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Productivity in agriculture of Ukraine and other CIS

Roman Slaston, Alex Lissitsa

Selected Paper prepared for presentation at the International Agricultural Trade Research Consortium's (IATRC's) 2013 Symposium: Productivity and Its Impacts on Global Trade, June 2-4, 2013, Seville, Spain

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UkrainianAgribusinessClub

Productivity in agriculture of Ukraine and other CIS

Roman Slaston, Alex Lissitsa

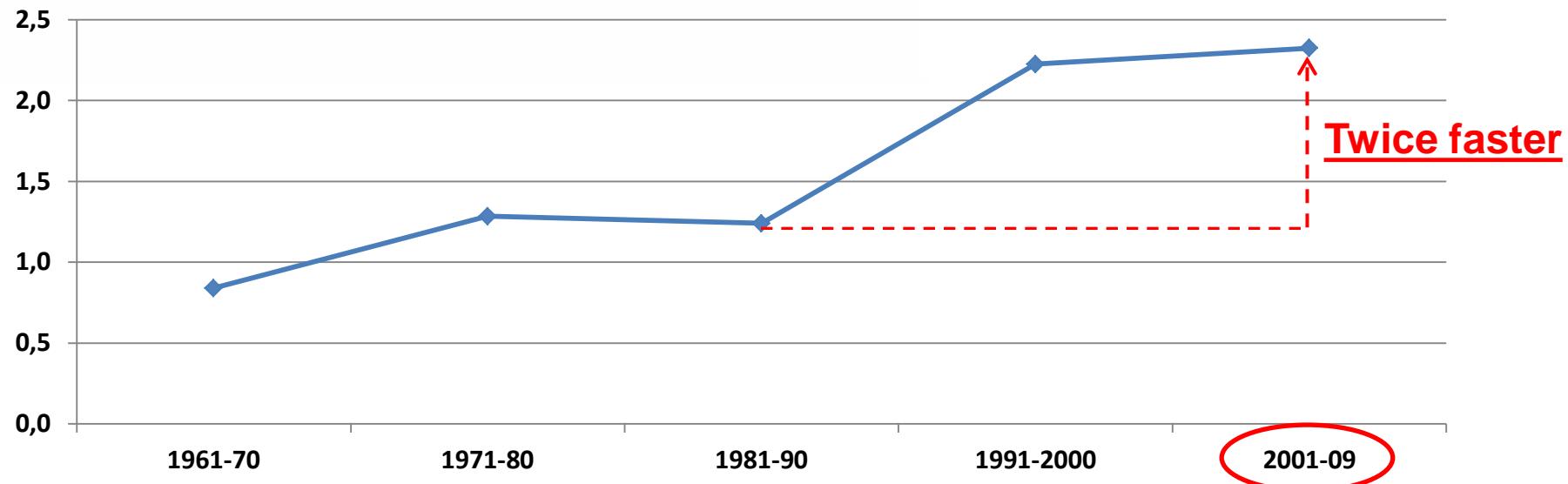
Productivity and Efficiency and their measurement

- Productivity is a major concept in economics, but there is no unique approach
- Productivity as ratio of output (produced) over the resources used (input) in the production process
 - partial productivity
 - Land
 - Labor
 - total factor productivity
 - Farm efficiency

