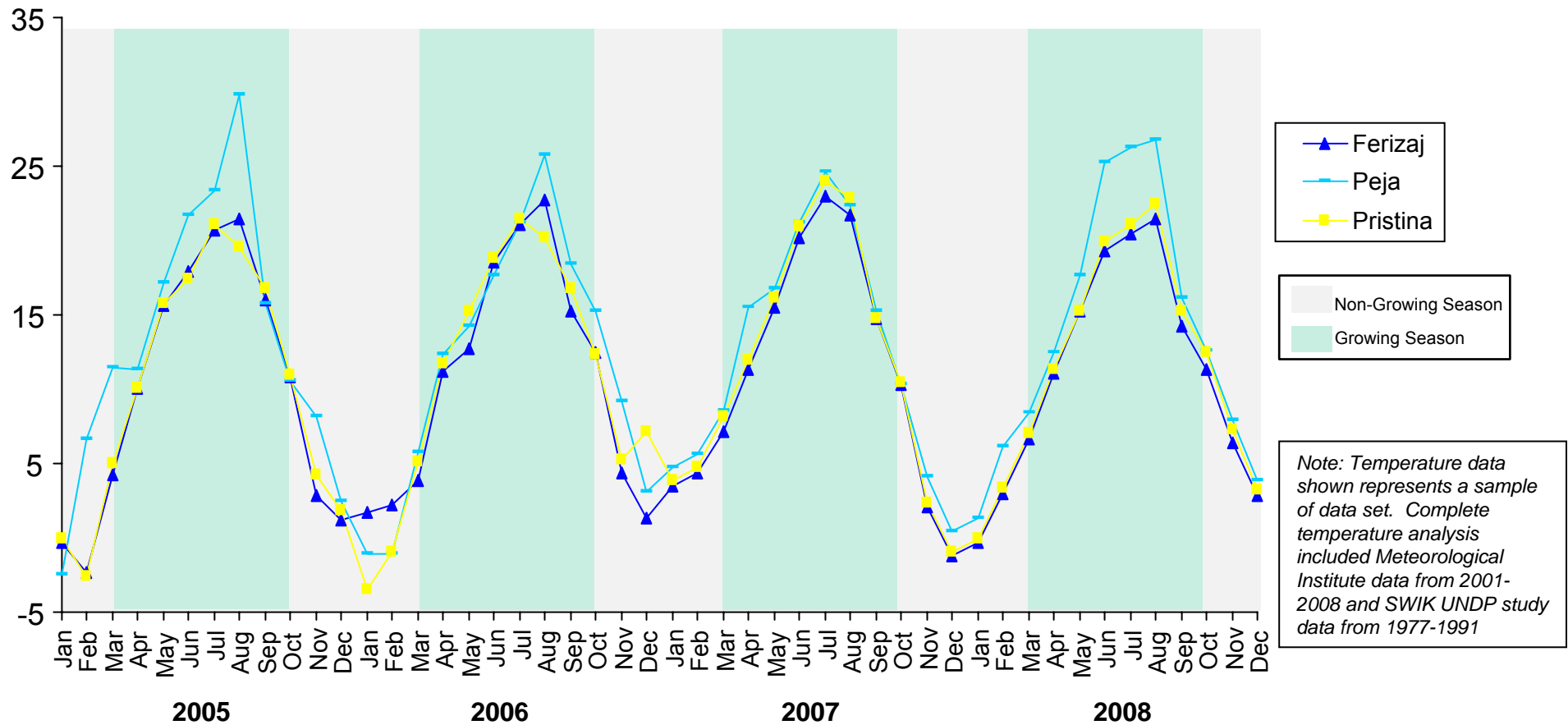
Note: Min, max, average temperatures are from: 2001-2008 for Prizren, Rahovec; 2002-2008 for Peja, Pristina, Ferizaj; 2003-2008 for Mitrovica; 2004-2008 for Podujeva; Data for Mitrovica, Rahovec, Prizren, Podujeva was aggregated over these periods, but annual data was available for Ferizaj, Peja, and Pristina Meteorological Stations

Note: Data for meteorological stations cover 10 square km

Source: Meteorological Institute; BAH Analysis, UNDP Funded Support for the Development of the Wine Industry of Kosovo (SWIK) Study, 2002

In addition, little temperature fluctuation occurs across the regions during the growing season from March to October

Monthly Temperature for Kosovo
(2005-2008, Celsius)



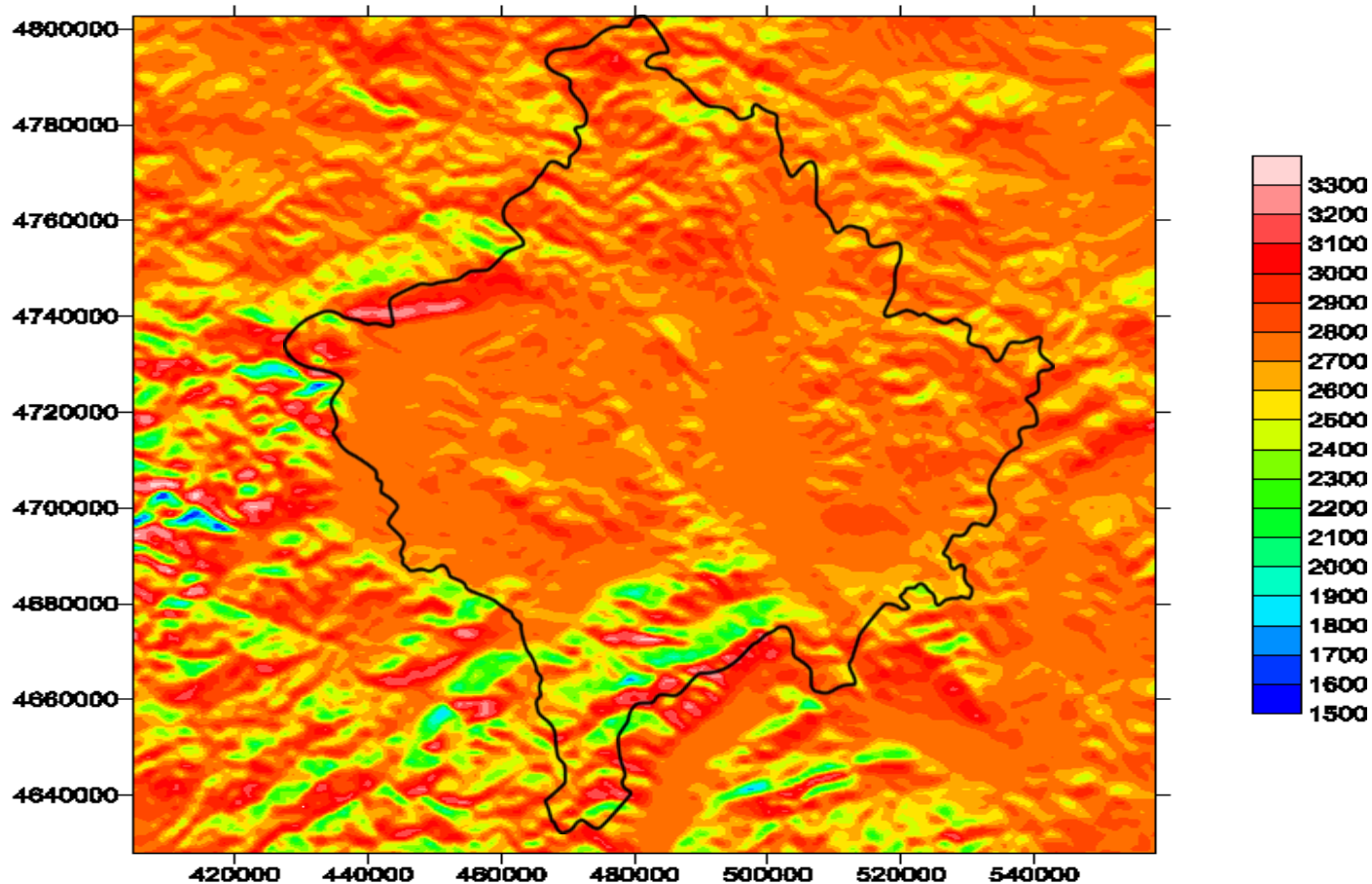
Note: Non-aggregated temperature data was only available for Ferizaj, Peja, and Pristina Meteorological Stations

Note: SWIK study contains historical temperature data from 1977 to 1991 for Dukadjini and Pristina

Source: Meteorological Institute; BAH Analysis, UNDP Funded Support for the Development of the Wine Industry of Kosovo (SWIK) Study, 2002

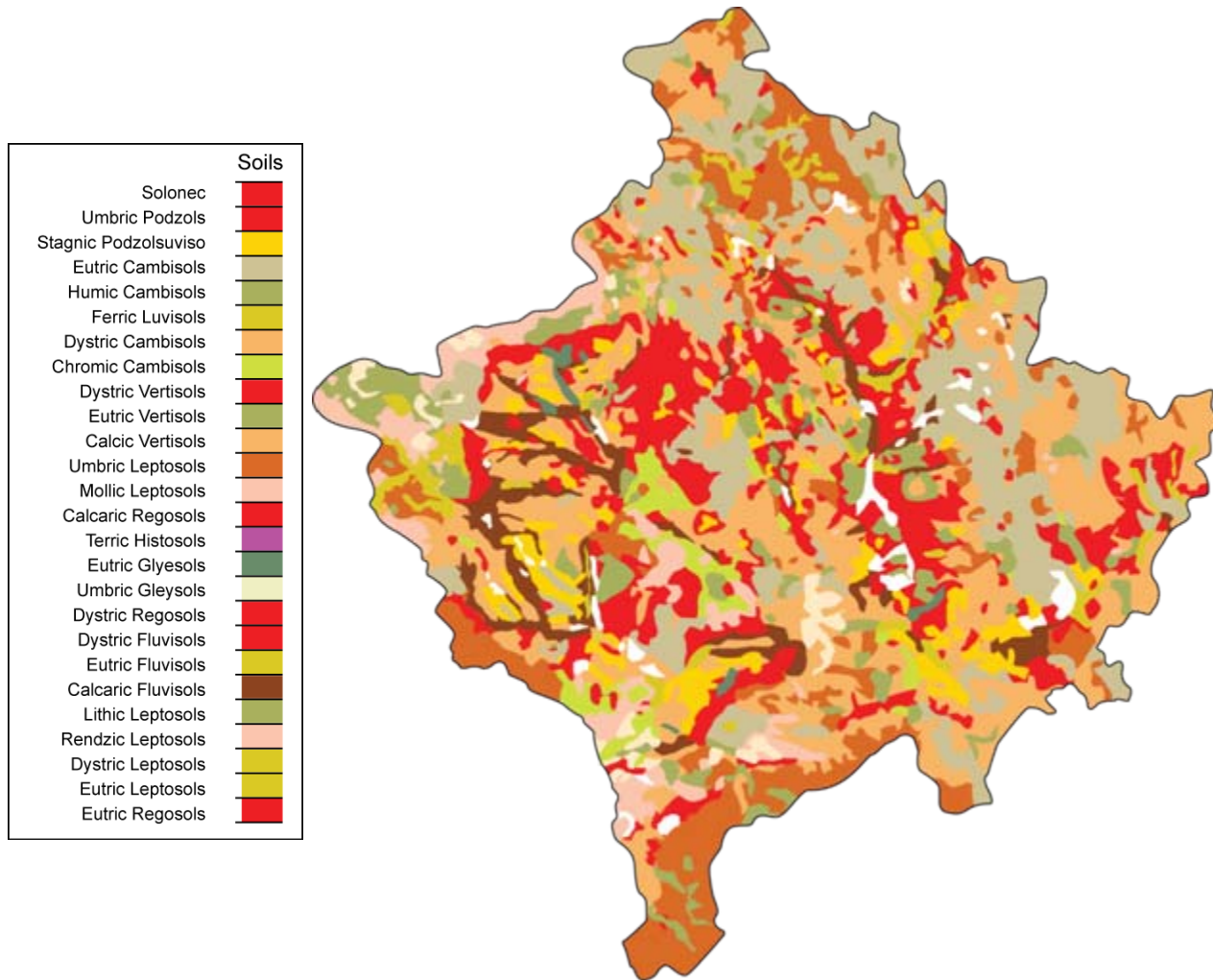
Annual solar radiation is also almost uniform across Kosovo, predominately falling between 2600 and 3000 total annual radiation hours

Photosynthetically Active Radiation (PAR) Map
(Total Annual Radiation Hours)



According to the 1974 Soil Survey, there are 13 different pedological units across Kosovo which can be subdivided into 26 soil types

Soil Types Across Kosovo



Comments

- ▶ Kosovo benefits from the presence of 13 of the 28 pedological units defined by the FAO-UNESCO 1988 classification
- ▶ The soil types are thoroughly mixed so that most soil types present can be found in most areas of the country
- ▶ However, overall, the Western part of the country has more presence of alluvial soil while the Eastern part has more presence of vertisols and reddish-brown soils

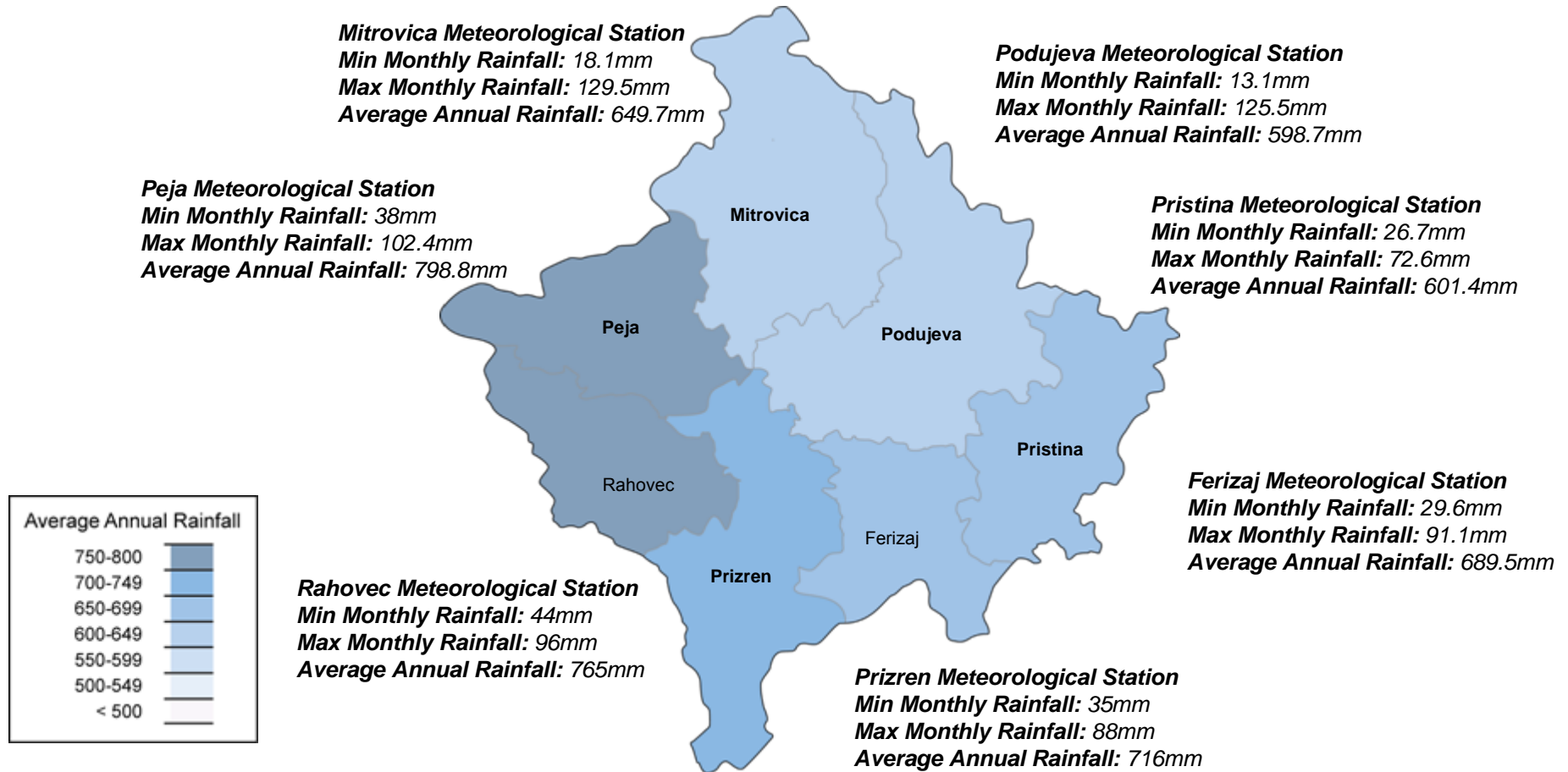
However, most of Kosovo is comprised of six main pedological units

Main Types of Pedological Units in Kosovo

	Characteristics	Effects on Crops	Composition
1 Alluvial	<ul style="list-style-type: none"> ▶ Deep or very deep soils, possibly high water capacity, possibly high water table, possibly high fertility 	<ul style="list-style-type: none"> ▶ High vigour, high yield, late variety, good technological maturity 	<ul style="list-style-type: none"> ▶ Sandy Loamy ▶ Loamy
2 Vertisols	<ul style="list-style-type: none"> ▶ Shallow to medium depth, low to high water capacity, rich in swelling clays that crack in dry period, cold in springtime, dry in summertime 	<ul style="list-style-type: none"> ▶ Possible nutritional disorders in springtime, unbalanced yield to growth ratio, water stress in midsummer, good maturity in low yielding conditions 	<ul style="list-style-type: none"> ▶ Non calcareous ▶ Brownized ▶ Leached with pseudogley ▶ Eroded
3 Reddish Brown	<ul style="list-style-type: none"> ▶ Shallow to medium depth, low to medium water capacity, adequate fertility 	<ul style="list-style-type: none"> ▶ Balanced yield growth ratio, good technological maturity 	<ul style="list-style-type: none"> ▶ Sandy loamy ▶ Loamy ▶ Leached
4 Podzol - Pseudogley	<ul style="list-style-type: none"> ▶ Acidic soils with a hydromorphic layer 	<ul style="list-style-type: none"> ▶ Possible nutritional disorders in spring, unbalanced yield to growth ratio, good maturity only in low yielding conditions 	<ul style="list-style-type: none"> ▶ Umbric
5 Cambisols	<ul style="list-style-type: none"> ▶ Very light structure, modification in color, structure and consistency 	<ul style="list-style-type: none"> ▶ Medium to good organic content, low to medium water capacity, adequate fertility 	<ul style="list-style-type: none"> ▶ Eutric ▶ Dystric
6 Leptosols	<ul style="list-style-type: none"> ▶ Low deep soils with light structure & presence of rock at maximum depth of 30 cm, modest presence of organic matter, modest water capacity and fertility 	<ul style="list-style-type: none"> ▶ Modestly suited for agriculture use in plane or low slope zones, the soil structure and depth could improve 	<ul style="list-style-type: none"> ▶ Umbric

Precipitation data indicates a range of annual rainfall from 598 mm to 798 mm and is slightly higher than average in Peja and Rahovec

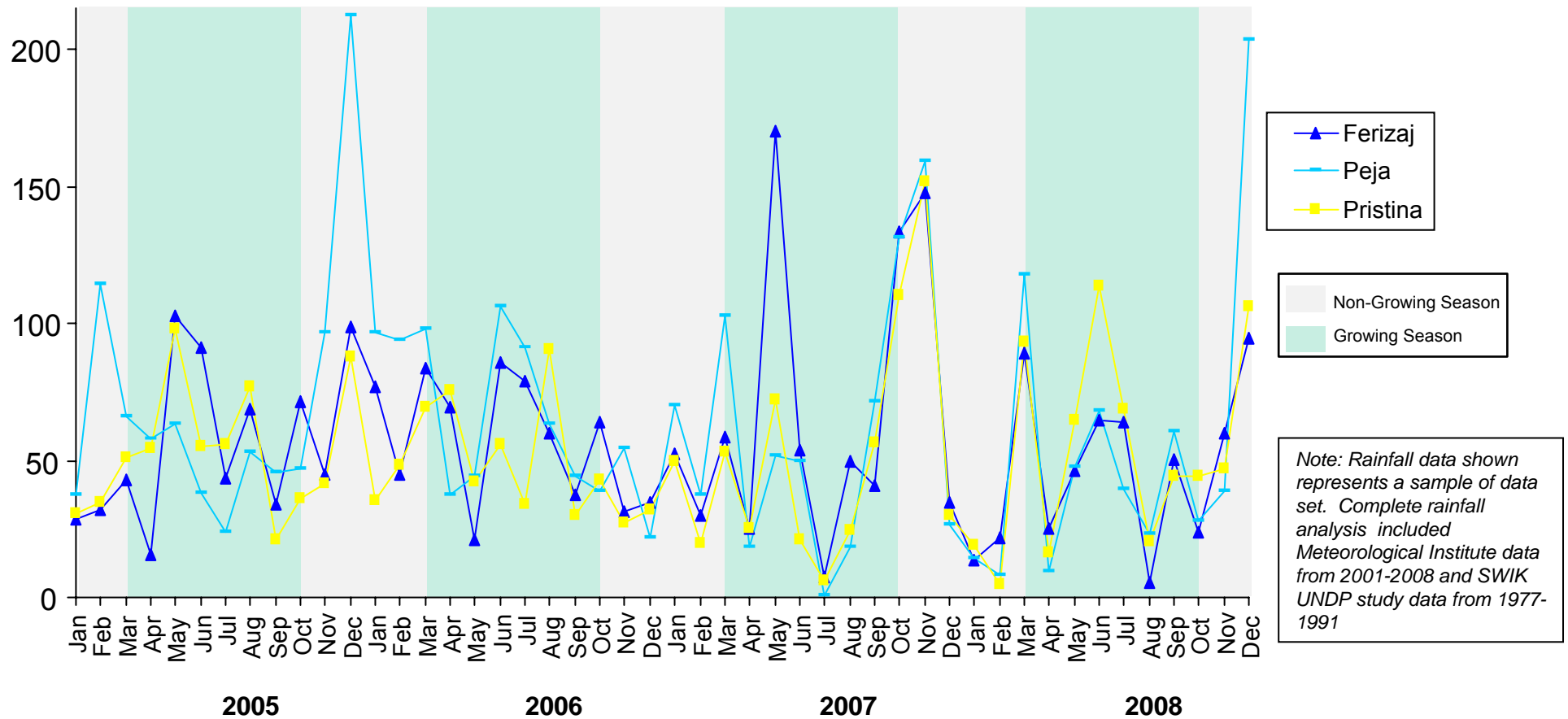
Precipitation Variation Across Kosovo* (Millimeters)



Note: Min, max, average annual rainfall data are from: 2001-2008 for Prizren, Rahovec; 2002-2008 for Peja, Pristina, Ferizaj; 2003-2008 for Mitrovica; 2004-2008 for Podujeva; Data for Mitrovica, Rahovec, Prizren, Podujeva was aggregated over these periods, but annual data was available for Ferizaj, Peja, and Pristina Meteorological Stations; (*) Rainfall data was used to determine min and max values in order to compare across the stations; Data for meteorological stations cover 10 square km
Source: Meteorological Institute; BAH Analysis

Across all the regions, precipitation is generally higher during the beginning and the end of the growing season

Monthly Precipitation Across Kosovo
(2005-2008, Millimeters)



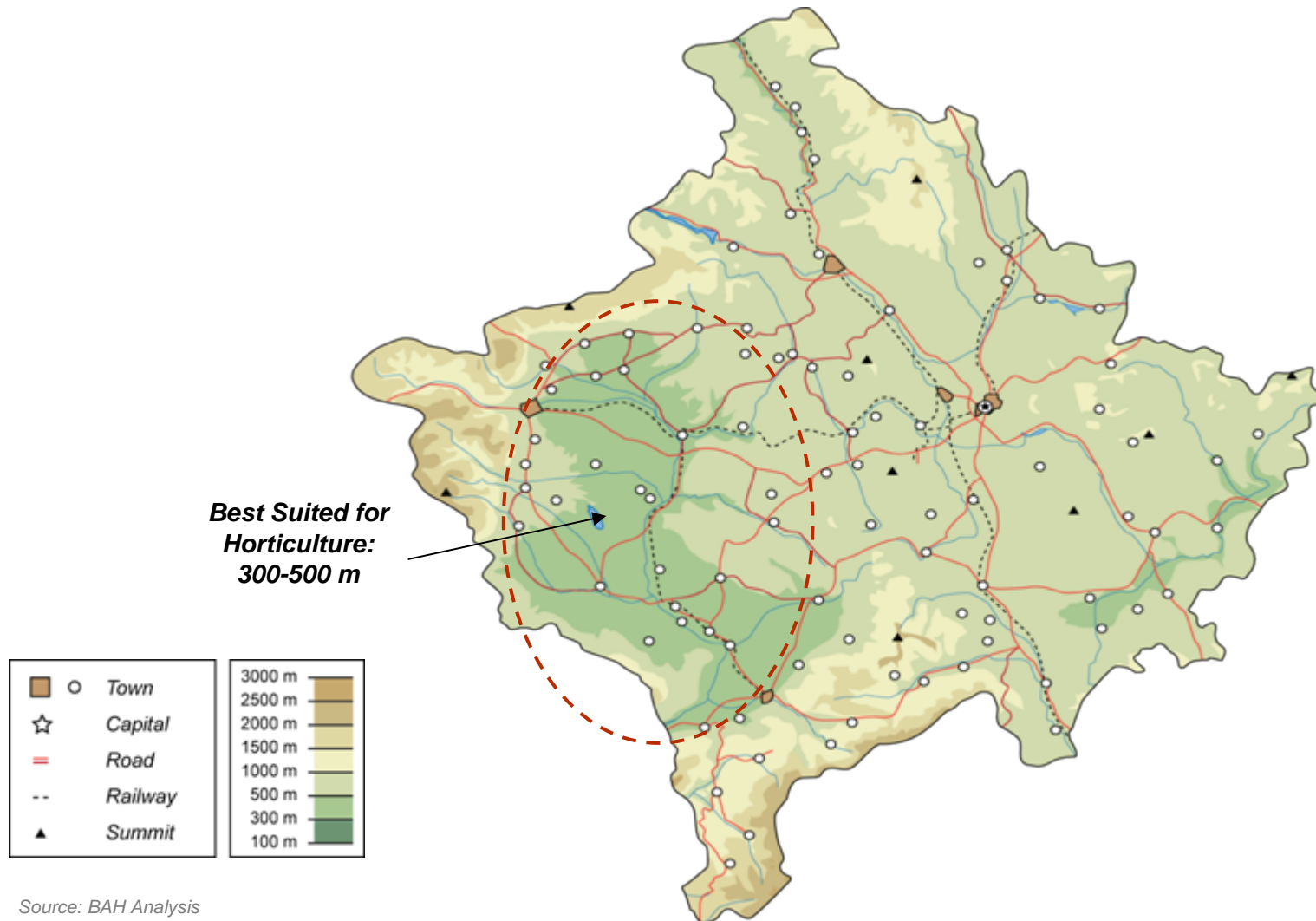
Note: Non-aggregated rainfall data was only available for Ferizaj, Peja, and Pristina Meteorological Stations

Note: SWIK study contains historical rainfall data from 1977 to 1991 for Dukadjini and Pristina

Source: Meteorological Institute; BAH Analysis, UNDP Funded Support for the Development of the Wine Industry of Kosovo (SWIK) Study, 2002

Cultivation occurs in a range of altitudes with low lying regions best-suited for horticulture in the western portion of the country

Altitude Across Kosovo
(Meters)

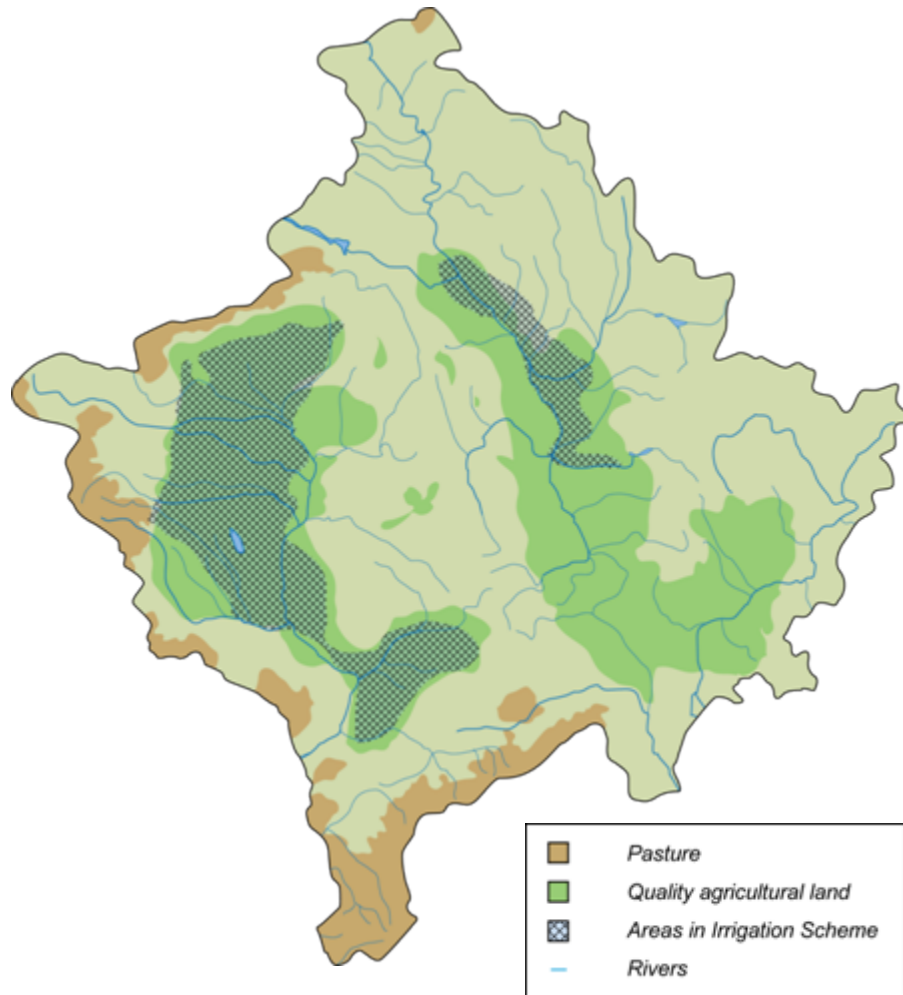


Source: BAH Analysis

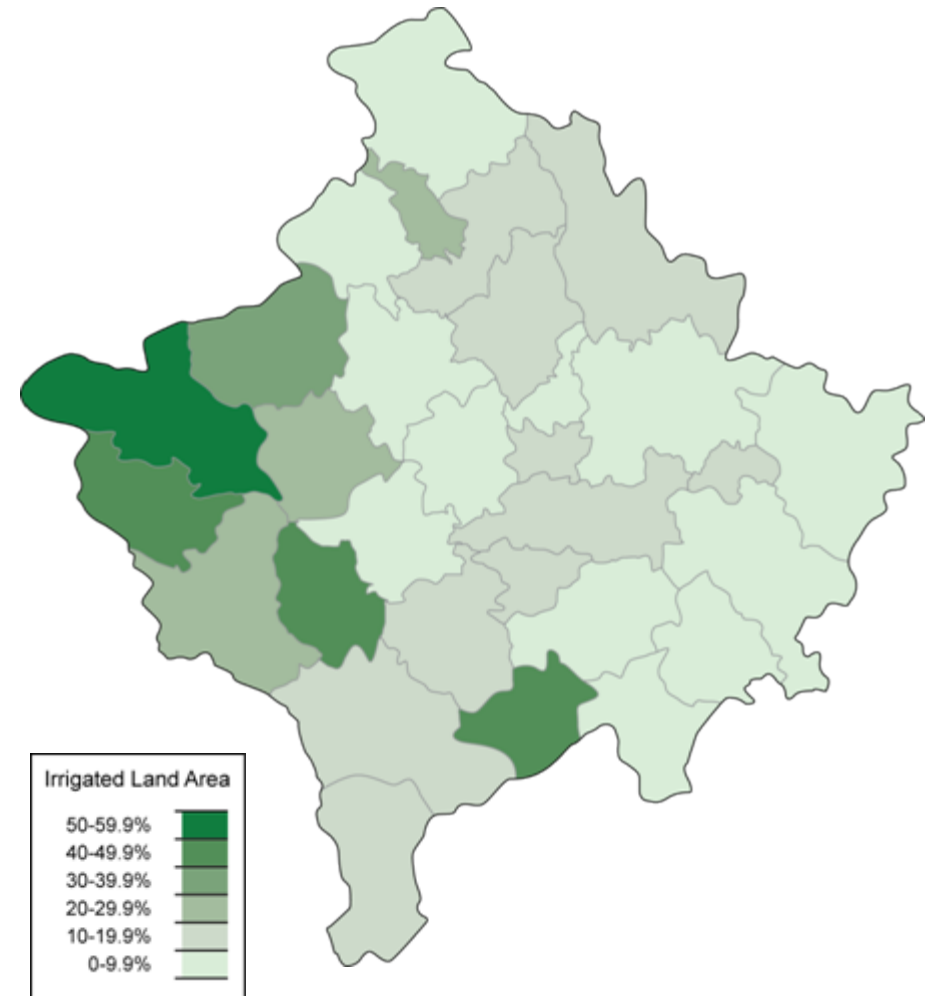
While only 17.4% of the arable land in Kosovo is irrigated, there is a wide range of irrigation available throughout the regions

Irrigation in Kosovo

Irrigation Scheme

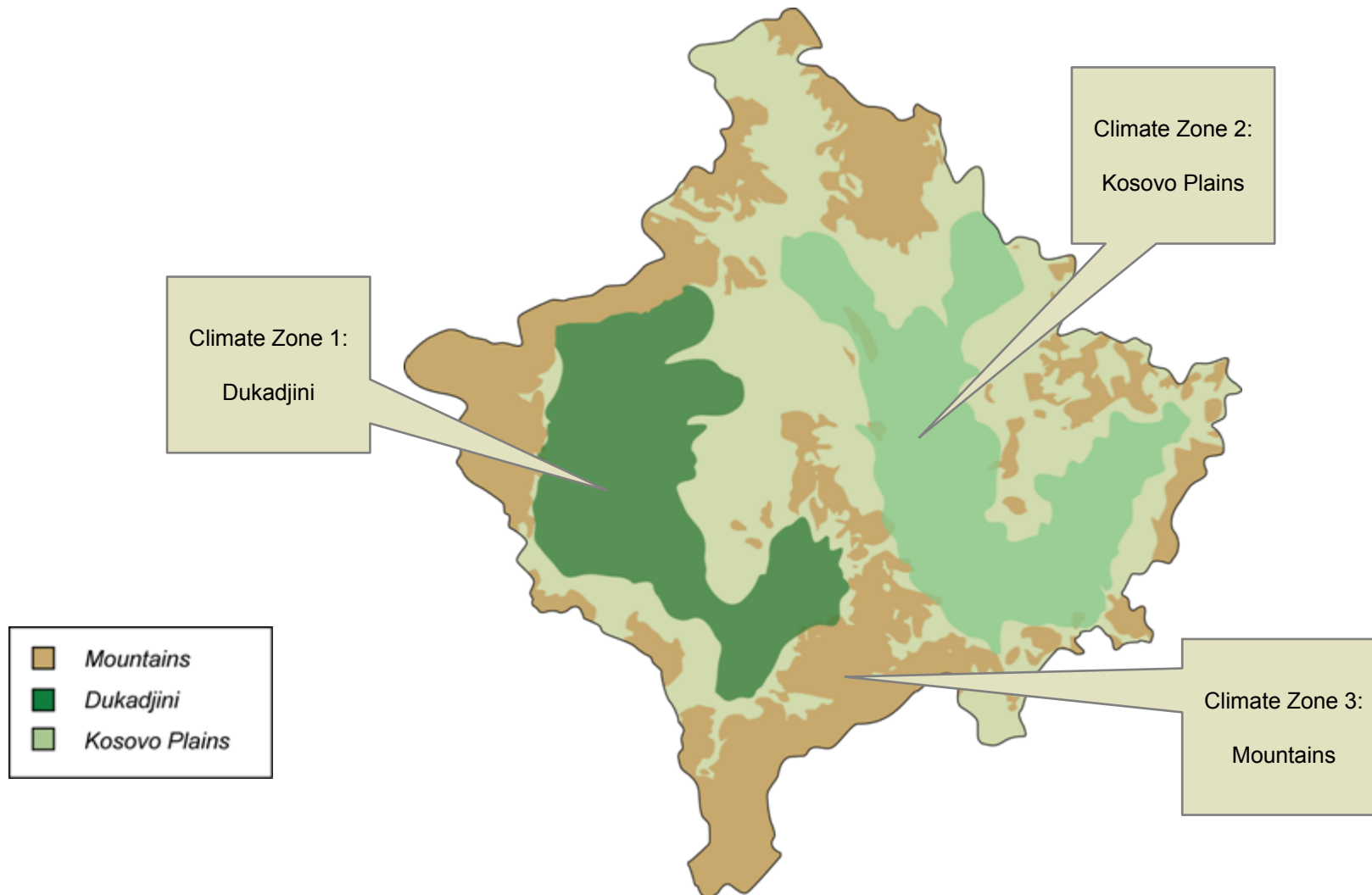


Irrigated Area by Municipality



The natural resource feasibility analysis reveals three primary climate zones in Kosovo: Dukadjini, Kosovo Plains, and Mountains...

