LIETUVOS RESPUBLIKOS
ŽEMĖS ŪKIO MINISTERIJA
THE MINISTRY OF AGRICULTURE OF THE REPUBLIC OF LITHUANIA

Lietuvos agrarinės ekonomikos institutas

AGRICIS TRADE

International scientific-practical conference
"EU agriculture and diversification of food markets in the context of the Eastern Partnership"

# Agriculture and Food Sector in the AGRICISTRADE countries

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# Structure of presentation

**STRUCTURE AND PERFORMANCE OF THE AGRICULTURAL SECTOR**

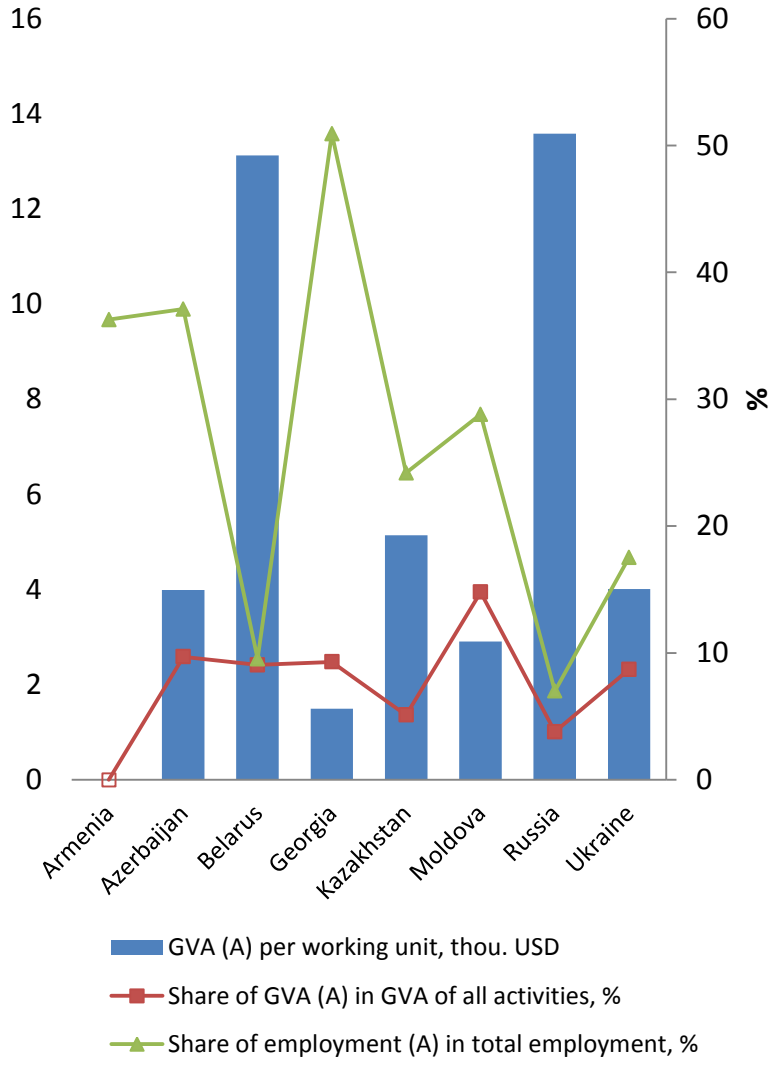
- Role of the agricultural sector in the economy
- Land use
- Farm structure
- Production and output (including major sectors and yields)
  - Crop production and yields
  - Animal production and yields
  - Crop and animal production prices
  - Organic production

**FOOD PROCESSING PERFORMANCES AND CONSUMPTION PATTERS**

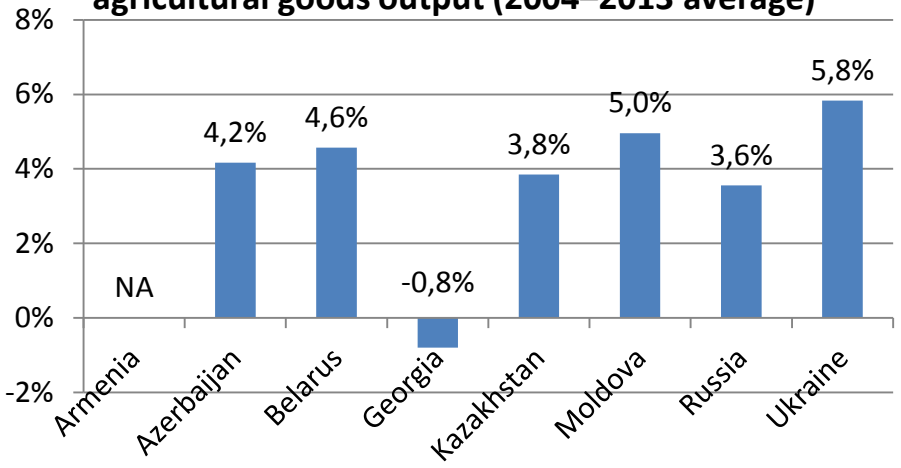
- Food industry importance in the national economies
- Food production
  - Structure of the food sector
  - Prices, costs and performance indicators
- Food retail and consumption patterns
  - Food retail sector
  - Food consumption

# Role of the agricultural sector in the economy

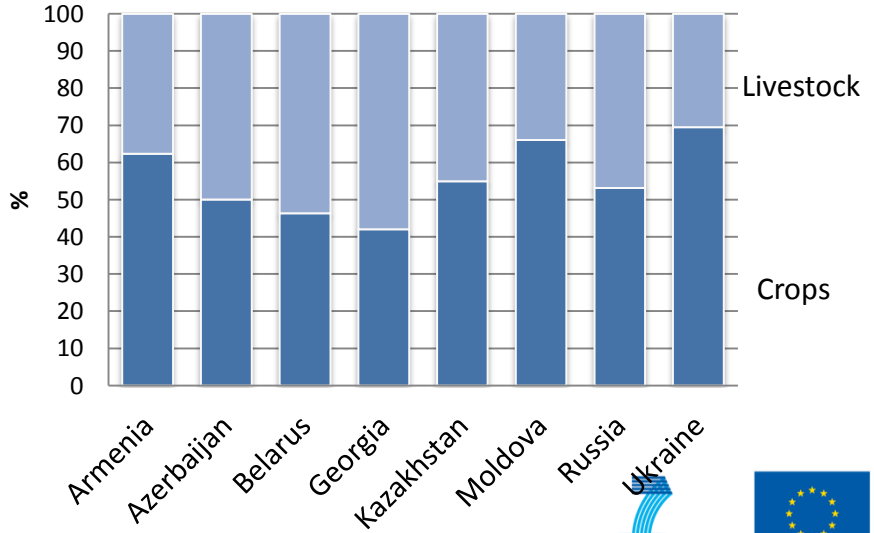
**GVA (A) per working unit, share of GVA (A) and share of employment (A) in 2013**