Global Agricultural Productivity

% annually

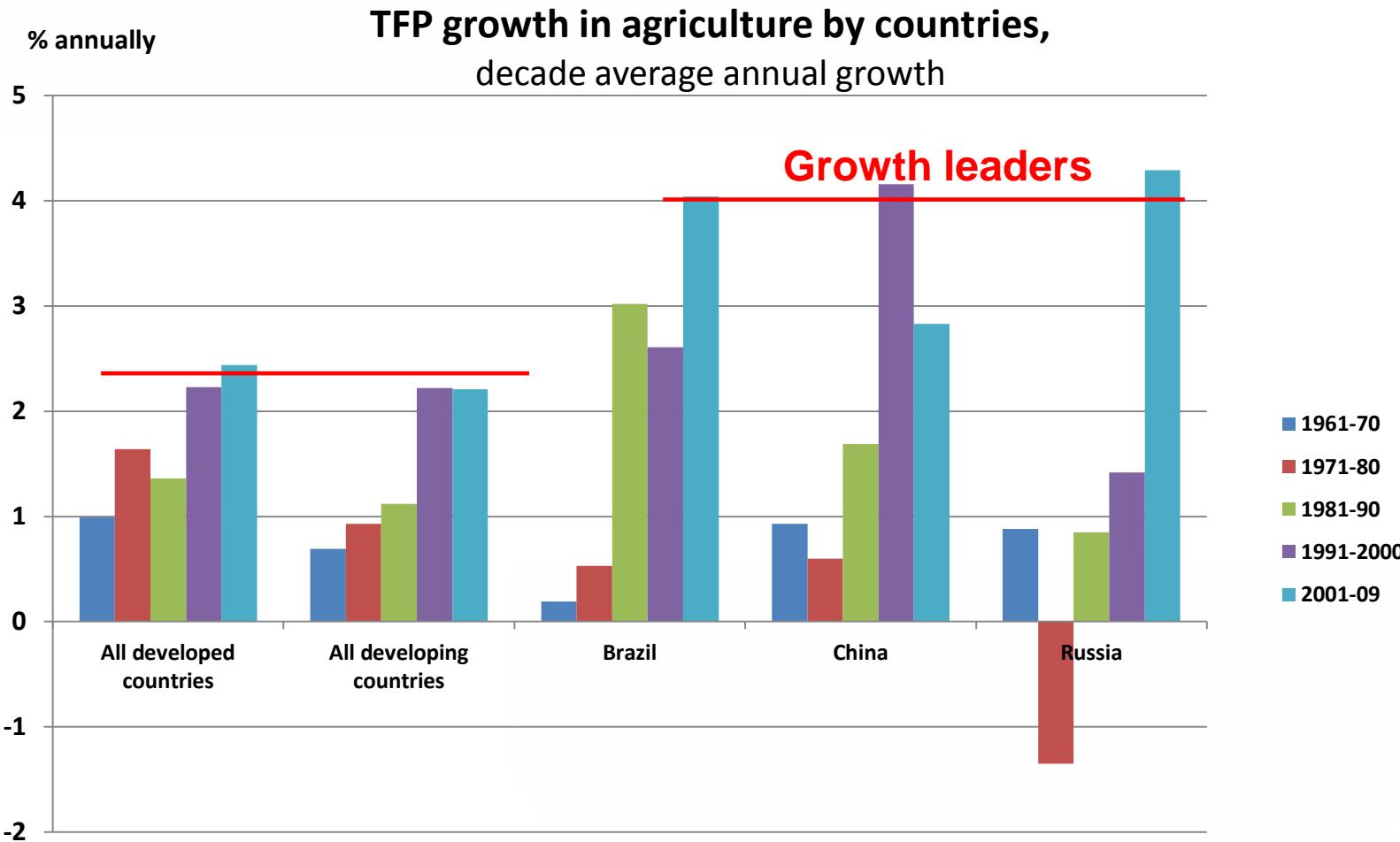
Global TFP growth in agriculture,
decade average annual growth



Efficiency increase

As result of
& Technological progress

Global Agricultural Productivity by Regions

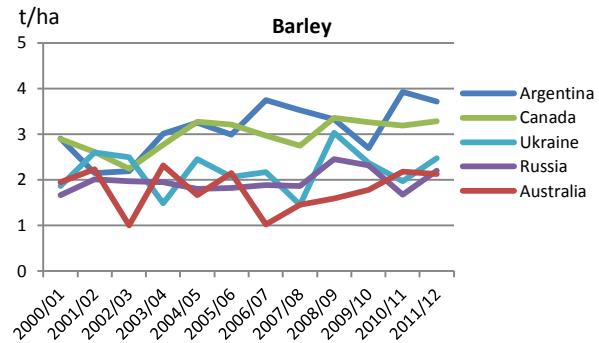
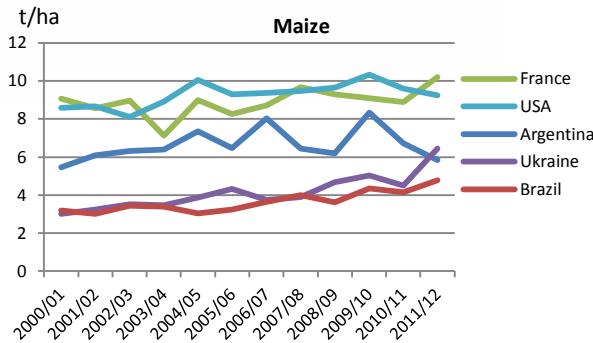
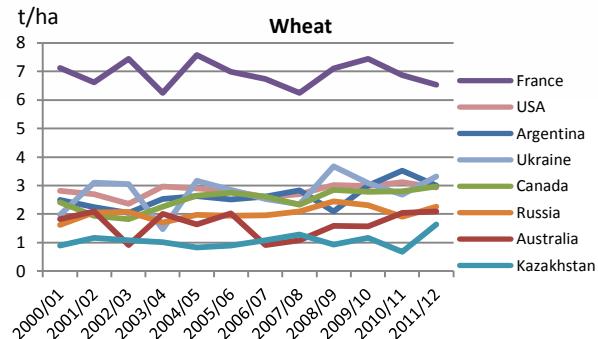