Overview of Climate Zones Across Kosovo



...with each displaying unique characteristics across six areas

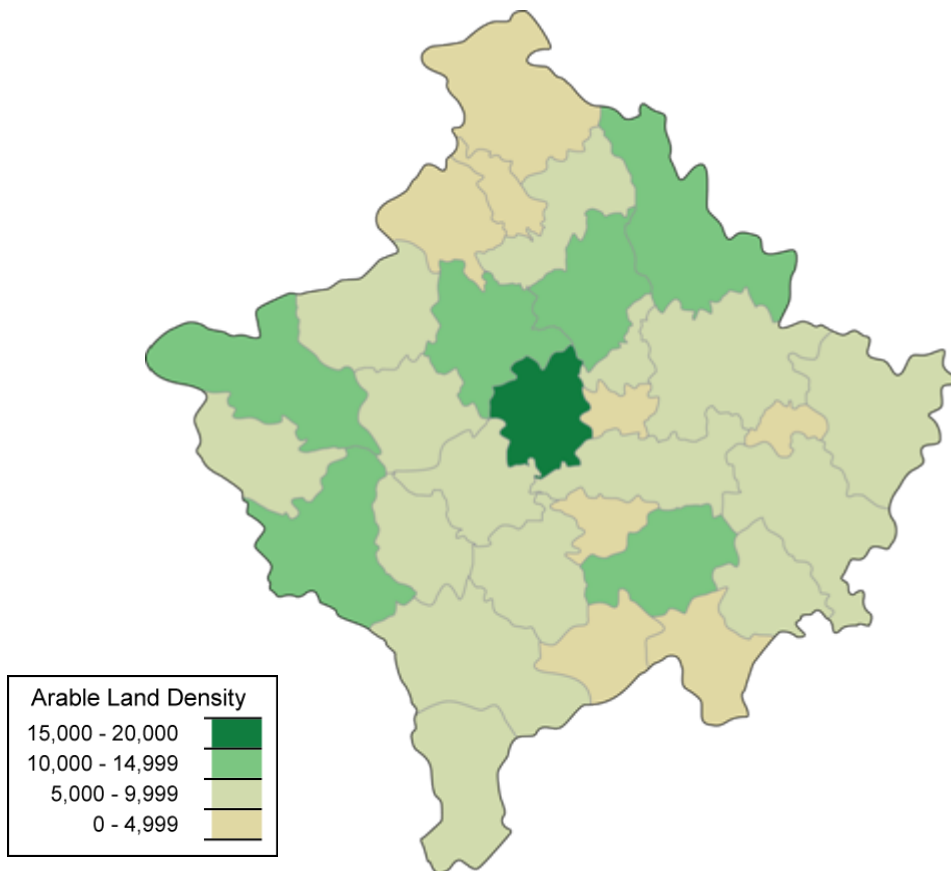
Description of Climate Zones in Kosovo

	Dukadjini (DK)	Kosovo Plains (KP)	Mountains (MT)
Temperature	<ul style="list-style-type: none"> ▶ Milder temperatures because of mountain and river influence 	<ul style="list-style-type: none"> ▶ Similar to temperatures in DK, but lower temperature extreme 	<ul style="list-style-type: none"> ▶ Lower temperatures due to elevation
Solar Radiation	<ul style="list-style-type: none"> ▶ 2500 to 3000 	<ul style="list-style-type: none"> ▶ 2500 to 3000 	<ul style="list-style-type: none"> ▶ 1800 to 2600 depending on elevation
Soil Type	<ul style="list-style-type: none"> ▶ Alluvial, Vertisols, Reddish Brown 	<ul style="list-style-type: none"> ▶ Alluvial, Vertisols, Cambisols, Reddish Brown, Podzol Pseudoclay 	<ul style="list-style-type: none"> ▶ Leptosol, Calcic Vertisols, Cambisols
Precipitation Trends	<ul style="list-style-type: none"> ▶ Precipitation comes from the northwest, peaks in the spring and fall, and is higher than KP 	<ul style="list-style-type: none"> ▶ Precipitation comes from the northwest after DK and receives lower rainfall 	<ul style="list-style-type: none"> ▶ Has the highest rain and snow precipitation levels due to elevation
Altitude	<ul style="list-style-type: none"> ▶ 300-500 meters 	<ul style="list-style-type: none"> ▶ 500-1000 meters 	<ul style="list-style-type: none"> ▶ 1000-3000 meters
Irrigation	<ul style="list-style-type: none"> ▶ Presence of the Radoniqi-Dukadjini and Drini i Bardhë systems 	<ul style="list-style-type: none"> ▶ Presence of the Ibër-Lepenc system in the north of K-P with only informal irrigation in the South 	<ul style="list-style-type: none"> ▶ For the most part un-irrigated except where coterminous with large-scale systems
General Description	<ul style="list-style-type: none"> ▶ Dukadjini Agricultural Zone has a milder continental climate being influenced by the Mediterranean climate and Drina river. This zone has a longer growing season than KP or MT by two weeks, has good rainfall, better access to irrigation, and more Alluvial, Vertisols, and Reddish Brown soil types. 	<ul style="list-style-type: none"> ▶ Kosovo Plains Agricultural Zone has a continental climate that can be influenced by the Russian anticyclone (winds). This zone has a shorter growing season than DK, has less access to irrigation facilities, and has predominately Vertisols/Reddish Brown/Alluvial/ Cambisols/Podzol soil types. 	<ul style="list-style-type: none"> ▶ Mountainous Agricultural Zone has the typical climatic characteristics of mountainous European areas with higher precipitation, lower yearly temperatures, and predominance of Leptosol, Calcic Vertisols, Cambisols soil types

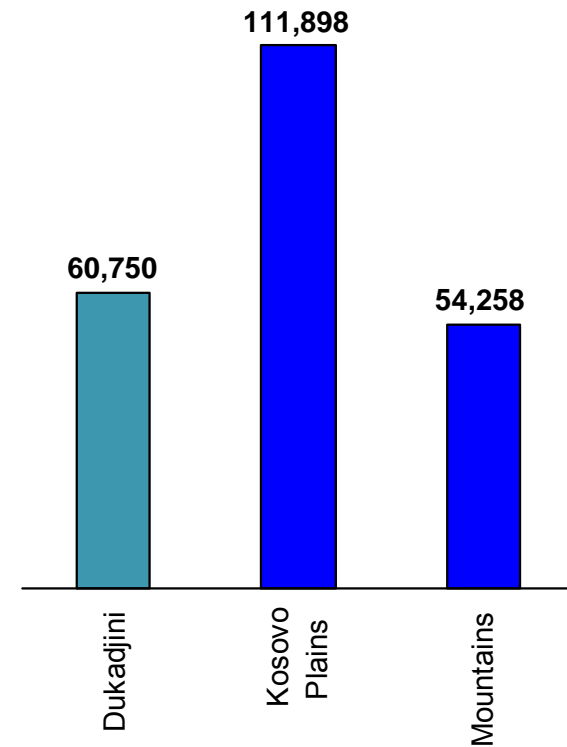
The Kosovo Plains Zone has the most arable land, with 112K ha, and the Mountains Zone has the least at 54K ha

Breakdown of Total Arable Land

**Total Arable Land by Municipality
(Ha, 2007)**



**Arable Land by Climate Zone
(Ha, 2007)**

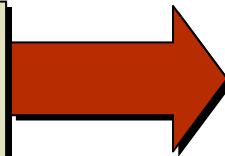


As a result, certain horticulture and cereal products can be better developed as primary crops depending on the climate zone

Overview of Crop Type by Zone

	Description	Crops Currently Grown	Total Favorable Crops in Model
1 Dukadjini	<ul style="list-style-type: none"> ▶ A longer growing season, milder temperatures, higher rainfall, and more alluvial, vertisols, and reddish brown soil types make Dukadjini ideally suited for labor intensive horticultural crop cultivation in deciduous fruits and vegetables 	<ul style="list-style-type: none"> ▶ Melon, pear, peaches, cherries, watermelon, pepper, tomatoes, cucumbers, cabbage 	<ul style="list-style-type: none"> ▶ 74 crops considered “most favorable” for this climate zone
2 Kosovo Plains	<ul style="list-style-type: none"> ▶ With less access to irrigation and soils that are richer in organic matter such as Reddish Brown/Podzol/ Vertisols/ Cambisols, Kosovo Plains is well suited for industrial crop cultivation like winter cereal and potato production 	<ul style="list-style-type: none"> ▶ Wheat, rye, barley, maize, potatoes, onions, beans, peas 	<ul style="list-style-type: none"> ▶ 45 crops considered “most favorable” for this climate zone
3 Mountains	<ul style="list-style-type: none"> ▶ Mountainous agro-forest area is characterized by cooler temperatures, shorter growing seasons, and soil types that limit possible agriculture production to crops including select nuts and berries 	<ul style="list-style-type: none"> ▶ Cherries, hazelnuts, chestnuts, berries, mushrooms 	<ul style="list-style-type: none"> ▶ 14 crops considered “most favorable” for this climate zone

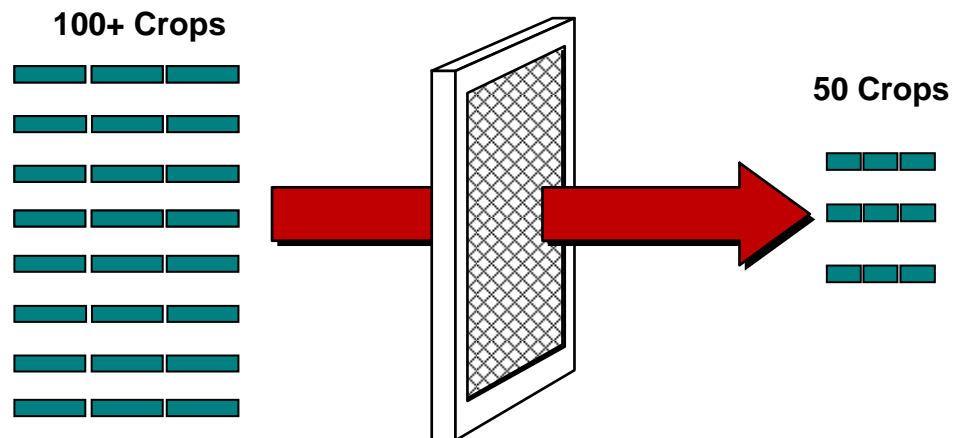
167 crops analyzed



105 crops for which there are favorable conditions in Kosovo

We then calculated the potential production value per hectare for each remaining crop in order to select the top 50 high-value crops

Filtering Methodology to Identify 50 Strategic Crops



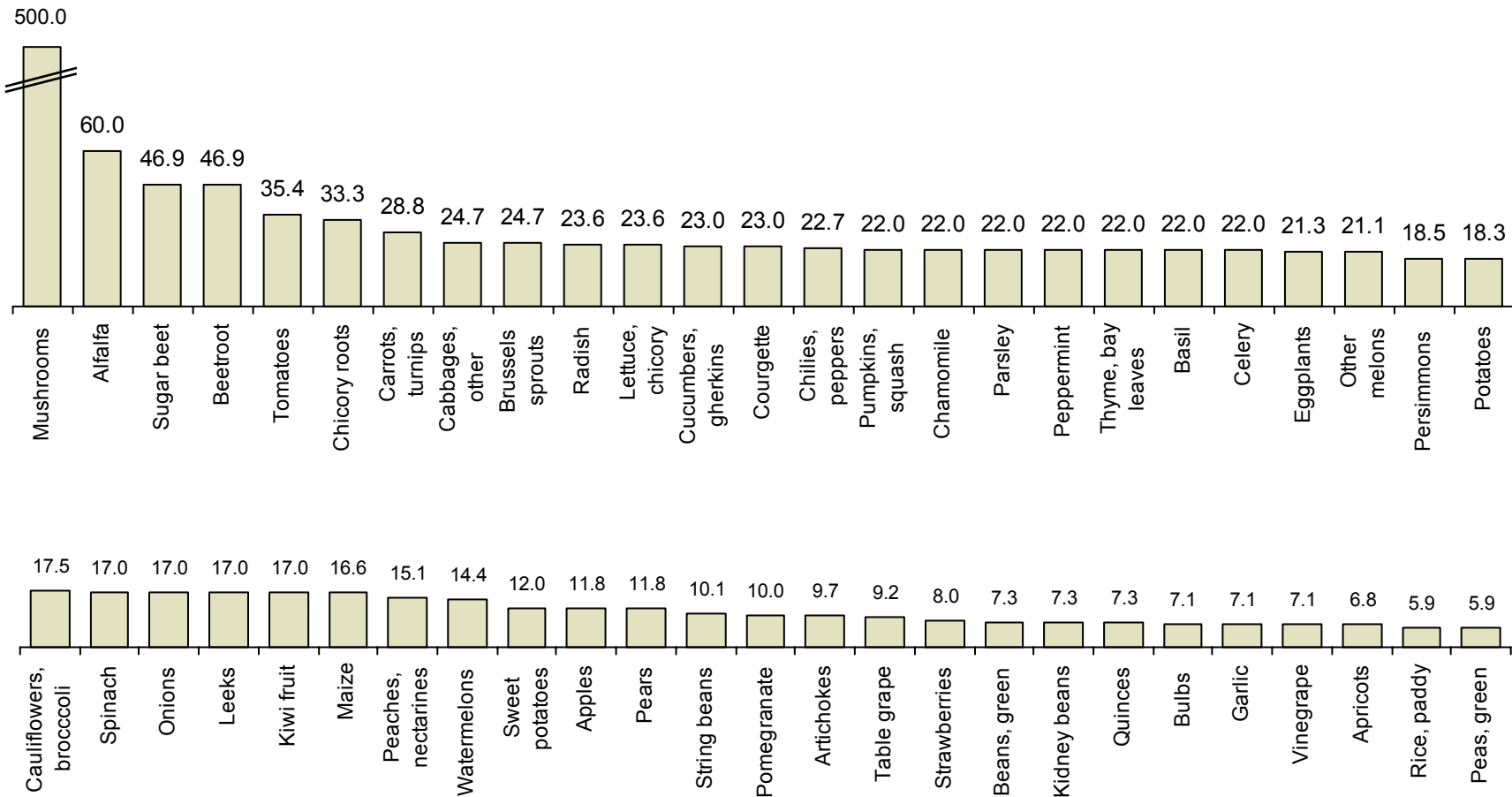
Filtering Method Overview

- ▶ This filter ranks over 100 crops according to their production value
- ▶ The average crop yield data comes from the FAOStat database and is supplemented with expert opinion
- ▶ To determine price per crop, an average import price per ton for the EU(27) was used as a proxy
 - The unit price per ton data comes from TradeMap, FAOStat, and is supplemented with expert opinion
- ▶ The production values for over 100 crops were ranked and sorted to identify the top 50 crops with the highest production value

$$\text{Production Value per Hectare (Euro/Hectare)} = \text{Average Crop Yield (Ton/Hectare)} \times \text{Unit Value (Euro/Ton)}$$

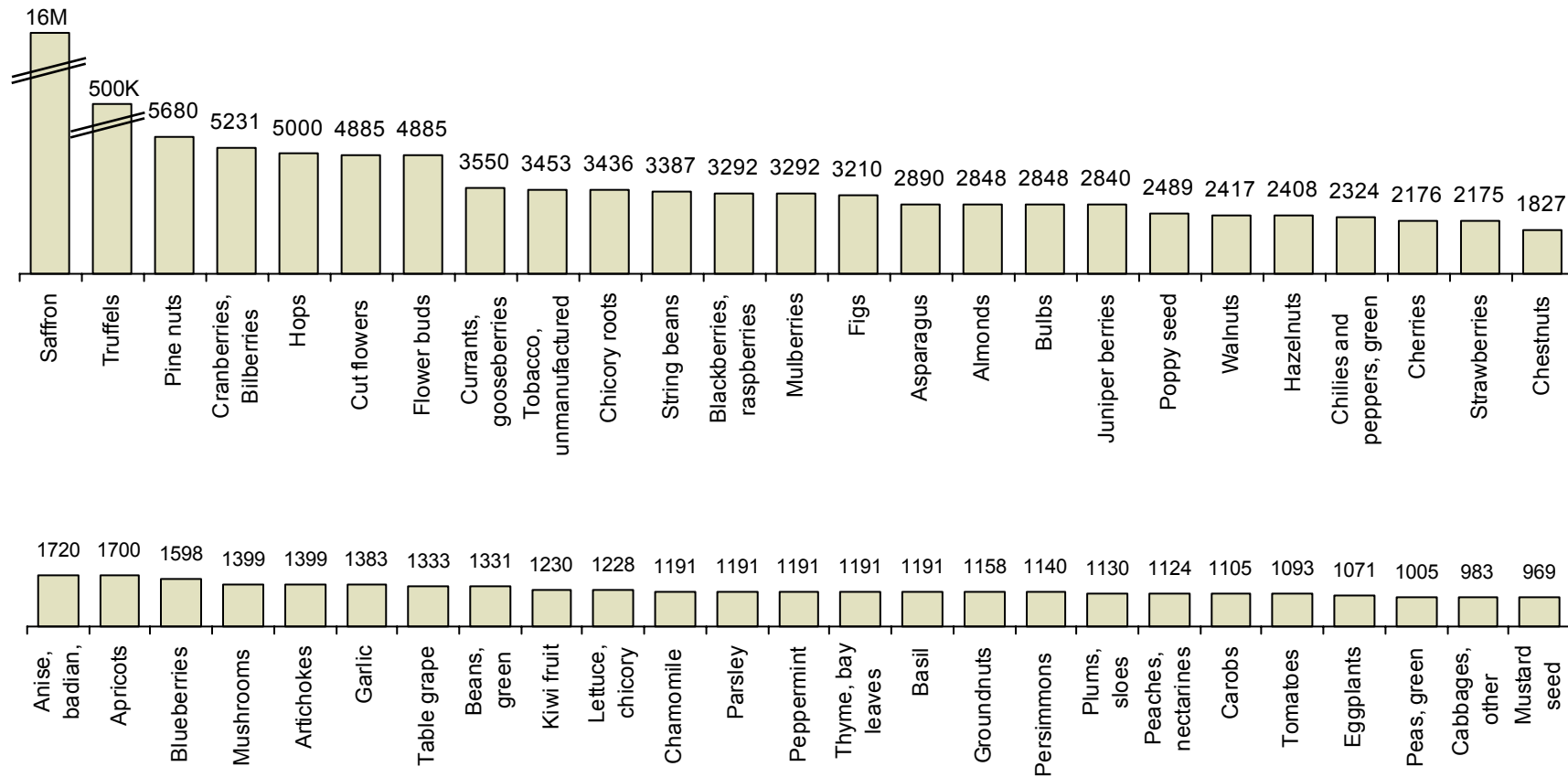
First we identified the yield for each crop, which ranged from 0.1 to 500 tons/hectare

Average Crop Yield for the Top 50 Crops
(Tons/Hectare)



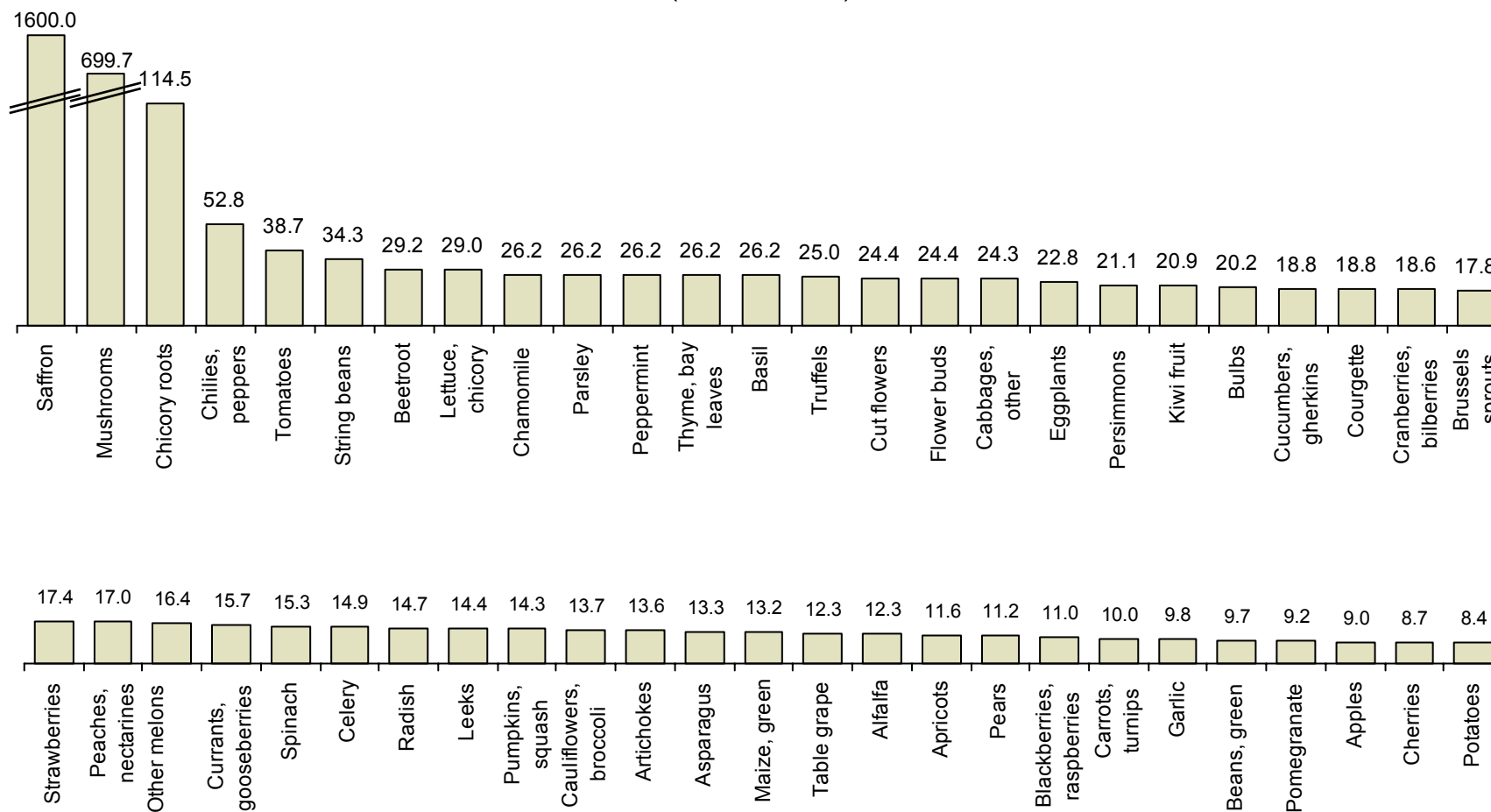
Then we determined the unit value (Euro/ton) for each crop, where prices ranged from 47 to 16M Euros/ton

Unit Value for the Top 50 Crops
(Euro/Ton)



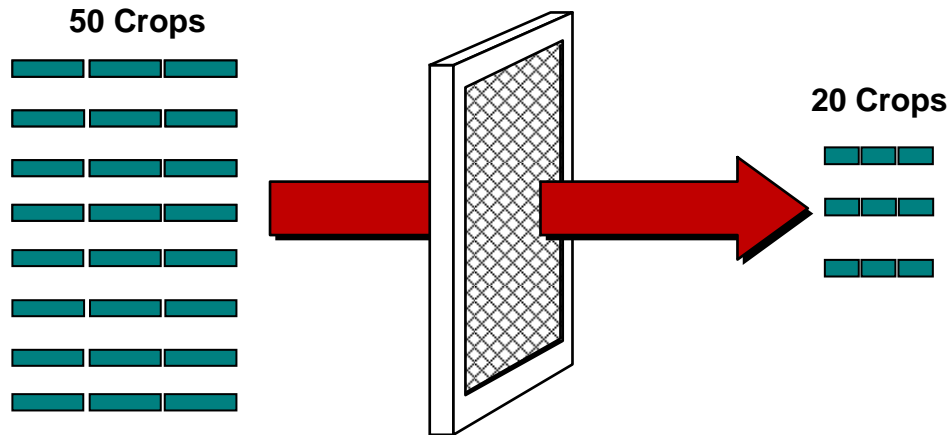
We multiplied the yield and unit value per crop to identify the top 50 crops with the highest potential production value

Potential Production Value for the Top 50 Crops
(Euro/Hectare)

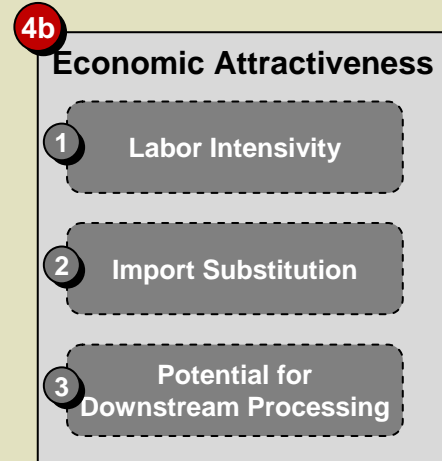


These 50 crops were further filtered according to economic feasibility and economic attractiveness...

Filtering Methodology to Identify 20 Strategic Crops



Six Dimensional Filter



Filtering Method Overview

- ▶ This filter ranks the 50 crops according to their:
 - Economic feasibility
 - Economic attractiveness
- ▶ Economic feasibility identifies and prioritizes:
 - Crops with the highest demand by the EU
 - Crops that can be grown on small plots of land
 - Crops with the highest EU import price/ton
- ▶ Economic attractiveness identifies and prioritizes:
 - Crops that can be highly labor intensive
 - Crops being imported by Kosovo that could be produced locally
 - Crops that have greater potential for high-value processing
- ▶ The final ranking of crops is derived from the consolidation of these six rankings, and leads to the selection of the top 20 crops

...using a combination of agriculture databases and expert analysis to determine the results of each filter

Calculation Methodology and Data Sources

		Calculation Methodology	Data Source	Weight
4A. Economic Feasibility	1. Demand in Target Markets	▶ Ranked and prioritized crops in order of decreasing demand by the EU (27)	▶ Comtrade, FAOStat, http://france.usembassy.gov/irs-euro.html , BAH Analysis	25%
	2. Lack of Significant Economies of Scale	▶ Crops that can be grown on small farms (less than 5 ha) received the highest ranking while crops grown on large farms (greater than 50 ha) received the lowest ranking	▶ Surveyed Agriculture Experts, BAH Analysis	15%
	3. High Value per Weight	▶ Top quartile of crops with the highest import value per ton into the EU received the highest ranking while the lowest quartile of crops with the lowest import value per ton received the lowest ranking	▶ Surveyed Agriculture Experts, BAH Analysis	20%
4B. Economic Attractiveness	1. Labor Intensity	▶ Highly labor intensive crops requiring more than 500 hours/ha per year for cultivation and harvest received the highest ranking while low labor intensive crops requiring less than 100 hours/ha per year received the lowest ranking	▶ Centro Ricerche Produzioni Vegetali (CRPV): COLTURE ARBOREE I COSTI DI PRODUZIONE 2008, BAH Analysis	20%
	2. Import Substitution	▶ If the annual import value is greater than 250,000 Euros, this crop could be considered for import substitution and received a higher ranking	▶ Kosovo Customs Data, BAH Analysis	5%
	3. Potential for Downstream Processing	▶ Crops that could be used to produce many high-value processed products in Kosovo received the highest ranking while crops with few processing options received the lowest ranking	▶ Surveyed Agriculture Experts, BAH Analysis	15%

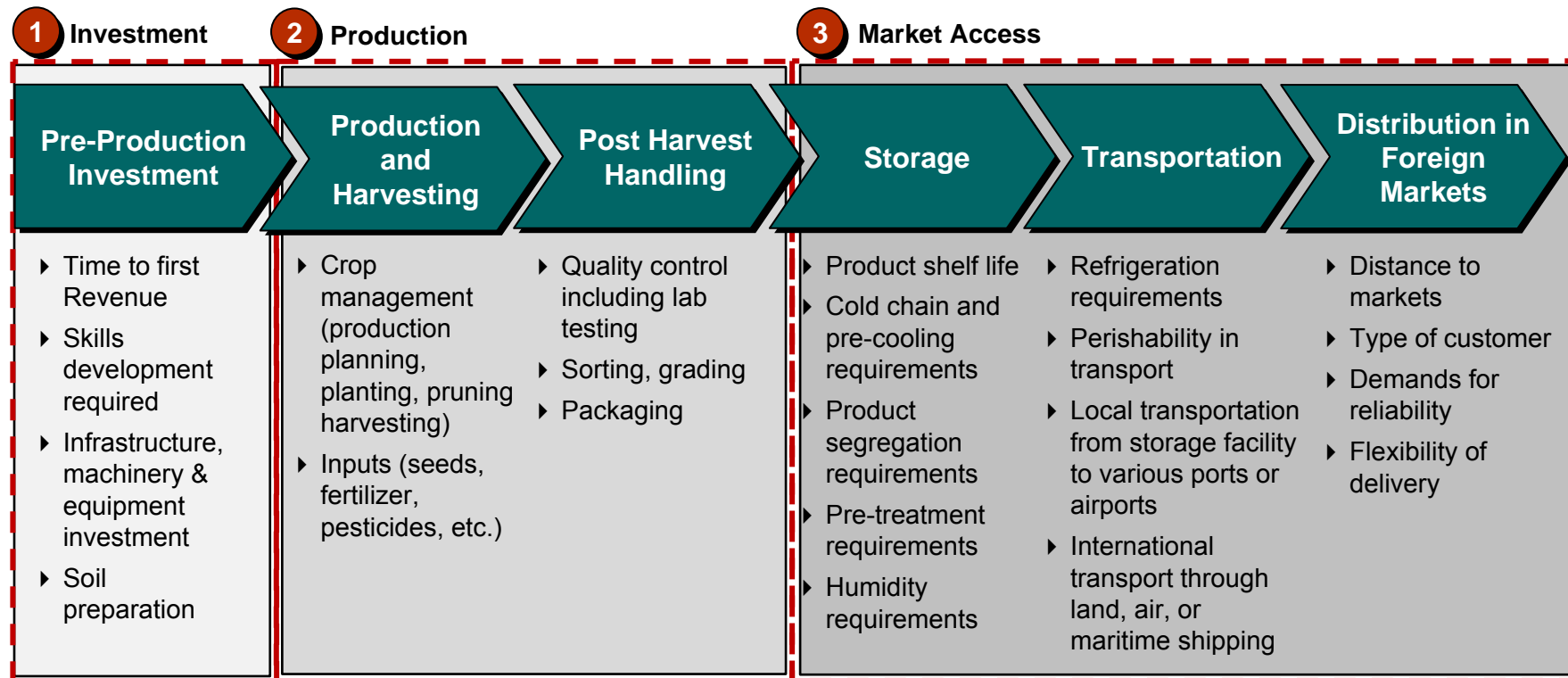
After combining the filters on a weighted basis, we identified 20 potential high-value, economically attractive and feasible crops

Selection of 20 Strategic Crops

Crop	Target Market Demand <small>25%</small>	Economies of Scale <small>15%</small>	High Value/Weight <small>20%</small>	Labor Intensity <small>20%</small>	Import Substitution <small>5%</small>	Downstream Processing <small>15%</small>	Weighted Score	Rank
Chilies and peppers, green	1	1	1	1	1	1	1.0000	1
Strawberries	1	1	0.75	1	0.01	1	0.9005	2
Mushrooms	1	1	0.75	1	0.01	1	0.9005	2
Peaches and nectarines	1	1	0.5	1	1	1	0.9000	4
Blackberries, raspberries	0.75	1	1	1	0.01	1	0.8880	5
Cherries	0.75	1	1	1	0.01	1	0.8880	5
Kiwi fruit	1	1	0.75	0.67	1	1	0.8840	7
Truffles	1	1	1	0.67	0	1	0.8840	7
Cucumbers and gherkins	1	1	0.5	1	1	0.67	0.8505	9
Cut flowers	1	1	1	1	0	0.33	0.8495	10
Flower buds	1	1	1	1	0	0.33	0.8495	10
Pears	1	1	0.5	0.67	1	1	0.8340	12
Cranberries and bilberries	0.5	1	1	1	0	1	0.8250	13
Saffron	0.5	1	1	1	0	1	0.8250	13
Table grape	1	1	0.75	1	0	0.33	0.7995	15
Apples	1	1	0.25	0.67	1	1	0.7840	16
Asparagus	0.25	1	1	1	0.01	1	0.7630	17
Currants and gooseberries	0.25	1	1	1	0	1	0.7625	18
Bulbs	0.75	1	1	0.33	0.01	1	0.7540	19
Lettuce and chicory	0.75	1	0.75	1	0.01	0.33	0.7375	20

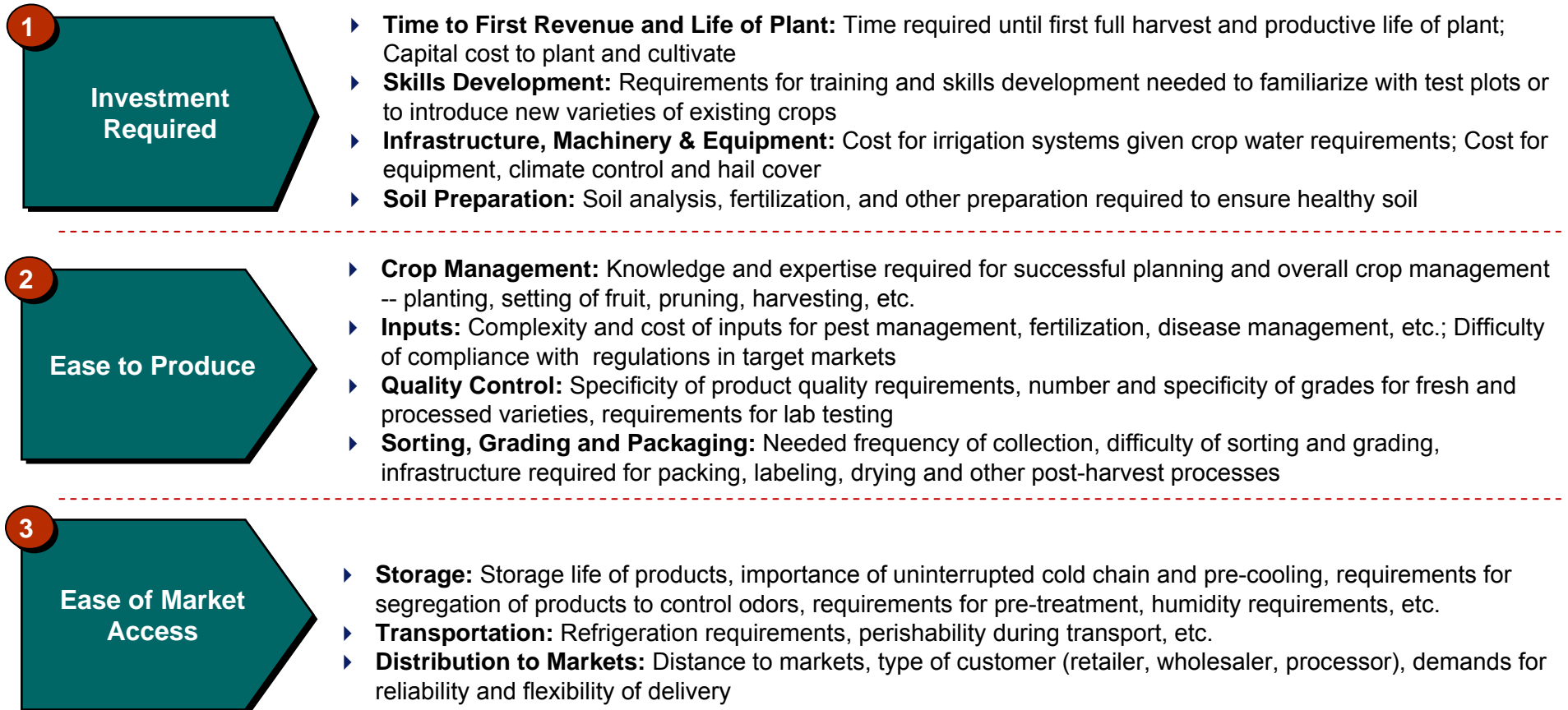
We further analyzed the remaining crops across the agriculture value chain to better understand the challenges and opportunities that would be faced in introducing them to Kosovo

Investment, Production, and Market Access Considerations Along the Agriculture Export Value Chain







More specifically, this final Value Chain Constraints filter focused on investment required, ease to produce, and ease of market access

Overview of Value Chain Constraints Analysis Filter Dimensions






We developed a scale that defines required investment levels ...

Required Investment Ranking Description

Weight	Description
	<ul style="list-style-type: none"> ▶ Almost no time is required until first harvest occurs ▶ Productive life of the plant is greater than 20 years ▶ Expertise for test plots or new varieties already exists ▶ Minimal cost for irrigation, machinery, and other equipment
	<ul style="list-style-type: none"> ▶ Minimal time is required until first harvest occurs ▶ Productive life of the plant is 11-20 years ▶ Expertise for test plots or new varieties already exists or can be obtained with minimal difficulty ▶ Reasonable costs for irrigation, machinery, and other equipment
	<ul style="list-style-type: none"> ▶ Slightly longer amount of time is required until the first harvest occurs ▶ Productive life of the plant is 2-10 years ▶ Some expertise exists, but additional expertise will be obtained with greater difficulty ▶ Higher costs for irrigation, machinery, and other equipment
	<ul style="list-style-type: none"> ▶ Significant time is required until the first harvest occurs ▶ Productive life of the plant is 1 year or less ▶ Little expertise or familiarity with test plots and new varieties with needed expertise difficult or expensive to obtain ▶ Prohibitive costs for irrigation, machinery, and other equipment

...and analyzed the potential for Kosovo to develop crops according to investment commitment

Required Investment Analysis and Rank




Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Apples	Multi annual	3-4 years	Up to 25 years	Up to 100,000 Euro/ha	
	<p>Skill Development: Additional knowledge is required to update varieties cultivated, introduce new types of virus-free stocks & rootstock, and update training and pruning techniques</p> <p>Infrastructure, Machinery & Equipment Needed: Drip irrigation system with fertilization, hail storm net cover set on proper poles and wires, a tractor, a crusher and weed sprayer, chemical sprayer, fork lift and a motor harvester/pruning carriage</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting medium quality calcareous/ alkaline (iron chlorosis) or slightly acid soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				
Blackberries/ Raspberries	Multi annual	2-3 years	up to 20 years	From 10,000-60,000 Euro/Ha	
	<p>Skill Development: Very simple crop so minimal additional training is needed about how to grow, harvest, etc.</p> <p>Infrastructure, Machinery & Equipment Needed: Small tractor with a crusher or motor cultivator, eventually a drip irrigation system with fertilization</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting marginal and slightly alkaline/slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				
Cherries	Multi annual	3-4 years	25+ years	Up to 100,000 Euro/ha	
	<p>Skill Development: Additional knowledge is required to introduce new varieties particularly for sweet cherries</p> <p>Infrastructure, Machinery & Equipment Needed: A drip irrigation system with fertilization, a hail storm net cover set on proper poles and wires, a tractor, a crusher, a weed sprayer, a chemical sprayer, a motor harvester/pruning carriage</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light drained soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included

Source: BAH Analysis

...and analyzed the potential for Kosovo to develop crops according to investment commitment (cont'd)

Required Investment Analysis and Rank




Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Cranberries/ Bilberries	Multi annual	2-3 years	Up to 20 years	From 10,000 to 60,000 Euro/Ha	
	<p>Skill Development: Very simple crop so minimal additional training is needed about how to grow, harvest, etc.</p> <p>Infrastructure, Machinery & Equipment Needed: A small tractor with a crusher or motor cultivator, eventually a drip irrigation system with fertilization</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				
Currants/ Gooseberries	Multi annual	2-3 years	Up to 20 years	From 10,000 to 60,000 Euro/Ha	
	<p>Skill Development: Very simple crop so minimal additional training is needed about how to prune, grow, and harvest</p> <p>Infrastructure, Machinery & Equipment Needed: A small tractor with a crusher or motor cultivator, eventually a drip irrigation system with fertilization</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting slightly acid soils rich of humus, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				
Kiwi	Multi annual	3-4 years	Up to 25 years	Up to 100,000 Euro/Ha	
	<p>Skill Development: Additional knowledge is required to produce kiwi since it is not currently produced in Kosovo including varieties to be cultivated, pruning and harvesting techniques, basic parasite and fungal control, etc.</p> <p>Infrastructure, Machinery & Equipment Needed: A drip irrigation system with fertilization, a hail storm net cover set on proper poles and wires, a tractor, a crusher, a weed sprayer, a chemical sprayer, a fork lift, a motor harvester/pruning carriage</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting less calcareous/alkaline (iron chlorosis) soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included

Source: BAH Analysis

...and analyzed the potential for Kosovo to develop crops according to investment commitment (cont'd)




Required Investment Analysis and Rank

Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Peaches/ Nectarines	Multi annual	3-4 years	Up to 20 years	Up to 100,000 Euro/Ha	
	<p>Skill Development: Additional knowledge is required to update varieties cultivated, introduce new types of free virus stocks & rootstock, and update training and pruning techniques</p> <p>Infrastructure, Machinery & Equipment Needed: A drip irrigation system with fertilization, a hail storm net cover set on proper poles and wires, a tractor, a crusher, a weed sprayer, a chemical sprayer, a fork lift, a motor harvester/pruning carriage</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light and drained soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				
Pears	Multi annual	3-4 years	up to 25 years	Up to 100,000 Euro/Ha	
	<p>Skill Development: Additional knowledge is required to update varieties cultivated, introduce new types of free virus stocks & rootstock, and update training and pruning techniques</p> <p>Infrastructure, Machinery & Equipment Needed: A drip irrigation system with fertilization, a hail storm net cover set on proper poles and wires, a tractor, a crusher, a weed sprayer, a chemical sprayer, a fork lift, a motor harvester/pruning carriage</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting less calcareous/ alkaline (iron chlorosis) soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, squaring & trees plantation)</p>				
Strawberries	Multi annual	From the first year	Up to 5-7 years	From 60,000 up to 150,000/250,000 Euro/Ha	
	<p>Skill Development: Additional knowledge is needed to update varieties and introduce new production models and techniques (e.g. mulching, etc.)</p> <p>Infrastructure, Machinery & Equipment Needed: Cost reflects production in plastic tunnels, but the production period could be expanded by investing in a more sophisticated type of green house with higher investment costs but higher revenues; Machinery and equipment are needed as per cultivation of horticultural crop (e.g. medium tractor, tiller, crusher, sprayer, etc.)</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting less calcareous/ alkaline (iron chlorosis) or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, mulching (plastic or organic material) and stolon plantation)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included; Modern greenhouses cost 150,000 Euro/ha and plastic tunnels are 40,000 Euro/ha
Source: BAH Analysis

...and analyzed the potential for Kosovo to develop crops according to investment commitment (cont'd)