**Average annual change in volume of total agricultural goods output (2004–2013 average)**

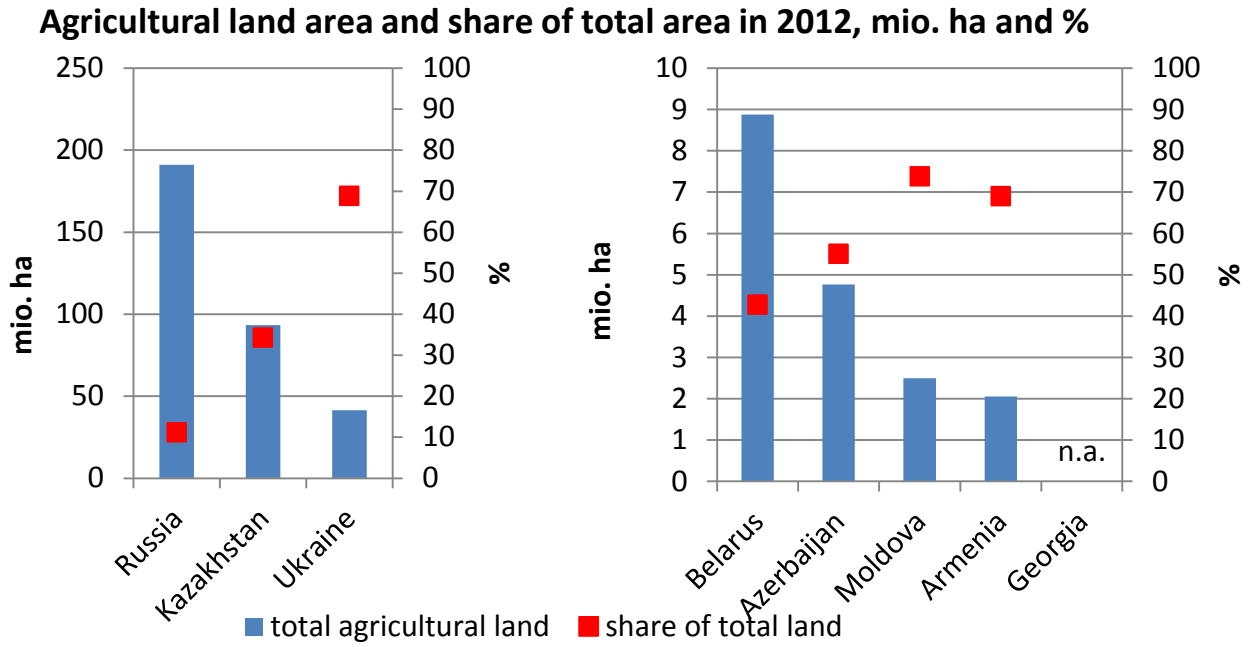


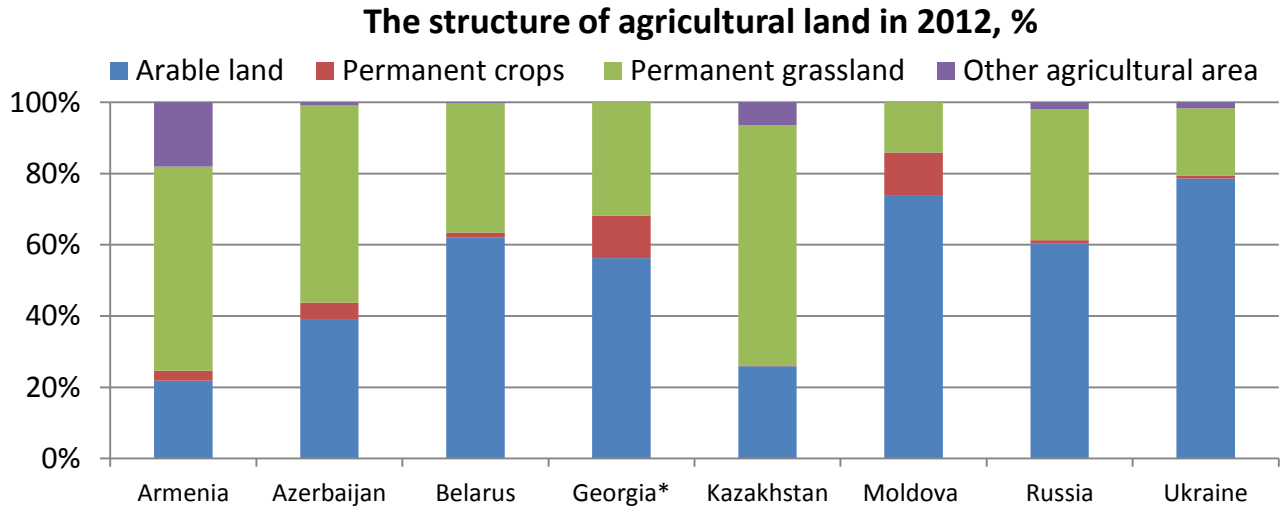

**The share of crop and livestock output in total agricultural output in 2013, %**




Source: AGRICISTRADE database, June 2015

# Land use

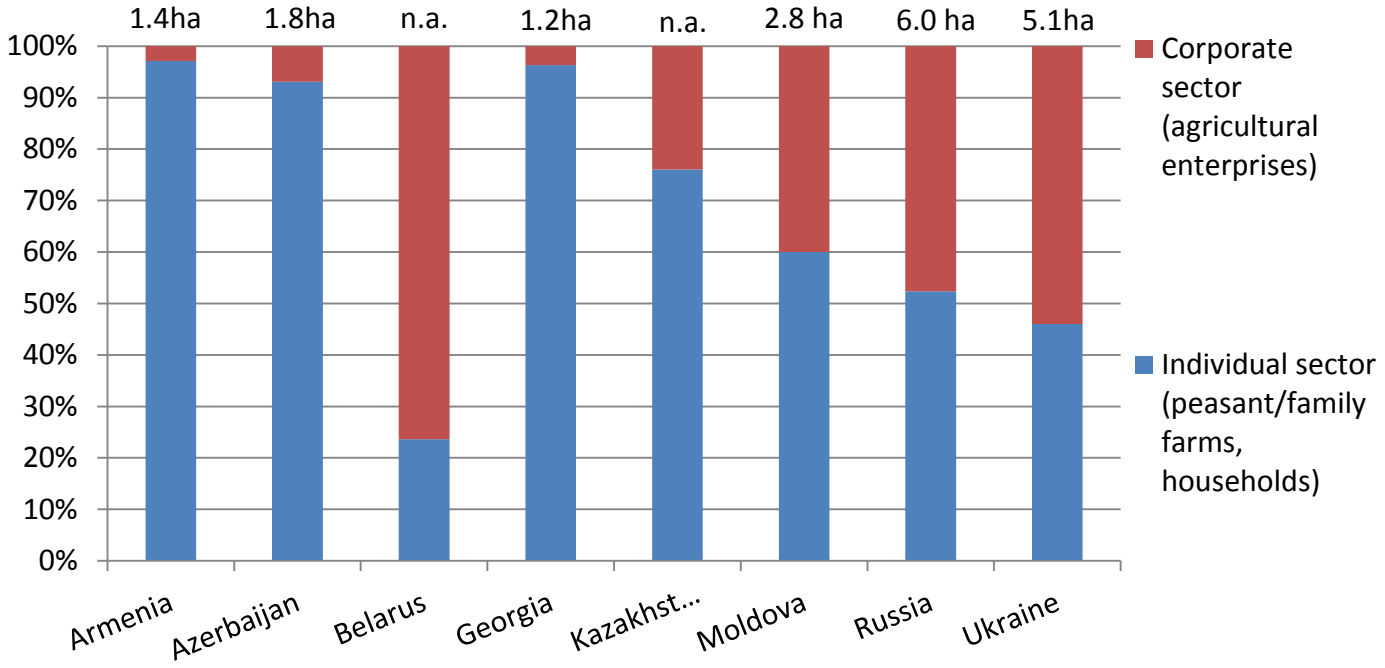



*Note: Georgia – the year available 2004.*
Source: AGRICISTRADE database, June 2015.

# Farm structure

**Farm types by their contribution to gross agricultural output and the average farm size* in 2013, % and ha**

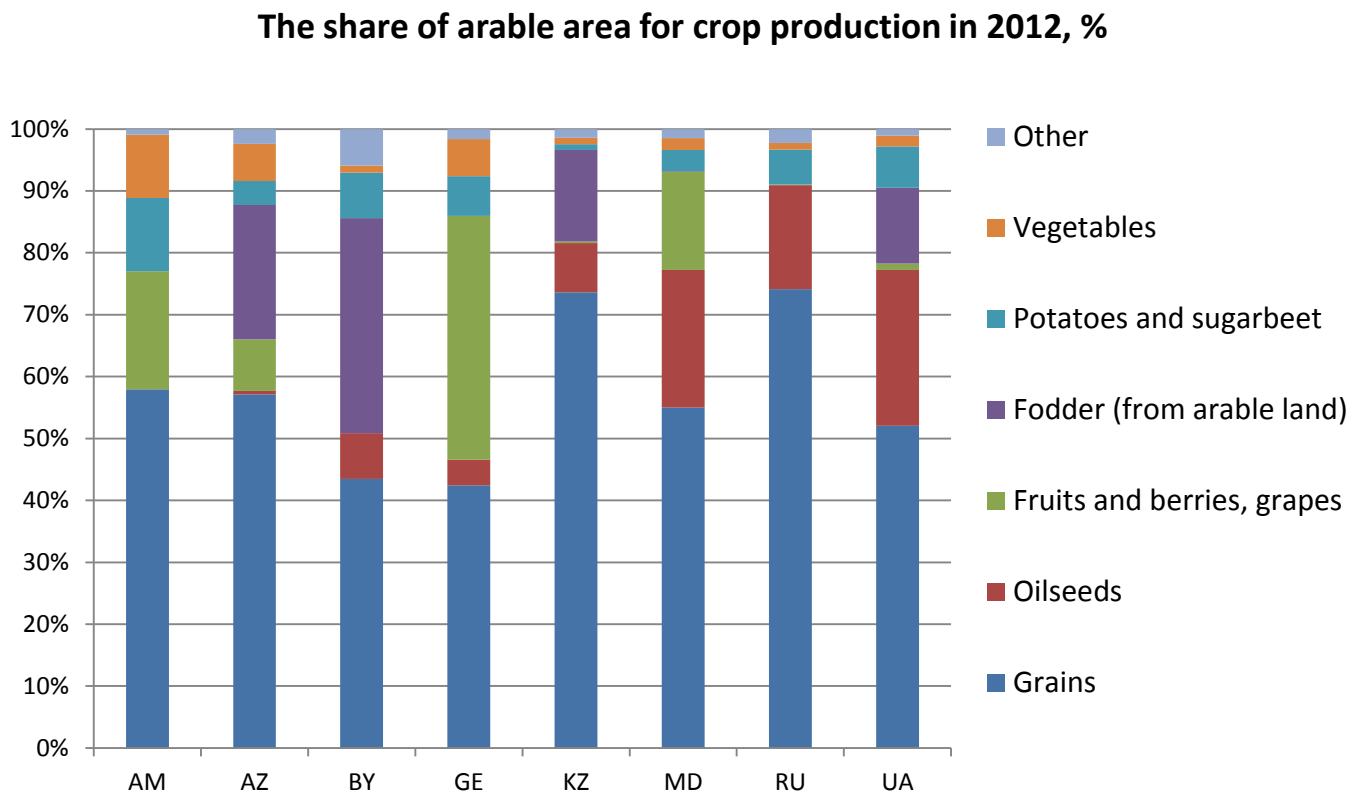



Note: farm size data for *Armenia: World Bank country study conducted in 2007, the average farm size of 1.4 ha; Azerbaijan: AGRICISTRADE database, year 2005; Georgia: AGRICISTRADE database, year 2004; Moldova: AGRICISTRADE database, data of UAA and number of holdings in 2011, Russia: year 2006, Узун В. et al, 2010; Ukraine: year 2012.*

Source: AGRICISTRADE database, June 2015; NSS of Armenia, 2014; SSC of Azerbaijan, 2014; Belstat, 2014; Geostat, 2014; AS of Kazakhstan, 2014; NBS of Moldova, 2014; Rosstat, 2014; Ukrstat, 2014.