Land productivity: Yields

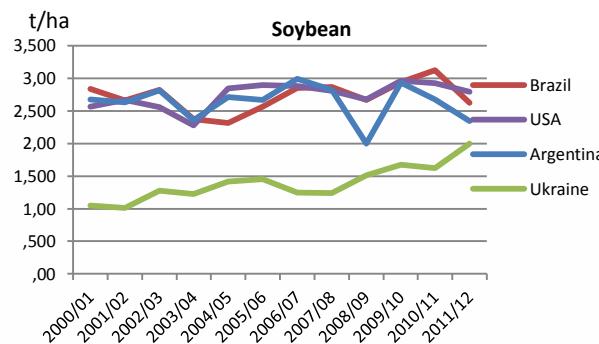
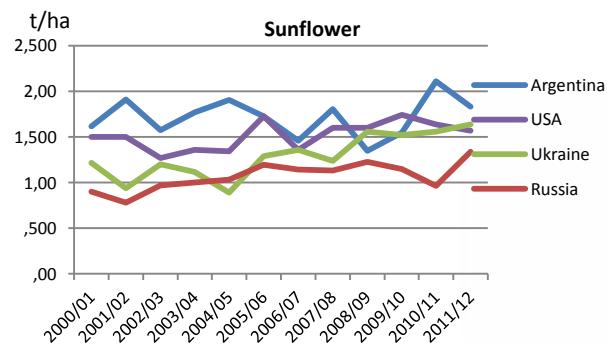


Yield dynamics

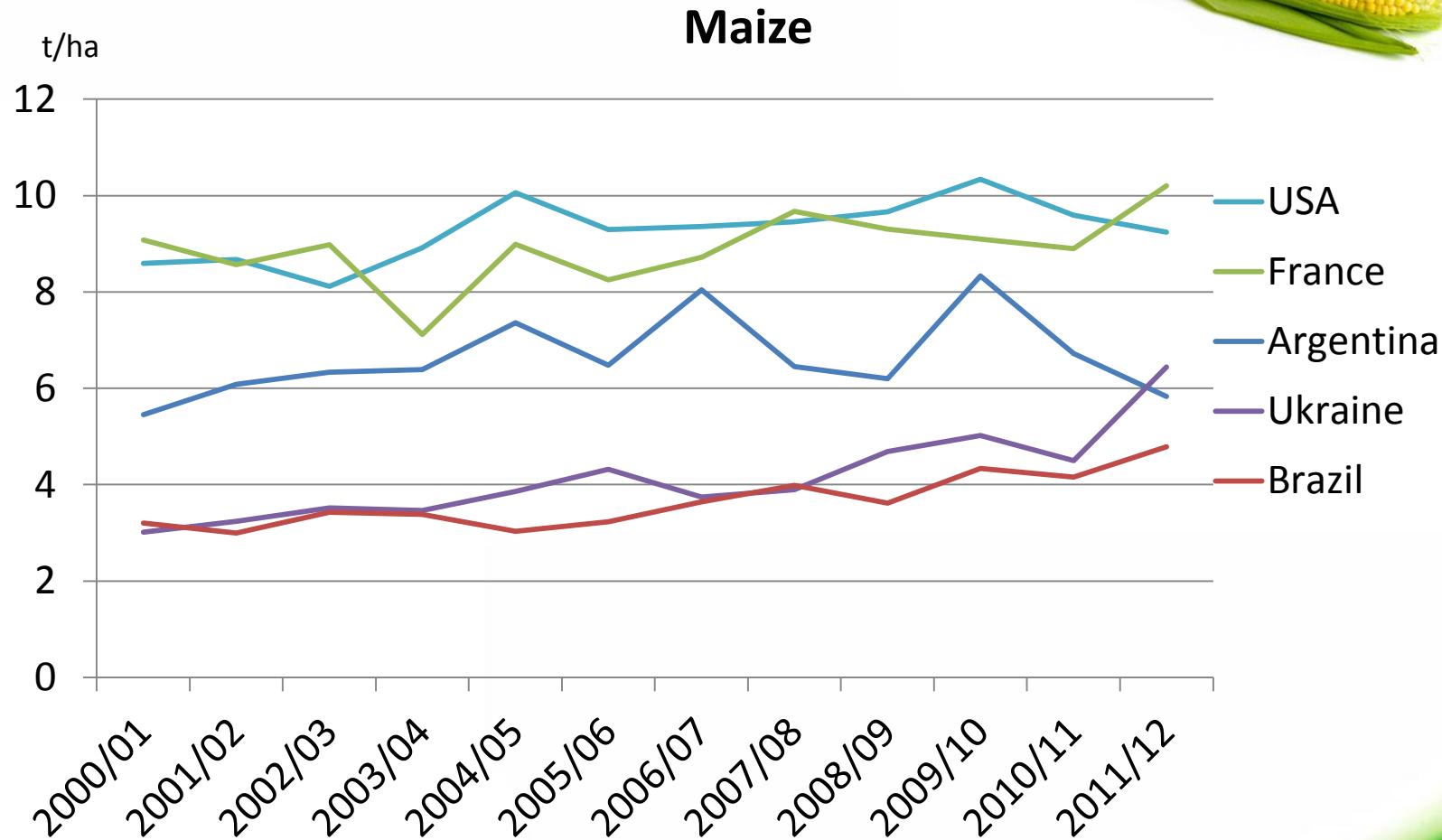
of major crops in major exporting countries