Required Investment Analysis and Rank




Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Table Grape	Multi annual	2-3 years	Up to 25 years	Up to 100,000 Euro/Ha	
	<p>Skill Development: Additional knowledge is required to update varieties cultivated, introduce new types of free virus stocks & rootstock, and update training and pruning techniques</p> <p>Infrastructure, Machinery & Equipment Needed: Drip irrigation system with fertilization, a hail storm net cover set on proper poles and wires, a tractor, a crusher and a weed sprayer, a chemical sprayer, a fork lift and a motor harvester/pruning carriage</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting less calcareous/ alkaline (iron chlorosis) or slightly acid soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, squaring and trees plantation)</p>				
Bulbs	Annual to Multi annual	From first to third year	1-3 years	Up to 10,000 Euro/Ha	
	<p>Skill Development: Since simple crop, minimum additional knowledge is required (e.g. varieties)</p> <p>Infrastructure, Machinery & Equipment Needed: Related to annual crop cultivation machineries (tractor, tiller) and a light plough to harvest the bulbs</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light calcareous/ alkaline or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization)</p>				
Cut flowers	Multi annual	All year long but mostly from early spring to late autumn	Strictly correlated to the species	Up to 150,000/250,000 Euro/Ha	
	<p>Skill Development: Significant and sophisticated level of knowledge is required</p> <p>Infrastructure, Machinery & Equipment Needed: High investment and production costs due to greenhouse construction and maintenance</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light calcareous/ alkaline (iron chlorosis) or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included

Source: BAH Analysis

...and analyzed the potential for Kosovo to develop crops according to investment commitment (cont'd)




Required Investment Analysis and Rank

Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Flower Buds	Multi annual	All year but mostly from early spring to late autumn	Strictly correlated to the species	Up to 150,000/250,000 Euro/Ha	
	<p>Skill Development: Significant and sophisticated level of knowledge is required</p> <p>Infrastructure, Machinery & Equipment Needed: High investment and production costs due to greenhouse construction and maintenance</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light calcareous/ alkaline (iron chlorosis) or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization)</p>				
Asparagus	Multi annual	2-3 years	Up to 20 years	From 60,000 to150,000/ 250.000 Euro/Ha	
	<p>Skill Development: More knowledge required for variety selection & cropping techniques due to its long term producing species</p> <p>Infrastructure, Machinery & Equipment Needed: : Cost reflects production in plastic tunnels but the production period could be expanded by investing in a more sophisticated type of green house with higher investment costs but higher revenues; Machinery and equipment are needed as per cultivation of horticultural crop (e.g. medium tractor, tiller, crusher, sprayer, etc.)</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light calcareous/ alkaline or slightly acid soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, dig the ditch 60x20 (as largeness x depth) and rhizome plantation)</p>				
Chilies/ Peppers	Annual	From late spring to early autumn	Annual	From 60,000 to150,000/ 250,000 Euro/Ha	
	<p>Skill Development: Low to medium level of additional knowledge required to introduce new growing techniques, varieties and related marketing</p> <p>Infrastructure, Machinery & Equipment Needed: Cost reflects production in plastic tunnels, but the production period could be expanded by investing in a more sophisticated type of green house with higher investment costs but higher revenues; Machinery and equipment are needed as per cultivation of horticultural crop (medium tractor, tiller, crusher, sprayer, etc.)</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light calcareous/ alkaline or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, mulching (plastic or organic material) and young plant plantation)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included; Modern greenhouses cost 150,000 Euro/ha and plastic tunnels are 40,000 Euro/ha
Source: BAH Analysis

...and analyzed the potential for Kosovo to develop crops according to investment commitment (cont'd)



Required Investment Analysis and Rank

Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Cucumbers/ Gherkins	Annual	From late spring to early autumn	Annual	From 60,000 to 150,000/ 250,000 Euro/Ha	
	<p>Skill Development: Low/medium level of knowledge required to introduce new growing techniques, varieties, related marketing</p> <p>Infrastructure, Machinery & Equipment Needed: Cost reflects production in plastic tunnels, but the production period could be expanded by investing in a more sophisticated type of green house with higher investment costs but higher revenues; Machinery and equipment are needed as per cultivation of horticultural crop (medium tractor, tiller, crusher, sprayer, etc.)</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light calcareous/ alkaline or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, mulching (plastic or organic material) and young plant plantation)</p>				
Mushrooms	Annual	From late spring to early autumn	Annual on inoculated substrata	From 60,000 to 150,000/ 250,000 Euro/Ha	
	<p>Skill Development: Production knowledge needed is not complicated, but production requires intensive cultivation methods, a particular location for production (also greenhouses), and inoculated substrata not currently available in Kosovo but could be imported. Training needed for varieties such as champignons and pleurotus</p> <p>Infrastructure, Machinery & Equipment Needed: Cost reflects production in plastic tunnels, but the production period could be expanded by investing in a more sophisticated type of green house with higher investment costs but higher revenues; Machinery and equipment are needed as per cultivation of horticultural crop (medium tractor, tiller, crusher, sprayer, etc.)</p> <p>Soil Selection & Preparation. No soil preparation needed as production is done on inoculated substrata</p>				
Lettuce & Chicory	Annual	From late spring to summer	Annual	From 60,000 to 150,000/ 250,000 Euro/Ha	
	<p>Skill Development: Medium level of knowledge required to introduce new growing techniques, varieties, related marketing</p> <p>Infrastructure, Machinery & Equipment Needed: Cost reflects production in plastic tunnels but the production period could be expanded by investing in large green houses with higher investment costs but also higher revenues; medium tractor, tiller, crusher, sprayer, etc.</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting slightly calcareous/ alkaline or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, mulching (plastic or organic material) and young plant plantation)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included; Modern greenhouses cost 150,000 Euro/ha and plastic tunnels are 40,000 Euro/ha
Source: BAH Analysis

...and analyzed the potential for Kosovo to develop crops according to investment commitment (cont'd)

Required Investment Analysis and Rank





Crop	Type of Crop	Time to First Harvest	Productive Life	Investment Cost*	Score
Saffron	Multi annual	From the first year	Up to 7 years	From 10,000 to 60,000 Euro/Ha	
	<p>Skill Development: Medium level of knowledge is required as this crop requires a very precise use of the agricultural techniques for soil preparation, harvesting and selecting techniques</p> <p>Infrastructure, Machinery & Equipment Needed: Costs based on production in open field with very good soil preparation; Medium tractor, tiller, crusher, sprayer, etc.</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting light and drained soils, and preparing soil (soil ripping, soil drainage, medium depth plough, organic and chemical fertilization, bulb plantation)</p>				
Truffles	Multi annual	From the 4/5 years	Up to 50-80 years and more	From 10,000 to 60,000 Euro/Ha	
	<p>Skill Development: Medium level of knowledge is required including: inoculation of trees such as hazelnut, oak, beech, poplar, cultivated in neutral or slightly alkaline soils, cultivation techniques (irrigation in late spring/summer particularly in beginning of crop production, simple maintenance of the planted inoculated tree), harvesting requires the training of a sniffing dog able to understand where the truffles are</p> <p>Infrastructure, Machinery & Equipment Needed: Cost based on setting up production in ornamental trees. Medium tractor, tiller, crusher, sprayer, etc.</p> <p>Soil Selection & Preparation: Conducting a soil analysis, selecting medium quality slightly calcareous/ alkaline soils or slightly acid soils, and preparing soil (soil drainage, medium depth plough, organic and chemical fertilization, squaring and young plant plantation)</p>				

Note: (*) Investment cost includes infrastructure, machinery, equipment, soil preparation, and seeds/plants/trees; Fork lift and motor harvester/pruning carriage equipment is considered a production cost and not upfront investment cost; Land cost not included

Source: BAH Analysis




We next created a scale that defines the levels for the “ease of production” ranking ...

Ease of Production Ranking Description

Weight	Description
	<ul style="list-style-type: none"> ▶ Extensive expertise exists for overall crop management ▶ Input costs are minimal, input requirements are straightforward, and regulatory compliance is easily obtained ▶ Product quality/grade requirements are minimal and easily obtainable ▶ Simple sorting/grading/etc. procedures, minimal and inexpensive infrastructure requirements
	<ul style="list-style-type: none"> ▶ Sufficient expertise exists for overall crop management ▶ Input costs are reasonable, input requirements are understandable, and regulatory compliance can be obtained ▶ Product quality/grade requirements are manageable and obtainable ▶ Understandable sorting/grading/etc. procedures, reasonable infrastructure requirements
	<ul style="list-style-type: none"> ▶ Some expertise exists for overall crop management ▶ Input costs are higher, input requirements can be unclear, and regulatory compliance can require significant effort ▶ Product quality/grade requirements can be extensive and can be difficult to obtain ▶ Several sorting/grading/etc. procedures, significant infrastructure requirements
	<ul style="list-style-type: none"> ▶ Minimal expertise exists for overall crop management ▶ Input costs are prohibitive, input requirements are unclear, and regulatory compliance requires significant effort ▶ Product quality/grade requirements are extensive and difficult to obtain ▶ Extensive, complicated sorting/grading/etc. procedures, prohibitive infrastructure requirements




...and analyzed the potential for Kosovo to develop each crop based on ease of production

Ease of Production Analysis and Rank

Crop	Explanation	Score
Apples	<p>Crop Management: Additional knowledge and expertise is needed in training and pruning to improve quality of harvesting</p> <p>Inputs: Pest management is relatively simple as long as weather forecasts are observed and followed; the cost of pest management and fertilization is relatively low; compliance with regulations in target markets is possible with average effort</p> <p>Quality Control: Processes to produce fresh, intact product (no pinches, hail storm damage, etc.) are fairly simple to master. Categorization by diameter is required with low quality products (small diameter, defects) are generally sent for processing. Lab testing needed to determine level of pest residuals</p> <p>Sorting, Grading & Packaging: Harvesting occurs in two intervals; requires significant, specialized infrastructure and machinery to select, package, label products</p>	
Blackberries/ Raspberries	<p>Crop Management: This crop requires minimal additional training for pruning and quality harvesting</p> <p>Inputs: Pest management is not complex since the crop has practically no parasites, cost of pest management and fertilization is very low, compliance with regulations in target markets can be easily obtained</p> <p>Quality Control: Procedures are minimal and obtainable, fresh intact product is selected meeting quality requirements while the lower quality is generally processed, practically no need for lab testing for pest residuals since the species has no parasite</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, but requires simple sorting and packaging procedures and modest infrastructure requirements</p>	
Cherries	<p>Crop Management: Additional knowledge and expertise is needed to introduce new varieties, train and prune the trees, and improve quality harvesting</p> <p>Inputs: Pest management is not complex since the crop has few parasites, cost of pest management and fertilization is low, compliance with regulations in target markets can be easily obtained</p> <p>Quality Control: Fresh intact product needs to be categorized by diameter, low quality products (low diameter, defects) generally sent for processing, need lab testing to determine level of pest residuals</p> <p>Sorting, Grading & Packaging: The crop is harvested by hand, requires simpler sorting and packaging procedures and modest to high infrastructure requirements</p>	




...and analyzed the potential for Kosovo to develop each crop based on ease of production (cont'd)

Ease of Production Analysis and Rank

Crop	Explanation	Score
Cranberries/ Bilberries	<p>Crop Management: This crop requires minimal additional training for quality harvesting</p> <p>Inputs: Pest management is not complex since the crop has practically no parasites, cost of pest management and fertilization is very low, compliance with regulations in target markets can be easily obtained</p> <p>Quality Control: Procedures are minimal and obtainable, fresh intact product is selected meeting quality requirements while the lower quality is generally processed, practically no need for lab testing for pest residuals since the species has practically no parasite</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, but requires simple sorting and packaging procedures and modest infrastructure requirements</p>	
Currants/ Gooseberries	<p>Crop Management: Additional knowledge and expertise is needed to train and prune the trees and improve quality harvesting</p> <p>Inputs: Pest management is not complex since the crop has very few parasites, cost of pest management and fertilization is very low, compliance with regulations in target markets can be easily obtained</p> <p>Quality Control: Procedures are minimal and obtainable, fresh intact product is selected meeting quality requirements while the lower quality is generally processed, practically no need for lab testing for pest residuals since the species has few parasite</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, but requires simple sorting and packaging procedures and modest infrastructure requirements</p>	
Kiwi	<p>Crop Management: Additional knowledge and expertise is needed to train and prune the trees and improve quality harvesting</p> <p>Inputs: Pest management has low complexity since the crop has practically no parasites, cost of pest management and fertilization is low, compliance with regulations in target markets is easily obtainable</p> <p>Quality Control: Procedures are fairly simple, fresh intact product needs to be categorized by diameter, low quality products (small diameter, defects) generally sent for processing, need lab testing to determine level of pest residuals</p> <p>Sorting, Grading & Packaging: Harvesting occurs in two intervals; requires significant, specialized infrastructure and machinery to select, package, label products</p>	


...and analyzed the potential for Kosovo to develop each crop based on ease of production (cont'd)

Ease of Production Analysis and Rank

Crop	Explanation	Score
<p>Peaches/ Nectarines</p>	<p>Crop Management: Additional knowledge and expertise is needed to train and prune the trees and improve quality harvesting</p> <p>Inputs: Pest management requires some technical assistance resulting in medium complexity, cost of pest management and fertilization is medium, compliance with regulations in target markets can be achieved with medium difficulty</p> <p>Quality Control: Procedures are fairly simple, fresh intact product (no pinches, hail storm damage, etc.) needs to be categorized by diameter, low quality products (small diameter, defects) generally sent for processing, need lab testing to determine level of pest residuals</p> <p>Sorting, Grading & Packaging: Harvesting occurs in two intervals; requires significant, specialized infrastructure and machinery to select, package, label products</p>	
<p>Pears</p>	<p>Crop Management: Additional knowledge and expertise is needed to train and prune the trees and improve quality harvesting</p> <p>Inputs: Pest management is relatively simple as long as weather forecasts are observed and followed, cost of pest management and fertilization is medium, compliance with regulations in target markets is possible with average effort</p> <p>Quality Control: Procedures can be easy, fresh intact product (no pinches, hail storm damage, etc.) needs to be categorized by diameter, low quality products (small diameter, defects) generally sent for processing, need lab testing to determine level of pest residuals</p> <p>Sorting, Grading & Packaging: Harvesting occurs in two intervals; requires significant, specialized infrastructure and machinery to select, package, label products</p>	
<p>Strawberries</p>	<p>Crop Management: This crop requires minimal additional training for introduction of new varieties and quality harvesting</p> <p>Inputs: Pest management is not complex, pest management and fertilization costs are medium, compliance with regulations in target markets can be obtained with medium difficulty</p> <p>Quality Control: Procedures are easy and obtainable, fresh intact product is selected meeting quality requirements while the lower quality is generally processed, strong need for lab testing due to pest residuals</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, but requires simple sorting and packaging procedures and modest infrastructure requirements</p>	




...and analyzed the potential for Kosovo to develop each crop based on ease of production (cont'd)

Ease of Production Analysis and Rank

Crop	Explanation	Score
Table Grape	<p>Crop Management: Additional knowledge and expertise is needed to train and prune the trees, and improve quality harvesting</p> <p>Inputs: Pest management requires weather forecasting and technical assistance and has a medium complexity, cost of pest management and fertilization is relatively high, compliance with regulations in target markets is possible with average effort</p> <p>Quality Control: Procedures can be easy, fresh intact product needs to be categorized by quality size, need lab testing to determine level of pest residuals</p> <p>Sorting, Grading & Packaging: Harvesting occurs in different intervals; requires significant, specialized infrastructure to select, package, label products</p>	
Bulbs	<p>Crop Management: Minimal expertise is required for crop management particularly directed to production techniques and quality harvesting</p> <p>Inputs: Pest management has a low complexity, cost of pest management and fertilization is low, compliance with regulation in target market can be achieved with minimal effort</p> <p>Quality Control: Requirements are minimal and easy to meet, the bulbs are selected by calibre and the lowest are kept for seed</p> <p>Sorting, Grading & Packaging: Harvesting occurs one time, requires simple sorting and packaging procedures, and modest infrastructure requirements</p>	
Cut Flowers	<p>Crop Management: Significant expertise is required particularly for production techniques and high quality harvesting</p> <p>Inputs: Pest management needs some technical assistance and has a medium/high complexity related to the cultivated species, cost of pest management and fertilization is medium, compliance with regulations in target markets can be difficult</p> <p>Quality Control: Procedures can be difficult to obtain while flowers are selected by quality size, residual testing could be required</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires significant, specialized infrastructure to select, package, label products</p>	




...and analyzed the potential for Kosovo to develop each crop based on ease of production (cont'd)

Ease of Production Analysis and Rank

Crop	Explanation	Score
Flower Buds	<p>Crop Management: Significant expertise is required particularly for production techniques and high quality harvesting</p> <p>Inputs: Pest management needs some technical assistance and has a medium/high complexity related to the cultivated species, cost of pest management and fertilization is medium, compliance with regulations in target markets can be difficult</p> <p>Quality Control: Procedures can be difficult to master as different species of flowers have different requirements for quality, color and size. There are multiple sorts per flower type. Residual testing is required.</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires significant, specialized infrastructure to select, package, label products</p>	
Asparagus	<p>Crop Management: Additional knowledge and expertise is required particularly directed to crop production techniques and high quality harvesting</p> <p>Inputs: Pest management is not complex, cost pest management and fertilization is low, compliance with regulations in target markets can be obtained with medium difficulty</p> <p>Quality Control: Procedures are minimal and easy to obtain, small/medium shoots have a better quality, larger shoots could be processed, residual testing is required</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires collection infrastructure where workers, not machines, select, package, and label products</p>	
Chilies/Peppers	<p>Crop Management: Additional knowledge and expertise is required particularly directed to crop production techniques and quality harvesting</p> <p>Inputs: Pest management has a medium complexity, average costs for pest management and fertilization, compliance with regulations in target markets can be obtained with medium effort</p> <p>Quality Control: Procedures are minimal and easy to obtain, fresh intact product is selected by size, the lowest quality product is processed, need of lab testing for pest residuals</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires collection infrastructure where workers, not machines, select, package, and label products</p>	



...and analyzed the potential for Kosovo to develop each crop based on ease of production (cont'd)

Ease of Production Analysis and Rank

Crop	Explanation	Score
Cucumbers/ Gherkins	<p>Crop Management: Additional knowledge and expertise is required particularly directed to crop production techniques and quality harvesting</p> <p>Inputs: Pest management has a medium complexity, average costs for pest management and fertilization, compliance with regulations in target markets can be obtained with medium effort</p> <p>Quality Control: Procedures are minimal and easy to obtain, fresh intact product is selected by size, the lowest quality product is processed, need of lab testing for pest management residuals</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires collection infrastructure where workers, not machines, select, package, and label products</p>	
Mushrooms	<p>Crop Management: Additional expertise is required for crop management particularly for production techniques and quality harvesting</p> <p>Inputs: Pest management is not complex and has practically no parasites, cost of pest management and fertilization is low, compliance with regulations in target markets are easily obtained</p> <p>Quality Control: Procedures are minimal and easy to obtain, higher quality products can be of all sizes and will have no defects while the other products are processed, lab testing for pest residuals is minimal</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires collection infrastructure where workers, not machines, select, package, and label products</p>	
Lettuce & Chicory	<p>Crop Management: Medium expertise is required particularly directed to new variety testing and quality harvesting</p> <p>Inputs: Pest management is not complex, cost of pest management and fertilization is low, compliance with regulations in target markets is easily obtainable</p> <p>Quality Control: Procedures are minimal and easy to obtain, higher quality products can be of all sizes and will have no defects while the other products are processed, lab testing for pest management residuals is needed</p> <p>Sorting, Grading & Packaging: Harvesting occurs in different times and requires collection infrastructure where workers, not machines, select, package, and label products</p>	





...and analyzed the potential for Kosovo to develop each crop based on ease of production (cont'd)

Ease of Production Analysis and Rank

Crop	Explanation	Score
Saffron	<p>Crop Management: Additional knowledge is required for crop introduction and diffusion, production techniques, quality harvesting, and destemming</p> <p>Inputs: Pest management is not complex since the crop has practically no parasites, cost of pest management and fertilization is low, compliance with regulations in target markets is easy to obtain</p> <p>Quality Control: Requirements are manageable and obtainable, fresh intact stigmas of different sizes are selected and processed, no need of lab testing for pest management residuals</p> <p>Sorting, Grading & Packaging: Continuous harvesting is needed, and requires collection infrastructure where workers select products and machines dry, package, and label products</p>	
Truffles	<p>Crop Management: Minimal expertise is required in crop production techniques and quality harvesting</p> <p>Inputs: Pest management is not complex and is related to the host species, cost of pest management and fertilization is low, compliance with regulations in target markets can be obtained with average difficulty</p> <p>Quality Control: Procedures can be difficult to obtain and require high quality standardization in shape, size, smell, denomination of origin, etc., high quality intact products are of mixed sizes, the lowest quality is processed, need lab testing for fertilizer residuals</p> <p>Sorting, Grading & Packaging: Procedures are complex, the crop needs a trained dog for harvesting, requires specialized workers, not machines, to select, package, and label products</p>	






For the final component of the Value Chain Constraints, we created a scale that defines the level of difficulty in getting products to market...

Ease of Market Access Ranking Description

Weight	Description
	<ul style="list-style-type: none"> ▶ Long product storage life, minimal storage requirements ▶ Low perishability, minimal transport requirements ▶ Close proximity to markets, reliable demand, flexible delivery
	<ul style="list-style-type: none"> ▶ Relatively long product storage life, reasonable storage requirements ▶ Relatively low perishability, reasonable transport requirements ▶ Relatively close proximity to markets, fairly reliable demand and flexible delivery
	<ul style="list-style-type: none"> ▶ Relatively short product storage life, several storage requirements ▶ Relatively high perishability, several transport requirements ▶ Relatively significant distance to markets, fairly unreliable demand and inflexible delivery
	<ul style="list-style-type: none"> ▶ Short product storage life, extensive storage requirements ▶ High perishability, extensive transport requirements ▶ Significant distance to markets, unreliable demand, inflexible delivery





...and analyzed the potential for Kosovo to develop crops based on the ease of market access rankings

Ease of Market Access Ranking Description

Crop	Explanation	Score
Apples	<p>Storage: Very long storage life (up to 9 months according variety) obtained with cold chain or modified atmosphere in controlled humidity, pre treatment needed for longer storage</p> <p>Transportation: Refrigeration required for long distances, modest perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could easily reach distant markets given value of crop and perishability, products can be purchased by all customer types (wholesaler, retailer, processor), crop requires medium reliability of demand, delivery can be flexible</p>	
Blackberries/ Raspberries	<p>Storage: Very short storage life (up to 15-20 days) obtained with cold chain, no treatment needed for storage</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach short to medium distant markets given value of crop and perishability, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	
Cherries	<p>Storage: Very short storage life (up to 1 month) obtained with cold chain. Pre-cooling required in most conditions.</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach long distance markets given value of crop and perishability, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	
Cranberries/ Bilberries	<p>Storage: Very short storage life (up to 15-20 days) obtained with cold chain, no treatment needed for storage</p> <p>Transportation: Refrigeration required for transportation, very high perishability.</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop most likely will not reach distant markets given value of crop and perishability, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	
Currants/ Gooseberries	<p>Storage: Very short storage life (up to 15-20 days) obtained with cold chain, no treatment needed for storage</p> <p>Transportation: Refrigeration required for transportation, very high perishability.</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop most likely will not reach distant markets given value of crop and perishability, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	





...and analyzed the potential for Kosovo to develop crops based on the ease of market access rankings (cont'd)

Ease of Market Access Ranking Description

Crop	Explanation	Score
Kiwi	<p>Storage: Very long storage life (up to 8 months) obtained with cold chain or modified atmosphere in controlled humidity, no need for pre treatment for longer storage</p> <p>Transportation: Refrigeration required for long distances, modest perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach distant markets given value of crop and perishability, products can be purchased by all customer types (wholesaler, retailer, processor), crop requires medium reliability of demand, delivery can be flexible</p>	
Peaches/ Nectarines	<p>Storage: Short storage life (up to 1/2 month) obtained with cold chain and pre cooling, no need for pre treatment for longer storage but pre cooling may be needed when fresh product is stored</p> <p>Transportation: Refrigeration required for long distances, medium to high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach distant markets given value of crop and perishability, products can be purchased by all customer types (wholesaler, retailer, processor), crop requires reliability of demand and a modest flexibility of delivery</p>	
Pears	<p>Storage: Long storage life (up to 6-7 months according variety) obtained with cold chain or modified atmosphere in controlled humidity, pre treatment needed for longer storage</p> <p>Transportation: Refrigeration required for long distances, modest perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach distant markets given value of crop and perishability, products can be purchased by all customer types (wholesaler, retailer, processor), crop requires medium reliability of demand, delivery can be flexible</p>	
Strawberries	<p>Storage: Very short storage life (up to 15 days) obtained with cold chain and pre-cooling could be required if stored</p> <p>Transportation: Refrigeration required for long/medium distances, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach short to medium distant markets given value of crop and perishability, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	





...and analyzed the potential for Kosovo to develop crops based on the ease of market access rankings (cont'd)

Ease of Market Access Ranking Description

Crop	Explanation	Score
Table Grape	<p>Storage: Medium storage life (up to 4 month) obtained with cold chain, pre cooling could apply when fresh product is stored</p> <p>Transportation: Refrigeration required for transportation, medium perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach distant markets given value of crop and perishability, products can be purchased by all customer types (wholesaler, retailer, processor), crop requires medium reliability of demand, delivery can be flexible</p>	
Bulbs	<p>Storage: Medium/long storage life (up to 6 month according to variety) obtained with cold chain or modified atmosphere in controlled humidity, some pre treatment needed for packaging</p> <p>Transportation: Refrigeration required for long distances, low perishability in low humidity</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach very distant markets given value of crop and perishability, products can be purchased by all customer types (wholesaler, retailer, processor), crop requires medium reliability of demand, delivery can be flexible</p>	
Cut Flowers	<p>Storage: Very short storage life (up to transportation period) obtained with cold chain, pre cooling could apply for better conservation in transport</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach distant markets given value of crop and perishability but must have speedy transport, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong relationships with buyers, no flexibility in delivery</p>	
Flower Buds	<p>Storage: Very short storage life (up to transportation period) obtained with cold chain, pre cooling could apply for better conservation in transport</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach distant markets given value of crop and perishability but must have speedy transport, products can be purchased by every type of customer (wholesalers, retailer, processors), crop requires strong relationships with buyers, no flexibility in delivery</p>	




...and analyzed the potential for Kosovo to develop crops based on the ease of market access rankings (cont'd)

Ease of Market Access Ranking Description

Crop	Explanation	Score
Asparagus	<p>Storage: Very short storage life (up to 15 days) obtained with cold chain, pre cooling could apply for better conservation</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach medium distant markets given value of crop and perishability, products can be purchased by every type of costumer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	
Chilies/ Peppers	<p>Storage: Short storage life (up to 1 month) obtained with cold chain, pre cooling could apply</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach medium distant markets given value of crop and perishability, products can be purchased by every type of costumer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	
Cucumbers/ Gherkins	<p>Storage: Short storage life (up to 1 month) obtained with cold chain</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach medium distant markets given value of crop and perishability, products can be purchased by every type of costumer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	
Mushrooms	<p>Storage: Short storage life (up to 15 days) obtained with cold chain, but better to be consumed fresh</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, products can be purchased by every type of costumer (wholesalers, retailer, processors), crop requires strong reliability of demand, no flexibility in delivery</p>	

...and analyzed the potential for Kosovo to develop crops based on the ease of market access rankings (cont'd)

Ease of Market Access Ranking Description

Crop	Explanation	Score
Lettuce & Chicory	<p>Storage: Medium storage life (up to 15 days) obtained with cold chain</p> <p>Transportation: Refrigeration required in transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach nearby markets given value of crop and perishability, products can be purchased by every type of costumer (wholesalers, retailer, processors), crop requires high reliability of demand, and no flexibility in delivery</p>	
Saffron	<p>Storage: No storage life since flowers are harvested and immediately processed inside the farm</p> <p>Transportation: No refrigeration required, minimal transportation requirements, very low perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, crop could reach long distant markets given value of crop and perishability, products can be purchased by every type of costumer (wholesalers, retailer, processors), crop requires low reliability of demand, flexibility in delivery</p>	
Truffles	<p>Storage: Short storage life (up to 15 days) obtained with cold chain but better to be consumed fresh</p> <p>Transportation: Refrigeration required for transportation, very high perishability</p> <p>Distribution to Markets: Close proximity to markets but must meet quality standards, products will be distributed in specialized shops of connoisseurs and could be processed as truffle cream or stored under olive oil, crop requires strong reliability of demand and no flexibility of delivery</p>	

Based on this final analysis, ten strategic export crop categories were identified including bulbs, lettuce/chicory, asparagus, apples, and table grapes

Selection of 10 Strategic Crops in Diversified Crop Mix

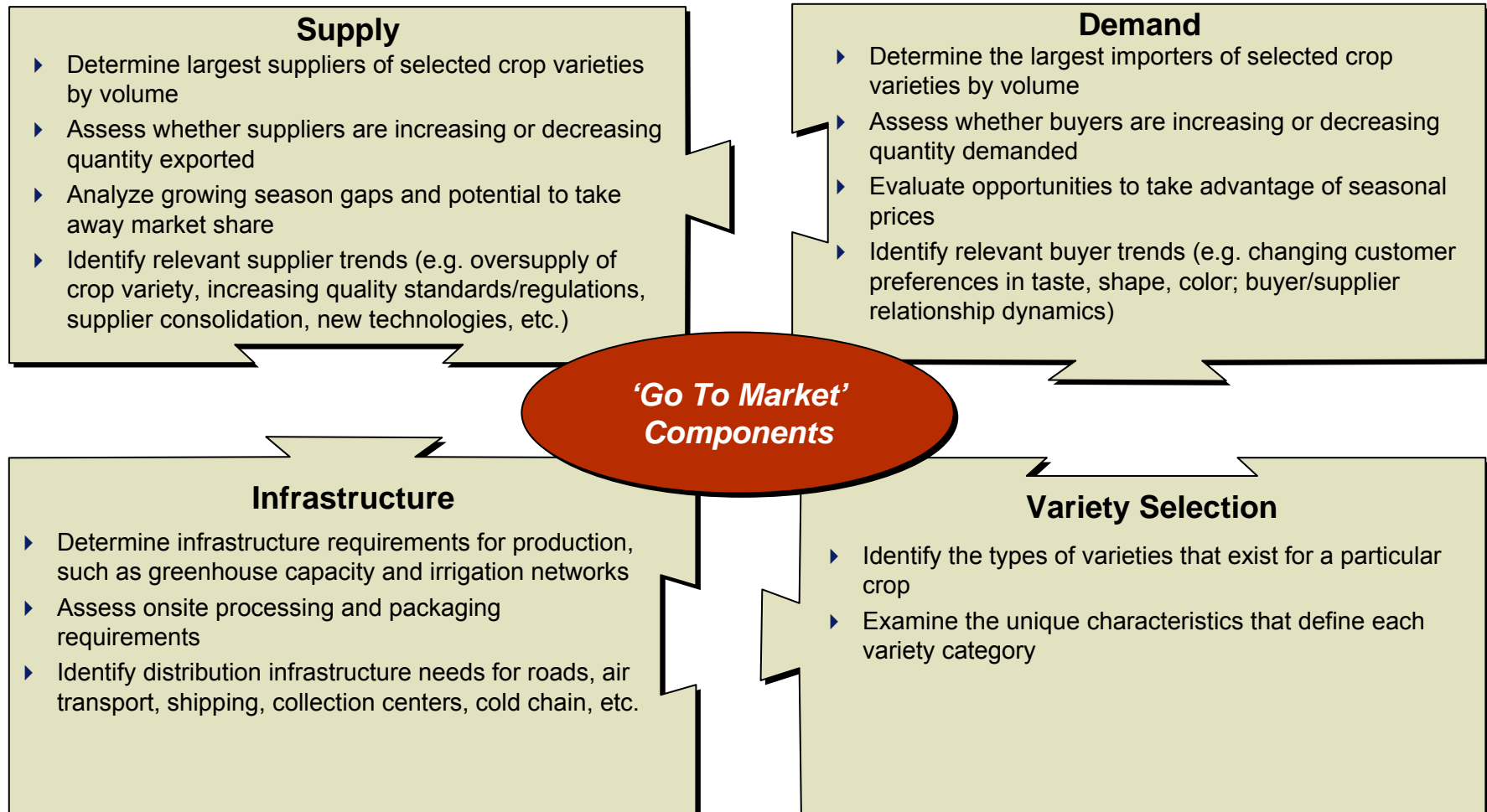
Crop	Filter 4 – Economic		Step 5 – Value Chain Constraints			Step 6
	Top 20 Rank	Weighting	Investment Required	Ease to Produce	Ease of Market Access	Final Rank
Bulbs (flower)	19	0.75	●	◐	●	1
Lettuce/chicory	20	0.50	◐	◐	◐	2
Asparagus	17	1.25	◐	◐	◐	3
Apples	16	1.50	◐	◐	●	4
Table grape	15	1.75	◐	◐	●	5
Cucumbers/gherkins	9	2.75	◐	◐	◐	5
Currants/gooseberries	18	1.00	◐	◐	◐	7
Saffron	13	2.00	◐	◐	●	7
Cranberries/bilberries	13	2.00	◐	◐	◐	7
Kiwi fruit	7	3.00	◐	◐	●	7
Pears	12	2.25	◐	◐	●	11
Chilies/peppers	1	4.00	◐	◐	◐	12
Blackberries/raspberries	5	3.25	◐	◐	◐	13
Cherries	5	3.25	◐	◐	◐	13
Strawberries	2	3.75	◐	◐	◐	15
Mushrooms	2	3.75	◐	◐	◐	15
Peaches/nectarines	4	3.50	◐	◐	◐	17
Truffles	7	3.00	◐	◐	◐	18
Cut flowers	10	2.50	◐	◐	◐	19
Flower buds	10	2.50	◐	◐	◐	19

Note: Top 20 ranking determined by economic feasibility and attractiveness filter; Harvey ball scale is as follows: 1-●; 2-◐; 3-◐; 4-◐

Source: BAH Analysis

Finally, we created 'Go To Market' snapshots which include four main components: supply, demand, infrastructure, and variety selection

Overview of 'Go To Market' Components



Demand for bulbs is increasing in Eastern Europe, with lilies and tulips among the most popular varieties. Prices for bulbs fluctuate, depending on the season



'Go To Market' Snapshot -- Bulbs

Supply

- ▶ The Netherlands, New Zealand and the US are the largest world suppliers of bulbs
- ▶ Kenya is the main supplier to European markets (also South Africa, Zimbabwe, Ethiopia to a smaller extent)
- ▶ South America (Colombia, Ecuador and Chile in particular) supplies North America
- ▶ New Zealand and Australia mainly supply Asia

Demand

- ▶ Japan, North America (US and Canada) and Western Europe (mainly Holland) are the largest import markets for bulbs
- ▶ From October to April, prices are higher for bulbs because worldwide supply is lower; conversely, prices are lower from April-September because worldwide supply is higher
- ▶ Overall demand for bulbs has increased in Eastern European countries such as Bulgaria, Hungary, Romania and Russia in recent years
- ▶ There is an emergence of the Middle Eastern market

Infrastructure

- ▶ Bulbs do not require greenhouses, as they can be grown in open fields or semi-covered fields (using plastic rain cover) to protect from rain
- ▶ Either machines or hand-labor can be used for cultivating bulbs
- ▶ If machines are used, simple tractor machinery and extraction bulb diggers are most commonly seen
- ▶ A consistent reliable source of water is necessary, such as overhead irrigation, drip irrigation or storage tanks
- ▶ Cold storage facilities are required for bulbs

Variety Selection

- ▶ There are several species of bulbs in the market including Lily, Tulip, Calla Lily (Zantedeschia), Ornithogalum, Iris, Bagonias and Gladioli
- ▶ Each species has various sub-species. For example, there are over 100 varieties of Cala Lilies but only 10-15 are commonly seen
- ▶ Varieties are differentiated based on color and value (price)
- ▶ Lilies have high market value but are difficult to grow, while Daffodils are easier to grow but receive a lower value in the market

Hydroponic greenhouses are used for lettuce/chicory and a cold chain system is required for fresh varieties; iceberg lettuce is becoming increasingly popular in Eastern Europe



'Go To Market' Snapshot -- Lettuce/Chicory

Supply

- ▶ Spain, the US, and the Netherlands are the three largest exporters of lettuce, making up 32%, 19% and 7% of world exports respectively in 2008
- ▶ In the US, lettuce exports have increased continuously in value since 1989 when an estimated \$60.5 million worth was exported compared to a record of \$275.2 million in 2004
- ▶ US lettuce exports mainly go to Canada, Mexico and Japan, whereas Spain and Netherlands' exports tend to stay in Europe
- ▶ China is the world's leading producer of lettuce, followed by the US; however, a large portion of China's production is consumed domestically

Demand

- ▶ Canada, Germany and UK are the top lettuce importers making up 19%, 18% and 17% of world imports respectively in 2008
- ▶ Lettuce prices are characterized by wide intra-seasonal variation largely because of an increasing overlap of harvest periods among producing areas, production expansion to new areas, and weather conditions

Infrastructure

- ▶ Hydroponic greenhouses are typically used for lettuce. All lettuce types are germinated with sprinklers and subsequently irrigated with drip, sprinkler, or furrow; all lettuce types require frequent irrigations to minimize moisture stress
- ▶ Fresh cut lettuce requires cold chain. After harvest, lettuce is transported to a cooling shed and distribution center where it is stored at 35 to 36° F
- ▶ Technological improvements, mainly in packing materials, have been largely responsible for the increase in availability of different varieties and ready-to eat salads

Variety Selection

- ▶ Romaine, leaf, butterhead and iceberg lettuce are the most common varieties of lettuce in the market
- ▶ Some studies show that consumers are opting to replace iceberg lettuce with leaf and romaine lettuce in their home-made salads for added taste, texture, and variety. Eastern Europe, however, has seen a surge in the availability of iceberg lettuce, with consumers favoring its crispy texture
- ▶ Historically, leaf and romaine lettuce have received higher prices than iceberg and other head varieties



Supply of asparagus is increasing faster than demand, causing prices to drop, although white asparagus is holding up well

'Go To Market' Snapshot -- Asparagus

Supply

- ▶ The largest exporter of asparagus is Peru, which exported about 90,000 metric tons (mt) in 2006. Mexico, the second largest exporter, supplied about 50,000 mt, and the US exported about 10,000 mt in the same year. Out of the three, only Peru's export market share has grown each year over the last several years
- ▶ China is one of the leading producers of white (canned/jarred) asparagus. Spain, Germany, Netherlands and France are major buyers of China's white asparagus, accounting for 80% of China's total asparagus exports in 2008. However, production is predicted to drop by 20% in 2010 due to continued low prices

Demand

- ▶ The top asparagus importers are the US, the EU and Japan
- ▶ Due to intense competition from Mexico and Peru, US exports of asparagus have been declining while imports have been steadily increasing
- ▶ Consumer demand is based on freshness, length and diameter of the stalks, color of spears, tightness of the spear tips, and the extent of bruising
- ▶ World demand is growing slower than supply in many markets, causing prices to drop. Peruvian asparagus producers have already experienced falling prices in the US and Europe

Infrastructure

- ▶ Asparagus is highly perishable and requires a cold chain system. Asparagus is typically partially cooled during washing, selection, and packing, and then hydro-cooled to near 32 °F after packing
- ▶ Processing of asparagus for pickling can bring growers a price premium and can be sold in winter months when prices are higher given lower supply
- ▶ Asparagus needs to be blanched and sterilized before being placed in cans

Variety Selection

- ▶ The two forms of asparagus in the marketplace are white and green asparagus. White asparagus is generally canned/jarred and green asparagus is either sold fresh or frozen/chilled
- ▶ About 40% of asparagus grown in Peru is green and shipped to the U.S. market, while the rest is white, which is processed and sent to the EU market
- ▶ White asparagus is widely used in Europe and Asia, while green asparagus is popular in the US
- ▶ White asparagus is generally priced higher than green asparagus



Global apple exports and imports are increasing and China is by far the leading world supplier. Apples can be stored fresh for up to 4-5 months

'Go To Market' Snapshot -- Apples

Supply

- ▶ China is the largest exporter of apples, supplying the world with 1.5 million metric tons in 2008/09; China's exports are forecast to surge more than 15% due to new plantings in the northwest provinces and increased demand from Asia and the Middle East
- ▶ The EU is the second largest apple exporter in the world; production is forecast down 4% due to reduced area in Poland and pollination problems in Spain
- ▶ Global apple exports have jumped 15% in the past 3 years mainly due to growth in China and the EU apple markets, favorable weather and improved management

Demand

- ▶ Russia is the world's largest importer of apples, importing 1.1 billion metric tons in 2008/09, 4% more than the previous year
- ▶ Overall world imports of apples are forecast up 20% due to strong demand for high quality fruit from the US and from Chile and other Southern Hemisphere countries during their off-season. World demand has also expanded for healthy snack and off-season fruit
- ▶ Consumers tend to buy apples based on color, though color does not effect taste or texture