# Production and output

## Crop production and yields (I)

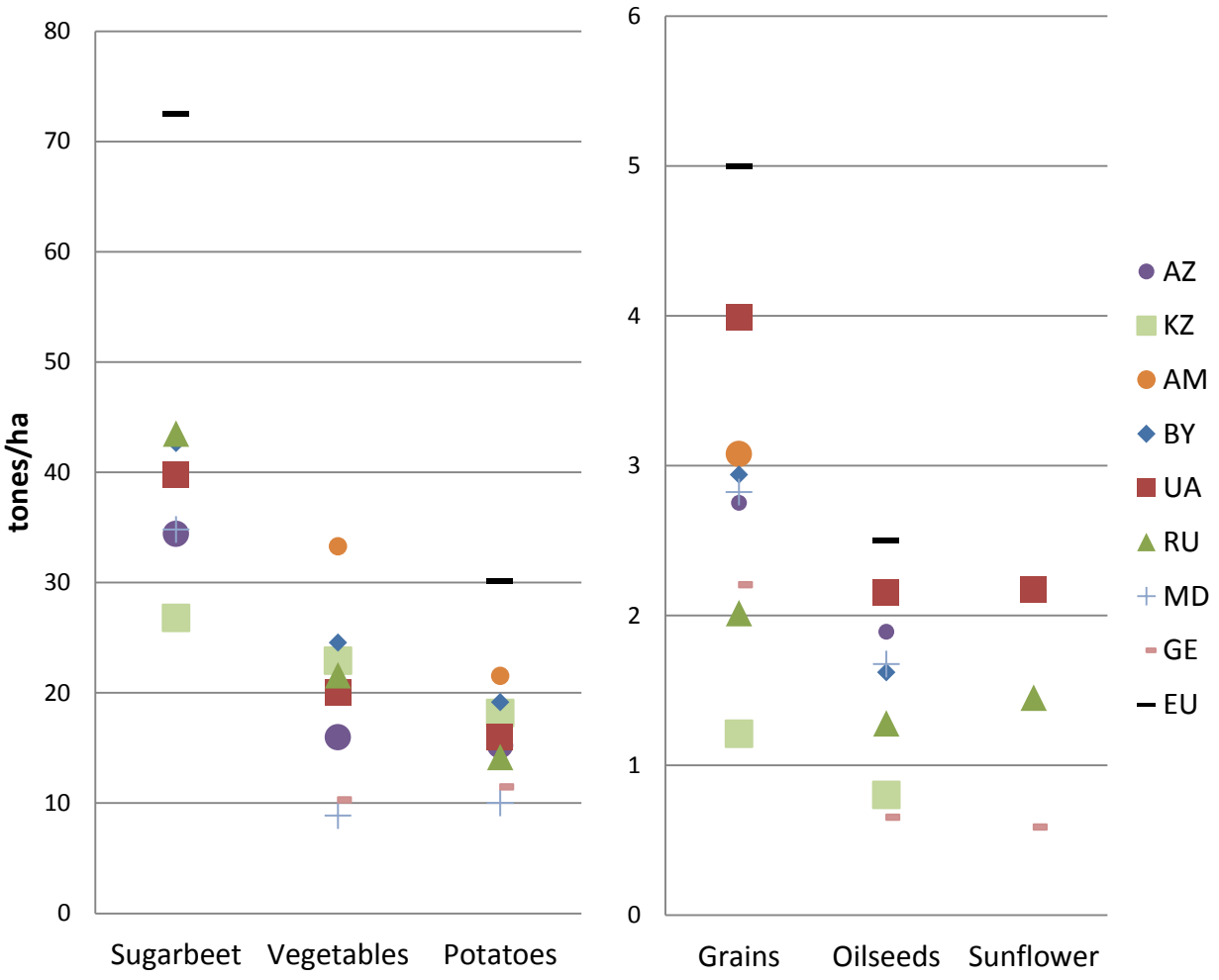



Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

# Production and output

## Crop production and yields (II)

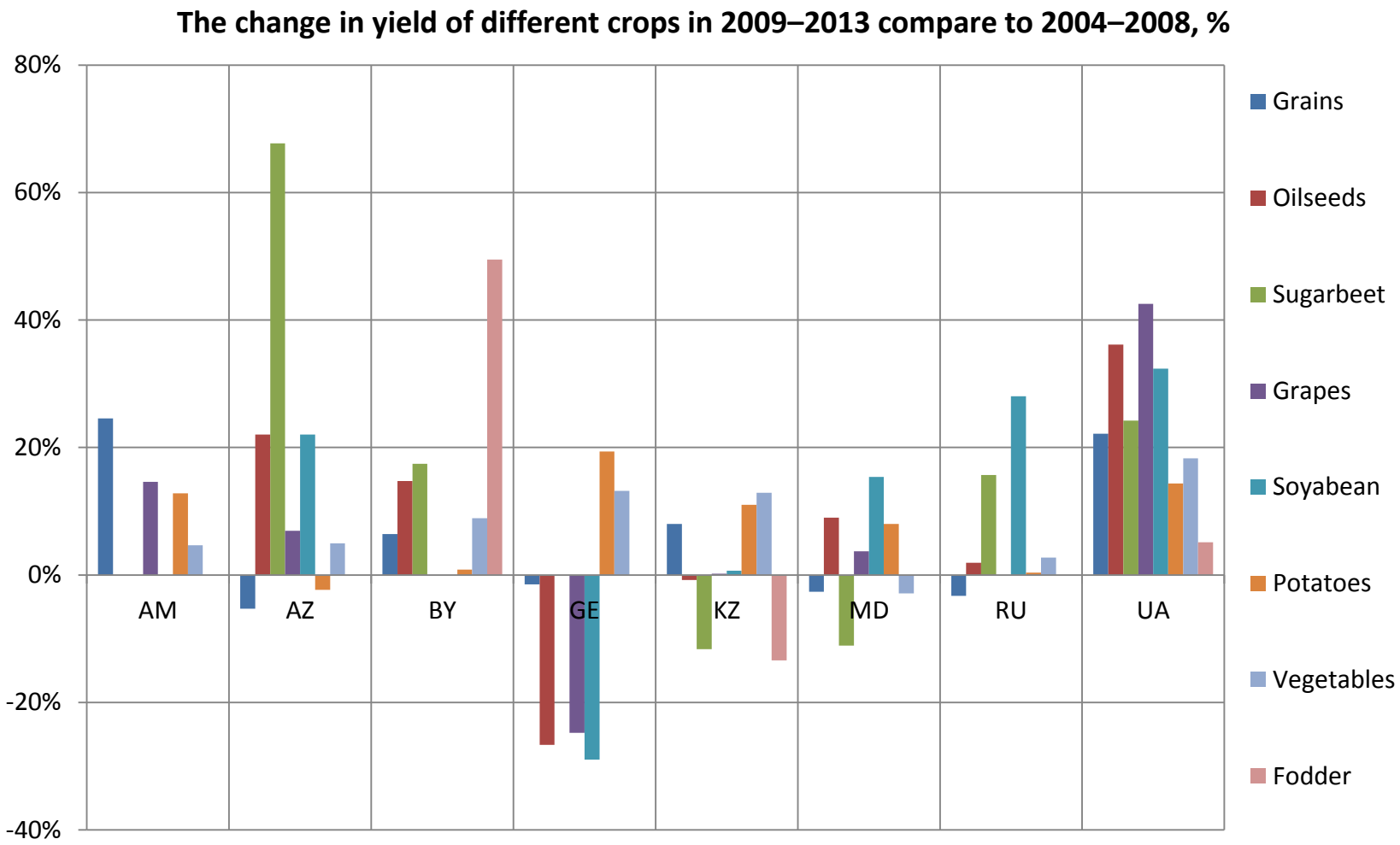
**The yield of different crops in 2013, tones/ha**




Source: AGRICISTRADE database, June 2015; Eurostat, 2015.3

# Production and output

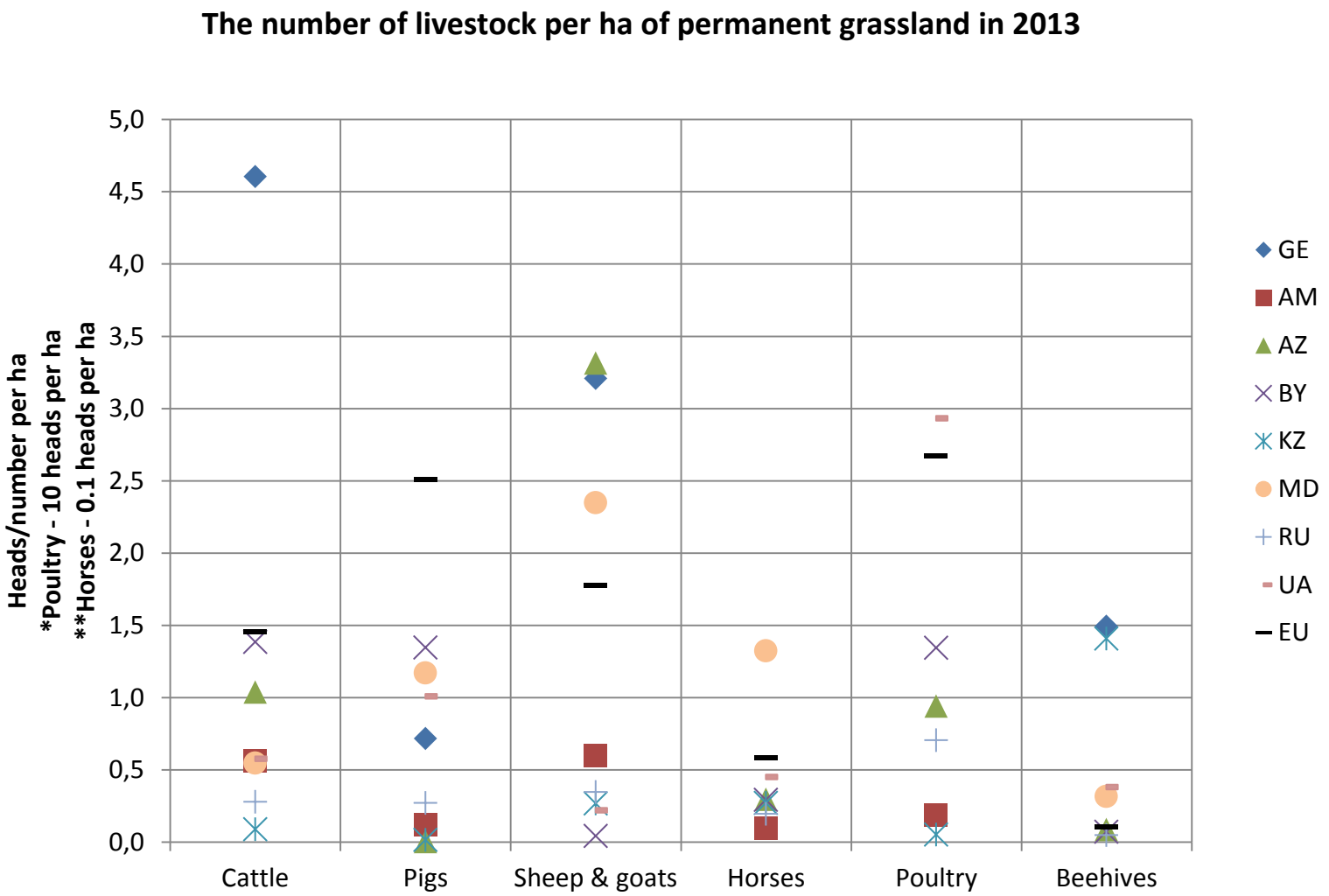
## Crop production and yields (III)




Source: AGRICISTRADE database, June 2015.

# Production and output

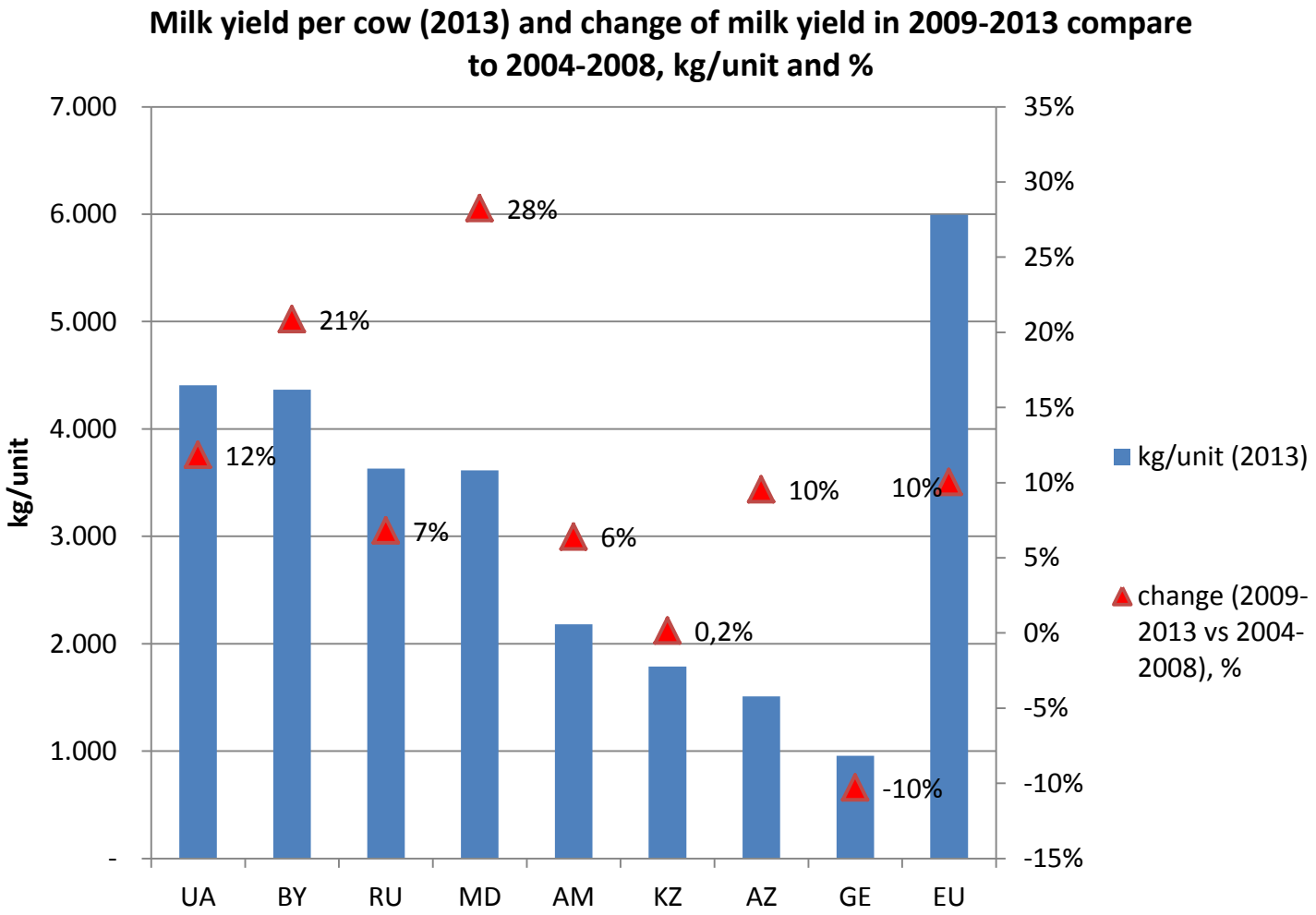
## Animal production and yields (I)




Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

# Production and output

## Animal production and yields (II)




*Note: *the data of milk yield in Ukraine is used from year 2012 and the change of milk yield in Ukraine is 2009–2012 compare to 2004–2008; ** the change of milk yield in Georgia is 2009–2013 compare to 2006–2008*