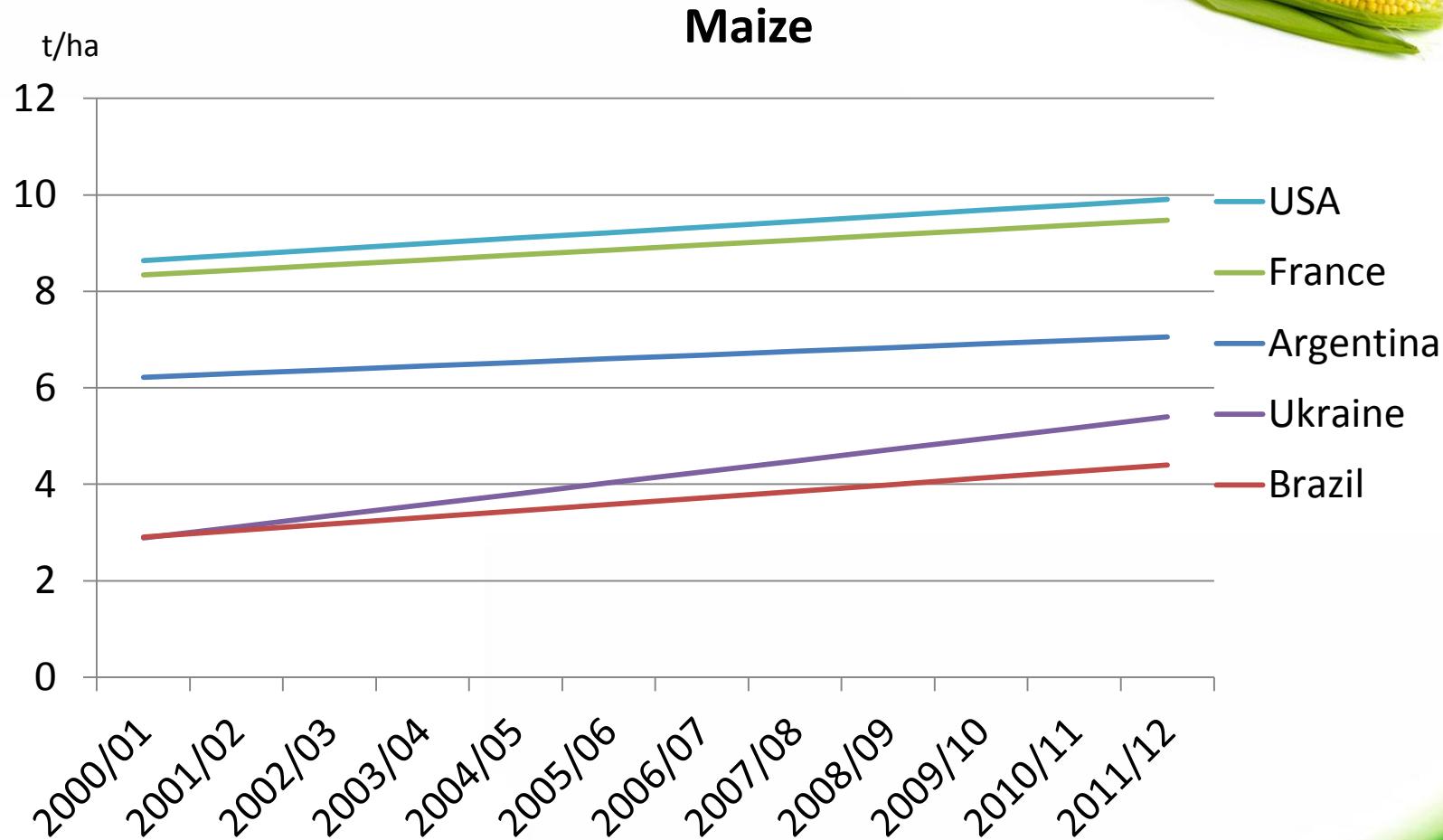
Let's look in more detail!