Infrastructure

- ▶ Drip irrigation system is generally used for apples
- ▶ Ultra-Low Oxygen (ULO) cold storage facilities can keep apples fresh for 4-5 months. Producers may decide to store apples until the off-season, when they can sell them for higher prices
- ▶ Apples to be sold fresh into the marketplace should be harvested at a later maturity than apples that are pre-destined for long-term storage

Variety Selection

- ▶ There are several thousand varieties of apples but some of the most common ones are Gala, Golden Delicious, Granny Smith, Liberty and Red Delicious
- ▶ Liberty apples, which are scab-resistant, are grown commonly in Belarus, Germany, Italy and Latvia
- ▶ Jonagold (a combination of Golden Delicious and Jonathan) apples are one of the major varieties grown worldwide and are popular in Europe. Jonagold accounted for nearly 60% of apple production in Belgium. It is also an important variety in Japan, and is the third most important variety in Canada
- ▶ Gala apples are also becoming increasingly popular in Europe because they are considered to be high quality

Chile and the US are the leading table grape suppliers to the world; high quality requirements must be met for table grapes to be successfully marketed



'Go To Market' Snapshot -- Table Grape

Supply

- ▶ Chile is the largest world supplier of fresh table grapes, exporting 850,000 metric tons (mt) in 2008/09; the US is the second largest supplier, exporting 336,045 mt in 2008/09, followed by Italy
- ▶ Chile and US accounted for ½ of global grape exports in 2009
- ▶ Southern hemisphere exporters are expected to continue expanding exports due to demand by northern hemisphere consumers for off-season fruit
- ▶ China is the largest producer, but a small exporter due to low quality and handling capacity
- ▶ Macedonia, Montenegro and Bosnia are large suppliers of table grapes to Eastern Europe

Demand

- ▶ The EU, US and Russia are the top table grape importers
- ▶ The EU accounts for about 1/3 of world imports but the economic crisis is expected to reduce EU imports by 4% in 2009/2010
- ▶ Lack of decay, cracked berries, stem browning, shriveling, sunburn and insect damage are important factors for consumer acceptance; high consumer acceptance is also attained for fruit with high Soluble Solids Concentration (SSC) ratio
- ▶ Croatian customers prefer table grape varieties with big berries, such as those imported from Italy, Spain, South Africa and Chile. Macedonian grapes are considered to be lower quality

Infrastructure

- ▶ Chilean and South African grapes are shed packed because they tend to be sent to distant markets, whereas most grapes from the US are field packed
- ▶ Table grapes should be quickly stored in a cold storage facility at a temperature of 30-32° F
- ▶ Table grapes typically require a hot, dry climate, deep well-drained soil and a large amount of irrigation water
- ▶ Because of their high quality requirements at the point of sale, table grapes demand hand labor, technical knowledge and experience

Variety Selection

- ▶ The more than 60 varieties of table grapes are grouped into three groups: red, black, green (also called white)
- ▶ Thompson Seedless grapes (green) are one of the most commonly grown grapes in the US and Chile. These grapes are popular because they are seedless, have thin skin and crisp texture
- ▶ While green grapes are commonly consumed in the US, red grapes are more popular in Europe

Cucumbers / gherkins are highly labor intensive crops that can either be processed or sold fresh; global demand has remained stable



'Go To Market' Snapshot -- Cucumbers/Gherkins

Supply

- ▶ Mexico, Spain, and Netherlands are the top three exporters of cucumbers / gherkins in the world. Mexico and Spain's exports grew by 12% and 2% respectively from 2004-2008, while Netherlands' exports have gone down slightly for the same years
- ▶ Spain and the Netherlands are the cheapest producers of fresh cucumbers in Europe¹
- ▶ Due to its labor-intensive nature, gherkin production is being moved to countries such as Serbia and India, where labor is relatively cheap

Demand

- ▶ Germany, US and UK are the largest importers of cucumbers / gherkins, making up 26%, 19% and 8% of world imports respectively in 2008
- ▶ Consumption of gherkins has remained stable and generally remains consistent year-round
- ▶ Consumers of cucumbers / gherkins tend to be most driven by price, but flavor and texture are also important attributes

Infrastructure

- ▶ Cucumbers are grown in either open field or greenhouses. Greenhouse cucumbers are grown hydroponically. Drip irrigation supplies nutrients and water to each plant
- ▶ Gherkins are very labor intensive, as they have to be hand-picked and growing and maintaining them requires craftsmanship and crop knowledge
- ▶ A cold chain needs to be set up for fresh crops. Processed gherkins must be packed in a jar within 20 hrs to maintain freshness

Variety Selection

- ▶ The main types of cucumbers are pickling cucumbers (gherkins) and fresh salad (slicing) cucumbers

Source: USDA/FAS; UC Davis Horticulture Crops Research Laboratory; TradeMap; Gherkin trader, Koeleman Foods International

Note (1): The Netherlands is able to produce cucumbers cheaply in part because it uses hydroponic greenhouses, which boost production. While cucumbers are grown in open fields in Spain, cheaper immigrant labor (mainly from Romania) is utilized, bringing down costs



Ukraine is a significant exporter and importer of currants / gooseberries; currant prices have been dropping in the last decade so some caution is required

'Go To Market' Snapshot – Currants/Gooseberries

Supply

- ▶ Gambia and Ukraine are the leading exporters of currants/gooseberries. In 2008, Gambia alone accounted for over 90% of world exports. Ukraine accounted for 6%. India is the third leading exporter, accounting for a little over 1% of exports
- ▶ Commercial production of currants and gooseberries has had limited success in the U.S. due to a federal ban that was placed on *Ribes* plants (includes currants / gooseberries) which were thought to have caused disease in pines. The federal restriction was lifted in 1996, but there is still confusion regarding the legality of growing these plants

Demand

- ▶ Poland and Ukraine are among the top importers of currants / gooseberries in Europe. Asia is also a popular market, with Indonesia and Malaysia as top importers
- ▶ The market for black currants is primarily for processed (concentrate) product which is a global market. Producers therefore are often competing with low cost producers in Eastern Europe
- ▶ The increase in currant production in the last decade has led to low fruit prices globally

Infrastructure

- ▶ Currants are machine harvested. Full production is achieved in year 4 (3+ years after planting) with a yield of 7,000 lbs
- ▶ Due to their fibrous, shallow roots, currants are ideal for drip irrigation
- ▶ Sprayers and tractors are other equipment generally used for currants
- ▶ Fruit for processing is generally hand-picked when fully sized but not completely ripe. Unripe currants can be placed in cold storage for a few days, if necessary, while gooseberries can keep for up to 2 weeks

Variety Selection

- ▶ There are 4 sections of economically important currant species within the genus: black currants, red and white currants, ornamental currants, and golden currants
- ▶ Red currants (mostly sold fresh) are the most common type of currant found in the European market
- ▶ Black currants, which are less common in the European market, are mostly used for processing (juice, jam)



Saffron is highly labor-intensive and sells at very high prices, but buyers should be weary of counterfeit supply

'Go To Market' Snapshot -- Saffron

Supply

- ▶ Spain is the world's largest saffron exporter, making up 46% of world exports, though production decreased from 20 metric tons to 5 metric tons in the last several years because growers have sought less labor-intensive crops
- ▶ While Iran produces over 90% of the world's raw saffron, it is not the largest exporter because it lacks a strong processing system. Spain processes and re-exports about 40% -50% of Iran's saffron
- ▶ There is a large supply of counterfeit saffron in the world because it is easy to manipulate the coloring and sell at a high price

Demand

- ▶ The major importers of saffron in 2008 were Italy, US, UAE and France
- ▶ High consumer demand is shown for saffron with depth of color (dark red with no yellow plant parts mixed in), flavor intensity and fresh aroma
- ▶ Global demand for saffron is under pressure due to its high price; however, bringing down prices may compromise supply because saffron is labor-intensive
- ▶ Saffron prices at wholesale and retail rates range from US\$500-\$5,000/pound. In Western countries, the average retail price is \$1,000/pound. A pound comprises between 70,000 to 200,000 threads

Infrastructure

- ▶ Saffron is an extremely labor-intensive crop, as more than 80% of production must be done by hand (harvesting, drying, packaging)
- ▶ Immediate post-harvest processing gives the best saffron spice quality. After harvest, flowers are taken to warehouses where stigmas are separated from each bud by hand. Once the stigmas have been removed, they are lightly dried over charcoal embers.
- ▶ Saffron for processing is sold in plastic bags placed in cardboard boxes
- ▶ Saffron for retail and food service is sold in tins

Variety Selection

- ▶ Iran is able to produce a very high quality saffron at favorable prices because labor is relatively cheap. Three main varieties of Iranian saffron include: Select Pushali, 'Coupe' Sargol, and Mashad. The first two varieties are higher grade, due to their high coloring strength and fine flavor components
- ▶ Unlike Iranian varieties, Spanish varieties (Mancha Select and Mancha Superior) tend to leave the yellow "tails" on the stamens, making the red coloring less deep than Iranian varieties



Global cranberry supplies have been decreasing but demand continues to rise, mainly in North America and UK, causing prices to increase

'Go To Market' Snapshot -- Cranberries

Supply

- ▶ The largest exporters of cranberries are Canada, Chile and US, making up 37%, 25% and 16% of world exports respectively in 2008*
- ▶ While both Canada and the US' exports have decreased by 2-3% between 2004-2008, Chile's exports have increased by 31% for the same years
- ▶ US cranberry production was down 10% in 2009 possibly due to cooler, wet weather in Massachusetts and Wisconsin, which reduced pollination and caused frost that damaged bogs
- ▶ 95% of the US cranberry market is made up of processed cranberries; only about 5 % of the total cranberry crop is sold for fresh fruit
- ▶ Cranberries are not commonly grown in Europe

Demand

- ▶ The largest world importers of cranberries in 2008 were US, Canada and UK
- ▶ While supplies of cranberries have decreased in recent years, global demand continues to rise, causing prices to go up. In 2007, frozen berries sold at levels above \$1.50/pound and concentrate sold at levels between \$80 and \$100+/gallon
- ▶ The popularity of cranberries has been increasing in recent years due to strong marketing campaigns and evidence of the fruit's health benefits

Infrastructure

- ▶ Man-made wetlands or bogs are used for harvesting cranberries
- ▶ Sprinkler systems are used to hydrate berries and some growers have water reservoirs adjacent to the bogs for ready water supply
- ▶ Flooding is used for harvesting of processed cranberries only. Water harvesting requires proper handling and storage to maintain quality
- ▶ Cranberries for the fresh market are harvested mechanically without flooding, using a picking machine that combs the berries off the vines

Variety Selection

- ▶ Cranberries are native to North America, where there are more than 100 varieties
- ▶ The most common varieties are Early Blacks, Howes and Stevens. Although Early Black is not as productive as other varieties, it is popular because of its earliness in ripening and its ability to grow in many types of cranberry soil. Howes are popular because they are well-colored, glossy and frost resistant



New Zealand and Italy are the leading suppliers of kiwis in the world and mainly export the Hayward variety

'Go To Market' Snapshot -- Kiwis

Supply

- ▶ In 2008, New Zealand was the leading exporter of kiwis in the world, followed by Italy and Chile. The three countries exported 34%, 25% and 13% of kiwis in the world respectively
- ▶ In 2007, Italy produced over 500,000 tons of kiwis, while New Zealand produced 385,000 tons
- ▶ China, Chile, France, Greece, Japan and the US are also significant producers
- ▶ In 2007, New Zealand exported 60% of its kiwis to Europe and 30% to Asia, mainly to Japan
- ▶ About 70% of Italy's kiwis are exported, mostly to other EU countries
- ▶ Continued growth in world kiwi production, together with improved storage facilities, have allowed kiwi sales in the northern and southern hemispheres to overlap, resulting in declining export prices

Demand

- ▶ The top importers of kiwis in the world are Belgium, Germany, Spain, Netherlands and Japan, making up 12%, 9%, 9%, 5% and 5% of imports respectively
- ▶ EU countries are primarily supplied by the top EU exporters (Italy, France and Greece). Europe is also a significant market for Chile, as 60% of Chilean kiwis were imported by Europe in 2006
- ▶ Japan and the US are also a key importers of Chilean kiwis. The US also imports from New Zealand

Infrastructure

- ▶ Frequent irrigation is required for kiwis, either through a drip, minisprinkler or undervine sprinkler system. Kiwifruit vines need more irrigation than grapes or fruit trees under similar soil and weather conditions
- ▶ Once harvested, kiwis are carried in field boxes to packing stations. The fruits are mechanically conveyed across a brushing machine that removes the hairs and, in some plants, the styles and sepals as well
- ▶ Kiwis are packed in a fiberboard or wooden boxes
- ▶ Kiwis are placed in cold storage for up to one year at 0°C to maximize their storage life

Variety Selection

- ▶ The most common varieties of kiwi are: Hayward, (green flesh, fuzzy skin) Zespri Gold and Green, (established by New Zealand's Zespri Group) Hardy Kiwi (does not have hair) and KIWIGOLD (yellow flesh)
- ▶ 95% of Italian kiwis are of the Hayward variety. Hayward is also the dominant variety grown in New Zealand and Chile
- ▶ Zespri Gold is considered a difficult product because it has a shorter selling season than the traditional Green variety. Only 17-18% of New Zealand's kiwi exports were of the Zespri Gold variety in 2007

World pear exports are expanding due to increasing demand from Russia and Asia. Some pear varieties, such as D'Anjou, require cold storage in order to ripen



'Go To Market' Snapshot -- Pears

Supply

- ▶ China, the EU and the US accounted for half of global pear exports in 2009
- ▶ US pear exports are projected to gain 10% due to greater purchases from Brazil and Russia; EU exports are also expected to rise by 7% and China's by 5% due to growing demand from Asian markets
- ▶ World pear exports are forecast to expand 4% in 2010 due to expected higher demand from Canada and Russia
- ▶ Slightly larger world production is predicted, resulting from favorable weather and improved management practices

Demand

- ▶ Russia is the world's largest importer with 360,000 metric tons in 2008/09. Russia is likely to purchase 10% more this year due to smaller domestic supplies and higher demand for inexpensive fruit from China
- ▶ EU imports are expected to fall slightly in 2010 due to demand being filled by ample domestic supplies

Infrastructure

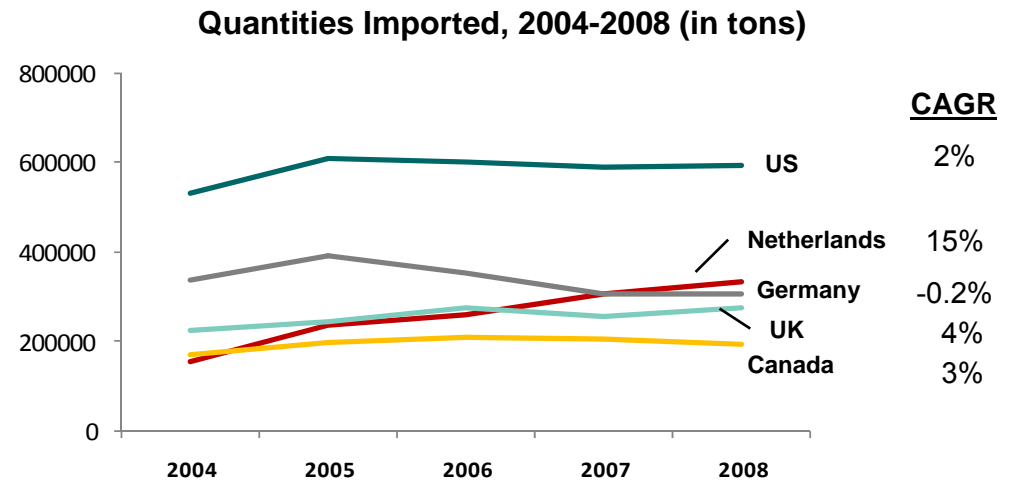
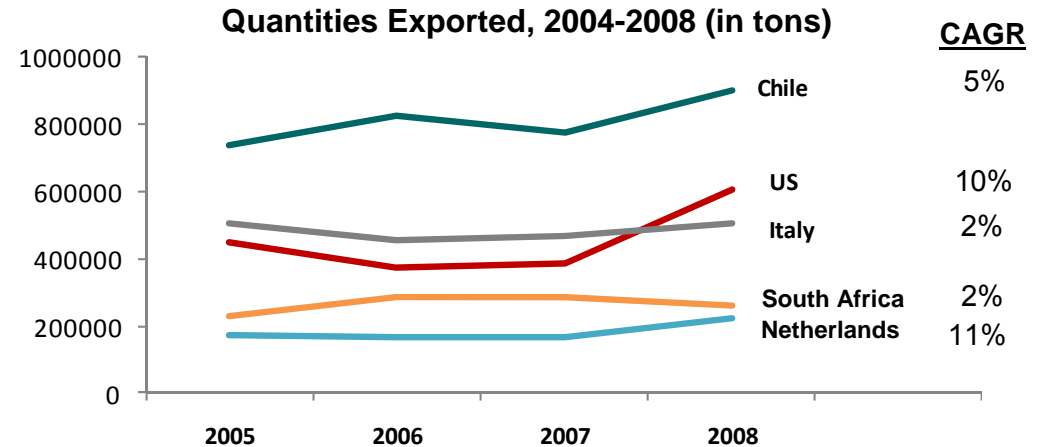
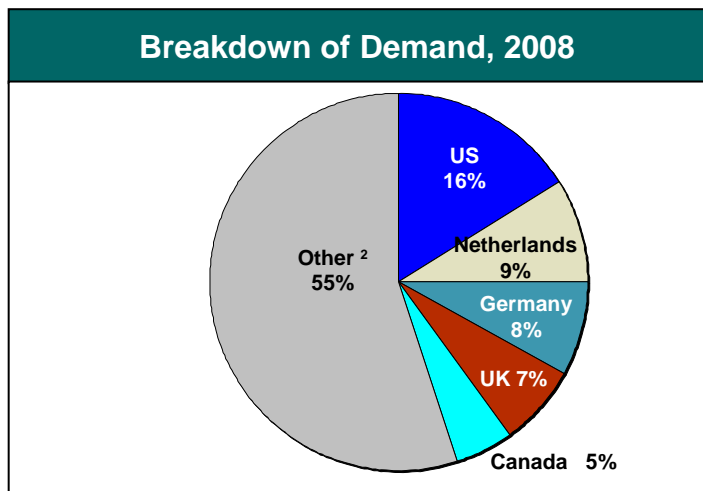
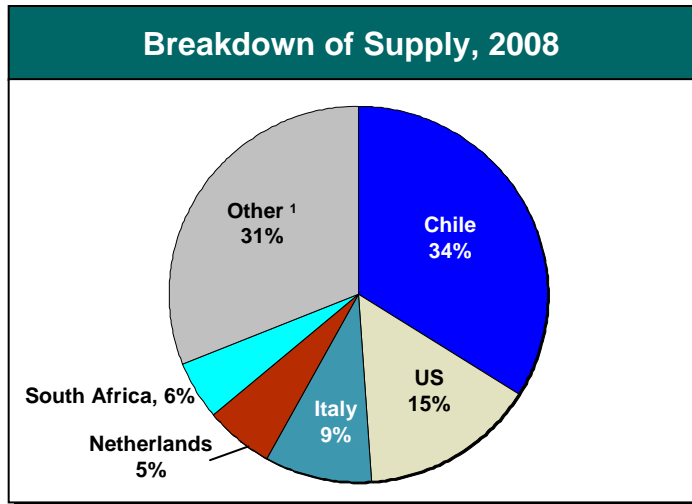
- ▶ A drip irrigation system with fertilizers is most often used for pears
- ▶ Pears that have been graded and packed are either sent to cold storage or sent via truck or rail for shipment to fresh market
- ▶ Canned pears are packaged in either lugs or bins and are loaded on cannery trucks with fork-lift equipment
- ▶ D'Anjou and Comice varieties will not ripen unless they have been held 8 -10 weeks in cold storage

Variety Selection

- ▶ There are over 3,000 known pear varieties grown around the world but the most common varieties include Bartlett, D'Anjou, Bosc, Comice and Forelle
- ▶ Red and Green Anjou varieties have been most popular among Russian consumers, while the Bartlett variety remains the most common variety sold worldwide

We selected one crop, Table Grapes, to do a more comprehensive review and identified major players and trends impacting the market

Breakdown of Supply and Demand and Related Trends



Note (1) : Includes supply from 86 other countries such as Turkey, Egypt, Mexico, Spain, India, Brazil, Greece, Argentina, China, Hong Kong

Note (2) : Includes supply from 136 other countries such as France, Hungary, Hong Kong, Poland, Mexico, Belgium, Ukraine, Czech Republic, China, Bangladesh

Source: TradeMap

Table grapes have specific infrastructure requirements that are critical for successful production, processing, and distribution

Infrastructure Requirements for Table Grapes

Production Infrastructure

- ▶ **Drip Irrigation System:** A typical irrigation system for table grapes includes pumps, filters, and pipes. The type of catching pump depends on the area of grapes to be irrigated with the system (e.g. larger pump is required for larger areas of land). Water quality determines the type of filters required (e.g. river water with algae requires a different filter than underground water with sand). Typically use plastic pipes for the primary and secondary distribution lines. Primary lines must be in place prior to planting during soil preparation while secondary lines must be put in before trees start to sprout. Drip or spray sprinklers can be used. Injectors distribute fertilizer throughout system
- ▶ **Hail Storm Net Cover:** Assemble during the year of first grape harvest or earlier in the life of the tree if hail storms occur once per year on average. Hail storm net is positioned 3-4 meters over the grape trees. Quality plastic nets last approximately 10-12 years. Will need to replace one time since the grape system lasts around 25 years
- ▶ **Factory Shed:** Storage facility required for harvesting equipment, tractor, sprayer, rotary tiller, forklift, carriage to transport to collection center

Processing and Packaging Infrastructure

- ▶ **Cooling System:** Required if don't pack and sell grapes immediately 1-2 days after harvest. Grapes can be stored up to 3-4 months. Cooling system has two main components: pre-cooling chamber and cold chamber. Grapes enter the pre-cooling chamber (20° Celsius) right after harvest and are moved to the cold chamber (around 5° Celsius) after a couple days. Each cooling system has a capacity of 25 metric tons and stores up to 100 metric tons of fruit per year
- ▶ **In/Out Weighing System:** Capable of weighing up to 20 ton trucks. In the packaging line, 1 weighing system is required for every 10 workers packaging and weighing boxes
- ▶ Outside of packaging, no other processing occurs for table grapes

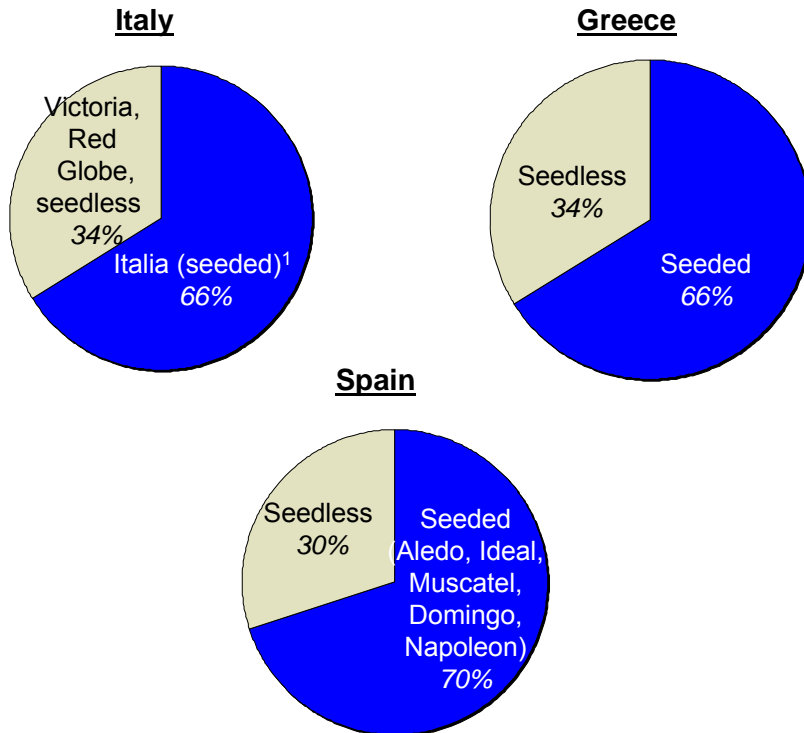
Distribution Infrastructure

- ▶ **Road Transport:** Table grapes are typically delivered by road since they can be expensive to transport long distances. Use refrigerated trucks at around 5° Celsius
- ▶ **Air and Sea Transport:** Requires cold storage containers or facilities around 5° Celsius
- ▶ **Distribution Center:** A center typically has a receiving storage chamber, cold storage facilities, and cold trucks of varying sizes according to business capacity

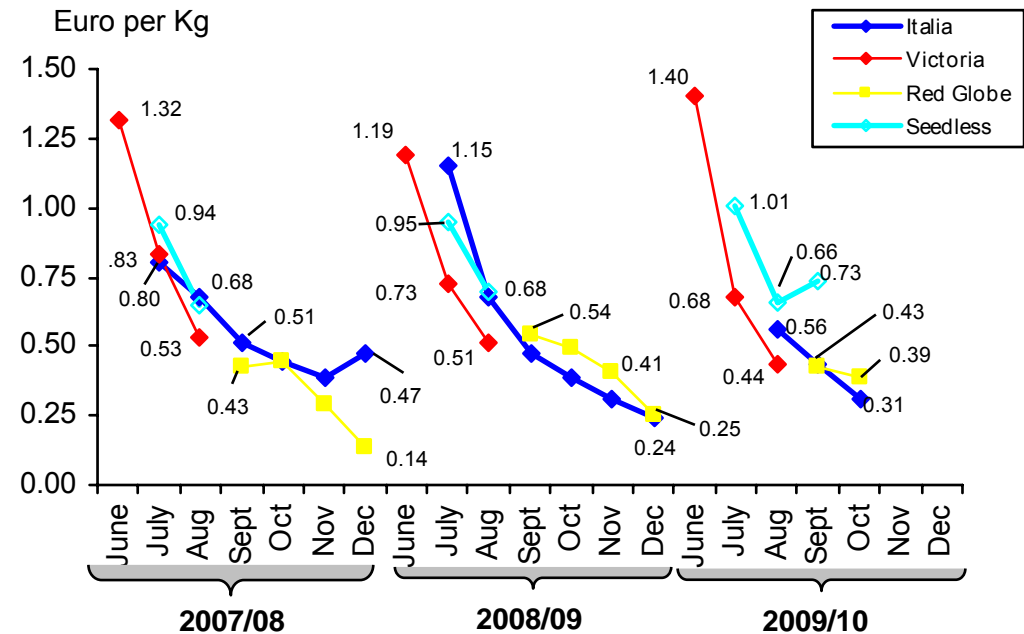
Seeded grapes continue to be the main variety of table grapes produced by the EU; prices for the Italia variety have been dropping in the past few years due to limited demand

Table Grapes Variety Overview

Table Grape Varieties of EU's Top Three Producers
(Italy, Spain, Greece, 2007-2009)



Average Grower's Price, Italy ²
(Price in Euro/Kg, Marketing Year 2007-2010)



Source: USDA Foreign Agricultural Service, GAIN Report , EU-27 Fresh Deciduous Fruit Annual, 2009

Note (1): Production of seedless grapes in Italy continues to be marginal, due to their lower profitability, particularly in terms of yields, although their prices are substantially higher than seeded grapes
 (2) Italian growers' prices are used as a proxy because Italy produced 63.5% of all table grapes produced in the EU market. Prices of Italia during the current marketing year have decreased by 21% in October 2009 compared to the previous year, and 31% lower than two years ago. This is a result of the limited demand from both domestic and export markets. Greece has been experiencing a partially similar situation, with producer prices averaging well below last year's levels. An additional factor in Greece and for seedless table grapes in Spain is the strong Euro exchange rate, compared to the British pound and other currencies.

A number of success factors exist for marketing table grapes, all of which require a concerted strategy among producers

Success Factors for Effectively Marketing Table Grapes

- 1 **Identify retailers, importers and distributors of Fresh Grapes in each target market**
 - ▶ Contact retailers about buying Fresh Grapes from the exporting country
 - ▶ Partner with designated distributors for delivery of Fresh Grapes from exporting country
- 2 **Implement and refine quality control and packaging requirements**
 - ▶ Implement plans through associations and producers to enforce certifications including GlobalGAP, BRC, IFS
 - ▶ Develop optimal packaging requirements such as grape bunches in punett, breathable bag, etc.
 - ▶ Enforce sanitary inspections so that Pesticide Residue Analyses for shipments meet target market requirements
- 3 **Design marketing program to launch Fresh Grapes Campaign**
 - ▶ Develop fund for marketing events to attract attention and recognition of Fresh Grapes from export country
 - ▶ Develop targeted, strategic marketing efforts for specific countries and regions, as in the case of Chilean blueberries in London
- 4 **Launch ad campaigns in target markets touting the quality and freshness of Fresh Grapes**
 - ▶ Market entry will not be immediate as the table grape market has established producers and exporters
 - Countries entering the market will need to differentiate themselves by delivering high quality for better prices

Comments

- ▶ None of these steps will be successful unless all the fresh grape producers are on the same page and support a unified strategy
- ▶ Associations should develop internal market controls to make sure that all members adhere to the program and produce table grapes that meet a certain level of quality and freshness

Table of Contents

- ▶ Overview of Deliverable
- ▶ Baseline Analysis of Agriculture Sector
- ▶ Recommendations to Improve Kosovo's Agriculture Sector
 - Overview
 - Recommended Diversified Crop Mix for Kosovo
 - Initiatives & Action Plan for Implementation
 - Reaching Kosovo's Overall Potential

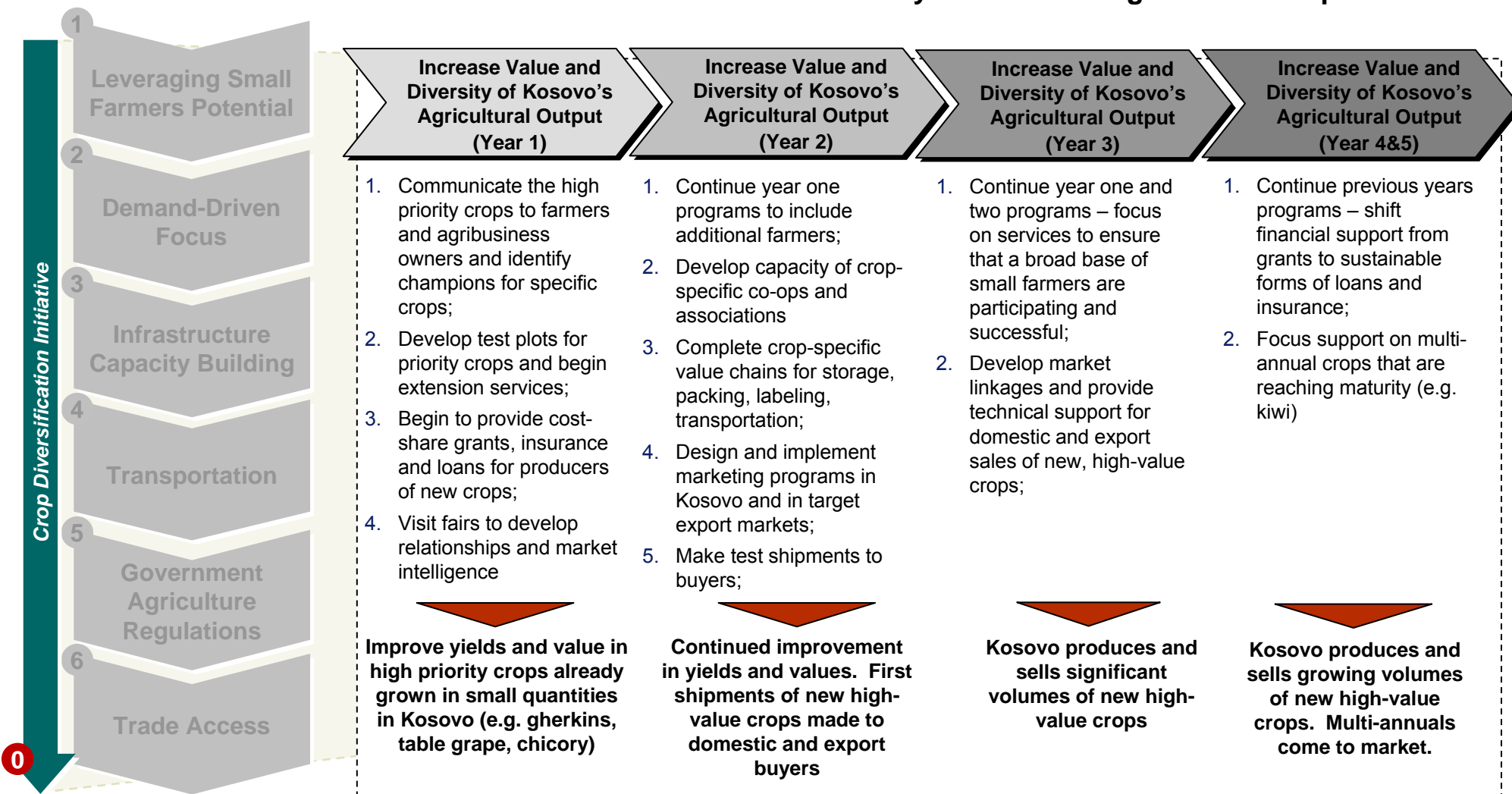
Twenty-one initiatives will support implementation of crop diversification and address Kosovo's agriculture challenges for both traditional and new crops

Overview of Proposed Initiatives



The primary initiative will be a crop diversification program which will bring significant volumes of high value crops to market by the end of the third year

Initiatives to Increase the Value and Diversity of Kosovo's Agricultural Output



Initiatives can be executed using full resources or achieving “quick wins”

Recommended Initiatives: Implementation with Quick Wins & Full Resources

	Quick Wins	Full Resources
Crop Diversification	<ul style="list-style-type: none"> ▶ Ramp up production of high-value crops already grown in Kosovo (e.g. gherkins, table grape, chicory) and address value chains gaps 	<ul style="list-style-type: none"> ▶ Develop production, sales and exports of significant volumes of high-value crops realizing efficiency gains throughout the value chain
Leveraging Small Farmers Potential	<ul style="list-style-type: none"> ▶ Develop extension and “coop-like” services by building relationships between lead firms and growers (PPP model) ▶ Implement a guarantee program for equipment leasing and finance 	<ul style="list-style-type: none"> ▶ Improve the effectiveness of associations and coops in areas such as input purchase, labor and equipment sharing and marketing ▶ Develop extension services through both PPP and public models ▶ Implement land consolidation programs
Demand-Driven Focus	<ul style="list-style-type: none"> ▶ Improve coordination of donor spending on agriculture production and marketing ▶ Development market information system including farm gate and market pricing in Kosovo target countries ▶ Attract private investment to collection, packhouse and storage businesses 	<ul style="list-style-type: none"> ▶ Improve the organization and processes for food safety and quality and attain a European-level of quality ▶ Develop a functional public-private investment promotion organization for agriculture
Infrastructure Capacity Building	<ul style="list-style-type: none"> ▶ Finance development of water-efficient small-scale irrigation systems and modern greenhouse through grants programs 	<ul style="list-style-type: none"> ▶ Invest in the financial and engineering sustainability of the formal irrigation system ▶ Develop over 200 additional hectares of greenhouses with a marketing chain for climate-controlled crops

Initiatives can be executed using full resources or achieving “quick wins” (cont’d)

Recommended Initiatives: Implementation with Quick Wins & Full Resources (cont’d)

	Quick Wins	Full Resources
Transportation	<ul style="list-style-type: none"> ▶ Publicize the economic benefits of the Tirana highway and attract Albania-based freight forwarders to Kosovo ▶ Obtain ICAO license for air freight pick-ups at ICAO 	<ul style="list-style-type: none"> ▶ Use an economic model to prioritize farm-to-market road projects and develop the rural road network through construction PPPs
Government Agriculture Regulations	<ul style="list-style-type: none"> ▶ Work with MAFRD, KFVA, and Ministry of Health to improve food safety inspections ▶ Establish alliances with inputs importers to provide training to farmers in proper application of inputs, thereby driving increase in production value 	<ul style="list-style-type: none"> ▶ Centralized organizational structure driving compliance of national and international food safety standards, thereby increasing exports of agriculture goods ▶ Developing system of private quality labs that are internationally recognized and have developed bilateral agreements with key exporting countries ▶ Fully automated tracking system tracking sales and distribution of all inputs, thereby decreasing the presence of counterfeit pesticides to less than 1%
Trade Access	<ul style="list-style-type: none"> ▶ Develop the data needed to enforce CEFTA information sharing provisions (Art 44) on all countries placing subsidies on agriculture goods ▶ Develop an inter-ministerial council for trade and a “rapid reaction force” to respond to trade issues affecting agriculture 	<ul style="list-style-type: none"> ▶ Focus on improved capacity of all trade officials in GoK, including Department of Trade (MTI), Kosovo Customs, Dept of Bilateral Affairs (MFA), Office of the President and KFVA, to negotiated trade agreements with regional countries ▶ Develop legitimate trade responses developed for all subsidies placed on agriculture goods, driving an increase in domestic consumption

All initiatives can be implemented in a phased approach during roll-out of crop diversification...