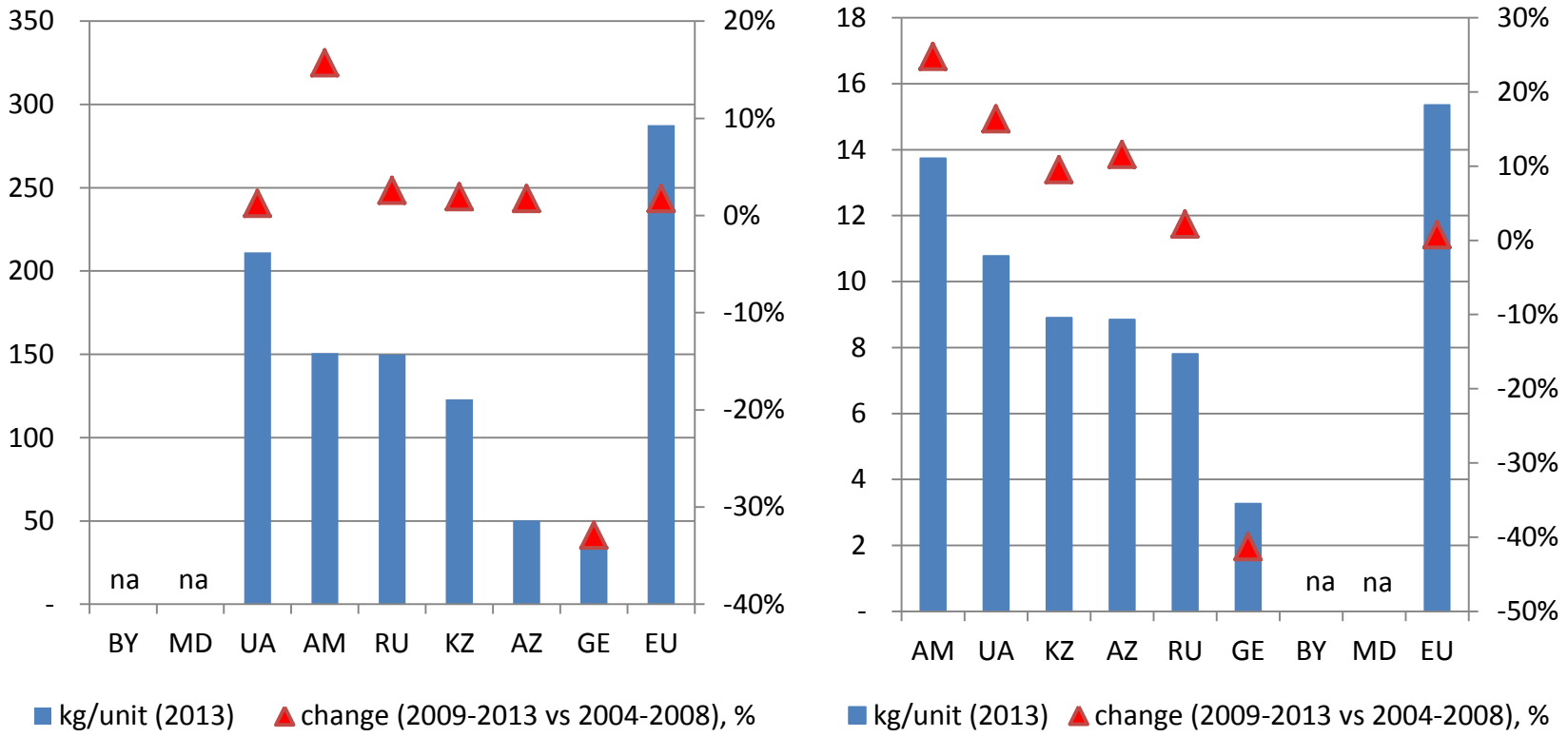
Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

# Production and output

## Animal production and yields (III)

**a) Beef and veal and b) sheepmeat and goatmeat**

**gross indigenous meat production and it change in 2009–2013 compare to 2004–2008, kg/unit and %**

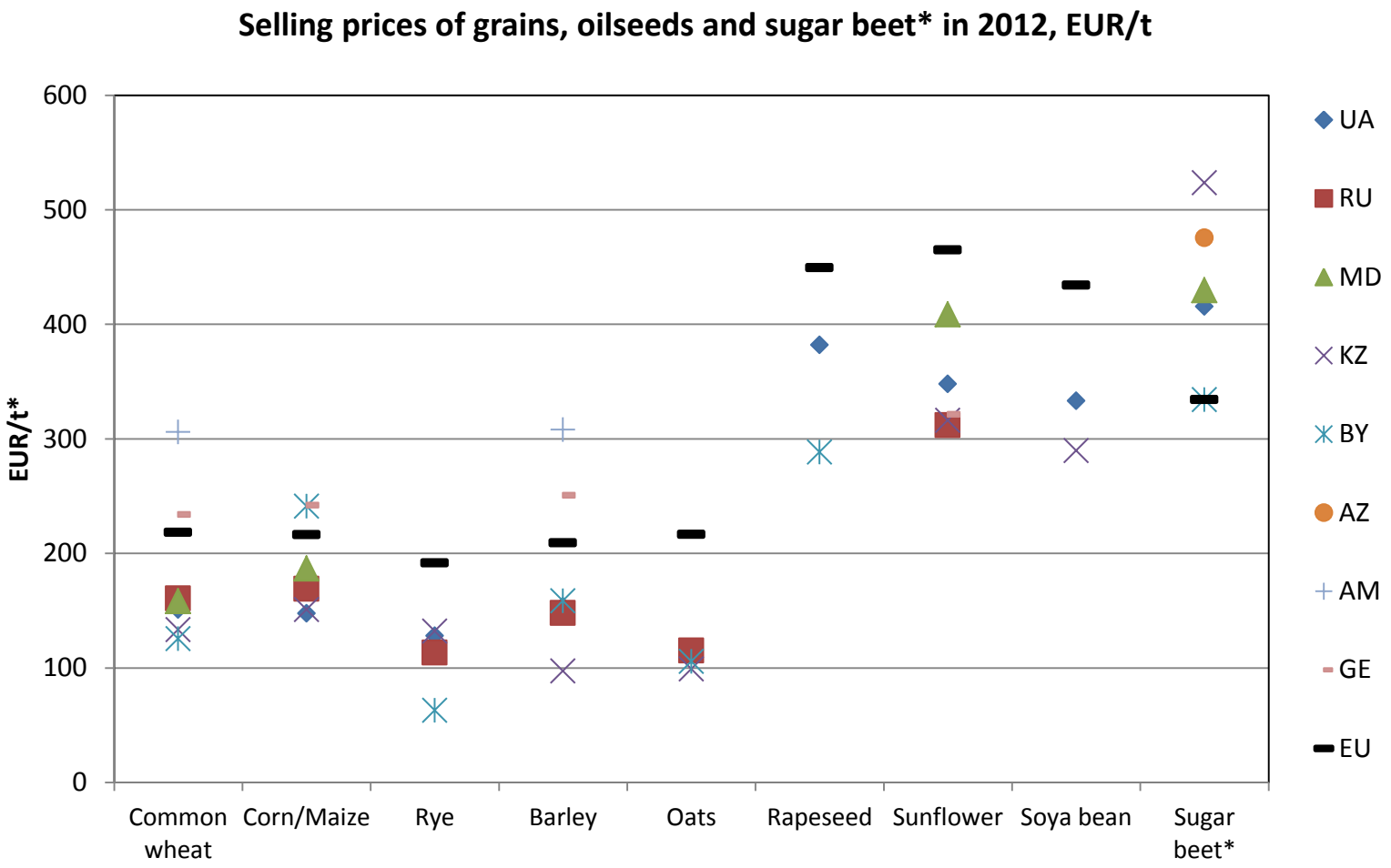



*Note: the change of meat production in Georgia is 2009–2013 compare to 2006–2008*

Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

# Production and output

## Crop and animal production prices (I)

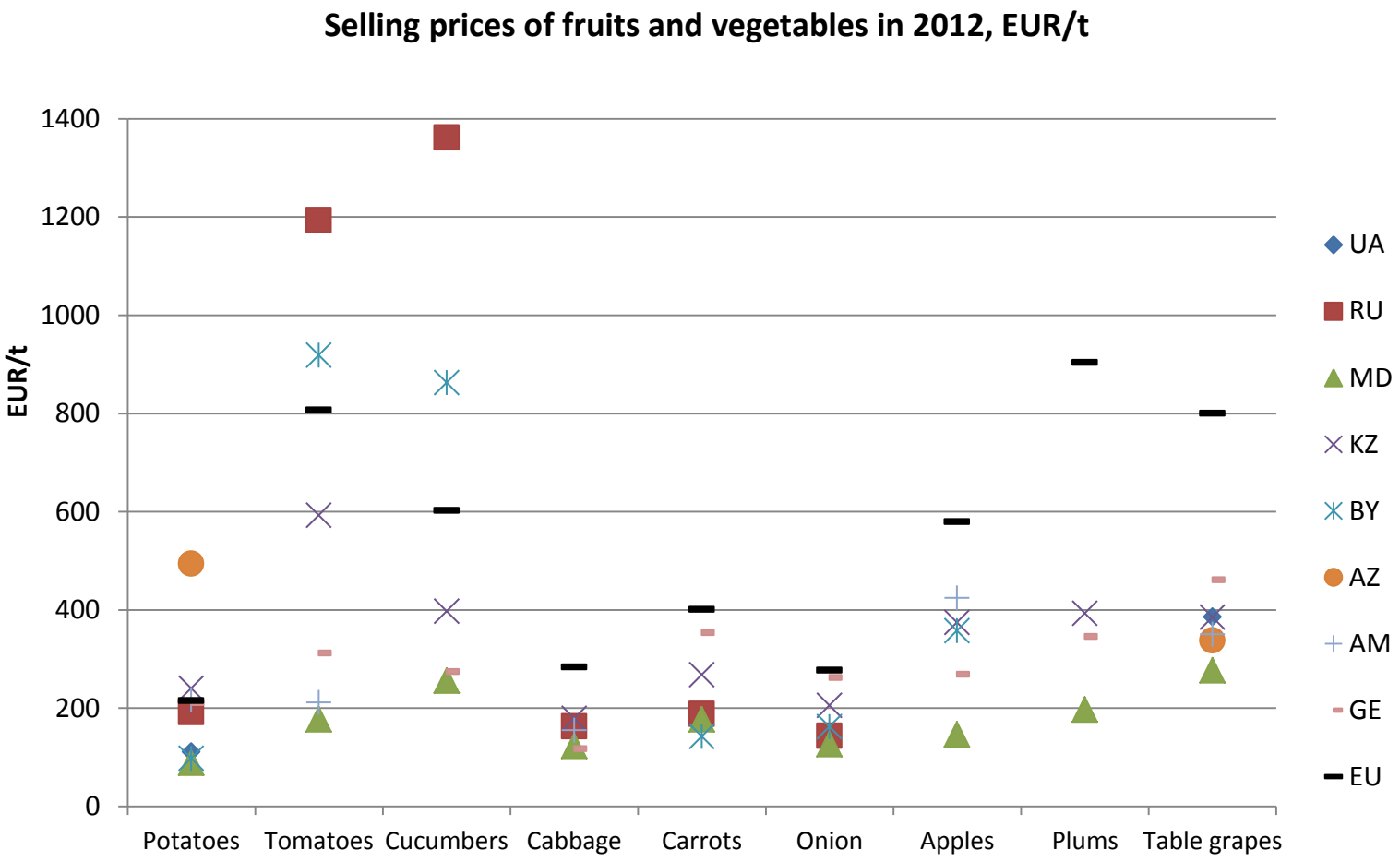



**sugar beet is measured in EUR/10 tons*
*Note: 2012 data used in terms of comparability among the eight analysed countries*

Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

# Production and output

## Crop and animal production prices (II)

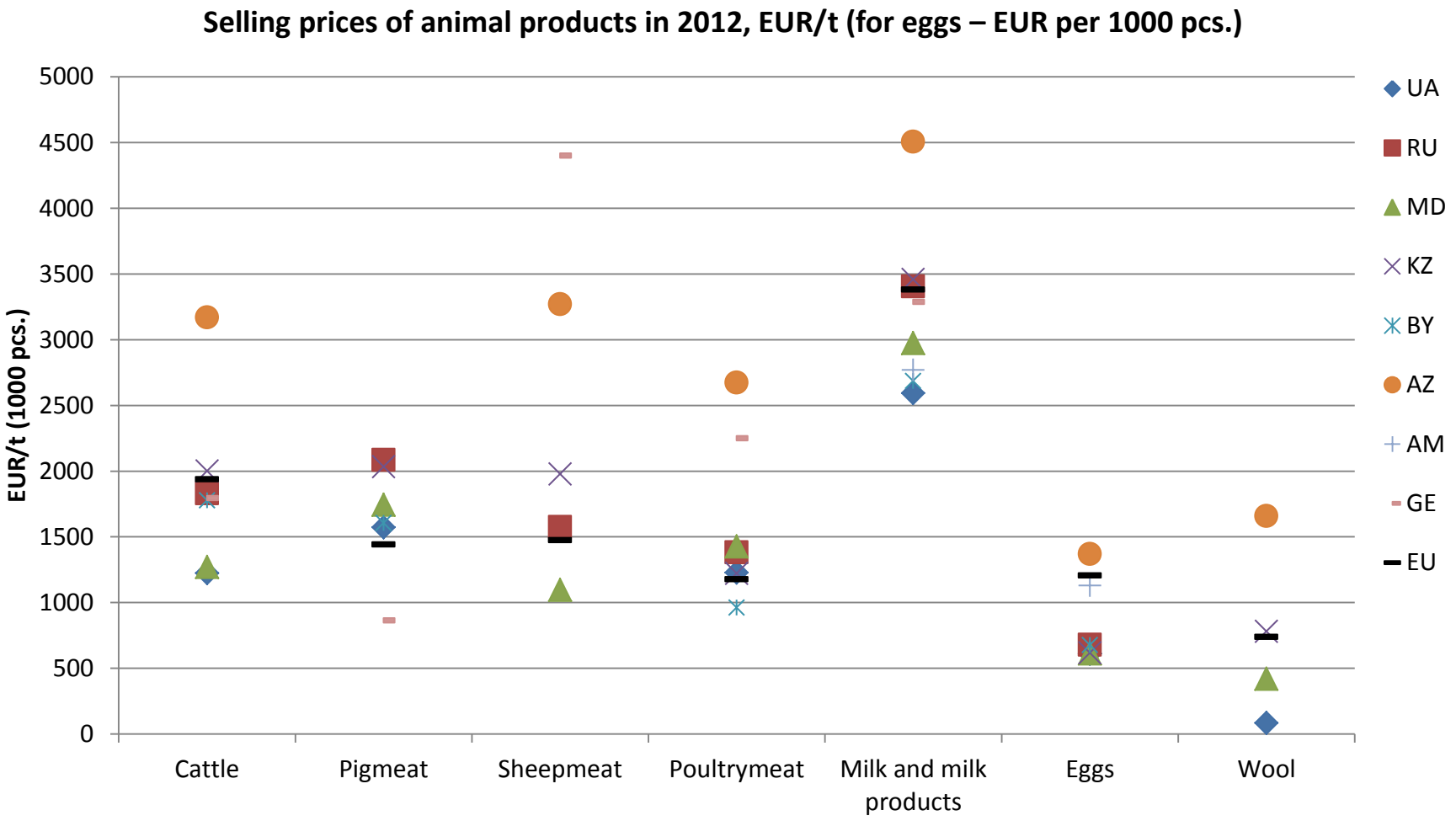



*Note: 2012 data used in terms of comparability among the eight analysed countries*

Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

# Production and output

## Crop and animal production prices (III)

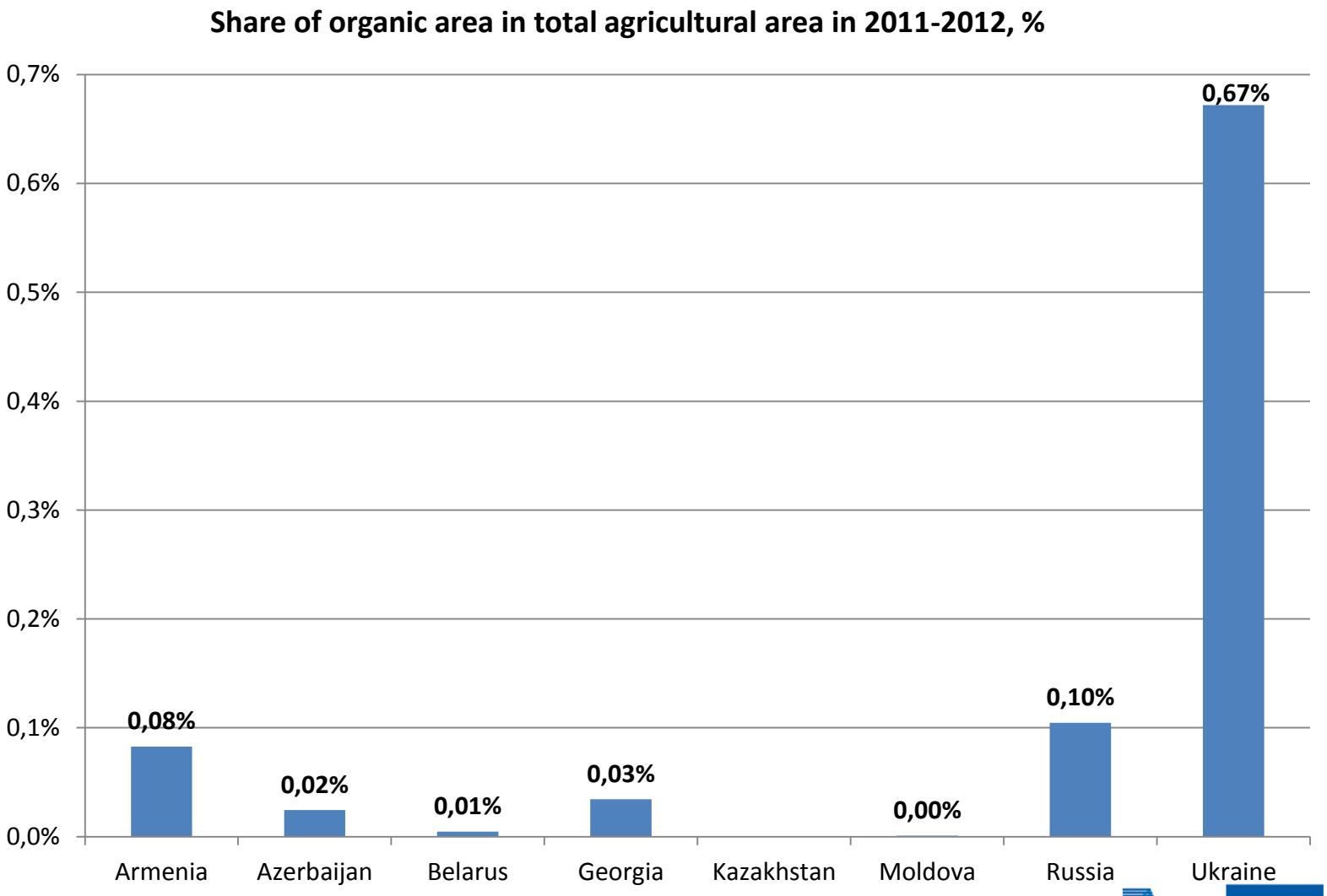



*Note: 2012 data used in terms of comparability among the eight analysed countries*

Source: AGRICISTRADE database, June 2015; Eurostat, 2015.

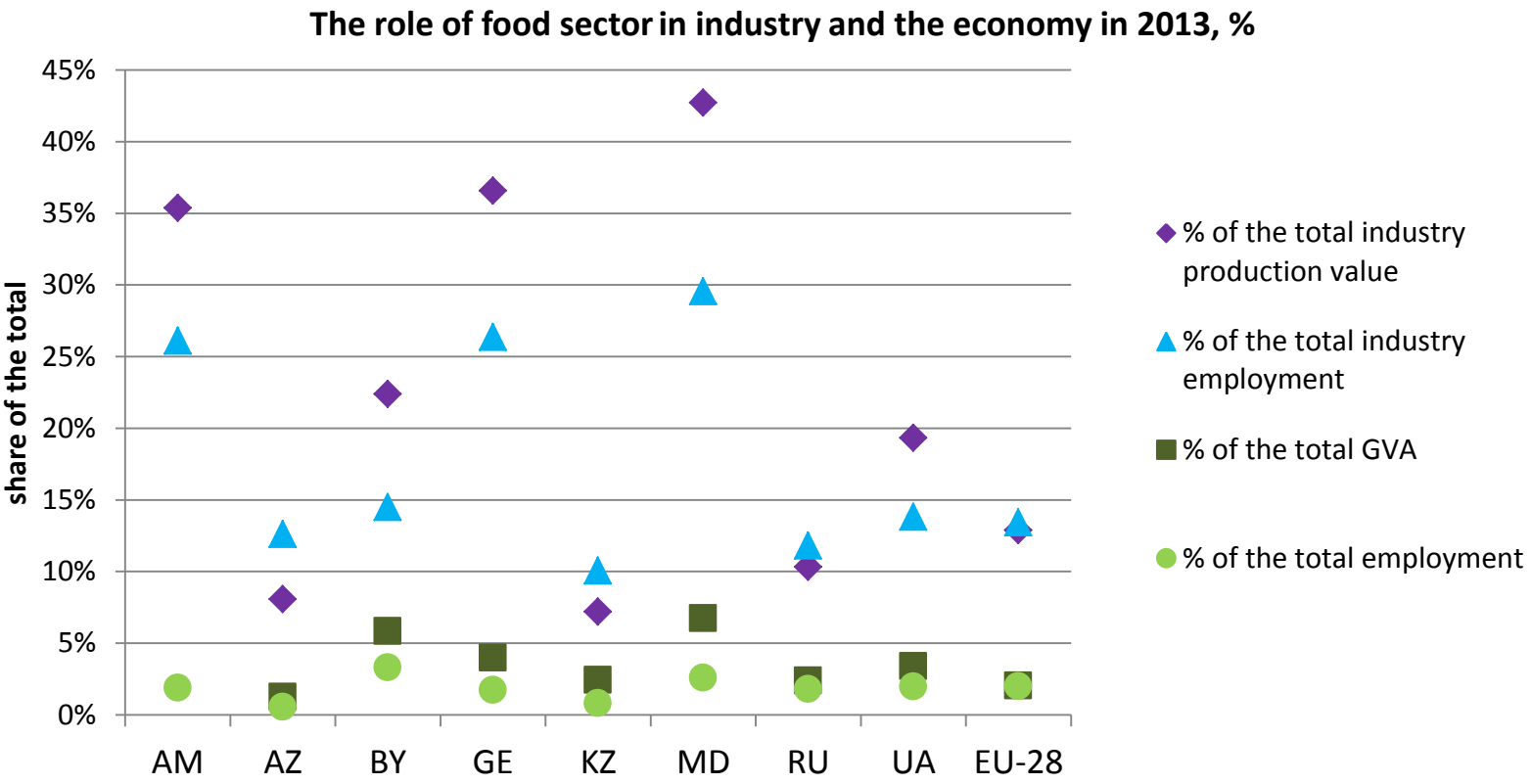
# Production and output

## Organic production




Source: AGRICISTRADE database, June 2015; data from WP2 Country reports.