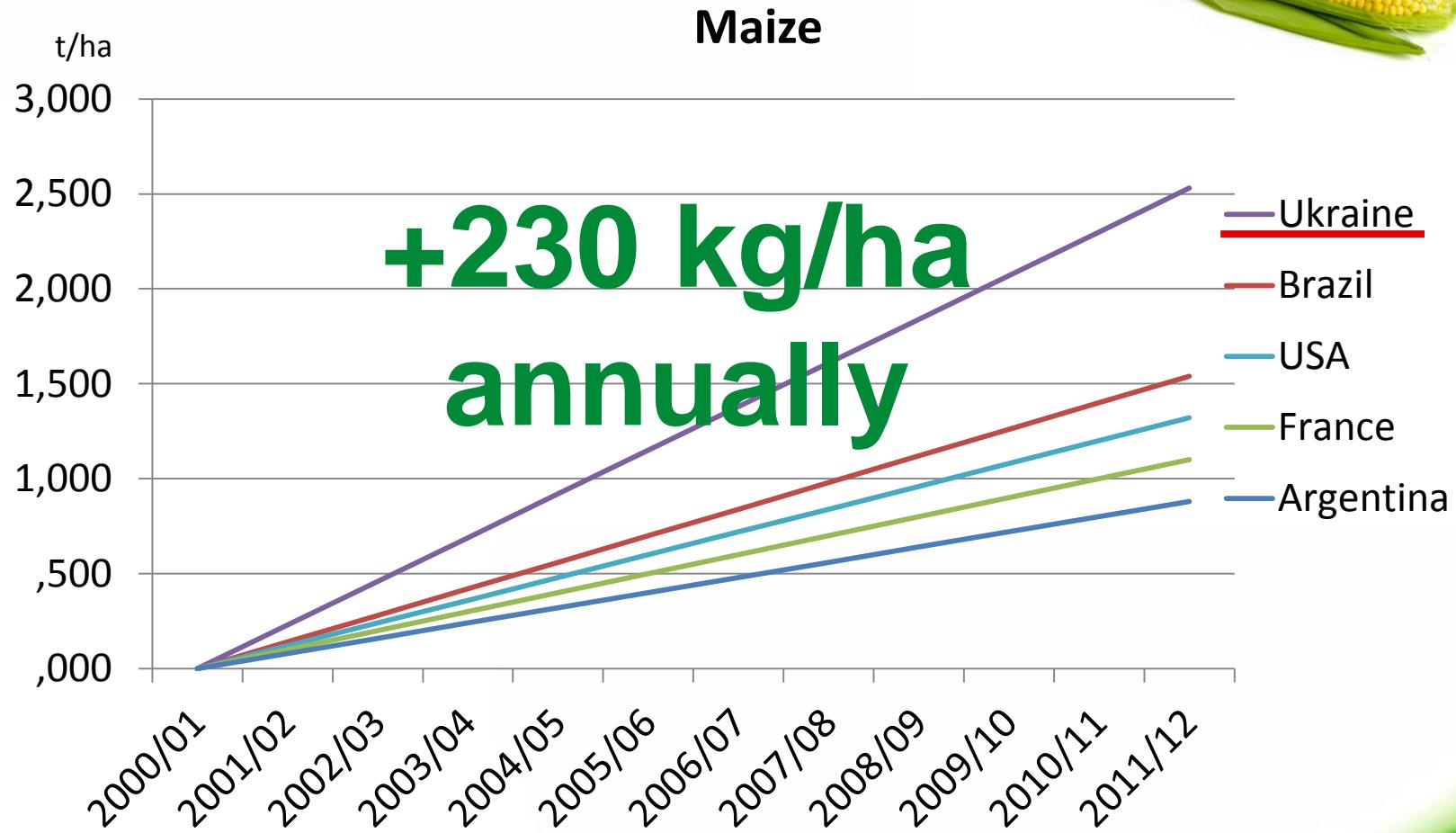
Yield dynamics