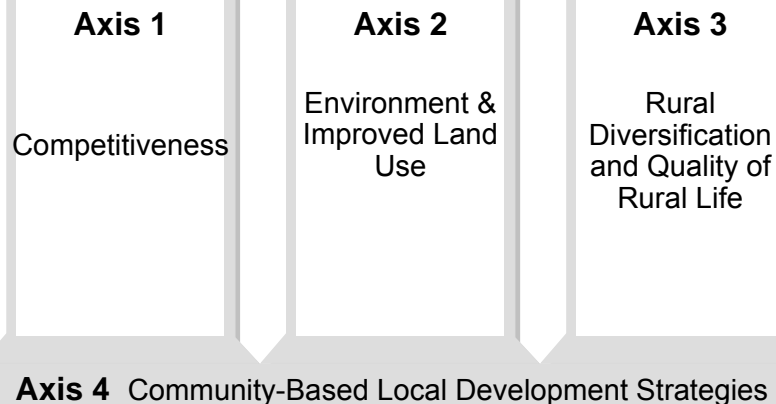
Proposed Implementation Timeline

		Initiative	Year 1	Year 2	Year 3	Year 4 & 5
		Crop Diversification Initiative				
Leveraging Small Farmers Potential	A. Improve business viability and coordination of associations					
	B. Introduce and strengthen extension system to promote traditional crops and improve diversity					
	C. Increase and diversify types of financial products available to smallholder farmers					
	D. Improve cadastral system and test effectiveness of pilot land consolidation program					
Demand-Driven Focus	A. Develop and launch donor coordination activities for agriculture					
	B. Create market intelligence system and communication plan					
	C. Improve capacity of collection centers, pack houses and cold storage					
	D. Establish centralized organization to oversee marketing & export promotion of agriculture goods					
Infrastructure Capacity Building	A. Rehabilitate the large-scale irrigation system in Kosovo					
	B. Increase use of small-scale irrigation systems					
	C. Support development of greenhouses					
	D. Increase energy competitiveness of the agriculture sector					
Transport	A. Prioritize and develop rural roads using cost-benefit analysis and PPPs					
	B. Develop air perishables plan and remove regulatory and market obstacles					
	C. Analyze and communicate cost advantages of the new Tirana highway					
Gov't Ag Regulations	A. Establish a centralized, strengthened organizational model for food safety and quality control					
	B. Help private quality control labs to achieve international certification					
	C. Establish program to protect the environment against pesticide and input misuse					
Trade	A. Develop institutional initiatives to facilitate trade and build capacity in the Government of Kosovo					
	B. Develop and execute interim response to subsidies in neighboring countries					

... and are consistent with the strategy developed by MAFRD

Agriculture and Rural Development Plan (ARDP) Framework (2009-2013)

Kosovo Agri-Rural Development



Agriculture Opportunities Strategy Initiatives

Axis 1

- ▶ Increase value and diversity of agricultural output (0)
- ▶ Improve coordination and business services of associations (1a)
- ▶ Introduce and strengthen extension services (1b)
- ▶ Increase and diversify types of financial products available to smallholder farmers (1c)
- ▶ Improve cadastral system (1d)
- ▶ Increase access and use of market information (2b)
- ▶ Improve capacity of collection centers (2c)
- ▶ Establish centralized org for marketing and promotion (2d)
- ▶ Ensure compliance with quality and safety standards (5 a & b)

Axis 2

- ▶ Encourage farm enterprise diversification (0)
- ▶ Promote sustainable and alternative land use (1d)
- ▶ Establish program to protect the environment against pesticide and input misuse (5c)

Axis 3

- ▶ Introduce PPP extension services in rural areas (1b)
- ▶ Increase types of financial products for rural farmers (1c)
- ▶ Brand and market local products (e.g. Rahovica table grapes) (2d)
- ▶ Increase use of small scale irrigation systems (3b)
- ▶ Create and rehabilitate roads in rural areas (4a)
- ▶ Increase competitiveness and access to energy (3d)

Axis 4

- ▶ Increase value and diversity of agricultural output (0)
- ▶ Improve coordination and business services of associations (1a)
- ▶ Introduce PPP extension services for communities (1b)

Initiative: Increase the Value and Diversity of Kosovo's Agricultural Output (Year 1)**Duration:** 5 years**Supporting Analysis:** pp18, 26, 29 (AgStrat Baseline)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Currently there are not many types of crops or diverse varieties of each crop cultivated in Kosovo. This is a legacy of the Yugoslav production system and of a sector that is focused primarily on local tastes. This puts the sector at risk, exacerbates the trade deficit, and reduces the livelihoods of farmers. ▶ The crop diversification initiative is designed to help Kosovo address these challenges and bring significant volumes of high value crops to market by the end of the third year. The first year of the crop diversification initiative will: 1) communicate the high priority crops to farmers and agribusiness owners and identify champions for specific crops, 2) develop test plots for priority crops and begin extension services, 3) begin to provide cost-share grants, insurance and loans for producers of new crops, and 4) visit fairs to develop relationships and market intelligence 	<ol style="list-style-type: none"> 1. <i>Communicate high priority crops to farmers/agribusiness owners and identify champions for crops</i> <ol style="list-style-type: none"> a. Identify farmers/associations capable of growing top crops identified in the crop diversification model b. Articulate benefits of growing top crops and potential varieties to farmers, determine which crops they would consider cultivating, and select 2-4 new crops and specific crop varieties for test plots c. Introduce new varieties and expand volumes of high yield/value crops already produced in Kosovo (e.g. gherkins, grape, chicory) 2. <i>Develop test plots for priority crops and begin extension services</i> <ol style="list-style-type: none"> a. Select organizations or technical experts that can provide the necessary knowledge and extension services needed for farmers to successfully grow quality, high yield crops b. Begin trainings with identified pilot farmers to explain in detail how to grow each crop, including planting, seed varieties, pesticide use, and water irrigation c. Discuss planting techniques required to cultivate varieties that will meet customer preferences for taste, color, shape, size, etc. as well as meet or exceed quality requirements and safety standards d. Plant and monitor varieties in test plots. At the end of the growing season, analyze which varieties are best suited for production in which areas and document lessons learned and changes for production in year two 3. <i>Begin to provide cost-share grants, insurance, and loans for producers of new crops</i> <ol style="list-style-type: none"> a. Establish credit/insurance mechanisms for farmers producing new pilot varieties b. Establish a small grants program with cost-share 4. <i>Visit fairs to develop relationships and market intelligence</i> <ol style="list-style-type: none"> a. Conduct market analysis for top crops and varieties selected to have a thorough understanding of the potential customers, targeted customer buying preferences, and main competitors supplying these products (leverage MIS once launched) b. Determine quality requirements and safety standards specific to each target market c. Analyze the distribution channels and identify distributors, wholesalers, and retailers d. Identify and attend select trade fairs (e.g. Fruit Logistica) as participants to begin to develop relationships and gather market intelligence 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in export value ▶ Increase in jobs ▶ Number of farmers participating in test plots ▶ Yield of test plots for each crop ▶ Proportion of harvest meeting quality and safety standards 	<ul style="list-style-type: none"> ▶ Farmers do not want to grow new crops or varieties: Detail benefits from growing each crop (potential farm gate prices for products meeting quality requirements, processing potential, size of target market) and initial technical and financial support to participate in initial crop diversification program 	<ul style="list-style-type: none"> ▶ 1% increase in export value ▶ 30 smallholder farmers and 2 largeholder farmers participating in test plots ▶ 50% of farms achieve at least an average yield for test plots when compared to regional benchmarks for crop ▶ 50% of harvest meets quality/safety standards

Initiative: Increase the Value and Diversity of Kosovo's Agricultural Output (Year 2)

Duration: 5 years

Supporting Analysis: pp18, 26, 29 (AgStrat Baseline)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ The goals during the second year of the crop diversification initiative are to: 1) continue year one programs to include additional farmers, 2) develop capacity of crop-specific cooperatives and associations, 3) complete crop-specific value chains for storage, packing, labeling, and transportation, 4) design and implement marketing programs in Kosovo and in target export markets, and 5) make test shipments to buyers 	<ol style="list-style-type: none"> 1. <i>Continue year one programs to include additional farmers</i> <ol style="list-style-type: none"> a. Identify additional farmers to expand test plot production and monitoring b. Conduct testing to confirm rigorous quality and safety standards are met (conducted by the new food safety and quality control organization) 2. <i>Develop capacity of crop-specific cooperatives and associations</i> <ol style="list-style-type: none"> a. Encourage cooperation within smallholder farmer community to ensure that economies of scale may be obtained for competitive opportunities b. Increase capacity of cooperatives and associations to cultivate (with competitive yields), harvest, and organize high quality products that meet international quality and safety standards as a group 3. <i>Complete crop-specific value chains for storage, packing, labeling, transportation</i> <ol style="list-style-type: none"> a. Design packaging and labeling to ensure quality and freshness and to enable portion control given some consumers pay more for individually labeled and packaged produce b. Analyze current packaging, storage, labeling, and transportation requirements near test plots c. Conduct gap analysis to determine needed infrastructure for each crop-specific value chain d. Develop plan to identify investors/donors/others to build and efficiently manage infrastructure 4. <i>Design and implement marketing programs in Kosovo and in target export markets</i> <ol style="list-style-type: none"> a. Develop marketing programs and campaigns to introduce crops to target markets b. Attend target trade fairs (e.g. Fruit Logistica) to expand potential buyer network, approach buyers with range of varieties, and offer sample products to buyers as well as gather innovative ideas and additional market intelligence 5. <i>Make test shipments to buyers</i> <ol style="list-style-type: none"> a. Select top products for export and work with KFVA to efficiently complete export requirements 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in export value ▶ Increase in jobs ▶ Number of farmers participating in test plots ▶ Yield of test plots for each crop ▶ Proportion of harvest meeting quality and safety standards ▶ Number of contracts secured for export orders ▶ Total quantity ordered for export by crop (varies by crop) 	<ul style="list-style-type: none"> ▶ Buyers are unaware of Kosovo's new crop variety production: Farmers and associations must work with marketing experts and actively participate in high profile trade shows to expand their network and spread the word about Kosovo's ability to produce high-quality crop varieties that meet customer preferences 	<ul style="list-style-type: none"> ▶ 5% increase in export value ▶ 70 smallholder farmers and 5 largeholder farmers participating in test plots ▶ 60% of farms achieve at least an average yield for test plots when compared to regional benchmarks for crop ▶ 60% of harvest meets quality/safety standards ▶ 5 contracts secured for export orders

Initiative: Increase the Value and Diversity of Kosovo's Agricultural Output (Year 3)

Duration: 5 years

Supporting Analysis: pp18, 26, 29 (AgStrat Baseline), p8,37 (AgCLIR)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ In the third year, the crop diversification initiative will: 1) continue year one and two programs – focus on services to ensure that a broad base of small farmers are participating and successful and 2) develop market linkages and provide technical support for domestic and export sales of new, high-value crops 	<ol style="list-style-type: none"> 1. <i>Continue year one and two programs—focus on services that ensure smallholder farmer participation</i> <ol style="list-style-type: none"> a. Continue to work with smallholder cooperatives to increase yields and meet customer demands by increasing their management capacity, knowledge of agriculture contracts, and trust b. Continue to develop and implement micro-lending products to ensure cost-share grants, insurance, and loans are available for farmers (especially smallholder producers) c. Work collaboratively with the food safety and quality control organization to ensure farmers (especially smallholder farmers) thoroughly comprehend quality/safety requirements d. Develop the capacity of smallholder farmers to ensure they can meet quality/safety requirements e. Conduct rigorous quality testing at KFVA in conjunction with associations, processors and donors to certify quality products and reject products that do not meet quality standards with clear documentation outlining reasons for rejection f. Work with processors and purchases to select and package quality products for export markets; and, work with Customs to complete necessary paperwork and other requirements to efficiently export to target markets 2. <i>Develop market linkages and provide technical support for domestic and export sales</i> <ol style="list-style-type: none"> a. Conduct direct marketing in domestic / export markets for traders in local green markets in Pristina b. Continue to attend current tradeshows to aggressively market and sell products as well as attend new trade fairs serving strategic markets or selected crops c. Attend trade shows to display, market, and sell products d. Contact potential buyers and send sample products to other buyers not present at trade shows e. Consider hosting potential buyers in Kosovo if sufficient demand for crops exists f. Export high-quality products to identified destinations g. Follow up with buyers to address any unforeseen challenges and ensure client satisfaction 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in export value ▶ Increase in jobs ▶ Yield of test plots for each crop ▶ Proportion of harvest meeting quality and safety standards ▶ Number of contracts secured for export orders ▶ Total quantity ordered for export by crop (varies by crop) ▶ Number of trade fairs attended ▶ Number of farmers/association representatives attending each trade fair 	<ul style="list-style-type: none"> ▶ Buyers do not perceive Kosovo as a high-quality producer: Highlight Kosovo's significant investment in and commitment to its new quality and food safety organization, upgraded quality labs, and highly trained professionals enabling Kosovo to rigorously assess crops and enforce stringent quality standards 	<ul style="list-style-type: none"> ▶ 10% increase in export value ▶ 150 smallholder farmers and 8 largeholder farmers participating in test plots ▶ 75% of farms achieve at least an average yield for test plots when compared to regional benchmarks for crop ▶ 75% of harvest meets quality/safety standards ▶ 10 contracts secured for export orders ▶ 5 trade fairs attended ▶ Minimum of 5 farmers/association representatives attending each trade fair

Initiative: Increase the Value and Diversity of Kosovo's Agricultural Output (Year 4 & 5)		
Duration: 5 years		Supporting Analysis: pp18, 26, 29 (AgStrat Baseline)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ In the fourth and fifth years, the crop diversification initiative will: 1) continue previous years programs – shift financial support from grants to sustainable forms of loans and insurance and 2) focus support on multi-annual crops that are reaching maturity (e.g. kiwi) 	<ol style="list-style-type: none"> 1. <i>Continue previous years programs – shift financial support from grants to sustainable forms of loans and insurance</i> <ol style="list-style-type: none"> a. Continue all programs from previous years b. Begin to wind down grants funding while increase cost share c. Provide technical assistance to financial services companies to ensure that financial products for crop diversification are robust and commercially viable d. Identify sources of financing to replace donor support 2. <i>Focus support on multi-annual crops that are reaching maturity</i> <ol style="list-style-type: none"> a. Focus extension on multi-annual crops introduced in the diversity initiative and only reaching maturity at this time (e.g. kiwi). b. Support producers of multi-annuals in making test shipments to buyers 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in export value ▶ Increase in jobs ▶ Yield of test plots for each crop ▶ Proportion of harvest meeting quality and safety standards ▶ Number of contracts secured for export orders ▶ Total quantity ordered for export by crop (varies by crop) ▶ Number of trade fairs attended 	<ul style="list-style-type: none"> ▶ Sustainability. Focus on transition of all programs to GoK and other stakeholders. Ensure that financial products are commercially viable. Identify sources of funding to replace donor funds. ▶ Access to capital for producers of multi-annuals. Assist multi-annual producers with cash flow management as crops reach maturity. 	<ul style="list-style-type: none"> ▶ 20% increase in export value ▶ 300 smallholder farmers and 12 largeholder farmers participating in test plots ▶ 75% of farms achieve at least an average yield for test plots when compared to regional benchmarks for crop ▶ 75% of harvest meets quality/safety standards ▶ 20 contracts secured for export orders ▶ 5 trade fairs attended

Initiative: Increase the Value and Diversity of Kosovo's Agricultural Output

Duration: 5 years

Supporting Analysis: pp18, 26, 29 (AgStrat Baseline)

Rationale

- ▶ Targeted crops will increase farmer livelihoods providing an incentive for expansion for the 30% of small farmers who leave part of their land fallow because they have no profitable use for it.
- ▶ Crop diversification has prioritized labor intensive crops, the cultivation of which will significantly reduce rural unemployment. Increased demand for sorting/grading, packing, storage, processing and transportation will create many knock-on jobs in agribusiness.
- ▶ Targeted crops are in high demand in regional markets and the European Union and will decrease the trade deficit through expanded exports and substitution of imports.
- ▶ Production of the targeted crops will develop Kosovo's reputation as a skilled producer of high-value horticulture, branded for the country.

Key Counterparts

Crop Experts

- ▶ Experts train farmers on production techniques and address challenges with test plots to be able to meet quality/safety standards and customer preferences

Marketing/
Packaging
Experts

- ▶ Experts to conduct market analysis for selected crops, develop marketing strategy/campaign for selected crops, develop packaging labels

Customs
Ministry/
Quality Org

- ▶ Customs to provide assistance to help new exporters navigate export process
- ▶ Quality Organization to train farmers on quality/safety standards and monitor crops

Ministry of
Agriculture/
Peja Institute

- ▶ Leverage Peja Institute and MoA experience with test plots and crop specific production knowledge and techniques

Donors

- ▶ Provide technical and financial assistance to launch and monitor progress of crop diversification strategy

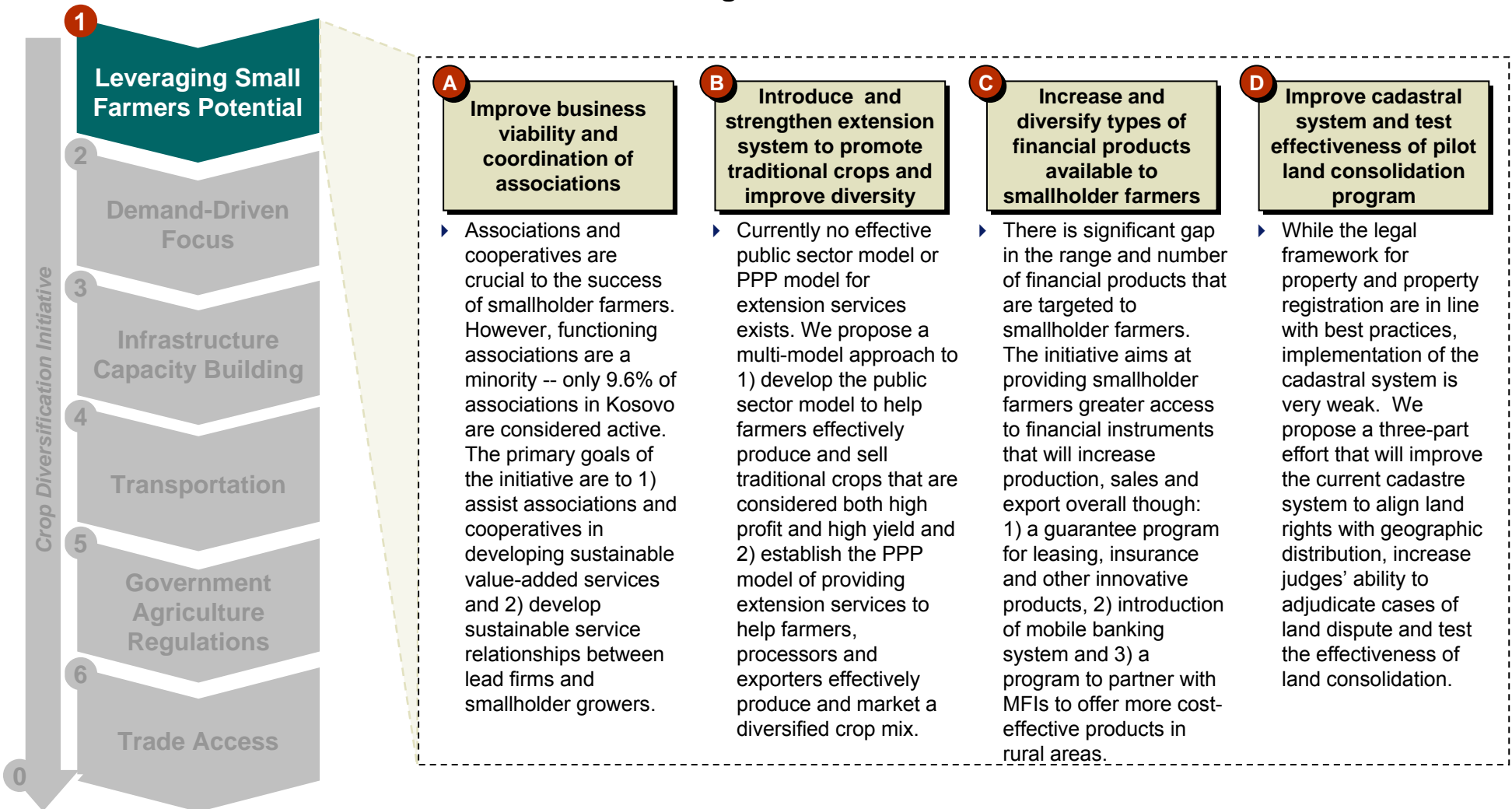
High Level Cost Estimate

- ▶ **Technical Assistance:** \$10,800,000 (8 people for 5 years)
- ▶ **Small Grant Fund** (1,000 grants averaging \$5000): \$5,000,000
- ▶ **Supporting for Revolving Loan Fund or Insurance:** \$1,000,000 (amount in subsidies for guarantee-assumption will leverage a \$10,000,000 guarantee) ¹

Total Estimated Costs: \$ 16,800,000

Initiatives for leveraging smallholder farmers' potential range four main programs covering associations, extension systems, financial products and a land consolidation program

Initiatives to Leverage Small Farmers' Potential



Initiative 1A: Improve business viability and coordination of associations		
Duration: 3 years		Supporting Analysis: pp48-49 (AgStrat Baseline), pp37-39 (AgCLIR)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Associations and cooperatives are crucial to the success of smallholder farmers. However, functioning associations such as Perdrini and Anadrini are a minority -- only 9.6% associations (13 total) in Kosovo are considered active. Much of the difficulty lies in establishing active associations that provide valuable services to farmers and have a self-sustaining business model. Some of the obstacles include dependence on extended family for production relationships, lack of trust in developing business ventures and little emphasis placed on relationships with buyers. ▶ Therefore, we propose a two-pronged approach to 1) assist associations and cooperatives in developing sustainable value-added services and 2) develop sustainable service relationships between lead firms and smallholder growers. 	<ol style="list-style-type: none"> 1. <i>Assist associations and cooperatives in developing sustainable value-added services</i> <ol style="list-style-type: none"> a. Complete exhaustive analysis of all associations according to crop type, management model, revenue, equity management b. Complete survey for consumer perception to determine the areas where associations could enhance or support development of new products c. Pinpoint weaknesses in stage of association development and formulate business case to help support those that appear to be financially stable and meet consumer demand d. If necessary, refine management model, including appointment of board and senior leadership e. Identify and provide technical assistance as necessary to address weakness in areas of the agriculture value chain, including production, processing and marketing f. Establish policy and legislation to legalize cooperatives in Kosovo 2. <i>Develop sustainable service relationships between lead firms and smallholder growers</i> <ol style="list-style-type: none"> a. Based on exhaustive analysis of current associations, identify gaps in associations available to farmers according crop type, management model, regional coverage b. Identify and examine financial viability and management model of processors, exporters or large producers in similar crop sectors to potentially develop lead associations c. Match processors, exporters and producers with pools of farmers to develop value-added services d. Develop management models with lead firms and growers to ensure sustainability and value-add e. Identify and provide technical assistance as necessary to address weaknesses in areas of the value chain, including production, processing and marketing f. Develop contracts between growers and lead firms and create a low-cost adjudication process to address disputes 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in production value ▶ Increase in export value ▶ Value of agriculture goods bought and sold by lead firms ▶ Increase in the range and depth of services provided by associations ▶ Increase in consumer satisfaction for products developed by associations 	<ul style="list-style-type: none"> ▶ Farmers' unwillingness to work with lead firms: assign responsibility to farmers on board and provide clear decision rights and interaction mechanisms ▶ Inability to improve production, processing and/or marketing: monitor product development, pinpoint recurring weakness and address with technical assistance ▶ Fear that lead firms will take advantage of small farmers: develop clear MoUs between lead firms and farmers 	<ul style="list-style-type: none"> ▶ At least 15 assisted associations operating as profitable businesses by the end of year 2 ▶ Increase in consumer satisfaction of association-developed products by 50% as measured by consumer survey

Initiative 1A: Improve business viability and coordination of associations**Duration:** 3 years**Supporting Analysis:** pp108-110 (AgStrat Baseline)**Rationale**

- ▶ Strengthening associations in Kosovo will help farmers produce products that meet consumer demand, thereby increasing competitiveness of products
- ▶ Associations will create greater economies of scale, which will help farmers decrease their costs and compete more effectively on the market
- ▶ Direct technical assistance will help farmers understand the methods of production, processing and marketing needed to create sustainable business models
- ▶ Associations will help foster greater trust and working relationship among farmers and lead firms
- ▶ Provide basis for knowledge transfer among lead firms and small farmers
- ▶ Improve distribution networks among lead firms and farmers in associations, thereby increasing sales to the end consumer

Key Counterparts**MAFRD**

- ▶ Maintain data and information on all associations, including results from analysis of all associations
- ▶ Monitor development of new and current associations

Donor Programs

- ▶ Provide monetary and technical assistance in addressing identified weakness
- ▶ Work with lead firms and farmers to develop management models and provide technical assistance for pilot associations

Current Associations & Lead Firms

- ▶ Work with donor programs to improve business viability of associations
- ▶ Openly communicate recurring weaknesses and obstacles to be addressed

High Level Cost Estimate

- ▶ **Technical Assistance:** \$2,592,000 (4 people for 3 years)
- ▶ **Small Grants to Associations and Lead Firms** (40 grants at \$10,000 each): \$400,000

Total Estimated Costs : \$2,992,000 for TA and Small Grants

Initiative 1B: Introduce and strengthen extension system to promote traditional crops and improve diversity**Duration:** 2 years**Supporting Analysis:** pp50-51 (AgStrat Baseline), pp25-26 (AgCLIR)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Currently no effective public sector model or PPP model for extension services exist. The Ministry of Agriculture operates an Extension Department in each of the municipalities, but activities are limited to data collection. Donor-funded projects such as KPEP and Intercooperation provide extension services, but the government does not play a role. ▶ Therefore, we propose a multi-model approach to 1) develop the public sector model to help farmers effectively produce and sell traditional crops that are considered both high profit and high yield and 2) establish the PPP model of providing extension services to help farmers, processors and exporters effectively produce and market a diversified crop mix. 	<ol style="list-style-type: none"> 1. <i>Develop public sector extension services for traditional crop mix</i> <ol style="list-style-type: none"> a. Complete assessment of current extension services provided for traditional crops that are considered high profit / high production b. Assess and pinpoint current weakness in farmers' production, processing and marketing of traditional crops c. Develop extension program that includes recommended workshops/classes, on-site interventions, publications, websites and access to technical advisors to address identified weaknesses d. Formulate detailed budget to implement public sector extension program e. Draft public sector extension program and MoU, including the services to be provided by the MAFRD, experts, universities, the Peja Institute; program will include governance structure, funding mechanism and sources, decision rights and accountability f. Secure funding sources, launch public sector extension services, and monitor effectiveness 2. <i>Work with donors to develop partnership (PPP) extension services for crop diversification</i> <ol style="list-style-type: none"> a. Determine the skills and knowledge that will be required for farmers to grow new high-value crops b. Identify pilot group of farmers who will produce crops and assess skill sets to pinpoint gaps that can be addressed by extension programs c. Work with Donor Coordination Committee and MAFRD to identify the proper donors and buyers who could provide extension services under partnership model d. Develop extension program that includes recommended workshops/classes, on-site interventions, publications, websites and access to technical advisors to develop new crops e. Formulate detailed budget to implement PPP extension program f. Draft PPP extension program and MoU, including the services to be provided by the donors and buyers; program will include governance structure, funding mechanism and sources, decision rights and accountability g. Secure funding and investment sources, launch PPP extension services, and monitor effectiveness 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in yield ▶ Number of farmers trained and reached through public and PPP extension services ▶ Number of training programs and interventions administered 	<ul style="list-style-type: none"> ▶ Inability to identify proper experts for training: work with MAFRD and donors to exhaustive search for key agriculture experts ▶ Low participation rate from farmers: develop more on-site interventions for areas with low participation rates ▶ Inability to attract buyers for PPPs: provide investment and/or tax incentives for participation ▶ Enforcement of agreement and funding: monitor effectiveness of program and address problems as they arise 	<ul style="list-style-type: none"> ▶ At least 1000 farmers assisted within first year of program ▶ Minimum 100 training programs and on-site interventions administered ▶ Completely operational public sector extension program by end of year 1 ▶ At least 5 PPP extension programs created by end of year 1

Initiative 1B: Introduce and strengthen extension system to promote traditional crops and improve diversity**Duration:** 2 years**Supporting Analysis:** pp111-113 (AgStrat Baseline)**Rationale**

- ▶ The public sector model will be more effective in developing a large scale program for high profit / high yield products
 - Experience/ knowledge exists in key government agencies (MAFRD, Peja Institute, etc.) and farmers, thereby ensuring success of program
- ▶ The PPP model will be effective in ensuring knowledge transfer between companies and donors to farmers, processors and government entities
 - Introduction of new crops will require outside expertise that may not currently exist in Kosovo
- ▶ A multi-model approach ensures that Kosovo takes advantage of all possible partners and funding sources
- ▶ High penetration rate of public sector model through training of farmers, associations, processors, etc. who in turn, can train members and employees
- ▶ PPP model could attract presence of more buyers who are interested in working with farmers in Kosovo

Key Counterparts**Ministry of Agriculture**

- ▶ Oversee development of public extension system; provide funding, monitor effectiveness of program and make changes

Donor Coordination Committee

- ▶ Oversee development of PPP extension system; identify donors and partners, monitor progress and make changes

University of Pristina

- ▶ Develop training programs, materials, website and publication for extension system

Peja Institute

- ▶ Provide expertise in specific crop areas to develop extension programs
- ▶ Monitor content delivered in programs

Buyers & Companies

- ▶ Provide funding and expertise to develop PPP extension programs in coordination with donors

High Level Cost Estimate

- ▶ **Technical Assistance in Ministry for Public Model:** \$1,296,000 (3 people for 2 years)
- ▶ **Short-term TA to Implement the PPP approach:** \$432,000 (1 full time person equivalent for 2 years)
- ▶ **Administration of 200 Training Programs:** \$300,000 (20 participants at rate of \$1,500 per program)
- ▶ **Experts for 200 Training Programs:** \$720,000 (2 trainers, average 2 day classes)
- ▶ **On-Site Technical Assistance:** \$300,000 (1,000 farmers 4 times per year, \$75 for each visit)
- ▶ **Administration Costs for Onsite Assistance:** \$60,000

Total Estimated Costs : \$3,108,000 for Training & On-Site Assistance

Initiative 1C: Increase and diversify types of financial products available to smallholder farmers**Duration:** 3 years**Supporting Analysis:** pp52, 114-5 (AgStrat Baseline), pp 18-29 (AgCLIR)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Currently small farms represent 98% of total farms in Kosovo. There is significant gap in the range and number of financial products that are targeted to smallholder farmers. Primary reasons for this gap include distance from banking networks, lack of smallholder farmer collateral, and little knowledge among the banking and commercial sector about agriculture producers in Kosovo. In addition, while microfinance has been successful in Kosovo, financial products are limited to loans and target mostly urban areas. Finally, large market potential exists for leasing farm equipment to smallholder farmers. Close to 80,000 tractors and motocultivators and available in the market for leasing. While two companies are registered for leasing, neither are active except in vehicle leasing. ▶ We proposed a three-part effort that provides smallholder farmers greater access to financial instruments that will increase production, sales and export overall: 1) a guarantee program for leasing and other innovative products, 2) introduction of mobile banking system and 3) a program to partner with MFIs to offer more cost-effective products in rural areas. 	<ol style="list-style-type: none"> 1. <i>Develop guarantee program to increase commercial presence of leasing, insurance and other innovative products to smallholder farmers</i> <ol style="list-style-type: none"> a. Examine and identify banks and companies nationally and regionally who could offer leasing services, insurance and other innovative products to smallholder farmers b. Work with donors to set-up leasing and other guarantee programs with banks / companies, detailing target markets, funding sources, guarantee structure and recourse for disputes 2. <i>Introduce mobile banking system targeted to rural areas and smallholder farmers</i> <ol style="list-style-type: none"> a. Work with current microfinance providers, such as Kosinvest, to identify potential telecom partners, donors and banks and determine mobile banking services to be offered for target markets b. Develop business model detailing the funding structure and operational structure of mobile banking arrangement, including roles and responsibilities of banks, telecoms, donors, etc. c. Introduce policies/regulations for interoperability, payment systems and consumer protection d. Develop MoU between banks, telecom companies and donors to delineate roles, responsibilities, funding commitments and recourse for disputes 3. <i>Work with MFIs in Kosovo to provide more cost-effective and attractive financial products smallholder farmers in rural areas</i> <ol style="list-style-type: none"> a. Complete scan of MFIs operating nationally and regionally to identify partners b. Examine and identify target regions and communities of smallholder farmers that lack access to cost effective and attractive financial instruments (deposits, loans and crop insurance) c. Work with MFIs and donor institution to determine the portfolio of financial products to be offered, the amount of funding necessary for program and secure resources d. Develop MoUs between donors, banks and community leaders to delineate roles, responsibilities, funding commitments and recourse for disputes 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in production value ▶ Increase in number of farmers with access to financial instruments ▶ Increase in financial literacy among smallholder farmers ▶ Increase in mechanization rate from leasing program 	<ul style="list-style-type: none"> ▶ Lack of interested banks, telecom companies, etc. in program because of risk and repayment issues: use donor backing to guarantee repayment ▶ Lack of penetration rate among smallholder farmers: develop communication plan describing program and resulting benefits ▶ Delays in implementing policies and legislation for mobile banking: bring in and work with experts who have launched similar programs in other countries 	<ul style="list-style-type: none"> ▶ Over 500 farmers reached through MFI partner program by end of year 1 ▶ Mobile banking system established and launched by end of year 1 ▶ Over 10,000 pieces of equipment leased by the end of year 1

Initiative 1C: Increase and diversify types of financial products available to smallholder farmers**Duration:** 3 years**Supporting Analysis:** pp52, 114-5 (AgStrat Baseline), pp 18-29 (AgCLIR)**Rationale**

- ▶ Increased access to finance will enable farmers to have the resources they need to increase production of high yield / high profit goods
- ▶ Greater understanding and presence of banks could lead to increased investment in Kosovo's agriculture sector
- ▶ Leasing program could lead to increased mechanization of farmers, thereby increasing productivity and quality of agricultural goods
- ▶ Mobile banking system increases rural farmers' access to finance, especially those that are far from banking networks

Key Counterparts**GoK**

- ▶ Assist in drafting and implementing regulations and policies required for mobile banking system

Donor Coordination Committee

- ▶ Work with GoK, banks, telecom companies and equipment companies to determine the markets, services and funding required from programs; provide funding for guarantee program

Telecom companies

- ▶ Work with donors, banks and microfinance institutions to introduce mobile banking system

Equipment companies

- ▶ Provide equipment to be leased through backing of financial intermediaries and donors

Banks & Microfinance Institutions

- ▶ Provide funding and expertise to introduce wide range of financial products for smallholder farmers

High Level Cost Estimate

- ▶ **Technical Assistance:** \$1,944,000 (3 people for 3 years)
- ▶ **DCA / Revolving Fund for Leasing and Insurance:** \$1,000,000 (amount in subsidies for guarantee-assumption will leverage a \$10,000,000 guarantee).

Total Estimated Costs : \$2,944,000 for TA & DCA / Revolving Fund

Initiative 1D: Improve cadastral system and test effectiveness of pilot land consolidation program**Duration:** 4 years**Supporting Analysis:** pp45-48 (AgCLIR report); p116 (AgStrat baseline)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ While the legal framework for property and property registration are in line with best practices, implementation of the cadastral system is very weak. Significant discrepancies exist between the immovable property rights registered at the KCA, Municipal Cadastre Offices and true geographical distribution of property. In addition, many courts do not follow the evidentiary requirements for making final decisions and / or do not have correct information to resolve land disputes. ▶ While studies show that large and specialized farms make better use of the land, leaving only 1.7% fallow, compared to 9.5% for all farms, a number of constraints exists for land consolidation, such as movement of property rights through family generations, unclear titling, and potential for increased rural unemployment. ▶ We propose a three-part effort that will improve the current cadastre system to align land rights with geographic distribution, increase judges' ability to adjudicate cases of land dispute and test the effectiveness of land consolidation. 	<ol style="list-style-type: none"> 1. <i>Improve cadastre registry system to track land ownership, size and location</i> <ol style="list-style-type: none"> a. Develop automated registry system in all Municipal Cadastre Offices and a centralized system at Kosovo Cadastral Agency (KCA), including system to update information across the network b. Aggregate all land ownership information into automated system c. Work with governments of neighboring countries to return all previous registries to Kosovo d. Develop and launch program to survey, validate and reconcile land ownership information (including geography and size) with current immovable property rights e. In case of discrepancies between KCA and survey program where there are no land disputes, update registry with current information; in cases of dispute, forward case to adjudication process 2. <i>Provide training and technical assistance to municipal courts to improve adjudication process</i> <ol style="list-style-type: none"> a. Identify procedural deficiencies based on OSCE study in addition to on-site visits of municipal courts b. Create centralized, automated case management system that aggregates land disputes cases in municipalities, including network to KCA to access current registry information c. Develop training program on 1) processes, decision rights, and evidentiary requirements for municipal courts that addresses identified gaps and 2) implementation and use of the automated case management system d. Launch training program across all municipalities and central court system and monitor progress in resolution of disputes. Where weaknesses continue, provide targeted technical assistance 3. <i>Develop pilot program for land consolidation</i> <ol style="list-style-type: none"> a. Evaluate MAFRD's current efforts on land consolidation to extract findings for revised pilot b. Develop project framework for land consolidation for an identified region with significant land fragmentation, including cost-estimate, schedule, and performance monitoring system c. Determine inventory of land parcels, including geography, size, value, and any current disputes d. Prepare draft consolidation plan, including new layout of parcels, ownership structure, location of roads and facilities e. Socialize plan with key stakeholders and make any necessary changes before implementation 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in production value ▶ Proportion of titles that correctly reflect land ownership and geographic distribution ▶ Proportion of land disputes resolved through reformed adjudication system ▶ Increase in production value of agriculture land in pilot program for land consolidation 	<ul style="list-style-type: none"> ▶ Delays in compiling and reconciling information for cadastral system: launch parallel, coordinated efforts across municipalities to reconcile data ▶ Inability of judges to resolve disputes despite training: targeted technical assistance to address weaknesses and movement of "difficult cases" to a central court system ▶ Lack of stakeholder buy-in for land consolidation: clearly defined MoU and land rights defined for participating farmers 	<ul style="list-style-type: none"> ▶ Cadastral registry system inputted with all correct information and reconciled by year 1 ▶ 50% increase in resolved cases by end of year 1 ▶ Consolidation plan completed and socialized by end of year 1

Initiative 1D: Improve cadastral system and test effectiveness of pilot land consolidation program**Duration:** 4 years**Supporting Analysis:** pp45-48 (AgCLIR report); p116 (AgStrat baseline)**Rationale**

- ▶ Decrease in land disputes will stabilize ownership structure for farmers, potentially increasing use of land, productivity and jobs
- ▶ Land consolidation program will help create economies of scale and competitive agricultural production arrangements for farmers with fewer parcels of land
- ▶ Accurate and updated cadastral registry will enable GoK and stakeholders to better track use of land and devise support programs that can increase agricultural productivity
- ▶ In a land consolidation program, landlords can encourage tenants to maintain property and make improvements (according to HACCP, etc.), thereby opening up new market opportunities

Key Counterparts**Donor Coordination Committee**

- ▶ Work with GoK entities to identify and provide monetary/technical support for cadastre registry system, adjudication process and pilot land consolidation pilot

KCA and Municipal Offices

- ▶ Aggregate and automate information for cadastral registry system; oversee land survey program to reconcile land information

Municipal court system

- ▶ Work with donors and subject matter experts to implement dispute resolution training program and automated case management system

Kosovo Property Agency

- ▶ Work with adjudication training program and donors to develop and enforce evidentiary requirements to resolve disputes over land

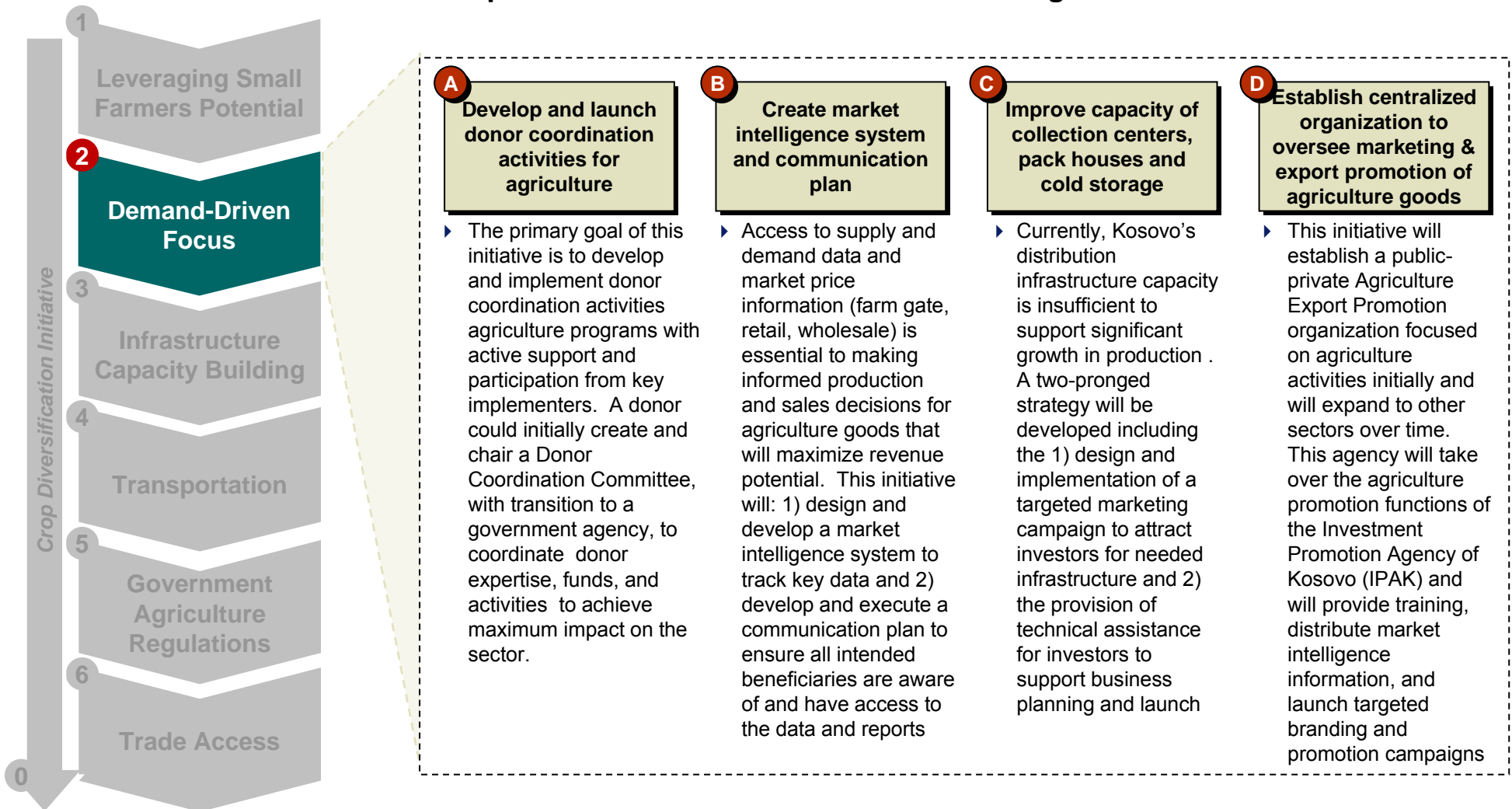
High Level Cost Estimate

- ▶ **Systems Work to Develop Cadastral Registry System:** \$2,000,000
- ▶ **Technical Assistance:** \$2,592,000 (3 people for 4 years)
- ▶ **Pilot Support in 2 Municipalities:** \$864,000 (1 full time person per municipality for 2 year pilot)