# Food industry importance in the national economies

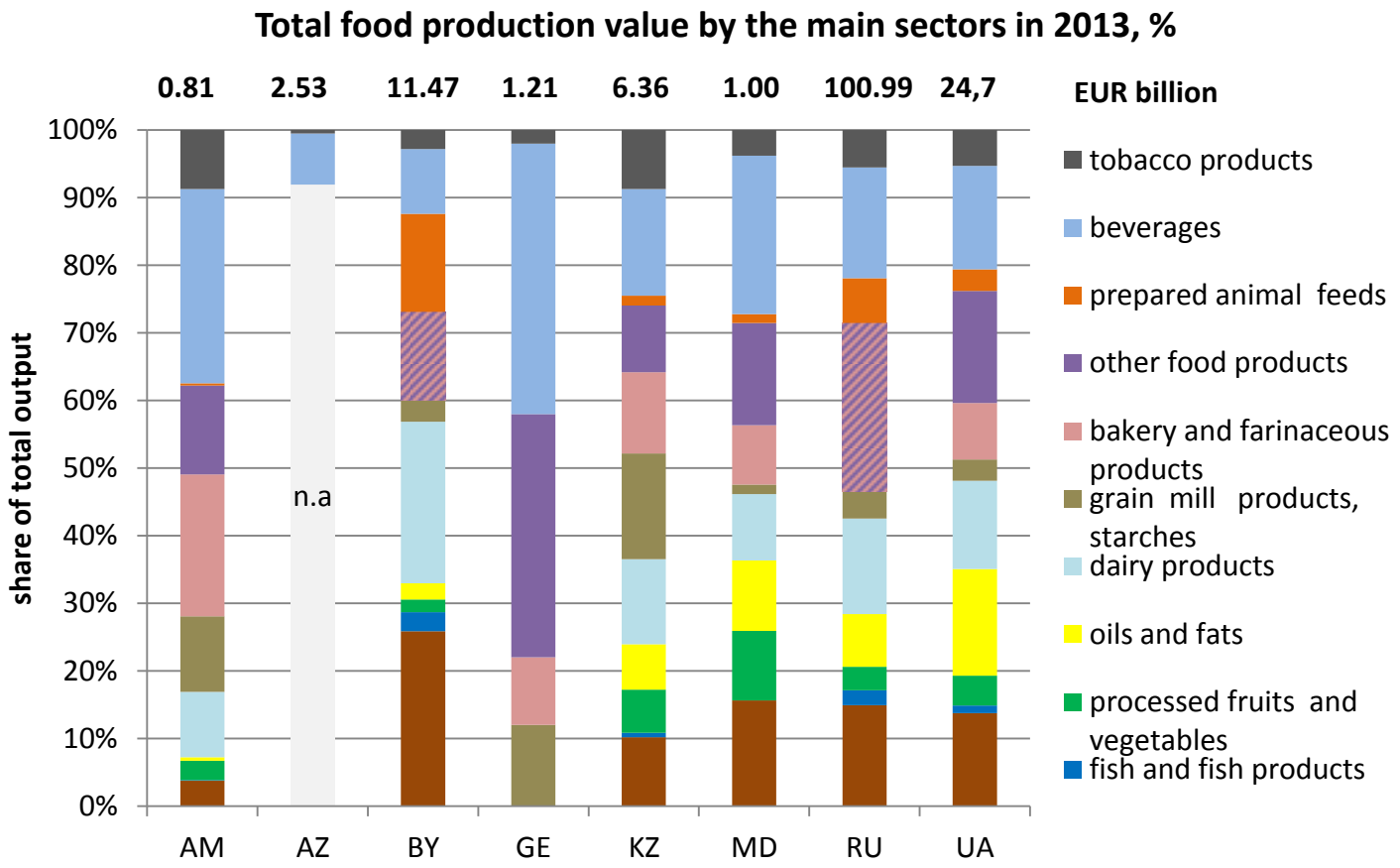



*Note: AM – data not available on VA in food sector; KZ – GVA and employment data for 2012; RU – data on shipped goods of own production used for production value; UA – data on sales used for production value; EU-28 – GVA data for 2012.*

Source: NSS of Armenia, 2015, 2014; SSC of Azerbaijan, 2015, 2014; Belstat, 2015, 2014; Geostat, 2015; AS of Kazakhstan, 2014; NBS of Moldova, 2015, 2014; Rosstat, 2014; Ukrstat, 2015, 2014, Eurostat, 2015; ARICISTRADE, 2015; own calculations.

# Food production

## Structure of the food sector (production structure)

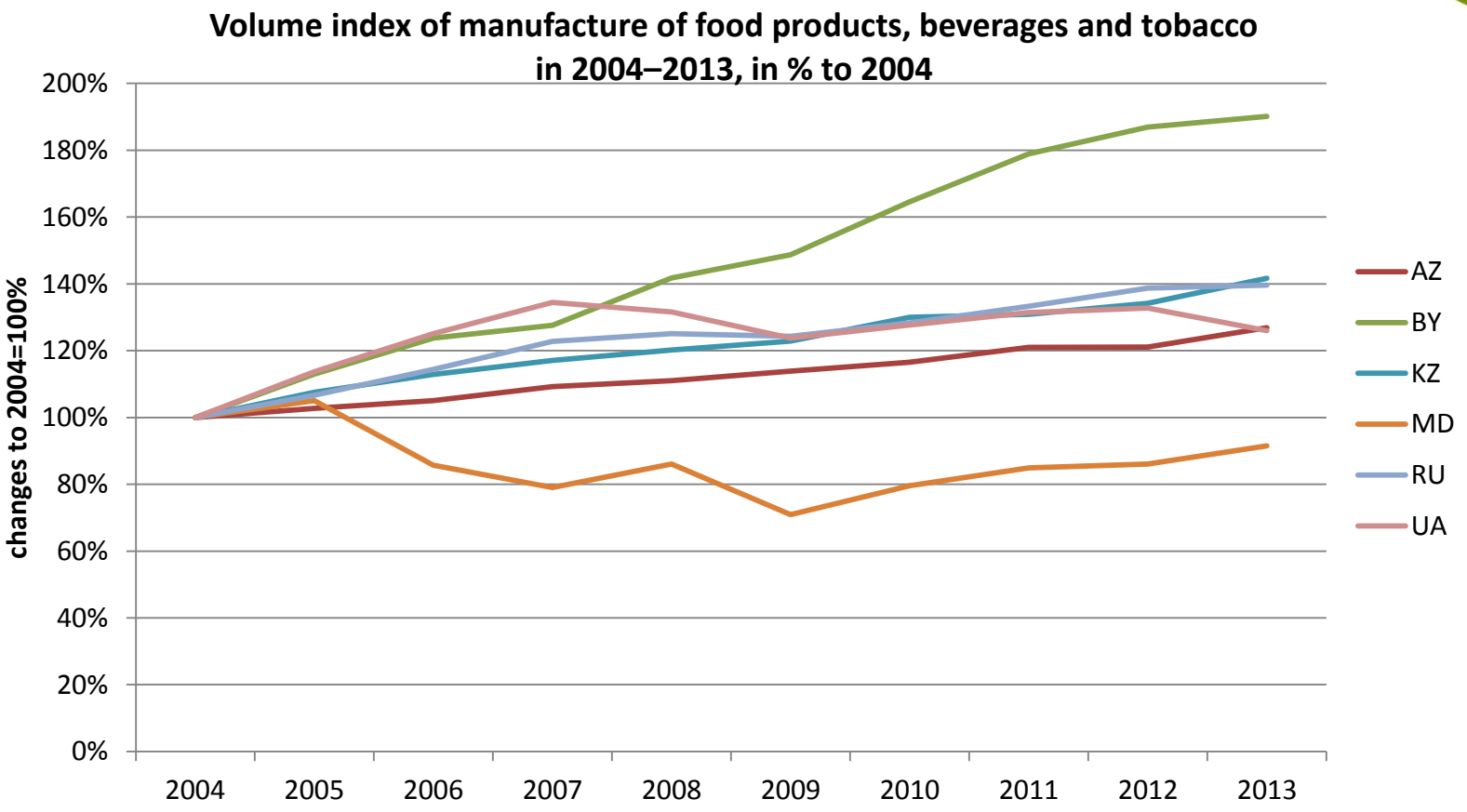



*Note: structure: GE – output (national accounts), other food products include also meat and dairy products; RU – turnover (medium and large enterprises only); UA – sales*

Source: NSS of Armenia, 2015, 2014; SSC of Azerbaijan, 2014; Belstat, 2014; Сельское…, 2015; Geostat, 2015; AS of Kazakhstan, 2014; NBS of Moldova, 2015; Rosstat, 2015, 2014; ARICISTRADE, 2015; own calculations.

# Food production

## Structure of the food sector (production growth rates (I))




*Note: AM – no comparable data available; AZ – manufacture of food products; GE – no data available; KZ – manufacture of food products; MD – manufacture of food products and beverages*

Source: SSC of Azerbaijan, 2014; Belstat, 2015; AS of Kazakhstan, 2015; NBS of Moldova, 2014; Rosstat, 2014, 2010; Ukrstat, 2015; ARICISTRADE, 2015.

# Food production

## Structure of the food sector (production growth rates (II))

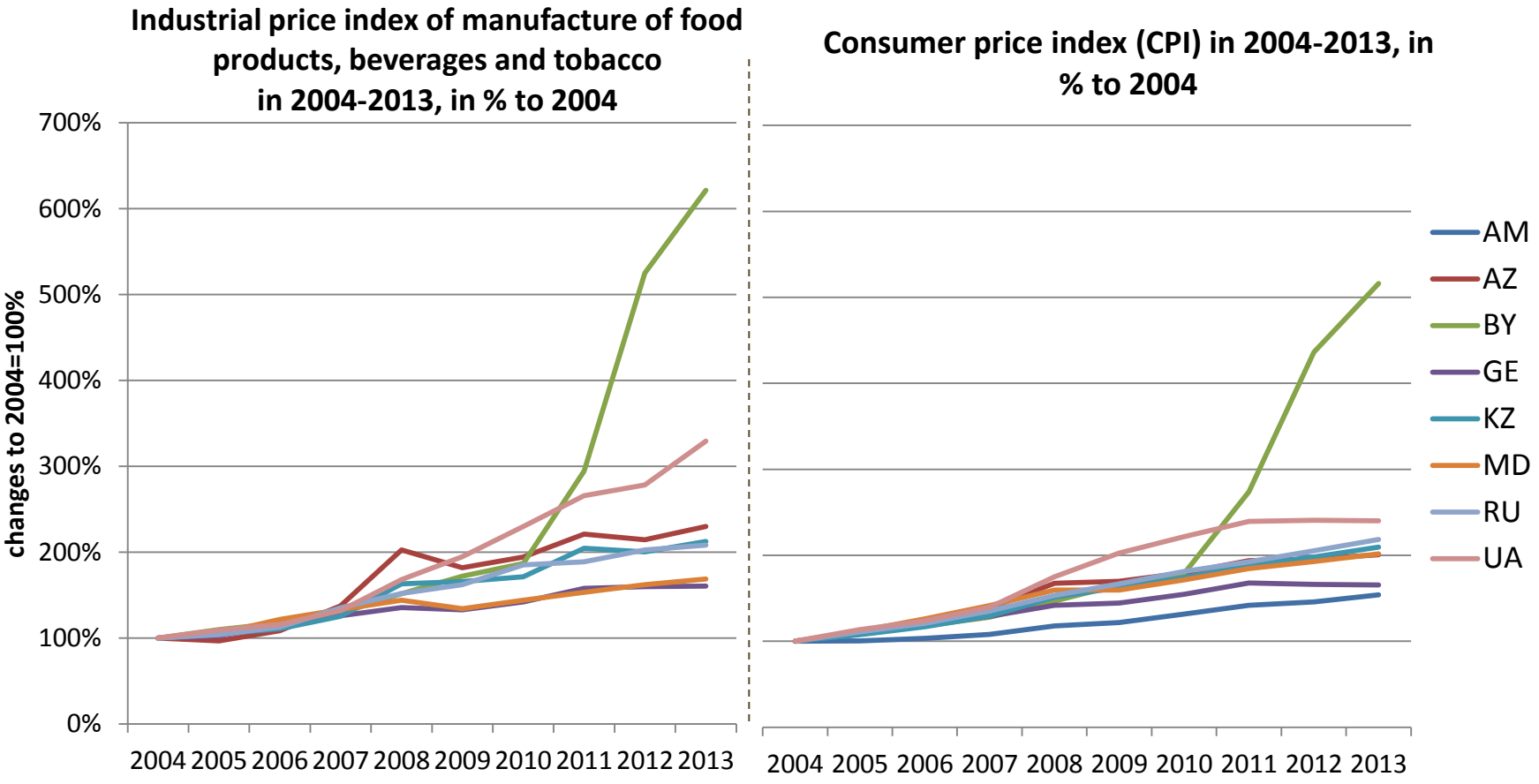
| Armenia | Azerbaijan | Belarus | Kazakhstan | Moldova | Russia | Ukraine |
|---|---|---|---|---|---|---|
| **Fastest growing food sectors** | | | | | | |
| • Sugar<br>• Oils and fats<br>• Tobacco<br>• Beverages | • Meat and meat products<br>• Sugar<br>• Dairy products<br>• Oils and fats | • Oils and fats<br>• Animal feeds<br>• Meat and meat products<br>• Dairy products | • Oils and fats<br>• Animal feeds<br>• Beverages<br>• Meat and meat products | • Animal feeds<br>• Alcoholic beverages<br>• Meat and meat products<br>• Dairy products | • Meat and meat products<br>• Animal feeds<br>• Oils and fats<br>• Canned fruits and vegetables | • Oils and fats<br>• Meat and meat products |
| **Declining food sectors** | | | | | | |
| • Fish and fish products<br>• Canned fruits and vegetables | • Fish and fish products<br>• Tobacco | • Chocolate and sugar confectionery | • Fish and fish products<br>• Tobacco | • Grain mill products, starches<br>• Wine<br>• Tobacco | • Beverages<br>• | • Tobacco<br>• Sugar<br>• Beverages<br>• Grain mill products<br>• Bakery and farinaceous products |