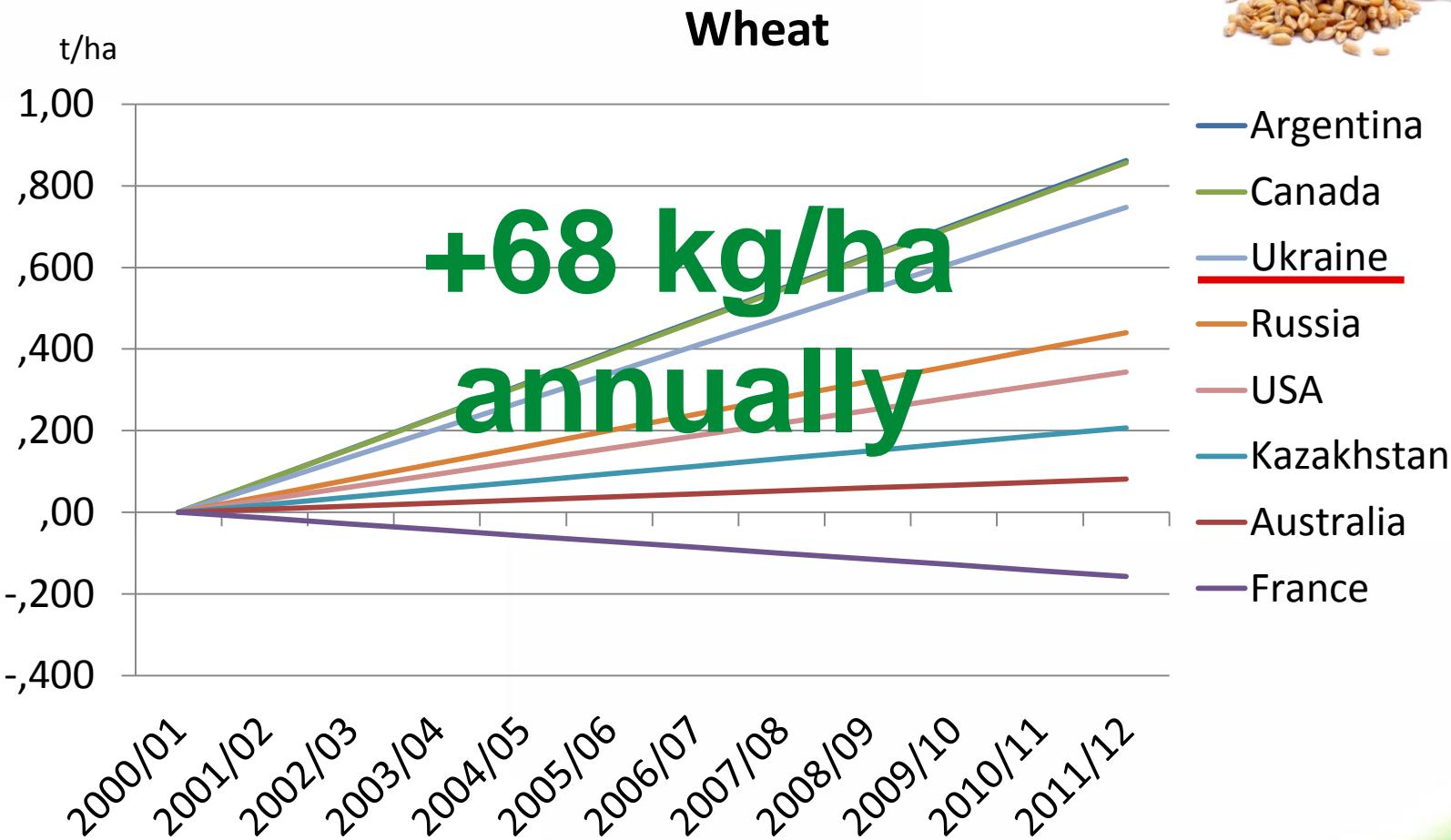
Yield trends