Total Estimated Costs : \$5,456,000 for Systems Work, TA & Pilot Support

Initiatives to improve the demand-driven focus of the sector include better donor coordination, market intelligence, improved packing and storage and a stronger export promotion agency

Initiatives to Improve the Demand-Driven Focus of the Agriculture Sector



Initiative 2A: Develop and launch donor coordination activities for agriculture		
Duration: Ongoing		Supporting Analysis: pp56,117 (AgStrat Baseline); p11, 18, 38 (AgCLIR)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Effective donor coordination and communication is essential to leveraging available expertise and funding to achieve maximum benefit potential. While there are several donor organizations active in Kosovo's agriculture sector, there is poor coordination across current and planned projects. ▶ The primary goal of this initiative is to develop and implement donor coordination activities agriculture programs with active support and participation from key implementers. A donor could initially create and chair a Donor Coordination Committee, with transition to a government agency, to coordinate donor expertise, funds, and activities to achieve maximum impact on the sector including infrastructure, production, extension, and marketing 	<ol style="list-style-type: none"> 1. <i>Form Donor Coordination Committee:</i> <ol style="list-style-type: none"> a. Identify initial donor and/or proper ministerial champion (i.e. MAFRD) and nominate qualified individual to lead and oversee Donor Coordination Committee b. Determine additional government Ministry representatives c. Contact donors working in Kosovo's agriculture sector, confirm interest in participating in Donor Coordination Committee, and designate a POC for coordination activities with decision making authority d. Ensure all key implementers for coordination projects participate in the Committee e. Define Donor Coordination Committee strategy, mission statement, goals, objectives, protocols for working together and operating responsibilities 2. <i>Conduct Donor Coordination Activities:</i> <ol style="list-style-type: none"> a. Create and maintain a comprehensive donor matrix outlining donor funding priorities and expertise, current and planned agriculture projects, project location and duration, intended beneficiaries, local counterparts and support, desired outcomes, etc. b. Using donor matrix, identify and prioritize regional and crop-specific opportunities for cooperation on current and future projects, assign personnel responsible, outline detailed implementation steps necessary for successful coordination of selected donor activities c. Initiate monthly donor coordinator meetings to review current and planned activities, monitor progress, and address challenges 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Value of donor investment in agriculture coordinated through committee ▶ Proportion of donor organizations represented in Donor Coordination Committee vs. total donors active in Kosovo ▶ Proportion of donor members present at Donor Coordination Committee meetings vs. total donor members of Donor Coordination Committee ▶ Proportion of donor coordinated projects vs. total number of donor funded projects 	<ul style="list-style-type: none"> ▶ Donors lack of participation: Replace donor representatives with alternates, clearly document benefits and incentives for participants in all selected coordination projects, and post progress publically ▶ Lack of trust or fear of reliance on other donors: Develop MoU and/or other contractual agreements clearly stating roles, responsibilities, and conflict resolution procedures 	<ul style="list-style-type: none"> ▶ €15-18M of donor investment in agriculture coordinated through committee ▶ 75% donors active in Kosovo are represented in Donor Coordination Committee ▶ Donor Coordination Committee meeting attendance at 75% ▶ Donor coordinated projects are 25% of total number of donor funded projects

Initiative 2A: Develop and launch donor coordination activities for agriculture
Duration: Ongoing

Supporting Analysis: pp56,117 (AgStrat Baseline); p11, 18, 38 (AgCLIR)

Rationale

- ▶ Reduce duplicative, potentially contradictory donor funded efforts in the agriculture sector
- ▶ Facilitate collaborative partnerships, improve donor communication, and build trust
- ▶ Focus donor efforts to achieve maximum impact and return on investment along the agriculture value chain
- ▶ Allow donors to take on projects requiring larger funding amounts by sharing the costs across organizations
- ▶ Ensure proper sequencing of projects along the agriculture value chain
- ▶ Facilitate knowledge exchange and discussions to determine best approach to deal with constraints facing Kosovo's agriculture sector

Key Counterparts
Donors

- ▶ Potential initial organizer of Donor Coordination Committee, with transition to government agency (to be determined)
- ▶ Provide monetary and technical assistance for coordinated agriculture projects
- ▶ Assist lead government agency to monitor progress of donor coordinated projects

MAFRD

- ▶ Potential organizer to create and oversee Donor Coordination Committee activities
- ▶ Maintain donor coordination matrix containing donor and project data
- ▶ Monitor and document progress of donor coordinated projects

Other Ministries

- ▶ Contribute to identification, prioritization , and implementation of agriculture priorities and corresponding coordinated donor funded projects
- ▶ Actively participate in Donor Coordination Committee meetings

High Level Cost Estimate
▶ Technical Assistance

- ▶ Develop donor coordination matrix (5 total person-days): \$4,500

Total Estimated Costs: \$4,500 for TA

Initiative 2B: Create market intelligence system and communication plan		
Duration: 3 years to establish and ongoing maintenance		Supporting Analysis: pp55, 122 (AgStrat Baseline); p39 (AgCLIR)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Access to information such as supply and demand data, market price information, and quality requirements is essential to making informed production and sales decisions. For example, the Foreign Agricultural Trade of the United States (FATUS) service provides historical prices for USA's exports and imports, by crop and country of origin / destination ▶ In addition, it is critical to know your end customer and be able to produce high quality products that meet desired end customer preferences in order to sell your agriculture goods. In Kosovo, there is limited knowledge and ability to meet customer requirements unless an intermediary (such as Perdrini) educates farmers on requirements. Most exporters are dependant on customers with knowledge of the end market. ▶ This initiative will: 1) design and develop a market intelligence system to track key data and 2) develop and execute a communication plan to ensure all intended beneficiaries are aware of and have access to the data/reports 	<ol style="list-style-type: none"> 1. <i>Create market intelligence system (MIS)</i> <ol style="list-style-type: none"> a. Determine appropriate home sponsor for this initiative (e.g. MAFRD, SOK) and conduct necessary capacity building activities as needed b. Develop list of intended beneficiaries c. Identify quantitative and qualitative data requirements (e.g. import and export volume by crop worldwide, farm gate/wholesale/market price information by crop, consumer preferences by market, safety standards, quality information, pesticide usage, contacts for wholesalers, distributors, etc.) d. Design templates for standard database reports and market research reports for major crops e. Determine data sources, collection methods, collection frequency, and organization/person responsible for data collection and market research reports f. Develop a plan to ensure data collection and report development is maintained and up to date g. Select appropriate database system and tailor it to address data requirements, desired functionality (i.e. search functions, data reports, email and SMS capabilities) , and potential end user restrictions (i.e. knowledge or access limitations) h. Test functionality to ensure intended beneficiaries can use and understand database prior to rollout 2. <i>Develop and execute communication plan:</i> <ol style="list-style-type: none"> a. Create detailed marketing campaign and training program (train the trainers) plans to introduce market intelligence system to smallholder farmers and other beneficiaries throughout Kosovo b. Conduct MIS training sessions to showcase database components, illustrate how to use data to make more informed production and sales decisions, explain how to access data (e.g. online, SMS) c. Conduct tailored outreach events to provide additional technical information through handouts and discussion forums to cover topics such as the importance of proper pesticide usage, hygiene requirements and agronomic practices required to comply with international food safety standards 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increased value of production ▶ Number of MIS training sessions conducted ▶ Number of market intelligence system users ▶ Frequency of market intelligence system users ▶ % of smallholder farmer users ▶ Number of outreach events and total attendance 	<ul style="list-style-type: none"> ▶ Beneficiaries don't know how to effectively use MIS: Involve select beneficiaries throughout design and testing phase and execute rollout training program and follow up training sessions ▶ Services not sustainable: Identify Government of Kosovo funding source and leverage for-profit models (fee for service, consulting, subscription, page view advertising, split of SMS fees) 	<ul style="list-style-type: none"> ▶ 5% increase value of production ▶ 2 training sessions/month/ trainer ▶ 5,000 market intelligence system users ▶ Average user accesses information 2 times per week ▶ 75% of the users are smallholder farmers ▶ 2 outreach events/region/month for 20 people

Initiative 2B: Create market intelligence system and communication plan**Duration:** 3 years to establish and ongoing maintenance**Supporting Analysis:** pp55, 122 (AgStrat Baseline); p39 (AgCLIR)**Rationale**

- ▶ The market intelligence system will establish a consolidated, 'one stop shop' platform to disseminate critical production and market data
- ▶ Enable producers to make informed production decisions that meet customer requirements for variety, shape, grade, size and packaging of products and possibly identify and predict buyer trends
- ▶ Clearly document safety standards and quality standards required to increase export potential and sell products to target markets
- ▶ Empower producers with instant price information to help ensure farmers receive the highest market prices
- ▶ Identify opportunities to take away market share from regional competitors given declining growth

Key Counterparts**MAFRD/SOK**

- ▶ Possible home/sponsor to lead development of market intelligence system and ongoing data collection effort
- ▶ Create quarterly market research reports
- ▶ Conduct topic specific outreach activities

Local Organization

- ▶ Possible home/sponsor for data collection efforts (trade data, market data, safety and quality standards) and outreach activities

Farmers/Associations

- ▶ Inform development of market intelligence system and regularly access data
- ▶ Actively participate in and help improve outreach activities

Donors

- ▶ Provide assistance to develop and launch market intelligence system and develop outreach programs

High Level Cost Estimate▶ **Technical Assistance:**

- ▶ Conduct requirements analysis, design, and develop MIS: \$700,000
- ▶ Test and deploy MIS and launch training program: \$600,000
- ▶ Develop and conduct outreach programs (1 person for 1 year): \$216,000

Total Estimated Costs: \$1,516,000 for TA

Initiative 2C: Improve capacity of collection centers, pack houses and cold storage		
Duration: 3 years		Supporting Analysis: pp58-62 (AgStrat Baseline); p8, 37 (AgCLIR)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ To effectively and efficiently move agriculture goods from producers to markets, a production value chain must have a sufficient capacity in for collection, packing, processing and storage in key agricultural areas. Currently, Kosovo's distribution infrastructure capacity is insufficient to support significant growth in production . For instance, Kosovo has only 5 collection and packing operations dedicated to the production value chain and also has limited cold chain infrastructure. Overall, key roles in the distribution chain are not being filled. ▶ To address this challenge, a two-pronged strategy will be developed including the: 1) design and implementation of a targeted marketing campaign to attract investors for needed infrastructure and 2) the provision of technical assistance for investors to support business planning and launch 	<ol style="list-style-type: none"> 1. <i>Design and implement a targeted marketing campaign</i> <ol style="list-style-type: none"> a. Conduct detailed needs assessment to clearly document specific infrastructure requirements including number by infrastructure type, capacity, location, clientele profile (small holder farmers, large holder farmers), etc. b. Prepare a series of pre-packaged investor prospectuses for each type of infrastructure investment starting with Vegco to highlight the demand plan, costs, financials, IRR, Capex and legal overview. c. Explore successful organizational models (private institution operating under government, independent government, state-owned bank) offering insurance programs to cover political and commercial risks for investors d. Develop marketing materials highlighting possible incentives, local resources available such as skilled labor and inputs, and examples of other successful ventures e. Identify target investor pool including Kosovo diaspora and investors active in the region with assistance from the Kosovo Chamber of Commerce (KCC) and the Alliance of Kosovo Businesses (AKB) f. Contact and develop a relationship with individuals in target investor pool, send prospectus and marketing materials, invite them to Kosovo to see first hand existing business opportunities 2. <i>Provide technical assistance</i> <ol style="list-style-type: none"> a. Develop detailed technical assistance plan outlining areas of support, eligibility and duration of support, organizations and personnel providing support, etc. b. Areas of support can include: 1) development of supply contracts with farmers and cooperatives, 2) assistance with regulations, land purchases, licensing and visa, 3) support for financing of equipment purchases, and 4) development of linkages and contracts with buyers 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Total Investment ▶ Number of investors building infrastructure in Kosovo ▶ Proportion of built infrastructure vs. total needed infrastructure 	<ul style="list-style-type: none"> ▶ Investors do not want to invest in Kosovo due to perceived risk: Develop marketing materials highlighting political stability. Develop risk insurance (e.g. Serbia and Montenegro Export Credit Agency - SMECA). Prepare a pre-packaged investment prospectus based on VegCo. 	<ul style="list-style-type: none"> ▶ 4 investors per year building infrastructure in Kosovo ▶ €4 million in FDI per year (based on Vegco, each investment is 1M Euros) ▶ 75% of needed infrastructure is built

Initiative 2C: Improve capacity of collection centers, pack houses and cold storage**Duration:** 3 years**Supporting Analysis:** pp58-62 (AgStrat Baseline); p8, 37 (AgCLIR)**Rationale**

- ▶ The appropriate number, capacity, placement, and quality of collection centers, pack houses, and cold chain infrastructure builds a strong and comprehensive production infrastructure distribution chain able to effectively and efficiently meet growing export demand
- ▶ Increase in collection and storage centers will improve the flexibility of distribution for sellers allowing farmers to take advantage of higher off season prices and reduce reliance on imports
- ▶ Additional pack houses and cold chain infrastructure will satisfy customer demands for quality and enable predictable, flexible, and reliable delivery
- ▶ Increase in tax revenue received and employment created from new businesses

Key Counterparts**Agriculture Export Agency (AEA)/IPAK**

- ▶ Lead development of targeted marketing campaign
- ▶ Work with other ministries to provide defined technical support

Other Ministries

- ▶ Ministries including Trade and Industry and Forestry, Agriculture, and Rural Development will support AEA/IPAK to provide defined technical assistance

Investors

- ▶ Interested investors will work with AEA/IPAK and local ministries to establish businesses

Donors

- ▶ Provide technical assistance to develop and launch targeted marketing campaign and build business plans

High Level Cost Estimate

- ▶ **Technical Assistance:** \$972,000 (1.5 people for 3 years)
- ▶ **ODCs:** \$250,000 for marketing costs

Total Estimated Costs : \$1,222,000 for TA and ODCs

Initiative 2D: Establish centralized organization to oversee marketing & export promotion of agriculture goods		
Duration: 3 years		Supporting Analysis: pp55, 64, 65, 121 (AgStrat Baseline), p34, 37 (AgCLIR)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ IPAK does not focus on agribusiness given the importance of the sector in the economy. Overall, the agency has a €250k budget and only 13 employees, many of whom do not speak foreign languages. Services provided to users are generally considered poor. Since agriculture is a significant portion of Kosovo's economy, it is essential to have a strong, capable organization leading marketing and export promotion to realize Kosovo's full agriculture export potential ▶ This initiative will establish a public –private organization to focus on Agricultural export promotion. This agency will take over the agriculture promotion functions of IPAK and will provide training, distribute market intelligence information, and launch targeted branding and promotion campaigns. 	<ol style="list-style-type: none"> 1. <i>Establish organization</i> <ol style="list-style-type: none"> a. Define the public-private structure, mission and programs for the Agricultural Export Agency (AEA) b. Develop the public-private governance model including the governmental sponsor (e.g. PM, MTI, MAFRD) and the private-sector participants, develop the resource plan, and hire qualified staff c. Develop marketing and promotion plan including events and low-cost marketing programs and define focus on crops, products and markets d. Develop performance metrics and M&E 2. <i>Provide training and technical assistance</i> <ol style="list-style-type: none"> a. Develop/provide trainings on sales, marketing, public relations, negotiation, customer service, contracts, etc. 3. <i>Launch branding campaigns</i> <ol style="list-style-type: none"> a. Create branding campaigns focused on positioning priority crops above the commodity level (e.g. "Try Kosovo Kiwi!"); b. Develop campaigns focused on attributes of Kosovo that emphasize value-add – certifications such as organic, halal or fair trade, designations based on historic producer regions (e.g. Rahovica table grapes), production by small family farmers 4. <i>Initiate Promotion campaigns</i> <ol style="list-style-type: none"> a. Launch low-cost and highly effective marketing campaigns such as "earned media", web sites, advertising and direct marketing to retailers and buyers in target markets (e.g. Chilean blueberries) b. Target marketing based on product type and pre-positioning of commodities at agriculture food fairs c. Support qualified smallholder farmers to distribute their products readily at international fairs (e.g. USAID South African Trade Hub sponsored six companies to attend the 2006 Spring Fancy Foods Show in Chicago, helped pre-position distribution of products so small farmers could promote and easily sell their products with minimal lag time during and after the food fairs, provided free 3-week distribution to premium health spas, offered samples at radio stations and shows, and launched a national print and online PR campaign with the potential to reach over 3.5 million consumers) 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in agriculture export value ▶ Number of training sessions conducted ▶ Number of attendees at training sessions ▶ Growth in export quantity for targeted crops ▶ Number of internationally recognized brands ▶ Number of exporters represented at trade fairs 	<ul style="list-style-type: none"> ▶ Products do not meet quality and safety standards: Establish and enforce stringent quality and safety standards and launch an information campaign to educate producers on the importance of standards ▶ Small producers cannot reach economies of scale: Support bundling of less-than-truckload quantities 	<ul style="list-style-type: none"> ▶ 10% increase in agriculture export value ▶ 3 trainings per region per month ▶ 20 attendees for each training session ▶ 25% CAGR in export quantity for first 5 years ▶ 4 additional internationally recognized brands ▶ 5 exporters represented at each trade fair

Initiative 2D: Establish centralized organization to oversee marketing & export promotion of agriculture goods
Duration: 3 years

Supporting Analysis: pp55, 64, 65, 121 (AgStrat Baseline), p34, 37 (AgCLIR)

Rationale

- ▶ Kosovo's agriculture goods have weak branding. They are positioned on the lowest rung of the supply chain and are used primarily to fill seasonal demand in neighboring markets when domestic products are unavailable
- ▶ Export promotion is fragmented and is not focused on key markets and crops. Little focus has been placed on promotional events besides trade fairs
- ▶ This organization will centralize and strengthen Kosovo's marketing and promotion capabilities, facilitate significant export growth and enhanced brand recognition worldwide, develop capacity and knowledge of small and large holder farmers to make informed, proactive decisions when identifying potential markets and buyers

Key Counterparts
Agriculture Export Agency (AEA)

- ▶ Help farmers find markets for their products and increase knowledge of demand driven export considerations
- ▶ Monitor progress of service delivery

IPAK

- ▶ Support AEA to execute its mission
- ▶ Reorganize and redefine purpose to build on existing strengths and eliminate weaknesses
- ▶ Monitor progress of service delivery

Marketing and Export Promotion Experts

- ▶ Work with the AEA to outline and implement key marketing and promotion services
- ▶ Ensure service delivery excellence and results

Donors

- ▶ Provide monetary and technical assistance to develop the AEA

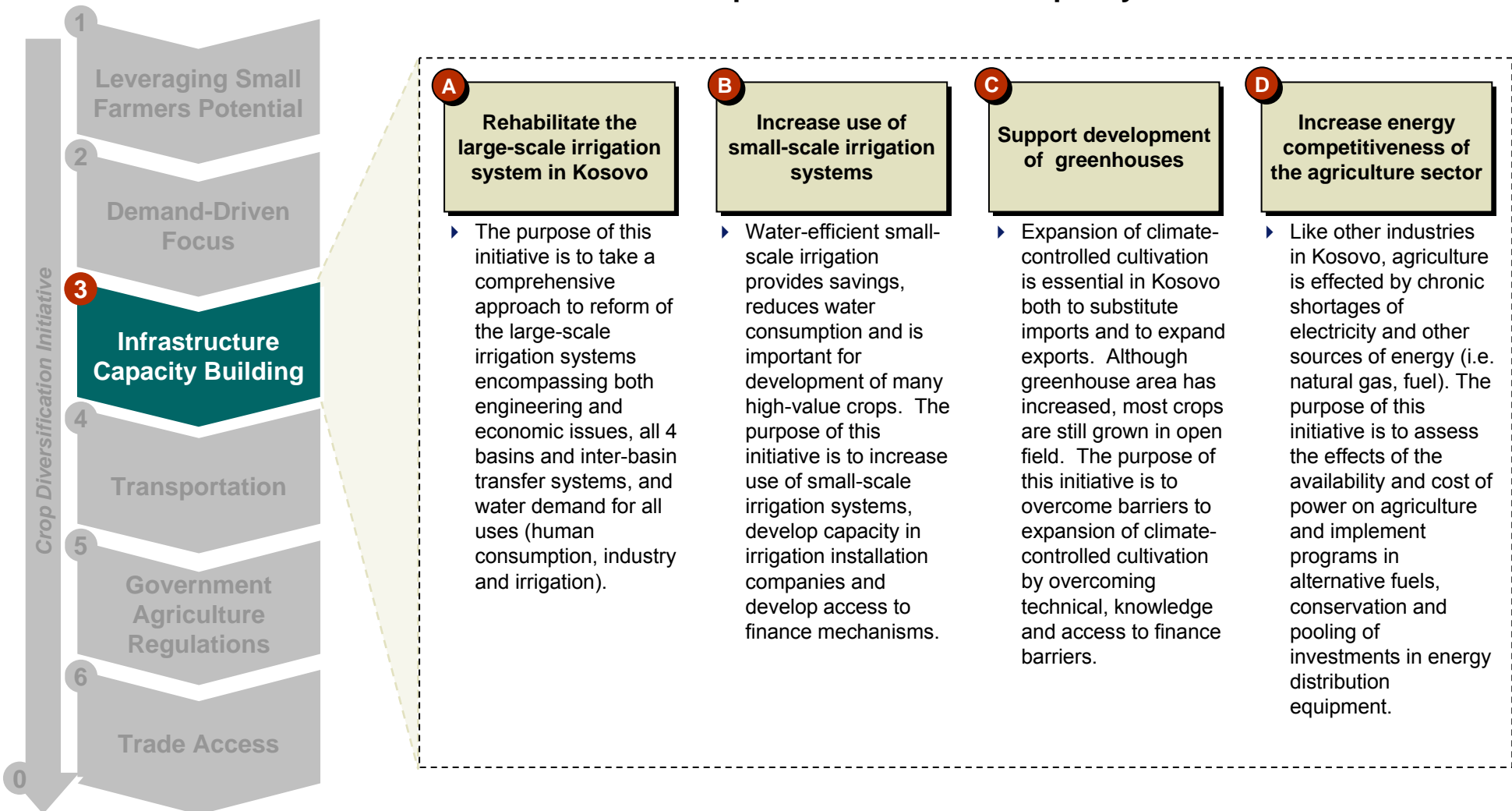
High Level Cost Estimate

- ▶ **Technical Assistance:** \$1,296,000 (2 people for 3 years)
- ▶ **ODCs:** \$250,000 for marketing costs

Total Estimated Costs : \$1,546,000 for TA and ODCs

Initiatives to improve infrastructure include four programs focused on irrigation, greenhouses and electrical infrastructure

Initiatives to Improve Infrastructure Capacity



Initiative 3A: Rehabilitate the large-scale irrigation system in Kosovo		
Duration: 4 years		Supporting Analysis: pp66-72, pp123-124 (AgStrat Baseline)
Description	Implementation Steps	
<p>▶ The large-scale irrigation system in Kosovo is not sustainable, suffering from low demand in some areas with scarcity of supply in others; prices insufficient to recover cost; low investment in operations & maintenance; and human capacity issues . Of the 71k hectares covered by the systems only 18k are currently irrigated. In order to reform this system, a comprehensive approach must be taken which encompasses both engineering and economic issues; all 4 basins and inter-basin transfer issues and water demand for all uses (human consumption, industry and irrigation).</p>	<ol style="list-style-type: none"> 1. <i>Provide training on Integrated Water Resource Management</i> <ol style="list-style-type: none"> a. Provide training to experts who will participate in the 2011 Water Strategy, led by MESP 2. <i>Conduct a study to provide clarity and transparency to investment decisions covering all basins and IPs (as recommended by World Bank)</i> <ol style="list-style-type: none"> a. Institutional appraisal - capacity, available funding and public expenditure b. National Water Demand Management Program - develop processes for managing trade-offs in water use and investment including pricing and conservation programs c. Development of investment plan for Ibër basin including inter-basin use of the Gazivodë Reservoir d. Identification of water demand scenarios and likely shortages e. Development of resource plan for irrigation providers f. Assessment of climate change on supply and demand of water g. Prioritization of investments using multi-criteria analysis- priorities, costing, funding models 3. <i>Organizational and Process Re-design at MESP, MAFRD and IPs</i> <ol style="list-style-type: none"> a. Support development of more effective organizations and processes for water management b. Support changes to laws and enforcing regulations 4. <i>Technical assistance to IPs to establish sustainable business models focusing on Radoniqi and Ibër-Lepenc</i> <ol style="list-style-type: none"> a. Develop financial plans including estimates of break-even irrigated area, needed O&M investments and shadow price b. Develop and implement marketing plans including creation of Water Use Associations to improve collection c. Consider options for private-sector financing 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increased revenue in O&M at the Irrigation Providers ▶ Increased investment in O&M at the Irrigation Providers ▶ Increase in irrigated area ▶ Investment in expansion and rehabilitation of irrigation systems 	<ul style="list-style-type: none"> ▶ Inability to attract sufficient investment from private sector, development banks or Kosovo Central Budget (KCB) - Identification of funding models at time of investment prioritization, focus on feasible investments only ▶ Lack of political will to enforce Water Law which calls for “full cost recovery” and to re-organize water management functions at MAFRD, MESP and IPs - Strong GoK buy-in at PM level needed before project start ▶ Possibly adverse effects on low-value staples crops (e.g.. corn) if prices increase - Need for effective extension services to assist in transition to higher value crops 	<ul style="list-style-type: none"> ▶ Completion of IWRM training ▶ Completion of investment study

Initiative 3A: Rehabilitate the large-scale irrigation system in Kosovo

Duration: 4 years

Supporting Analysis: pp66-72, pp123-124 (AgStrat Baseline)

Rationale

- ▶ Sustainable operation of at least some of the Irrigation Providers, improving the efficiency of the systems, reducing the strain on the GoK budget and avoiding pending financial crisis.
- ▶ Prioritization of investments in water infrastructure resulting in sustainable use of all four river basins in Kosovo. Likely priorities including expansion of the Radoniqi system, re-planning of the Dukadjini system which has lost 75% of its original area to urbanization, and recharging of the Drini i Bardhë basin from the Ibër basin. The planned expansion of the Ibër Lepenc system to the southeast of the country should also be considered.
- ▶ Expansion of the total irrigated areas resulting in higher crop yields.
- ▶ Improved water pricing promoting efficient use of water for economic purposes.

Key Counterparts

- | | |
|-----------------------------|---|
| GoK | <ul style="list-style-type: none"> ▶ OPM - Project sponsor. Direction setting for public expenditure priorities, organization. ▶ MESP Dept of Water ▶ MAFRD Dept of Irrigation & Drainage and of Rural Development |
| | |
| Irrigation Providers | <ul style="list-style-type: none"> ▶ Development of finance, marketing and investment functions ▶ Provision of irrigation services to farmers |
| | |
| Donor Programs | <ul style="list-style-type: none"> ▶ Funding of technical assistance ▶ Coordination and communication ▶ Protection of subsistence farmers who could be hurt by higher tariffs |
| | |
| Development Banks | <ul style="list-style-type: none"> ▶ Lead financing of projects including private investors and GoK public expenditures |
| | |
| Cooperatives | <ul style="list-style-type: none"> ▶ Develop water use associations to pool purchases of water ▶ Improve water use efficiency by advising farmers on water-saving techniques |

High Level Cost Estimate

- ▶ **Technical Assistance:**
 - IWRM Training - \$25,000 (50 participants)
 - Investment Analysis - \$1,100,000 (61 person-months, IBRD analysis)
 - Implementation - \$3,200,000 (5 people for 3 years)
- ▶ **Capital Expense:** Minimum €25.6M (*Ibër-Lepenc 1* - €6.4M; *Radoniqi* - €9.6M; *Drini i Bardhë* - €9.6M)

Total Estimated Costs: TA = \$4,300,000; CapEx = >€25,600,000 ¹

Note (1) : CapEx requirements not included in high level cost estimate
Sources : BAH Analysis

Initiative 3B: Increase use of small-scale irrigation systems		
Duration: 2 years		Supporting Analysis: pp66-72, pp123-124 (AgStrat Baseline)
Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Water-efficient small-scale irrigation provides savings to farmers, reduces water consumption and is important for development of many crops (e.g. table grapes, fruit trees). The purpose of this initiative is to increase use of small-scale irrigation systems, develop capacity in irrigation installation companies and develop finance mechanisms. 	<ol style="list-style-type: none"> 1. <i>Pilot Programs for Water-Efficient Small Scale Irrigation Systems</i> <ol style="list-style-type: none"> a. Identify irrigation suppliers/installers and provide technical assistance in technology, marketing and business plan. b. Identify gaps in available technologies. c. Work with suppliers and other counterparts to identify pilot sites d. Support pilot sites with small grants. e. Measure and communication cost savings and yield improvements and resulting ROI. f. Work with Ministry of Environment and Spatial Planning (MESP) to identify licensing and other regulatory issues and remove obstacles. g. Examine whether incentives can be provided by GoK for efficient water use. 2. <i>Establish financing programs for small-scale irrigation systems</i> <ol style="list-style-type: none"> a. Communicate financial facts about small-scale irrigation to banks and MFIs - costs, improvements in farm cash flow, etc. b. Work with banks and MFI to design procedures to increase financing for irrigation systems. c. Consider provision of a DCA or other guarantee mechanism to support investment in small-scale irrigation systems d. Identify potential for vendor financing working with technology and equipment providers 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Additional income to small irrigation providers ▶ Increased revenue (yield and value) to farmers ▶ Development of a financing program ▶ Development of capacity in irrigation system suppliers 	<ul style="list-style-type: none"> ▶ Availability of investment capital for cost-shares in pilot systems. Mitigation - partial financing of investments through grants program, development of bank and MFI financing mechanisms, work with at least some large farms. ▶ Capacity of irrigation suppliers/installers to participate in the pilots. Mitigation - provision of technical assistance to suppliers/installers both on technical issues and on marketing and business planning. 	<ul style="list-style-type: none"> ▶ Implementation of at least 10 pilot systems in first year and 40 in second year ▶ Development of capacity in at least 1 provider/installer of irrigation systems

Initiative 3B: Increase use of small-scale irrigation systems

Duration: 2 years

Supporting Analysis: pp66-72, pp123-124 (AgStrat Baseline)

Rationale

- ▶ Water-efficient small-scale irrigation provides savings to farmers and reduce water consumption
- ▶ Drip irrigation is critical for several of the high-value crops in the crop diversity initiative including table grapes, chicory, asparagus.

Key Counterparts

- | | |
|---|---|
| Donor Program | <ul style="list-style-type: none"> ▶ Provision of technical assistance to irrigation installers and farmers ▶ Supervision of pilot programs ▶ Management of Small Grant Fund |
| MESP | <ul style="list-style-type: none"> ▶ Improving process for water licensing for systems under 100 ha |
| MAFRD | <ul style="list-style-type: none"> ▶ Potential source of financing or water-efficiency incentives through grant fund |
| Banks, MFIs and Irrigation Vendors | <ul style="list-style-type: none"> ▶ Source of financing for small-scale irrigation systems |

High Level Cost Estimate

- ▶ **Technical Assistance:** \$160,000 (9 total person-months as part of a larger initiative)
- ▶ **Small Grants Fund:** \$1,000,000 (\$10k average grant size for 100 systems)
- ▶ **Potential DCA or other Finance Mechanism:** (Not budgeted)

Total Estimated Costs: \$1,160,000 for TA and Small Grants

Initiative 3C: Support development of greenhouses		
Duration: 4 years		Supporting Analysis: pp73-78, 125 (AgStrat Baseline)
Description	Implementation Steps	
<p>▶ Expansion of climate-controlled cultivation is essential in Kosovo both to substitute imports and to expand exports. Although greenhouse cultivation has expanded to over 154 Ha over the past 4 years, most crops are still grown in open field. The purpose of this initiative is to overcome barriers to expansion of climate-controlled cultivation by providing technical assistance to greenhouse construction companies, improving crop management techniques, developing marketing & distribution channels and creating financial products.</p>	<ol style="list-style-type: none"> 1. <i>Technical assistance to Kosovo installers of modern greenhouses</i> <ol style="list-style-type: none"> a. Work with 3-5 installers of modern, block-style greenhouses to improve technology and equipment, construction quality, cost control and marketing. b. Create vendor financing options with equipment suppliers that reduce the up-front capex required for greenhouses. 2. <i>Extension services for climate-controlled cultivation</i> <ol style="list-style-type: none"> a. Identify the right model for provision of services b. Provide training and extension to improve crop management (insect and disease control, planting and harvesting schedule, etc) c. Advise farmers on crop diversification, identifying high-value crops that can benefit from greenhouse development 3. <i>Development of marketing & distribution plans for climate-controlled crops</i> <ol style="list-style-type: none"> a. Work with distributors in the local market and with exporters to create distribution and sales channels for climate-controlled production b. Advise farmers on price fluctuations and the best times and channels for sale of greenhouse grown crops 4. <i>Development of financial products to support development of greenhouses</i> <ol style="list-style-type: none"> a. Explore options for donor funding, tax credits, investment and income support b. Work with banks to develop cost-effective products suitable for the 6-9 year pay-back period required for greenhouse investments including term loans, mortgages and leasing 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<p>▶ Increased value of crops produced in greenhouses or other climate-controlled conditions</p> <p>▶ Value of investment in greenhouses</p> <p>▶ Expansion of total area of greenhouses <ul style="list-style-type: none"> – Of that, area under “modern” greenhouses as opposed to tunnels </p> <p>▶ Number of farmers trained and supported with extension services</p> <p>▶ Number of greenhouse installation companies supported</p>	<p>▶ Availability of finance: modern greenhouses require a substantial investment and changes in crop management techniques to achieve pay-back. The program will not be acceptable unless sources of financing can be developed and farmers’ growing practices be changed</p> <p>▶ Mitigation <ul style="list-style-type: none"> – Provide extension services on crop management and post-harvest distribution to ensure ROI is achieved – Focus on financial products that provide an incentive for investment including “better than market” finance from donors or MAFRD and/or from vendors of greenhouse equipment </p>	<p>▶ Program should target at least 130 hectares of new greenhouses over 4 years, an approximate doubling of the current stock</p>

Initiative 3C: Support development of greenhouses

Duration: 4 year

Supporting Analysis: pp73-78, 125 (AgStrat Baseline)

Rationale

- ▶ Without greenhouses, most crops are harvested within a two-week window causing a glut of product during that time and a scarcity at other times. This problem must be addressed both for import substitution and exports and development of greenhouses are critical.
- ▶ This program will address the obstacles to expansion of greenhouses including the quality of construction, farmers' knowledge of the best planting and harvesting schedules, knowledge of appropriate crop management techniques for greenhouse cultivation, lack of post-harvest processing and marketing channels, and diversification of the crops planted in greenhouses.
- ▶ Because the payback period is 6-9 years, even with improvements in all of these areas, access to finance is also an important – perhaps the most important – obstacle to overcome. This program will address the obstacle by developing two types of financing: 1) vendor financing provided by international equipment suppliers through Kosovo greenhouse construction companies and 2) bank financing provided through banks.

Key Counterparts

- | | |
|---|---|
| Donor Program | <ul style="list-style-type: none"> ▶ Provide technical assistance to greenhouse construction firms ▶ Development of extension programs and training for farmers ▶ Development of access to finance programs include possible provision of grants and/or capital or guarantees to banks |
| MAFRD | <ul style="list-style-type: none"> ▶ Support access to finance programs through grant funding and KCB allocation ▶ Support training programs |
| Equipment Suppliers and Installers | <ul style="list-style-type: none"> ▶ Support introduction of new technologies and construction techniques ▶ Support vendor financing programs ▶ Provide training to farmers |
| Associations/ Universities | <ul style="list-style-type: none"> ▶ Provide training and extension programs ▶ Support development of distribution & marketing chain |

High Level Cost Estimate

- ▶ **Technical Assistance:** \$2,600,000 (3 people for 4 years as part of a larger initiative)
- ▶ **Finance Fund and Grants:** \$2,900,000 (Total investment to develop 130 ha of greenhouse is €19.5M or \$29.3M. We have assumed that grants, 2-stage lending and guarantees will need to cover 10% of this total.)

Total Estimated Costs: \$5,500,000 TA and Financing

Initiative 3D: Increase energy competitiveness of the agriculture sector		
Duration: 2 years		Supporting Analysis: Not specifically addressed in baseline
Description	Implementation Steps	
<p>▶ Like other industries in Kosovo, agriculture is effected by chronic shortages of electricity and natural gas. While it is assumed that this situation will improve with the completion of the Kosovo e Re, the impacts on all aspects of the agriculture value chain including irrigation, greenhouse, soil preparation and harvesting, cold storage, packaging, etc. must be understood. The purpose of this initiative is to assess the effects of the availability and cost of power on agriculture and implement programs in alternative fuels, conservation and pooling of investments in energy distribution equipment.</p>	<ol style="list-style-type: none"> 1. <i>Identify impacts of power and fuel shortages on all stages of the agriculture value chain</i> <ol style="list-style-type: none"> a. Determine availability and cost of electricity compared to benchmark countries b. Determine cost and availability of natural gas and other fuels compared to benchmark countries c. Forecast supply and estimate unmet demand for each of the next ten years 2. <i>Develop a plan to mitigate unmet and uneconomic demand over the next ten years</i> <ol style="list-style-type: none"> a. Consider alternate power sources and fuels b. Consider conservation and renewables c. Highlight activities and methods that are uncompetitive under current energy supply conditions d. Analyze energy pricing for agriculture and recommend changes 3. <i>Implement programs to increase energy competitiveness</i> <ol style="list-style-type: none"> a. Provide small grants for alternative fuels including farm waste and fuel crops (e.g. canola) and small-scale wind and solar (e.g. solar for irrigation pumping) b. Provide small grants for conservation and energy efficiency projects c. Provide incentives to discontinue uneconomic activities d. Create Agriculture Processing Parks in A+ or A areas that will enable agribusinesses to pool the costs of investment in energy distribution. 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Value of energy saved ▶ Total additional investment in energy ▶ Number of farmers and agribusinesses assisted 	<ul style="list-style-type: none"> ▶ There is a risk that incentives for alternative fuels will distort decisions about whether to plant fuel crops instead of food or export crops. Mitigation: The 10-year plan will examine in detail which fuel substitution programs are economically rationale. In addition, specific grant proposals will be evaluated to ensure that grants are non-distorting. 	<ul style="list-style-type: none"> ▶ 100 programs implemented ▶ 20 programs in first year

Initiative 3D: Increase energy competitiveness of the agriculture sector

Duration: 2 years

Supporting Analysis: Not specifically addressed in baseline

Rationale

- ▶ The availability, reliability and cost of electricity, natural gas and other fuels effects the competitiveness of the Kosovo agriculture sector.
- ▶ The implications on competitiveness must be understood and a plan developed to offset disadvantages especially until the Kosovo e Re power plant can be brought on line.
- ▶ This initiative will improve the competitiveness of agribusiness by substituting cheaper and more readily available biofuels for electricity and hydrocarbons, by introducing conversation projects, by assisting agribusinesses in identifying and discontinuing processes that are not competitive because of energy and by developing Agriculture Processing Parks with A+ energy supply from KEK.