*Note: GE – no data available; KZ and MD – based on the volume indices of the main food sectors; other countries – based on the changes in the physical production of the main food products; national reports*

Source: NSS of Armenia, 2014, 2009; SSC of Azerbaijan, 2014; Belstat, 2015; AS of Kazakhstan, 2015; NBS of Moldova, 2014; Rosstat, 2014, 2010; Ukrstat, 2015; AGRICISTRADE, 2015.

# Food production

## Prices, costs and performance indicators (producer prices and costs)

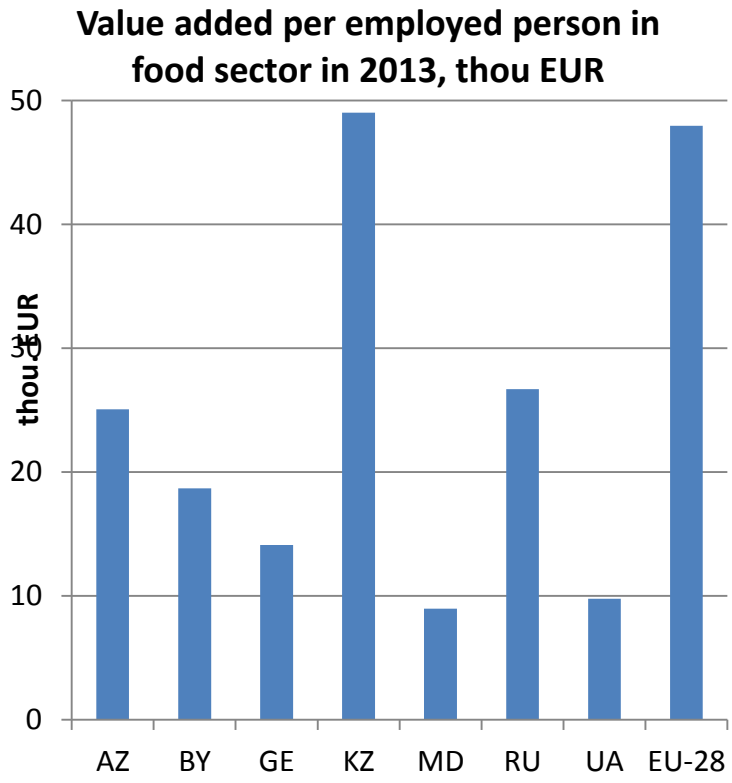


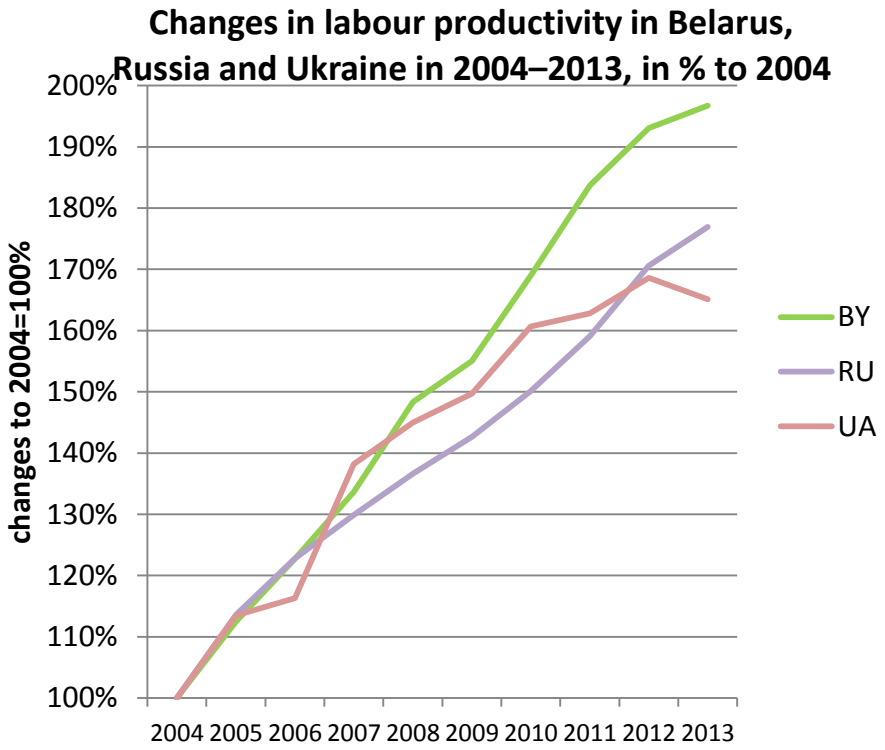

*Note: AM – no data available; AZ – manufacture of food products; KZ – manufacture of food products; MD – manufacture of food products and beverages; RU – december over december.*

Source: NSS of Armenia, 2015; SSC of Azerbaijan, 2015; Belstat, 2015; Geostat, 2015; AS of Kazakhstan, 2014; NBS of Moldova, 2015, Rosstat, 2010, 2014, 2015; Ukrstat, 2015, ARICISTRADE, 2015

# Food production

## Prices, costs and performance indicators (value added and labour productivity)



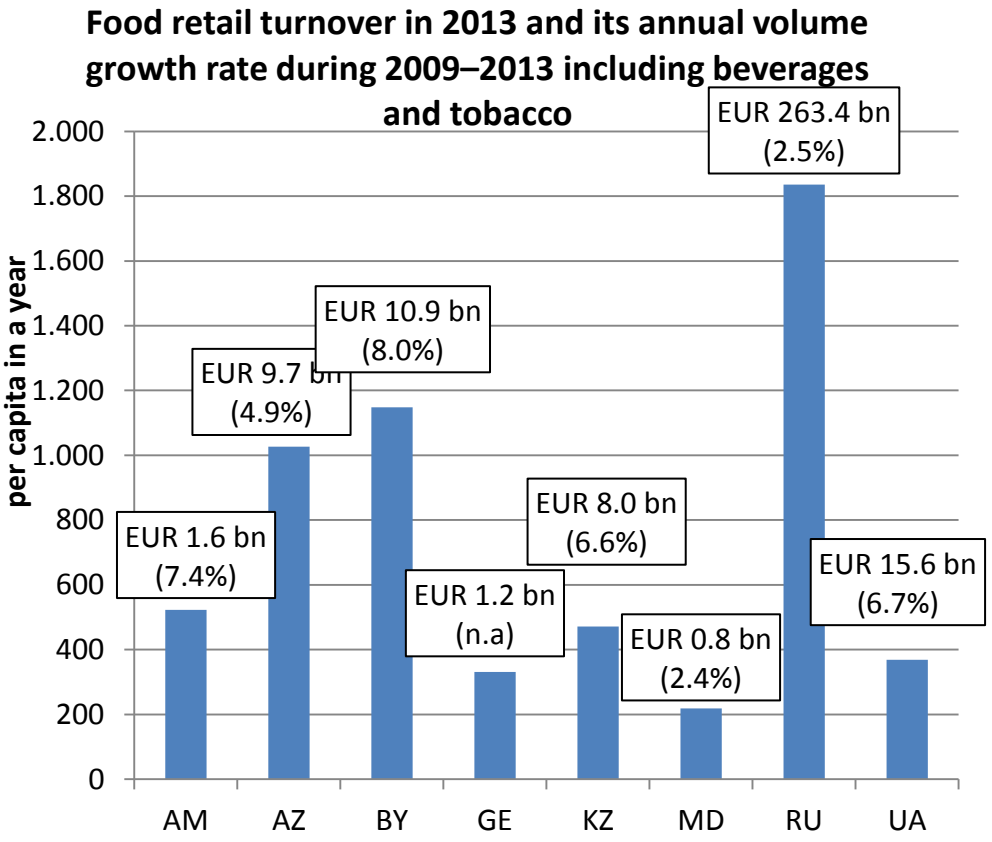

*Note: AM – no data available on VA*

Source: SSC of Azerbaijan, 2015, 2014; Belstat, 2015, 2014; Geostat, 2015; AS of Kazakhstan, 2014; NBS of Moldova, 2014, 2015; Rosstat, 2014; Ukrstat, 2014, Eurostat, 2015; own calculations.

Source: Belstat, 2014, 2013; Rosstat, 2014, 2010, 2008; Ukrstat, 2015, 2014, 2012, 2009; own calculations.

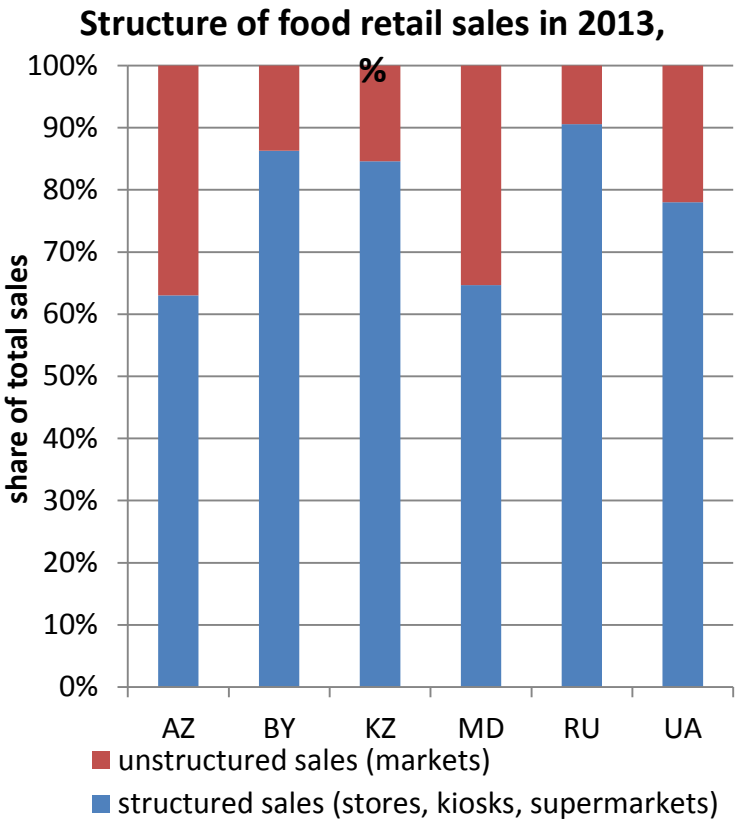
# Food retail and consumption patterns

## Food retail sector




*Note: AM – value of food sales calculated from the share of food sales in the total retail sales (by shops), volume indices of food retail sales of shops only; GE – cash expenditures for food used for retail sales; UA – retail sales and volume indices of enterprises only.*

Source: NSS of Armenia, 2014; SSC of Azerbaijan, 2014; Belstat, 2014; Geostat, 2015; AS of Kazakhstan, 2015; NBS of Moldova, 2015; Rosstat, 2015; Ukrstat, 2015; ARICISTRADE, 2015; own calculations.