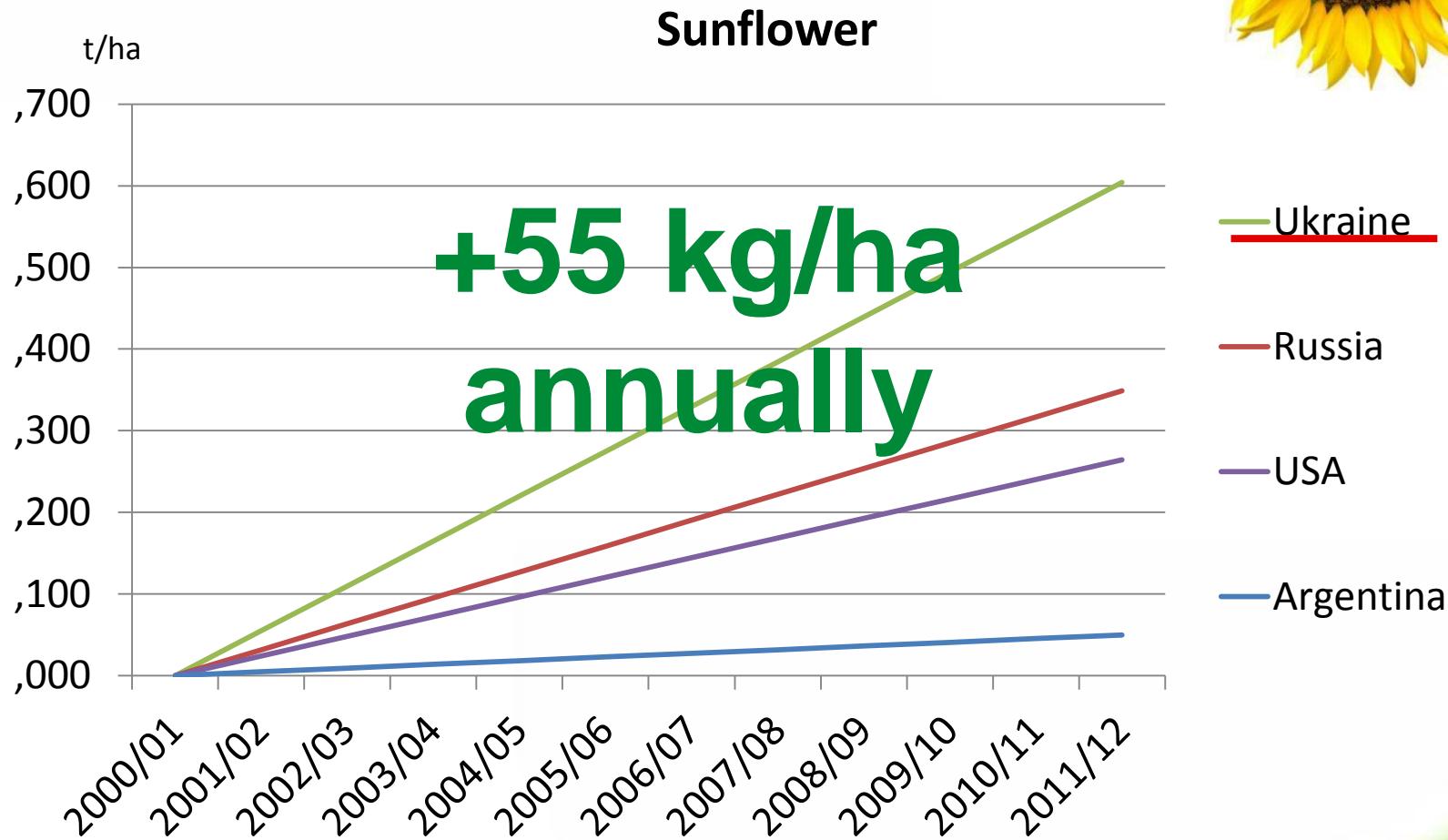
Yield growth