Key Counterparts

Donor Program

- ▶ Conduct analysis and provide technical assistance
- ▶ Administer and monitor grants program

**MAFRD,
Ministry of
Energy**

- ▶ Act as primary GoK counterparts for the program
- ▶ Provide data and validate assumptions for analysis. Ensure that agriculture demand is incorporated into national energy plans
- ▶ As possible, contribute to grants program

Associations

- ▶ Assist the program in providing technical assistance, communicating about the grants program and identifying and qualifying grants applications

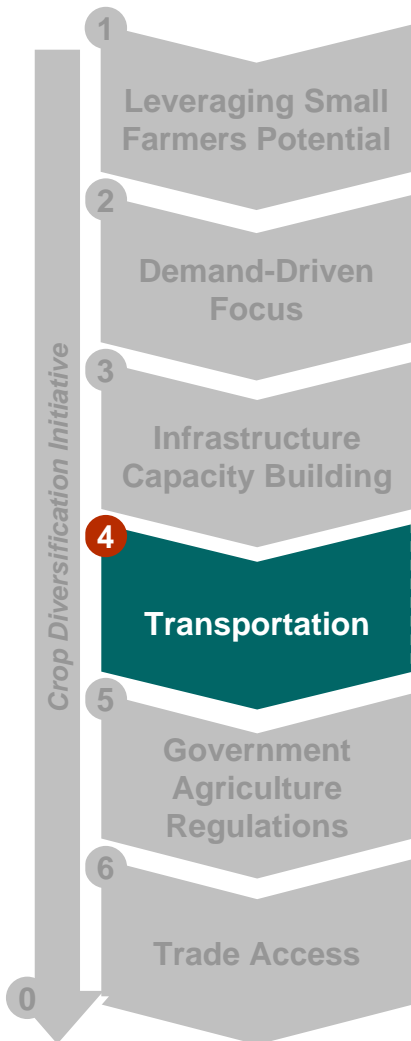
High Level Cost Estimate

- ▶ **Technical Assistance:** \$1,080,000 as part of a larger program (2.5 persons for 2 full years)
- ▶ **Small Grants Program:** \$1,500,000 (100 projects at a grant value of €10k, or \$15k, on average)

Total Estimated Costs: \$2,580,000 for TA and Small Grants Program

Initiatives to improve transportation include three programs to develop the rural road network, develop air freight services and communicate benefits of the new road link to Tirana

Initiatives to Improve Transportation



A **Prioritize and develop rural roads using cost-benefit analysis and PPPs**

- ▶ The density of the rural road network in Kosovo is lower than any of its regional competitors, which act as a disadvantage to agriculture and rural economic activity in general. The purpose of this initiative is to prioritize developments in the rural road network based on the economic impact of the investments, identify funding and develop tenders for new construction including development of PPPs that can lessen the initial capital outlay for road construction.

B **Develop air perishables plan and remove regulatory and market obstacles**

- ▶ Development of high-value agriculture exports often relies on air transportation, which provides advantages in freshness, timeliness and reliability of delivery. In Kosovo, there is very little export by air and no dedicated freighters servicing the country. The purpose of this initiative is, in the short-term, to remove policy obstacles to an air perishables freighter service from Pristina-Milan and, in the long-term, to develop a strategy expansion of cost-effective air perishables services from Pristina.

C **Analyze and communicate cost advantages of the new Tirana highway**

- ▶ The Tirana highway will be complete by Spring 2010. Interviews with Pristina-based freight forwarders indicate that they do not plan to shift significant traffic to this route. Some of this behavior is economically rational, but some is based on habit or lack of knowledge as many freight operators are used to the Yugoslav network. The purpose of this initiative is to provide quality data on the economics of the new route, to communicate it and to attract additional freight forwarders from Albania and elsewhere in the region to Kosovo.

Initiative 4A: Prioritize and develop rural roads projects using cost-benefit analysis and PPPs	
Duration: 4 years	Supporting Analysis: pp127-128 (AgStrat Baseline)

Description	Implementation Steps	
<p>▶ The density of the rural road network in Kosovo is lower than any of its regional competitors, which act as a disadvantage to agriculture and rural economic activity in general. The purpose of this initiative is to prioritize developments in the rural road network based on the economic impact of the investments, identify funding and develop tenders for new construction including development of PPPs that can lessen the initial capital outlay for road construction.</p>	<ol style="list-style-type: none"> 1. <i>Prioritize planned investments in farm to market roads using a cost-benefit economic model</i> <ol style="list-style-type: none"> a. Create a comprehensive list of planned rural road projects b. Determine the economic impact of each project in terms of economic output (GDP) and employment using a model like the World Bank <i>Road Economic Decision (RED)</i> model. c. Working with stakeholders, prioritize projects in terms of cost-benefit for rural development. d. Work with a Kosovo stakeholder to transfer the model and the analytical framework 2. <i>Develop detailed costing and project plans for each High Priority project</i> <ol style="list-style-type: none"> a. Estimate the length of road for each project and establish the International Roughness Index (IRI) for each road segment b. Using data from similar projects, cost the project based on the length, IRI of each segment and the type of road desired. 3. <i>Identify financing model, create tender process and identify contractors</i> <ol style="list-style-type: none"> a. Define the source(s) of financing and financing model for each project including direct payment, BOTs, etc. b. Conduct pre-tender meetings with potential bidders. c. Develop tender documents and assist Kosovo counterparts to manage tender process. 4. <i>Manage construction projects and maintenance; repeat prioritization</i> <ol style="list-style-type: none"> a. Assist Kosovo counterparts to manage the projects. b. Development maintenance plans. c. On an annual basis, repeat cost-benefit analysis to prioritize next round projects. 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Total reduction in transport costs ▶ Reduction in prices of raw materials ▶ Length of road constructed ▶ Value of tenders completed ▶ Model successfully transferred to counterpart and process in place for on-going prioritization of projects 	<ul style="list-style-type: none"> ▶ Availability of funding to complete projects. Mitigation – Develop diversified sources of funding including Kosovo budget, development banks and private investors in PPPs ▶ Interest/willingness of GoK to prioritize development of rural roads using an economic benefit model. Mitigation. Work closely with MOT and other counterparts to ensure that they agree with the specifics of the model and have the knowledge to use it. 	<ul style="list-style-type: none"> ▶ Prioritization and costing analysis complete ▶ At least 2 projects tendered in first year and 10 in life of project

Initiative 4A: Prioritize and develop rural roads projects using cost-benefit analysis and PPPs

Duration: 4 years

Supporting Analysis: pp127-128 (AgStrat Baseline)

Rationale

- ▶ Kosovo has the lowest road network density of any country in the region. Low quality of the road network has been identified as an impediment for farm to market transport and other rural investment (e.g.. Tina Association interviews). Funding is limited.
- ▶ The initiative will address this problem in a cost-effective way by prioritizing farm to markets roads that will provide the highest benefits in terms of rural incomes and employment and financing them first.
- ▶ It will also identify diversified sources of financing for PPPs that can be used to reduce the up-front capital investment required for road development.

Source : CIA World Factbook

Key Counterparts

Ministry of Transport

- ▶ Identify the list of possible projects
- ▶ Participate in and approve the prioritization, costing and development of projects
- ▶ Manage tenders, projects and maintenance of roads

Donors and Development Banks

- ▶ Finance the analytical phases of the project.
- ▶ Identify sources of financing for construction including through loans, risk insurance, etc.
- ▶ Support sustainability of the analytical framework and the construction; measure results

Private Sector

- ▶ Support financing of the projects through attraction of finance partners in PPP consortia
- ▶ Oversee the building and maintenance of infrastructure

High Level Cost Estimates

- ▶ **Technical Assistance:**
 - ▶ Initial Analysis - \$250,000 (based on similar MCC studies in Serbia, Mozambique)
 - ▶ Implementation - \$3,900,000 (6 people for 4 years as part of a larger program)
- ▶ **CapEx:** Paving and upgrading of farm-to-market roads estimated at \$120,000-150,000 per km.¹

Total Estimated Costs: \$4,150,000 for TA and Implementation

Note (1) : CapEx requirements not included in high level cost estimate
Sources : BAH Analysis

Initiative 4B: Develop air perishables plan and remove regulatory and market obstacles

Duration: 1 year

Supporting Analysis: pp84, 130 (AgStrat Baseline)

Description	Implementation Steps	
<p>▶ Development of high-value agriculture exports often relies on air transportation, which provides advantages in freshness, timeliness and reliability of delivery. In Kosovo, there is very little export by air and no dedicated freighters servicing the country (Turkish Air flies a freighter from Milan but does not pick up in Pristina). The purpose of this initiative is to develop an air perishables plan including the level of demand that would make air transport feasible and infrastructure, economic and policy obstacles to development of this area.</p>	<ol style="list-style-type: none"> 1. <i>Identify and resolve policy obstacles to air freight pick-up at Pristina airport</i> <ol style="list-style-type: none"> a. Identify the specifics of the ICAO licensing requirement b. Develop a strategy to negotiate with ICAO in cooperation with existing carriers servicing Pristina (Turkish, Austrian, Slovenian) c. Resolve issues to enable exports on the existing Istanbul to Milan freighter operated by Turkish 2. <i>Develop a forward-looking plan to expand air freight access</i> <ol style="list-style-type: none"> a. Based on development of high-value crops, development a 10-year estimate of demand for perishables air freight b. Estimate the price point at which air freight will be economically feasible c. Interview air freight operators to determine the point at which expanded air freight at PRN is feasible d. Prepare a high level estimate of the level of demand that would require additional capital investment at PRN 3. <i>Brief counterparts on results and establish supply and demand commitments</i> <ol style="list-style-type: none"> a. Secure commitments from international organizations and companies to use commercial air freighter service as perishables volume increases as a way to increase supply ahead of demand b. Establish commitments from air freight operators to offer commercial services at sustainable rates to Pristina airport 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in quantity exported by air ▶ Total saving on air freight from use of re-routed freighter ▶ Number of weekly freighters servicing PRN. ▶ Tons of agriculture perishables shipped from Kosovo 	<ul style="list-style-type: none"> ▶ “Chicken and the egg” problem / additional air service will not come without more market demand - To mitigate, 1) identify commitments from international organizations to use new air freight services while perishables demand builds up; 2) create demand estimates in conjunction with the “high value crops” programs to show a 5-year perishables demand estimate ▶ Recognition of sovereignty issues may complicate negotiations with ICAO – To mitigate, fully research in pilot phase and approach accordingly. 	<ul style="list-style-type: none"> ▶ Completion of plan and briefing of private sector stakeholders including major freight airlines not yet in Kosovo (Lufthansa and Scandinavian are the largest). ▶ Introduction of at least one weekly dedicated freighter service. ▶ At least 25 tons of perishables shipped in first year

Initiative 4B: Develop air perishables plan and remove regulatory and market obstacles

Duration: 1 year

Supporting Analysis: pp84, 130 (AgStrat Baseline)

Rationale

- ▶ Development of perishables exports for many crops will rely on availability and affordability of air transport. The benchmarks include several examples - most notably Kenyan green bean exports to the UK.
- ▶ The most affordable services are provided on dedicated air freighters on “dead head” services, where Kosovo producers can export freight using spare capacity on air freighters used to import goods to Kosovo.
- ▶ Currently Turkish Air operates a dedicated air freighter flying between Istanbul-Pristina-Milan and Milan is one of the largest terminal markets for produce in Europe. An ICAO license must be obtained to enable Turkish Airlines to pick up freight at Pristina on this route.
- ▶ The purpose of this initiative is provide access to air shipment for Kosovo’s perishables exports through a re-routed freighter service, providing access to new markets.

Key Counterparts

**Ministry of Transport/
Pristina Airport**

- ▶ Source of data on infrastructure and policy constraints
- ▶ Main counterpart for negotiations with ICAO (perhaps with Ministry of Foreign Affairs)

Donors and Development Banks

- ▶ Fund technical assistance portion of work
- ▶ Assist in developing short-term “demand commitments” from international organizations and multi-national companies

Private Sector Freight Companies

- ▶ Provide data on feasibility - costs at various levels of volume
- ▶ Support GoK in ICAO negotiations
- ▶ Operate services

High Level Cost Estimate

- ▶ **Technical Assistance:** \$350,000 for 3 people for 4 months

Total Estimated Costs: \$350,000 for TA

Initiative 4C: Analyze and communicate cost advantages of the new Tirana highway
Duration: 1 year

Supporting Analysis: p83 (AgStrat Baseline)

Description	Implementation Steps	
<p>▶ The Tirana highway will be complete by Spring 2010, significantly reducing the transportation cost to the Port of Durres and to the Albanian coastal highway. Interviews with Pristina-based freight forwarders indicate that they do not plan to shift significant traffic to this route. Some of this behavior is rational as shipping through Kulla or Merdare will remain more economical in many cases. However, some is based on habit or lack of knowledge as many freight operators are used to the Yugoslav network. The purpose of this initiative is to provide quality data on the economics of the new route, to communicate it and to attract additional Albania-based shippers to Kosovo.</p>	<ol style="list-style-type: none"> 1. <i>Detailed cost and time analysis of shipping routes</i> <ol style="list-style-type: none"> a. Interview Skopje, Pristina, Peja, Novi Pazar, Ljubljana and Tirana based shippers to determine the cost and time required to ship to/from points in Europe through various routes from various points in Kosovo including Pristina and Peja. Include analysis of land-sea and land-air routes. b. Understand the drivers of cost and actions that could be taken to lower cost, time or uncertainty on various routes c. Publish analysis comparing the various routes 2. <i>Communication and marketing to freight companies</i> <ol style="list-style-type: none"> a. Communicate the results of the study to ensure that shippers have full information and are making informed choices regarding shipping routes. b. Through interviews, identify conditions that would attract additional shipping companies to Kosovo. c. Working with the GoK and private sector, promote Kosovo as a location for shipping and freight forward companies to invest. 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<p>▶ Increase in exports resulting from increased market access</p> <p>▶ Number of new freight forwarders locating to or adding service for Kosovo</p> <p>▶ Amount of investment by freight forwarders in Kosovo</p>	<p>▶ No significant risks.</p>	<p>▶ Completion of analysis and briefing to stakeholders</p>

Initiative 4C: Analyze and communicate cost advantages of the new Tirana highway

Duration: 1 year

Supporting Analysis: p83 (AgStrat Baseline)

Rationale

- ▶ The currently most used transit route for agricultural products to/from Kosovo is the route through Kulla and Montenegro. This route has significant disadvantages:
 - ▶ It is 17% more expensive than the direct route through Serbia (if that route were open);
 - ▶ It is subject to snow closure in winter months;
 - ▶ It requires transit of BiH which at times refuses Kosovo certificates of origin for non-recognition reasons
- ▶ The opening of the Tirana highway offers a new option to transport goods either by land through Albania and Croatia or by land-sea through the port of Durres
- ▶ Currently most operators in Kosovo do not have sufficient information about the new route. In addition, because most are Yugoslav companies, there is a pre-disposition to Yugoslav road networks. This initiative will reduce transport costs by making operators aware of alternate routes and will attract new investments from freight forwarders locating to Kosovo.

Key Counterparts

- | | |
|---|---|
| GoK | <ul style="list-style-type: none"> ▶ Ministry of Transport to serve as GoK liaison for the project ▶ MTI, MEF and Kosovo Customs to make reforms to attract additional investment from freight forwarders |
| | |
| Donor Programs | <ul style="list-style-type: none"> ▶ Fund technical assistance portion of work |
| | |
| Private Sector Freight Companies | <ul style="list-style-type: none"> ▶ Sources of data and counterparts for project ▶ Potential new investors in the transport sector |

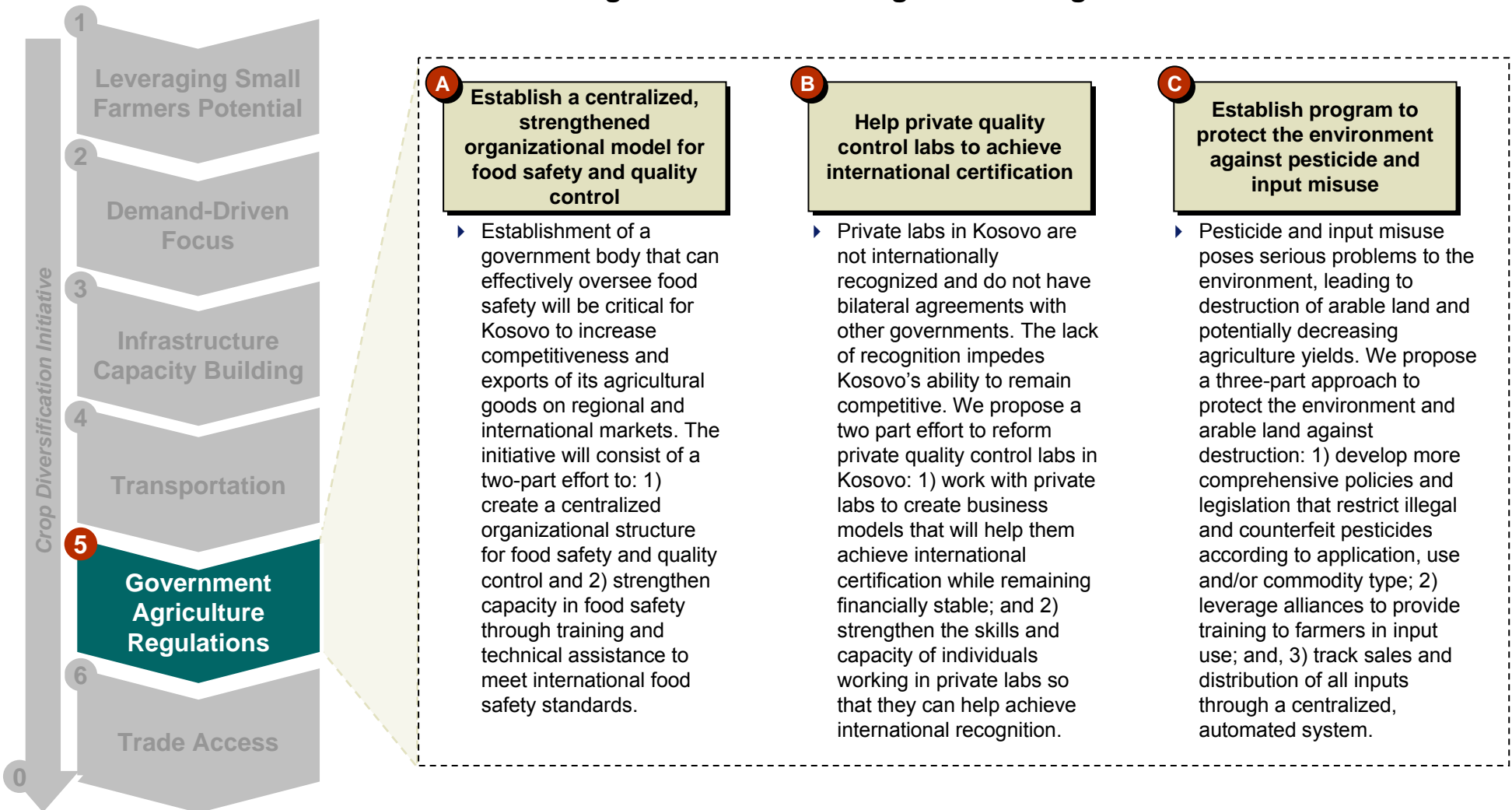
High Level Cost Estimate

- ▶ **Technical Assistance:** \$324,000 (1.5 people for one year)

Total Estimated Costs: \$324,000 for TA

Initiatives to strengthen government agriculture regulations include centralizing food safety & quality control, strengthening private labs and establishing an environmental protection program

Initiatives to Strengthen Government Agriculture Regulations



Initiative 5A: Establish a centralized, strengthened organizational model for food safety and quality control**Duration:** 2 years**Supporting Analysis:** pp 85, 132 (AgStrat Baseline)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Establishment of a government body that can effectively oversee food safety will be critical for Kosovo to increase competitiveness and exports of its agricultural goods on regional and international markets. Currently, execution of food safety standards take place in parallel at the Plant Protection Department at MAFRD, the KFVA under the Office of the Prime Minister and Sanitary Inspectorates under the Ministry of Health. As a result, food safety assurance is uncoordinated, which also leads to overlap in function. In addition to the structural issues, government employees lack the proper skills and capacity to complete required functions to meet international food safety guidelines. Kosovo will continue to suffer from lack of exports and recognition issues if these problems are not addressed. ▶ We propose to a two-part effort to address these issues: 1) create a centralized organizational structure for food safety and quality control and 2) strengthen capacity in food safety through training and technical assistance to meet international food safety standards. 	<ol style="list-style-type: none"> 1. <i>Develop unified organizational model for food safety and quality control</i> <ol style="list-style-type: none"> a. Draft revised organizational model to centralize food safety functions within a single entity in the GoK. Model should include roles, responsibilities, decision rights, reporting lines, communication and internal operating procedures b. Identify budget requirements for new organizational structure, including committees and taskforces to assist with the transition phase c. Circulate revised organizational structure to senior government leadership in the Prime Minister's office, MAFRD and Ministry of Health d. Revise and draft laws required to establish and enforce new organizational model e. Communicate laws defining new food safety organizational structure to Parliament and secure approval f. Develop implementation timeline for transitioning organizational structure to steady state g. Develop and launch communication plan to socialize organizational changes, including roles, internal operating procedures, to all government employees and stakeholders h. Launch transition to new organizational structure 2. <i>Build capacity in food safety through training and technical assistance to meet international standards</i> <ol style="list-style-type: none"> a. Determine employee competencies required to meet international best practices in food safety and achieve recognition. Key areas will include 1) inspection and oversight of production, infrastructure, processing, marketing 2) analysis and testing of products 3) coordination of exporters b. Assess competencies of all government employees involved in food safety in Kosovo and determine gaps in skills c. Identify training needs for all employees based on the gaps d. Sketch a detailed training plan outlining courses, partners, funding, timeline, and evaluation e. Launch training program; provide targeted technical assistance for areas of significant weakness 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in exported value of agricultural goods ▶ Decrease in cost of obtaining export certificates ▶ Increase in the number of countries accepting exports from Kosovo ▶ Number of employees trained who meet required competencies 	<ul style="list-style-type: none"> ▶ Delays in approving organizational structure: socialize recommendations and secure buy-in early in the process ▶ Resistance from government employees on new structure: develop targeted communication plan that outlines the benefits to Kosovo's competitiveness and agricultural sector ▶ Lack of participation in training: make training mandatory for all employees to be transitioned to new position 	<ul style="list-style-type: none"> ▶ New structure and accompanying laws approved within first 2 months ▶ Transition to new organizational structure by end of year 1 ▶ 3,000 government employees trained by end of year 1

Initiative 5A: Establish a centralized, strengthened organizational model for food safety and quality control**Duration:** 2 years**Supporting Analysis:** pp 85, 132 (AgStrat Baseline)**Rationale**

- ▶ Stronger reputation for food safety and quality control will help increase the country's competitiveness internationally, thereby augmenting production value and exports
- ▶ By achieving international standards, greater ability for Kosovo to establish strategic markets in foreign countries through bi-lateral recognition of food safety standards
- ▶ Greater likelihood for countries to decrease trade barriers for agricultural commodities across the board
- ▶ Centralized structure will allow for stricter, coordinated enforcement of food safety standards on producers, processors and exporters
- ▶ Production of high quality products will enable producers to take advantage of preferential trade regimes under CEFTA

Key Counterparts**Donor
Coordination
Committee**

- ▶ Assist in development and transition to new organizational structure; assess training needs and administer capacity building

**GoK /
Parliament**

- ▶ Assist in developing and approving final organizational structure for food safety and quality control in Kosovo

**MAFRD / Peja
Institute**

- ▶ Work with donors and other GoK counterparts to transition to new organizational model and support capacity building

**Prime
Minister
Office / KFVA**

- ▶ Work with donors and other GoK counterparts to transition to new organizational model and support capacity building

**Ministry of
Health**

- ▶ Implement functional changes as necessary according to new, centralized. Ensure that services do not overlap with those of the centralized unit

High Level Cost Estimate

- ▶ **Technical Assistance:** \$1,296,000 (3 people for 2 years)

Total Estimated Costs : \$1,296,000 for TA

Initiative 5B: Help private quality control labs to achieve international certification

Duration: 2 years

Supporting Analysis: pp 86, 133 (AgStrat Baseline)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Currently two private quality control labs exist in Kosovo. However, neither of the private labs are internationally recognized or have bilateral agreements with governments in other countries. The lack of recognition greatly impedes Kosovo's ability to remain competitive both regionally and internationally. This could lead to a continued decrease in sales and exports. ▶ We propose a two-part effort to reform private quality control labs in Kosovo: 1) work with private labs to create business models that will help them achieve international certification while remaining financially stable; and 2) strengthen the skills and capacity of individuals working in private labs so that they can help achieve international recognition. 	<ol style="list-style-type: none"> 1. <i>Revise business model for labs to achieve certification according to best practice models</i> <ol style="list-style-type: none"> a. Examine business model, functional structure and service offerings of private labs and pinpoint weaknesses against international best practice models b. Refine and recommend new business model that will enable labs 1) achieve international certification and 2) remain financially stable c. Formulate timeline and plan for private labs to achieve international certifications (ISO, etc.) d. Determine funding requirements to reform private labs, including money for technical assistance, infrastructure, equipment, technicians, analysts, etc. e. Determine funding support and technical assistance to be provided with donor support f. Launch program and monitor progress according to timeline for achieving certifications; provide technical assistance to target identified weaknesses 2. <i>Build capacity in private quality control labs to increase ability to achieve international recognition</i> <ol style="list-style-type: none"> a. Determine employee competencies required to meet international best practices for private quality control labs b. Assess competencies of employees and determine gaps in skills c. Where relevant, identify training needs for all employees based on the gaps; for significant gaps, determine the profiles of individuals that should be hired and develop recruitment plan d. Sketch a detailed training plan, outlining courses, partners, funding, timeline, and evaluation e. Launch training program; provide targeted continued technical assistance to complement training f. Launch recruitment plan to hire required resources 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in exported value of agricultural goods ▶ Decrease in the value of commodities rejected because of food safety issues ▶ Increase in the number of countries accepting exports from Kosovo ▶ Number of international certifications acquired 	<ul style="list-style-type: none"> ▶ Delay in acquiring international certification: constant monitoring of progress against timeline; provide targeted technical assistance to areas that are off track ▶ Inability to find required people and skill sets for private labs: use exchange program format for experts from labs in other countries to provide training and technical assistance ▶ Employee attrition to more lucrative positions: provide program for university students to work in private labs while acquiring their degrees 	<ul style="list-style-type: none"> ▶ Reformed private lab business models launched by the end of year 1 ▶ Recruiting for private labs 100% complete by the end of year 1 ▶ At least 3 agreements at negotiation phase for bi-lateral recognition with international labs by the end of year 1

Initiative 5B: Help private quality control labs to achieve international certification**Duration:** 2 years**Supporting Analysis:** pp 86, 133 (AgStrat Baseline)**Rationale**

- ▶ Stronger reputation for food safety and quality control will help increase the country's competitiveness internationally, thereby augmenting production value and exports
- ▶ By achieving international standards, greater ability for Kosovo to establish strategic markets in foreign countries through bi-lateral recognition of food safety standards
- ▶ Third party labs provide additional assurance that agriculture goods meet international food safety standards
- ▶ Private labs can perform quality control and auditing of testing completed by government entities
- ▶ In cases of high volume, GoK can outsource testing and analysis to internationally certified private labs

Key Counterparts**Donor
Coordination
Committee**

- ▶ Provide technical assistance and monetary assistance to help labs achieve international certification
- ▶ Identify partners for labs, including international labs and international government entities

**MAFRD, Peja
Institute,
KFVA, MoH**

- ▶ Establish MoUs for private labs to complete third party testing of agriculture goods
- ▶ Define audit and quality control procedures for private labs

**KFVA/
MAFRD**

- ▶ Accredite labs according to national standards
- ▶ Determine impact of private lab testing on export and import of goods

High Level Cost Estimate

- ▶ **Technical Assistance:** \$432,000 (1 people for 2 years)
- ▶ **Small Grants Program:** \$150,000 (5 small grants at \$30,000 for each lab)

Total Estimated Costs : \$582,000 for TA and Small Grants Program

Initiative 5C: Establish program to protect the environment against pesticide and input misuse**Duration:** 2 years**Supporting Analysis:** pp 87-88, 136 (AgStrat Baseline)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Pesticide and input misuse poses serious problems to the environment, leading to destruction of arable land and potentially decreasing agriculture yields. Farmers are not trained in the use of pesticides and tend to over-apply relative to the amounts needed for specific crops. The situation is more critical with the rapid growth in counterfeit pesticides in Eastern Europe. Input distributors report very infrequent inspections from MAFRD and complain that lack of enforcement makes it difficult to compete with illegal or counterfeit imports. ▶ We propose a three-part approach to protect the environment and arable land against destruction: develop more comprehensive policies and legislation that restrict illegal and counterfeit pesticides according to application, use and/or commodity type; 2) leverage alliances to provide training to farmers in pesticide, seed and input use; and, 3) track sales and distribution through a centralized, automated system housed within the GoK. 	<ol style="list-style-type: none"> 1. <i>Develop more comprehensive policies and legislation prohibiting use of illegal and counterfeit pesticides</i> <ol style="list-style-type: none"> a. Draft comprehensive list of banned and counterfeit pesticides, according to composition, application method and/or restriction according to commodity type, based on international best practice models b. Socialize and vet list of prohibited and counterfeit pesticides with agriculture experts from the donor community, MAFRD, Peja Institute, etc. c. Revise and/or draft policies and legislation enforcing bans on restricted pesticides and products d. Communicate revised policies and legislation through awareness program for farmers, processors, manufacturers, distributors, importers, etc. 2. <i>Establish alliances to provide extension services in pesticide, seed and other input use</i> <ol style="list-style-type: none"> a. Identify pesticides, seed and other input distributors, retailers and importers operating in the region who currently provide training on application for farmers b. Identify members of the donor community and GoK to serve as partners in the alliance c. Define MoU among all partners in alliance, including roles, responsibilities, funding sources d. Develop training program, content and timeline. Arrangement could possibly focus around distributors, retailers and importers providing training on pesticide, seed and input use for farmer associations buying inputs e. Launch extension program and monitor progress; make changes as necessary 3. <i>Create automated pesticide, seed and input tracking system</i> <ol style="list-style-type: none"> a. Develop automated registry system housed possibly MAFRD. b. Establish MoU to share pesticide, seed and input data with traders and Customs. Create network to link sales data from retailers and import data from the Customs Authority c. Develop training program both internally within the MAFRD to update and track pesticide, seed and input sales and distribution and externally for traders and Customs to provide accurate data 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in production value of goods ▶ Increase in exports of agriculture commodities ▶ Decrease in use of banned pesticides, seed and inputs ▶ Number of farmers trained who are properly using pesticides, seeds and inputs ▶ Proportion of pesticide, seed and input sales and imports tracked in automated system 	<ul style="list-style-type: none"> ▶ Continued use of banned pesticides, seeds and inputs by farmers: develop more stringent inspection and penalization system for misuse ▶ Lack of participation in training program: develop training programs targeting associations to reach more farmers ▶ Lack of participation in tracking system: develop arrangement to provide market data from MIS directly to all retailers and importers participating in the program 	<ul style="list-style-type: none"> ▶ Revised policies and legislation for banned pesticides implemented by end of 1 ▶ MoU for two alliances established by end of year 1 ▶ Automated tracking system developed in designated GoK entity by end of year 1

Initiative 5C: Establish program to protect the environment against pesticide and input misuse**Duration:** 2 years**Supporting Analysis:** pp 87-88, 136 (AgStrat Baseline)**Rationale**

- ▶ Protecting use of arable land will lead to increased yields and quality of agriculture goods
- ▶ Stringent bans on pesticides and seeds improves reputation of Kosovo's ability to produce safe, high-quality goods, thereby increasing exports and produced value
- ▶ Alliances create solid networks for farmers to buy pesticides, seeds and inputs from legal and well-established distributors
- ▶ Extension programs increases farmers' ability to develop products that meet international food safety standards
- ▶ Tracking system will help GoK entities limit the sale and distribution of illegal pesticides, seeds and inputs that could potentially destroy quality of arable land in Kosovo

Key Counterparts**Donor Coordination Committee**

- ▶ Experts help develop regulations
- ▶ Serve as partners in alliances
- ▶ Provide funding and technical expertise for automated tracking system

MAFRD

- ▶ Provide input and enforce banned list
- ▶ Potentially house automated tracking system

Peja Institute

- ▶ Provide input and enforce banned list
- ▶ Participate in extension program for farmers

Pesticide Retailers & Suppliers

- ▶ Serve as partners in alliances to provide funding and extension services
- ▶ Provide sales information for tracking system

Kosovo Customs

- ▶ Provide import data for automated tracking system

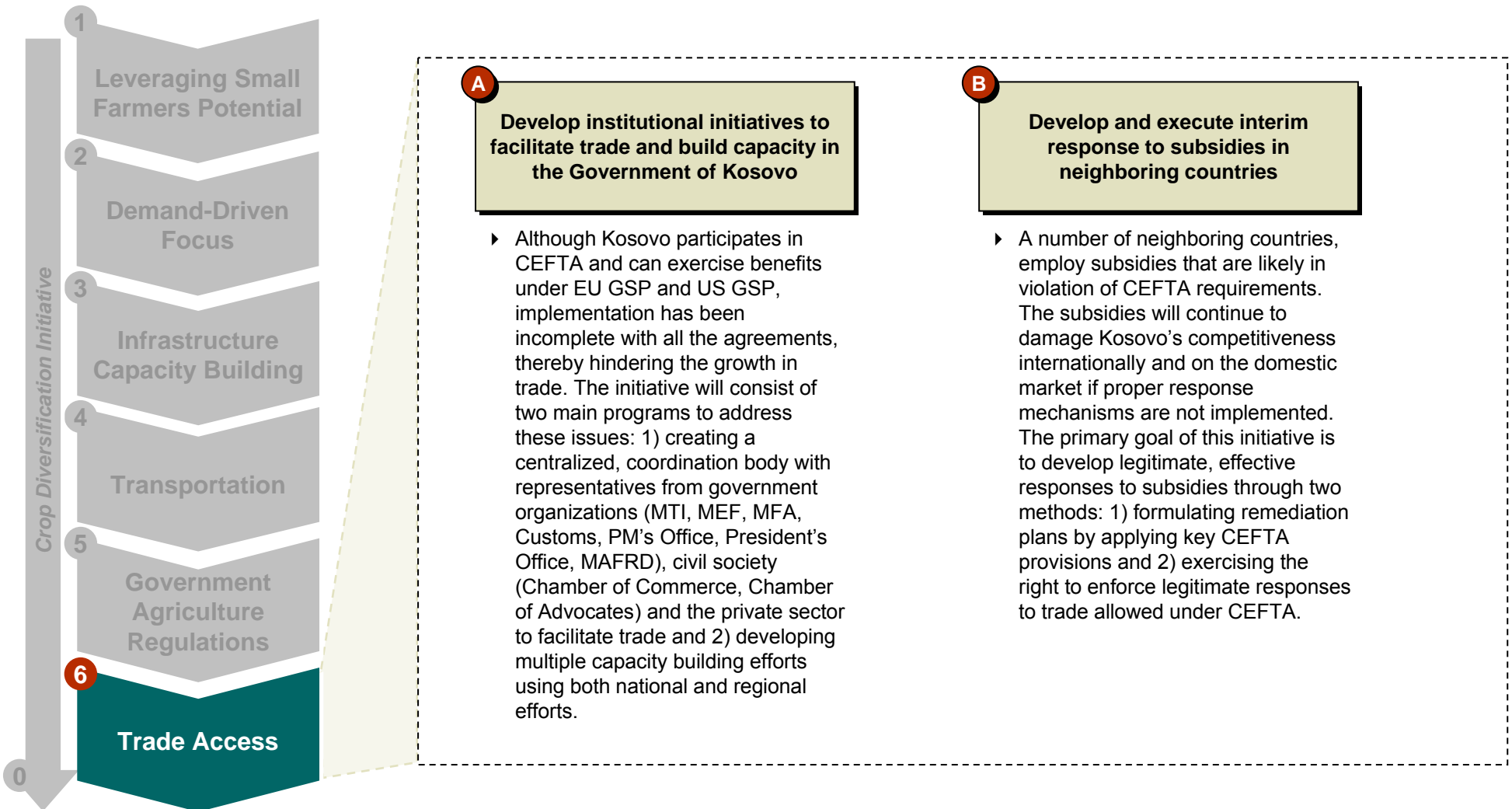
High Level Cost Estimate

- ▶ **Technical Assistance:** \$864,000 (2 person for 2 years)
- ▶ **Grants Program to Certify Retailers and Distributors:** \$225,000 (15 grants at a cost of \$15,000 each)
- ▶ **Conduct Requirements for Automated Tracking System** (analysis, design, and develop): \$500,000

Total Estimated Costs : \$1,589,000 for TA and Grants Program

Initiatives for trade access include developing institutional initiatives to facilitate trade and developing interim response to subsidies in neighboring countries

Initiatives to Increase Trade Access



Initiative 6A: Develop institutional initiatives to facilitate trade and build capacity in the Government of Kosovo (GoK)
Duration: 5 years

Supporting Analysis: pp 89-93, 137-138 (AgStrat Baseline), pp 43-51 (AgCLIR)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ Although Kosovo participates in CEFTA and can exercise benefits under EU GSP and US GSP, implementation has been incomplete with all the agreements, thereby hindering the growth in trade. Implementation issues stem from two primary reasons: 1) no central body exists to coordinate trade facilitation and examine trade issues on an economy-wide (rather than sector specific) basis and 2) key GoK trade entities, such as the Department of Trade (MTI), Kosovo Customs, Dept of Bilateral Affairs (MFA), Office of the President and KFVA, lack the skills or resources to negotiate effectively with trade partners. ▶ The initiative will consist of two main programs to address these issues: 1) creating a centralized, coordination body among the GoK, civil society and private sector to facilitate trade and 2) developing multiple capacity building efforts using both national and regional efforts. 	<ol style="list-style-type: none"> 1. <i>Develop an inter-ministerial council to facilitate trade policy</i> <ol style="list-style-type: none"> a. Identify representatives from government organizations (MTI, MEF, MFA, Customs, PM's Office, President's Office, MAFRD), civil society (Chamber of Commerce, Chamber of Advocates) and the private sector b. Develop rules of order, mission, bylaws and administration of meetings c. Define and designate leadership team, including roles, responsibilities, decision rights and plan for council to be housed in the PM's office d. Identify sources of funding and timeline; initial finding could come from donor support with transition to PM's office for sustainability e. Establish core "Rapid Response team" which would include 5-6 key players in trade and at least one from private sector. Rapid response team would always be available to take immediate action on emerging trade issues. 2. <i>Develop multi-pronged capacity building effort in the GoK</i> <ol style="list-style-type: none"> a. Assess skills sets of all employees involved in trade facilitation at Department of Trade, Kosovo Customs, Department of Bilateral Affairs (MFA), Office of the President and KFVA to determine gaps b. Design national capacity building plan, including training, technical assistance and workshops, to 1) strengthen trade facilitation 2) improve implementation of current trade agreements and 3) develop process to accede to the WTO 4) prepare them for negotiations for future trade agreements c. Determine regional capacity building plan, including initiatives to participate in regional seminars with neighboring countries and exchange programs with trade officials in other governments d. Work with other donors to determine cost, funding sources and timeline; pinpoint partners to implement national and regional capacity building plans e. Launch capacity building efforts and monitor effectiveness; make changes as necessary 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in exports of agriculture goods to CEFTA partners ▶ Decrease in imports of agriculture goods from CEFTA partners ▶ Increase in the benefits executed under preferential trade regimes ▶ Increase in bilateral agreements executed with trade partners 	<ul style="list-style-type: none"> ▶ Lack of participation in inter-ministerial council: make participants accountable for roles in the rules of order, also specifying methods of recourse for non-fulfillment of obligations ▶ Absence of discernable improvement in trade facilitation: for organizations with continued weaknesses, developed targeted technical assistance to address issues 	<ul style="list-style-type: none"> ▶ Execution of all preferential trade regimes under CEFTA with Albania and Croatia by end of year 2 ▶ Inter-ministerial council established and responding to trade issues on a regular basis by end of year 1

Initiative 6A: Develop institutional initiatives to facilitate trade and build capacity in the Government of Kosovo

Duration: 5 years

Supporting Analysis: pp 89-93, 137-138 (AgStrat Baseline), pp 43-51 (AgCLIR)

Rationale

- ▶ Increase in exports of agricultural goods under preferential trade regimes
- ▶ Strengthened government's trade capacity could decrease the number of countries that are currently blocking trade, thereby opening up new markets for exports
- ▶ Inter-ministerial body in conjunction with strengthened trade capacity will enable the government to respond more effectively to unfair trade practices
- ▶ Increased capacity to negotiate bi-lateral agreements with trade partners
- ▶ Strengthened capacity, especially at Customs, could decrease the number of illegal imports entering the country