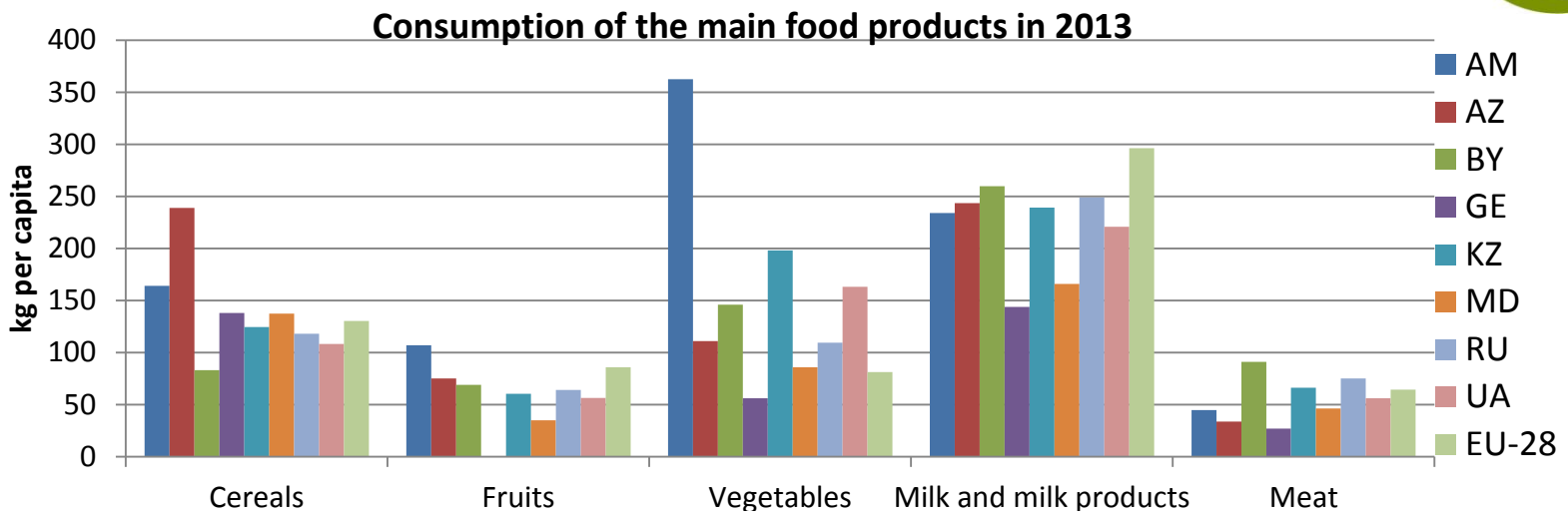



*Note: AM – no comparative data available; AZ, KZ, MD (data of 2010), RU, UA – total retail sales; GE – no data available*

Source: SSC of Azerbaijan, 2014; AS of Kazakhstan, 2014; NBS of Moldova, 2012; Rosstat, 2015, ARICISTRADE, 2015

# Food retail and consumption patterns

## Food consumption




**Changes in the consumption of the main food products in the eight countries in 2013 compared to 2007, %**

| | Armenia | Azerbaijan | Belarus | Georgia | Kazakhstan | Moldova | Russia | Ukraine |
|---|---|---|---|---|---|---|---|---|
| **Cereals** | **-11%** | **-1%** | **-7.6%** | **+1%** | **+2.0%** | **-6%** | **-2%** | **-6%** |
| **Fruits** | **+31%** | **+35%** | **+17%** | **n.a.** | **+241%** | **+46%** | **+25%** | **+34%** |
| **Vegetables** | **+16%** | **-5%** | **+4%** | **-3%** | **+17%** | **+13%** | **+17%** | **+38%** |
| **Milk and milk products** | **+15%** | **+38%** | **+3%** | **-7%** | **-20%** | **-5%** | **+5%** | **-2%** |
| **Meat** | **+26%** | **+42%** | **+28%** | **-4%** | **+2%** | **+28%** | **+22%** | **+23%** |

*Note: AM – consumption of wheat and maize used for cereals, consumption of meat calculated from the main meat types; GE - consumption of wheat and maize used for cereals, no data available for fruits; KZ – consumption of bread products, flour and groats used for cereals; MD – consumption of fruits without grapes; BY and RU - consumption of bread products, flour and groats (in flour equivalent) used for cereals*

Source: AGRICISTRADE database, June 2015; ARICISTRADE, 2015; AS of Kazakhstan, 2015; Rosstat, 2014; European Commission: Directorate-General for Agriculture and Rural Development, 2015; Freshel Europe, 2012.

# Thank you for your attention !

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# CONCLUSIONS(I)

## Agricultural sector development

•The role of agriculture in the economy of the eight countries was recognized as significant. The share of gross value added of the agriculture, forestry, hunting, and fishery sector in Moldova is the highest and accounts for nearly 15% in GVA of all activities, in Russia and Kazakhstan is nearly 5%, and in the rest countries is around 10%.

•Farming intensity in the analysed countries ranges from the relatively intensive farming in Ukraine and Moldova, through moderate intensity of farming in Belarus, Russia and Georgia, to very low intensity extensive farming in Azerbaijan, Armenia and Kazakhstan. First two groups of farming intensity are typical on more fertile land with intensive production systems. The third group of countries represents more traditional land uses, usually found on poorer land.

•The selected directions of agricultural reforms after the USSR collapse allow us to classify the analysed countries into two groups. The first group includes countries with distinct predomination of individual farms (i.e. in Armenia, Azerbaijan and Georgia), the second group has predominant share of corporate farms (i.e. Belarus, Kazakhstan, Moldova, Russia, Ukraine). This classification and implemented agricultural policy have a significant impact on the average farm size in the mentioned countries, which differs significantly.

•Though all countries cultivate common products, for example, wheat and barley, most of the analysed countries benefit from their agro-climatic conditions and could propose niche products for export (t.e. Russia produce fodder and oilseed, Belarus – fodder and green maize, Ukraine – sunflowers, Georgia –maize, Moldova – oilseed, Armenia and Azerbaijan – tomatoes, melons and apples. It should be noted that low yields is a common problem of the analysed countries. Low investments, shortage of turnover capital (for high-quality seeds and plant protection) and lack of farmers' knowledge could be mentioned as the most important factors, which influence the gap between factual situation and the potential. Some of the mentioned countries face unfavourable agro-climatic conditions.

•Self-sufficiency indicators show that most of the countries heavy rely on import of crops and domestic market could absorb more local production (for example, Georgia has demand for wheat, Armenia and Azerbaijan – for wheat and corn/maize, Moldova – for potatoes and potato products, Kazakhstan and Belarus – for fruits and berries. Although almost all countries have intensive livestock sector, the issues of productivity are very important.

# CONCLUSIONS (II)

## Agricultural sector development

•The examination of the selling prices of agricultural products showed large differences not only in comparison with EU, but also among the analysed countries. The EU average prices of grains are slightly higher than in the six of eight countries (except from Georgia and Armenia).

•Russia is characterized by extremely high selling prices for tomatoes and cucumbers. The differences in tomatoes and cucumbers' prices among the eight countries are the largest among all selling prices of agricultural products. The difference in selling prices of cabbages, onions and carrots among countries is very small. The fluctuation of prices of fruits is also low. However, the EU selling prices of fruits are more than twice the average of the eight countries.

•Selling prices of meat products in the EU countries are lower or similar to the eight countries average. Azerbaijan is characterized by the highest livestock production selling prices among the eight countries, which are almost twice the EU average. Russia and Kazakhstan also have higher than the EU selling prices for sheep meat, pig meat and milk and milk products. Georgia has particularly high sheep meat prices, i.e. three times higher than the EU average, and the cheapest pig meat, i.e. almost twice as cheaper as in EU. Ukraine and Moldova have relatively low sales prices for all livestock production.

•Assessment of the selling prices and the level of self-sufficiency of agricultural production in the eight countries slightly directed that sales of the EU animal products to some of the eight countries possibly could be a niche.

•Organic farming is a relatively new field of farming in the eight countries. Therefore, this farming practice is poorly developed. However, according to the accessible statistical data there is a considerable progress in such farming practice in the short term in the eight countries. Ukraine has developed organic farming the most among the eight countries in terms of organic area.

•The eight countries, with the exception of Russia and Azerbaijan, are net importers of energy. They inherited heavy dependence on traditional energy sources, such as gas, oil and coal. Most of the analysed countries initiated political tools to increase the share of bioenergy on national level in the first decade of XXI century, but biomass production remained underdeveloped as Russia successfully competed with this source of energy offering cheaper solution.

# CONCLUSIONS (III)

**Performance of the food sector**

•Food sector plays an important role in the economy of analysed countries (particularly in Armenia, Belarus, Georgia and Moldova), with the contribution to the GVA ranging from 6.7% to 1.2%.

•Overall, food production value per capita in the analysed countries is low compared with the EU average level, which inter alia implies on the less ability and possibility of the processors of these countries to attract higher value from the market (both in terms of higher quantity sold locally and abroad and higher product prices obtained).

•Food sectors are quite diverse in the analysed countries. Belarus excels in having very strong focus on the processing of products of animal origin – dairy products, meat and meat products, while there is distinctively large production of oils in Ukraine. Manufacture of beverages is one of the main food sectors in almost all analysed countries.

•Food production has been growing in the analysed countries – distinctively the fastest growth has been recorded in Belarus, followed by Kazakhstan and Russia, while Moldova was the only country where the production volume of food sector decreased over 2004-2013. Production of oils and fats has been among the fastest growing food sectors; also, processing and preserving of meat has been having high growth rates in the analysed countries.

•Food production structure in the analysed countries ranges from very fragmented to somewhat at the EU average level and even to a very large average size of food enterprises in Belarus. Overall, the average number of employed persons per enterprise in the food sectors of the analysed countries is larger than in the EU on average, with more labour input to production value.

# CONCLUSIONS (IV)

## Performance of the food sector

•There has been a strong price growth of both food output and input prices in the analysed countries, with the increase in prices in Belarus being the most remarkable. Overall, the growth is input prices has been more significant than increase in output prices, with more positive development of food sector's prices relative to production costs found only in Ukraine.

•The increase in wages and salaries in the largest food producing countries has not been balanced with the growth of labour productivity, which implies that the labour cost efficiency of food industry has decreased and consequently it can affect the competitiveness of the food sectors of these countries.

•There is low value added per employed person in most of the analysed countries (only about half the average EU level and less) and which is mainly due to the large labour input, with Ukraine also having higher share of intermediate consumption costs.

•The average profitability of food sector in the largest producing countries is rather high, especially in Belarus, followed by Russia. Profitability in Ukraine and Kazakhstan seems to be closer to the EU average level.

•Russia has considerably higher per capita food sales than other analysed countries, and which is not far behind the EU average level, while Moldova and Georgia seem to have the largest growth potential. The retail turnover of food products, beverages and tobacco has been growing rapidly in most analysed countries.

•There is high consumption of vegetables in the analysed countries, while the consumption of fruits, milk and milk products is lower compared with the EU average level. Per capita consumption of meat varies among the countries, but consumption of cereal products is somewhat at the EU average level. There has been a notable increase in the consumption of meat and meat products, and fruits in almost all analysed countries; also, per capita consumption of vegetables has been growing, while the consumption of cereal products has been rather stable and the changes in the consumption of milk and milk products have been varied among the analysed countries.