Key Counterparts

Donor Coordination Committee

- ▶ Provide initial funding and coordination support in set-up of inter-ministerial council
- ▶ Provide funding and technical support for capacity building efforts

MTI, MEF, MFA, Customs, PM's Office, President's Office

- ▶ Representatives on inter-ministerial council
- ▶ Receive capacity building support on trade facilitation issues
- ▶ Designate members of "Rapid Response" team

MAFRD, Chamber of Commerce, Chamber of Advocates

- ▶ Representatives on inter-ministerial council

High Level Cost Estimate

- ▶ **Technical Assistance:** \$1,620,000 (1 person full time and 1 person half-time for 5 years)

Total Estimated Costs : \$1,620,000 for TA

Initiative 6B: Develop and execute interim response to subsidies in neighboring countries (GoK)**Duration:** 5 years**Supporting Analysis:** pp 94-99, 139 (AgStrat Baseline), pp 43-51 (AgCLIR)

Description	Implementation Steps	
<ul style="list-style-type: none"> ▶ A number of neighboring countries, including Albania, Macedonia and Montenegro, employ subsidies that are likely in violation of CEFTA requirements. The subsidies will continue to damage Kosovo's competitiveness internationally and on the domestic market if proper response mechanisms are not implemented. At present, Kosovo is not exercising key CEFTA provisions, including legitimate responses to subsidies and barriers to trade, because they 1) lack the process and capacity and 2) do not exercise key information gathering provisions. ▶ The primary goal of this initiative is to develop legitimate, effective responses to subsidies through two methods: 1) formulating remediation plans by enforcing CEFTA provisions and 2) exercising the right to develop and enforce legally-accepted trade responses allowed under CEFTA. 	<ol style="list-style-type: none"> 1. <i>Develop remediation plans to trade subsidies by exercising key provisions under CEFTA</i> <ol style="list-style-type: none"> a. With donor support and spearheaded by the Ministry of Trade & Industry, develop core team of experts to examine current trade subsidies applied by neighboring countries. Members will be appointed to analyze subsidies in specific sub-sectors (i.e. dairy, horticulture, livestock, fish) b. Complete exhaustive analysis of current subsidies, in particular exercising Article 44 of the CEFTA agreement which requires that subsidies executed by countries be made public c. Develop response plans and safeguard measures, including increased tariffs for goods where domestic producers are suffering serious economic injury due to imports, as allowed under Article 23 of CEFTA d. Socialize response plan with inter-ministerial committee and secure buy-in e. Launch response plan and communicate safeguard measures to neighboring countries as per CEFTA disclosure requirements f. For areas where information was not sufficiently provided under CEFTA, examine possibility of launching arbitration procedures based on time, cost, and potential economic impact 2. <i>Formulate and enforce legally-accepted trade responses to competitor subsidies under CEFTA</i> <ol style="list-style-type: none"> a. Develop task force to examine imports of agriculture goods according to a variety of sectors (i.e. dairy, horticulture, livestock, fish). b. Task force launches effort to test products that could potentially violate basic international food safety standards c. Task force develops potential list of responses for implementation; socialize list with inter-ministerial committee and secure buy-in d. Draft communiqué detailing list of responses based on violations and submit to countries to increase transparency e. Develop and administer training to Customs officials at border posts for them to spot and refuse imports violating food and safety standards 	
Indicator	Key Risks / Mitigation Plans	Key Milestones
<ul style="list-style-type: none"> ▶ Increase in domestic sales of agriculture goods ▶ Increase in exports of agriculture goods to CEFTA countries ▶ Decrease in imports of goods violating food safety standards from CEFTA countries 	<ul style="list-style-type: none"> ▶ Lack of capacity to develop effective remediation plans: provide donor support in form of technical assistance to core team of experts ▶ Additional subsidies and barriers placed by neighboring countries: continued technical assistance provided by donors to ask for full disclosure of subsidies and provide support for arbitration 	<ul style="list-style-type: none"> ▶ Remediation plan developed and approved by inter-ministerial council by end of month 6 ▶ List of potential responses developed and approved by inter-ministerial council by end of year 1

Initiative 6B: Develop and execute interim response to subsidies in neighboring countries**Duration:** 5 years**Supporting Analysis:** pp 94-99, 139 (AgStrat Baseline), pp 43-51 (AgCLIR)**Rationale**

- ▶ The decrease in imports from neighboring countries will increase competitiveness of goods on the domestic market
- ▶ Potential for neighboring countries to decrease subsidies if Kosovo appears to be a more credible trading partner. Could potentially lead to an increase in exports
- ▶ Decrease the number of illegal and unsafe agriculture good entering the market
- ▶ Sector-focuses taskforce will ensure that all areas of agriculture are properly examined for subsidies and responses are developed

Key Counterparts**Donor
Coordination
Committee**

- ▶ Provide technical assistance / funding for core team in developing remediation plan and to assist task force in developing legitimate responses to subsidies

**Government
of Kosovo**

- ▶ Spearhead effort to develop remediation plan and develop legitimate responses to subsidies

**Inter-
ministerial
Committee**

- ▶ Review remediation plan and list of potential trade responses; provide final approval
- ▶ Oversee efforts to enforce remediation plan and enforce legitimate responses

**Kosovo
Customs**

- ▶ Receive training and exercise right to refuse goods that violate food safety standards in Kosovo

High Level Cost Estimate

- ▶ **Technical Assistance:** \$1,620,000 (1 person full time and 1 person half-time for 5 years)

Total Estimated Costs : \$1,620,000 for TA

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- ▶ Baseline Analysis of Agriculture Sector
- ▶ Recommendations to Improve Kosovo's Agriculture Sector
 - Overview
 - Recommended Diversified Crop Mix for Kosovo
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 - Reaching Kosovo's Overall Potential

The potential impact of the agriculture reforms were developed using two approaches: benchmark-based and initiative-focused

Approaches to Project Potential Impact on Kosovo's Agriculture Sector



Benchmark-Based Approach

- ▶ **Purpose:** Identify target countries whose current agriculture performance will serve to project Kosovo's agriculture performance in 5 and 10 years
- ▶ **Methodology:** Top down approach that compares Kosovo's agriculture performance to selected regional and best practice benchmark countries along agriculture metrics including agriculture production, exports, full-time employment, and yield
- ▶ **Output:** Estimates for Kosovo's increase in agriculture production, increase in agriculture exports, and additional agriculture jobs created by year 5 and year 10



Initiative-Focused Approach

- ▶ **Purpose:** Quantify the impact to Kosovo's agriculture sector of implementing the 21 recommended initiatives
- ▶ **Methodology:** Bottom up approach that calculates the monetized value and return on investment (ROI) for each recommended initiative designed to develop the diversified crop base and address Kosovo's challenges in the agriculture sector
- ▶ **Output:** Value and ROI for each initiative and overall value and ROI for all initiatives

We evaluated a number of different benchmark countries along key agriculture, export and employment statistics...

Key Agriculture Statistics for Benchmark Countries

	Kosovo	Macedonia	Albania	Croatia	Slovenia	Slovakia	Poland	Italy
Agricultural Production (€)	228M	640M	616M	1,849M	637M	1,637M	14,503M	35,419M
Agricultural Production (MT)	0.5M	1.5M	1.4M	3.3M	0.9M	3.2M	34.9M	51.5M
Agricultural Employment (FTEs)	90.8K	320.5K	5,938.4K	515.6K	207.7K	217.7K	5,093.5K	1,938.1K
Export Value (€)	4.4M	69.6M	3.2M	106.5M	48.1M	271.2M	1,444.4M	4,285.5M
Exports as % of Production	1.9%	10.9%	0.5%	5.8%	7.6%	16.6%	10.0%	12.1%
Yield (MT/ha)	20	25.6	33.4	21.9	36.1	19.0	33.7	45.1
Value (€/MT)	N/A ¹	433	430	569	729	507	416	688
Cropping Intensity (area hvstd / ag land)	0.48	0.48	0.35	0.61	0.7	0.6	0.74	0.74

Note: In order to compare across countries and data sources, looked at cereals, fruit and vegetables commodities only; Used 2007 data for all except agricultural land, which was 2005

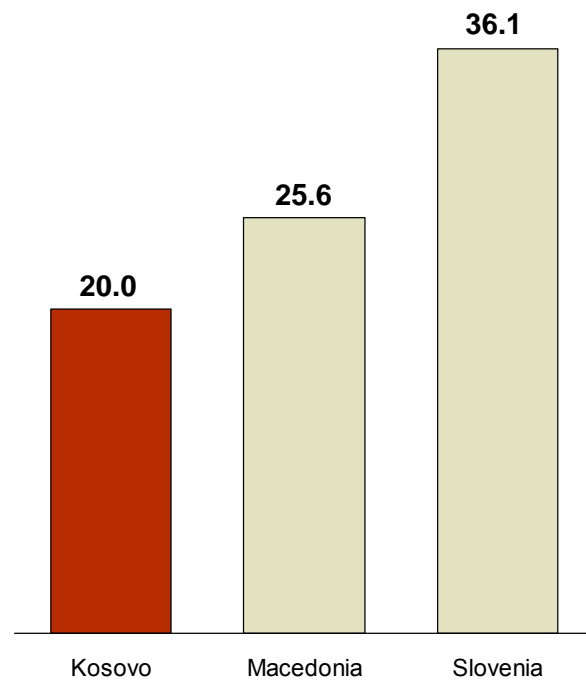
Note (1) : Price data for Kosovo not provided

Source: FAOSTAT, ILO, CIA factbook, TradeMap, WDI for agricultural land (2005), Statistics Office of Kosovo, Customs Office of Kosovo, BAH Analysis

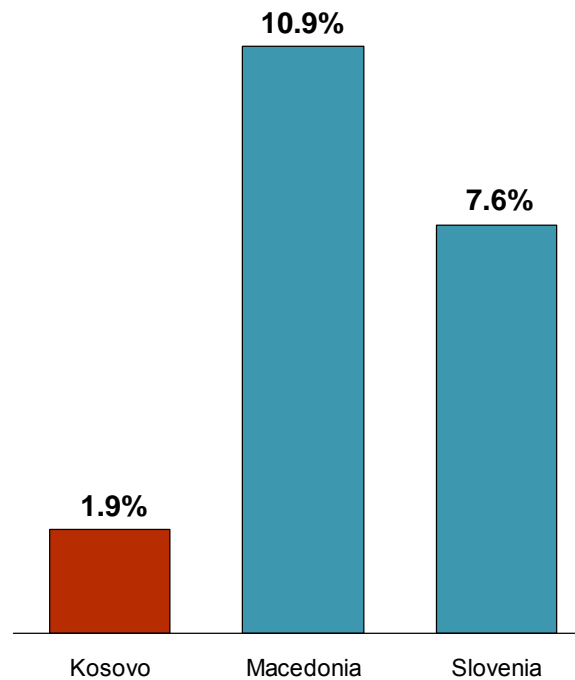
...and selected Macedonia and Slovenia to serve as proxies for 5-year and 10-year goals respectively

Primary Selection Criteria for 5 & 10 Year Goals

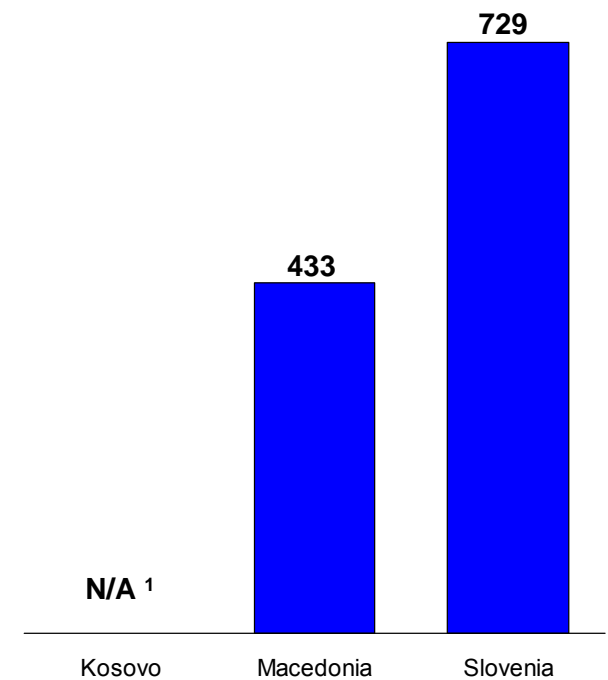
1 **Higher Yield**
(Metric Tons / Ha)



2 **Exports a Higher Proportion of Production**
(%)



3 **Higher Value of Goods**
(Euros / Metric Tons)



Note: In order to compare across countries and data sources, looked at cereals, fruit and vegetables commodities only; Used 2007 for data shown

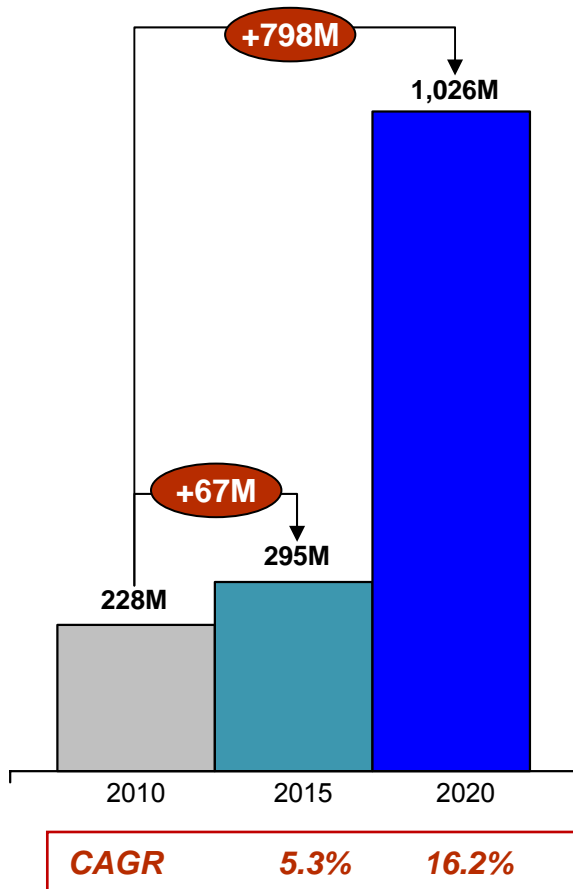
Note (1) : Price data for Kosovo not provided

Source: FAOSTAT, TradeMap, Statistics Office of Kosovo, Customs Office of Kosovo, BAH Analysis

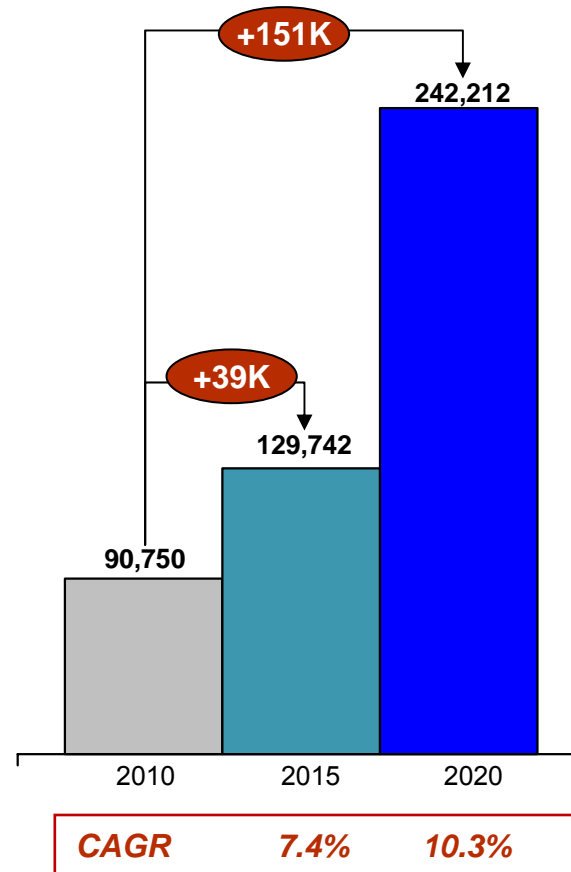
Kosovo has the potential to increase production by €798M, create 151K more jobs and augment exports by €73.2M by 2020...

Impact to Kosovo's Agriculture Sector: Five and Ten Year Projections

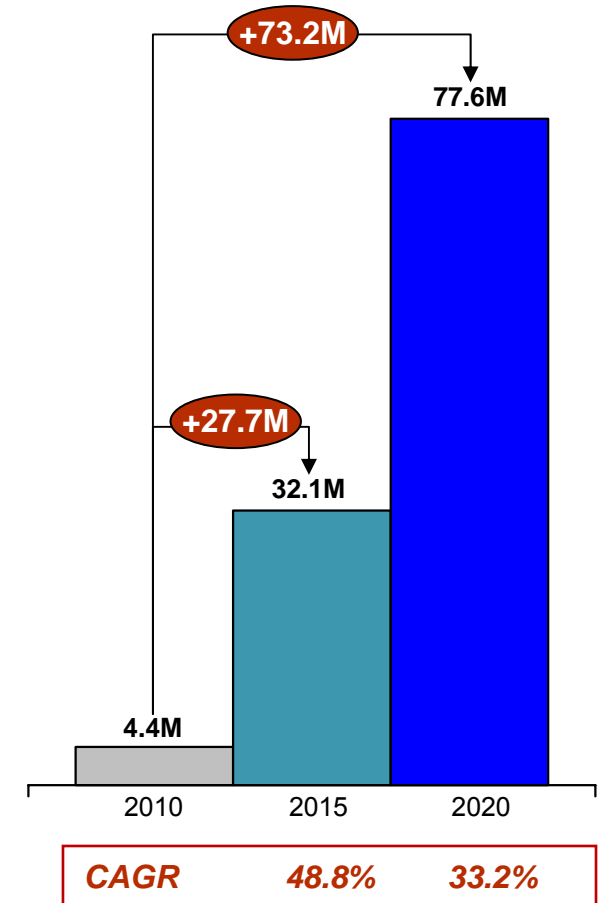
Five & Ten Year Production Potential (Euros)



Five & Ten Year Employment Potential ⁽¹⁾ (Number of FTEs)



Five & Ten Year Export Potential (Euros)



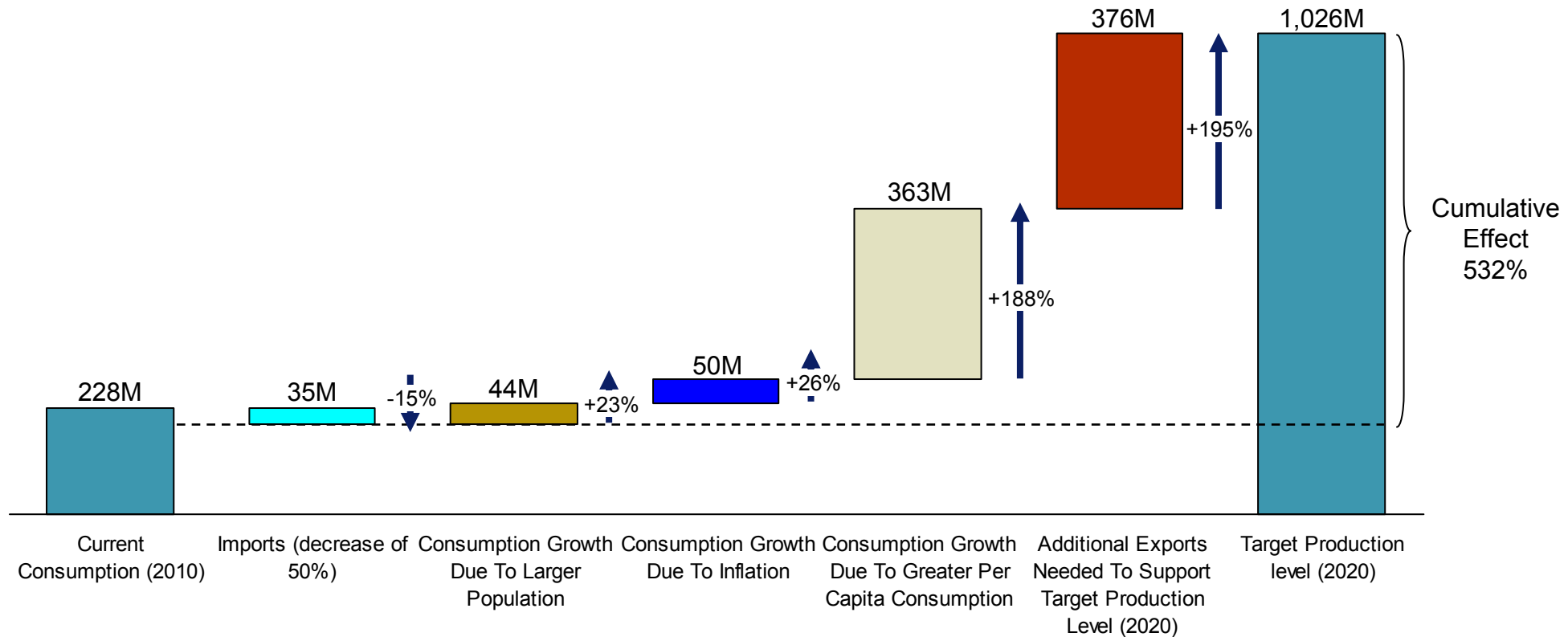
Note: In order to compare across countries and data sources, looked at cereals, fruit and vegetables commodities only; Used 2007 for data shown

Note (1) : Employment figures based on employment growth rates of Macedonia & Slovenia, and discounted by a negative growth rate in ag employment for Slovenia in 2015 and for Italy in 2020

Source: FAOSTAT, TradeMap, Statistics Office of Kosovo, Customs Office of Kosovo, BAH Analysis

...however, Kosovo may need to increase exports by a larger amount to support target production levels

Component Marginal Analysis to Absorb Projected Production
(2010- 2020, in Euros)

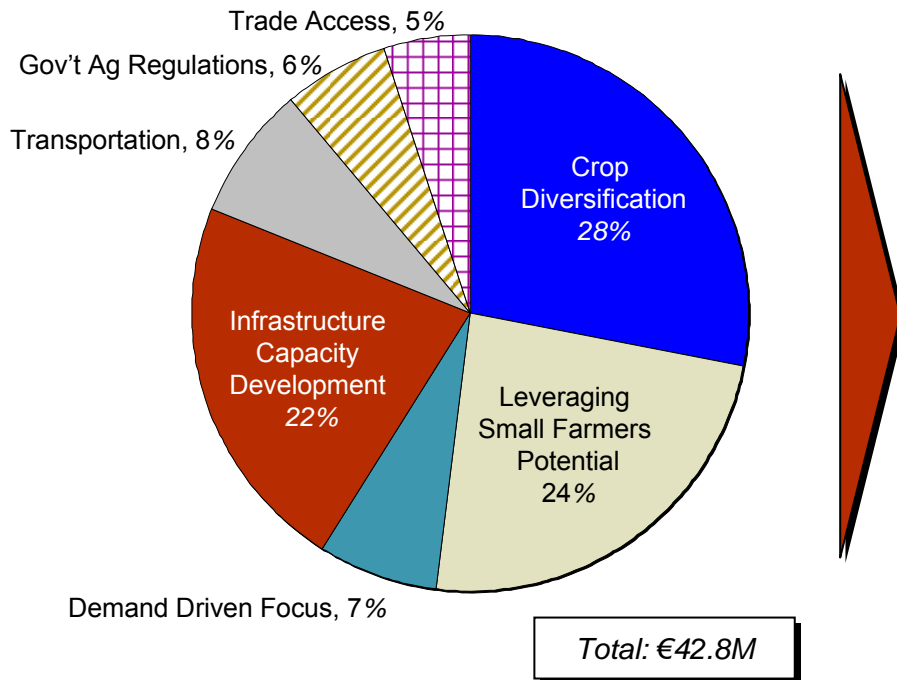


Note : Assumers that 50% vegetable, fruits and cereal imports will decrease; 1.775% population growth rate (Statistical Office of Kosovo); assumes 2% inflation growth; growth rate for per capita increase in consumption: 10% (2004-2008)
Source: BAH Analysis; Statistical Office of Kosovo

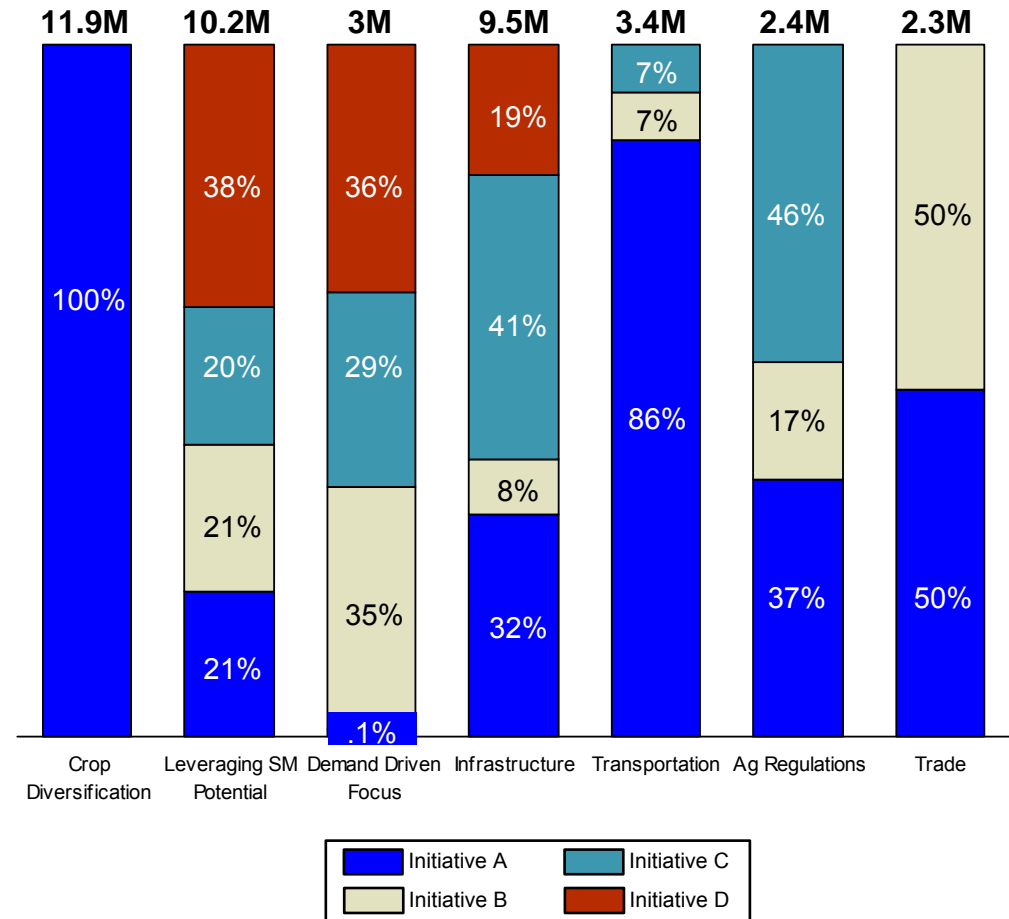
Total estimated costs for all initiatives is €42.8M over 5 years, with crop diversification comprising 28% of total costs

Cost Breakdown by Area and Initiative

Cost Breakdown for Recommendation Areas
(Percentage of Total)

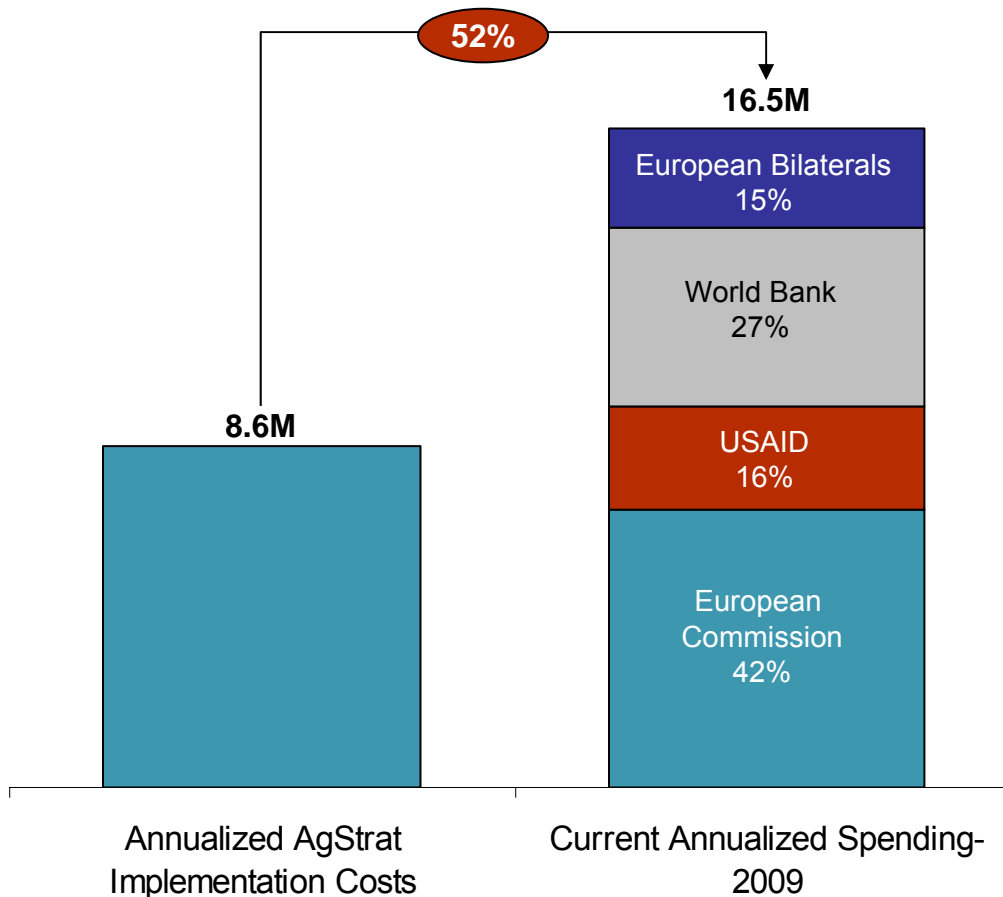


Cost Breakdown by Initiative
(Euros)



The annualized cost of implementing the recommended initiatives is €8.6M, which represents 52% of current annualized donor spending on agriculture

AgStrat Implementation Costs vs. Current Annualized Donor Spending on Agriculture ¹ (Euros)



Comments

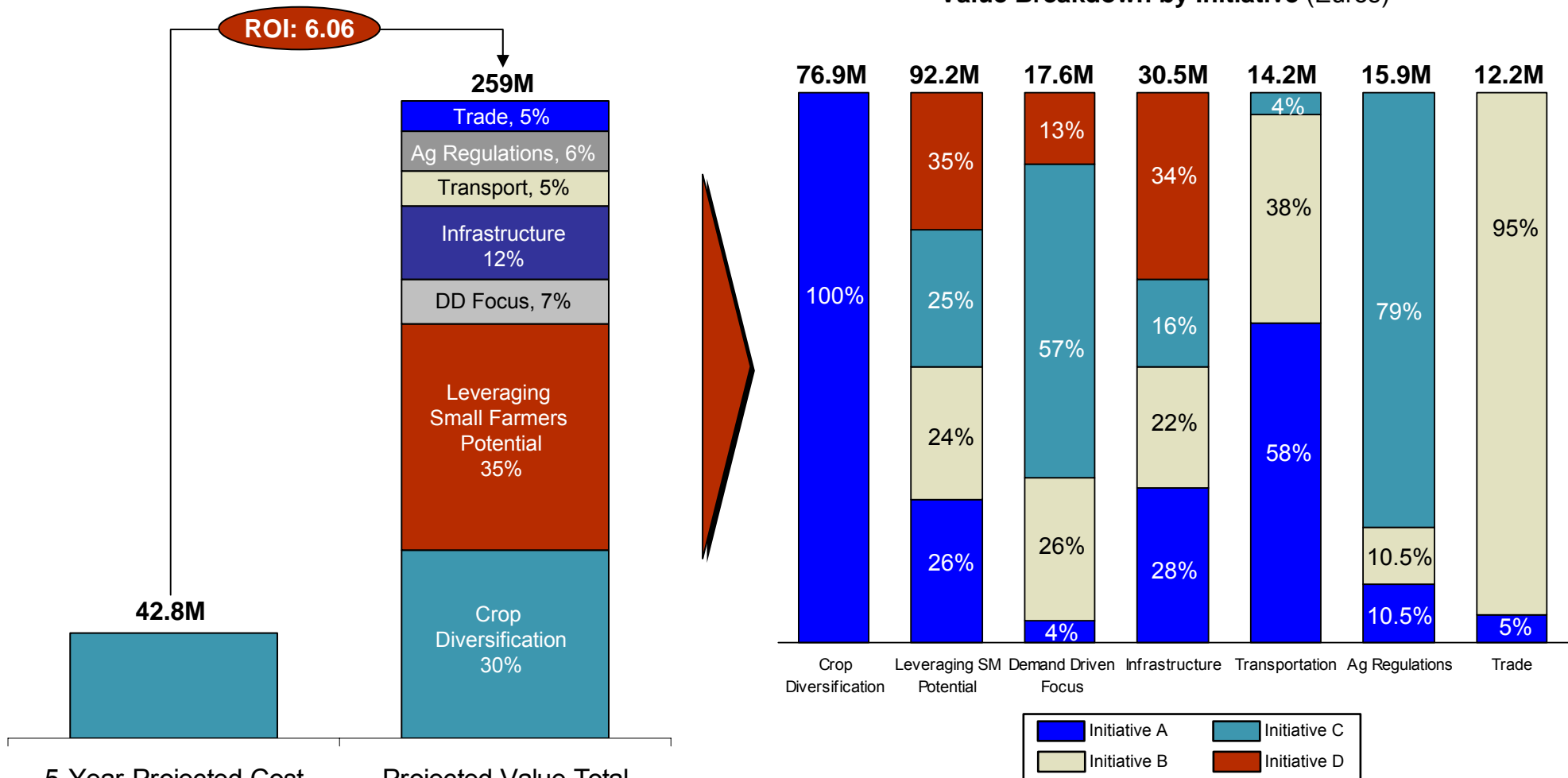
- ▶ Given the current funding of approximately € 15-18M, Kosovo is well-positioned to undertake substantial reforms in agriculture
 - If Kosovo continued to receive the same funding annually, approximately 52% would cover all 21 initiatives in the Agriculture Strategy. The difference could be used to support other priorities in agriculture
 - With increased donor coordination, efficiency and cost-savings could be realized

At an aggregate level, implementation of all the initiatives are expected to generate a conservative ROI of 6.06

Value Breakdown by Area and Initiative

Return on Investment of New Initiatives ¹ (Euros)

Value Breakdown by Initiative (Euros)



Note (1) : ROI assumptions conservative because 1) calculation based on 1 iteration for total costs over 5 years; 2) value created from production based on figures for fruits, vegetables and cereals
 Source: BAH Analysis

Institutional and infrastructure-related initiatives tend fall in lower ROI ranges because of the focus on strengthening the current state rather than producing direct value

Value Breakdown by Area and Initiative

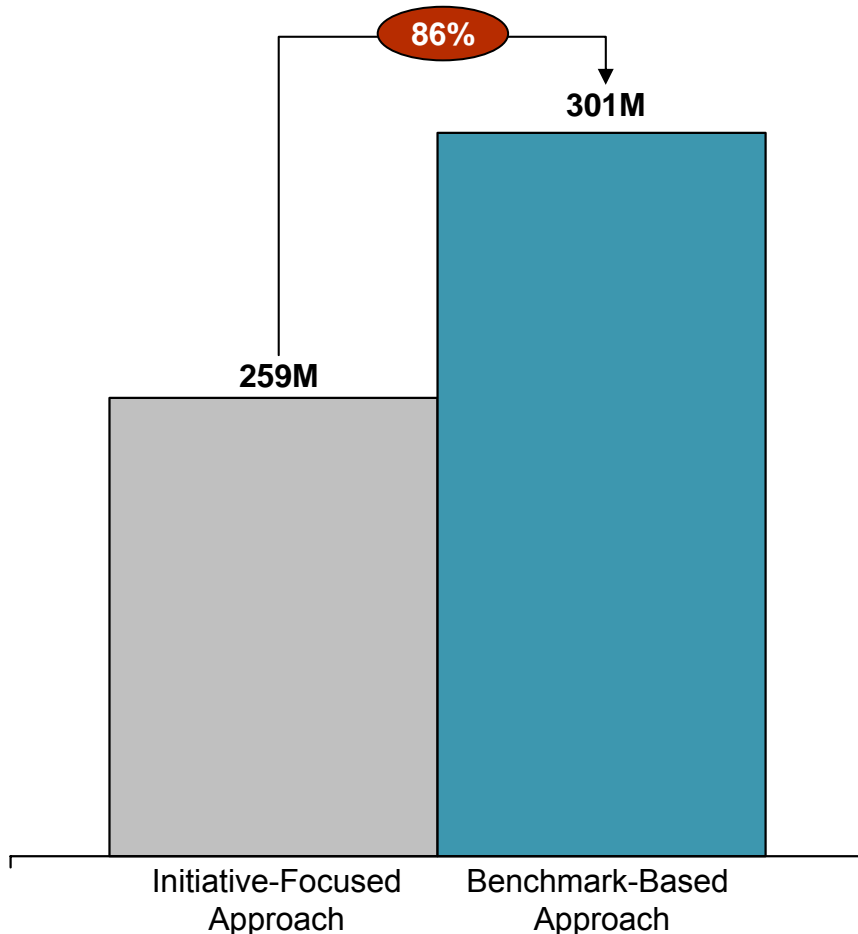
ROI Range	Initiatives
ROI greater than 10	<ul style="list-style-type: none"> ▶ 1A: Improve business viability and coordination of associations ▶ 1B: Introduce and strengthen extension system to promote traditional crops and improve diversity ▶ 1C: Increase and diversify types of financial products available to smallholder farmers ▶ 2A: Develop and launch donor coordination activities for agriculture ▶ 2C: Improve capacity of collection centers, pack houses and cold storage ▶ 4B: Develop air perishables plan and remove market and regulatory obstacles ▶ 5C: Establish program to protect the environment against pesticide misuse ▶ 6B: Develop and execute interim response to subsidies in neighboring countries
ROI between 5 and 10	<ul style="list-style-type: none"> ▶ 0: Crop Diversification Initiative ▶ 1D: Improve cadastral system and test effectiveness of pilot land consolidation program ▶ 3B: Increase use of small-scale irrigation systems ▶ 3D: Assess energy requirements for agriculture
ROI less than 5	<ul style="list-style-type: none"> ▶ 2B: Create market intelligence system and communication plan ▶ 2D: Establish centralized organization to oversee marketing & export promotion of agriculture goods ▶ 3A: Rehabilitate the large-scale irrigation system in Kosovo ▶ 3C: Support development of greenhouses ▶ 4A: Prioritize and develop rural roads projects using cost-benefit analysis and PPPs ▶ 4C: Analyze and communicate cost advantages of the new Tirana highway ▶ 5A: Establish a centralized, strengthened organizational model for food safety and quality control ▶ 5B: Help private quality control labs to achieve international certification ▶ 6A: Develop institutional initiatives to facilitate trade and build capacity in the Government of Kosovo

Comments
<ul style="list-style-type: none"> ▶ Although some initiatives have comparatively smaller ROI, they can still produce significant value for the agriculture sector <ul style="list-style-type: none"> – In general, initiatives that are smaller in scope can be linked more readily to a short/ medium-term, quantifiable returns – Large-scale projects tend to take more time to realize return ▶ Overall, the ROI for infrastructure and institutional projects tend to smaller because: <ul style="list-style-type: none"> – Projects tend to focus on strengthening current state and services rather than producing additional direct value – In the case of greenhouse, ROI was determined based on production value of traditional crops rather than the recommended, higher value crop mix

The initiative-focused analysis accounts for 86% of the total value identified by the 2015 estimate of Kosovo's potential from the benchmark-based approach

Overview of Value Created by Recommended AgStrat Initiatives

Projected Value Creation: Initiative vs. Benchmark Approaches (Euros)



Comments
<ul style="list-style-type: none">▶ Initiative focused analysis identifies 86% of the value projected from benchmarks. The initiative based analysis is inherently conservative because<ul style="list-style-type: none">– The projected value of the initiatives is based only on indicators that can be readily monetized– Parallel efforts in other areas related to agriculture, such as investor protection, education, social services and contract enforcement will help to provide additional value in helping Kosovo to meet its overall potential