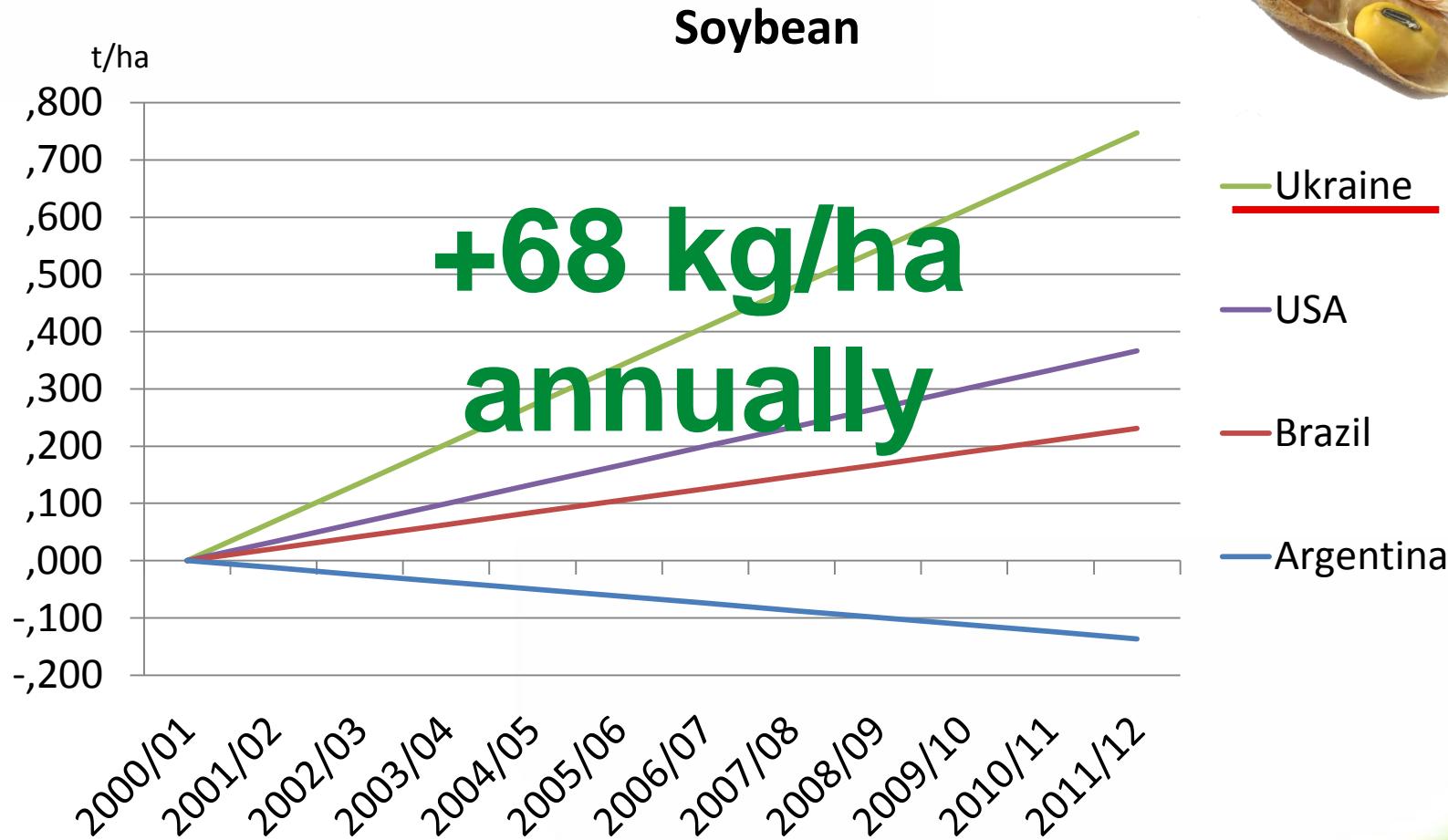
Yield growth



Yield growth

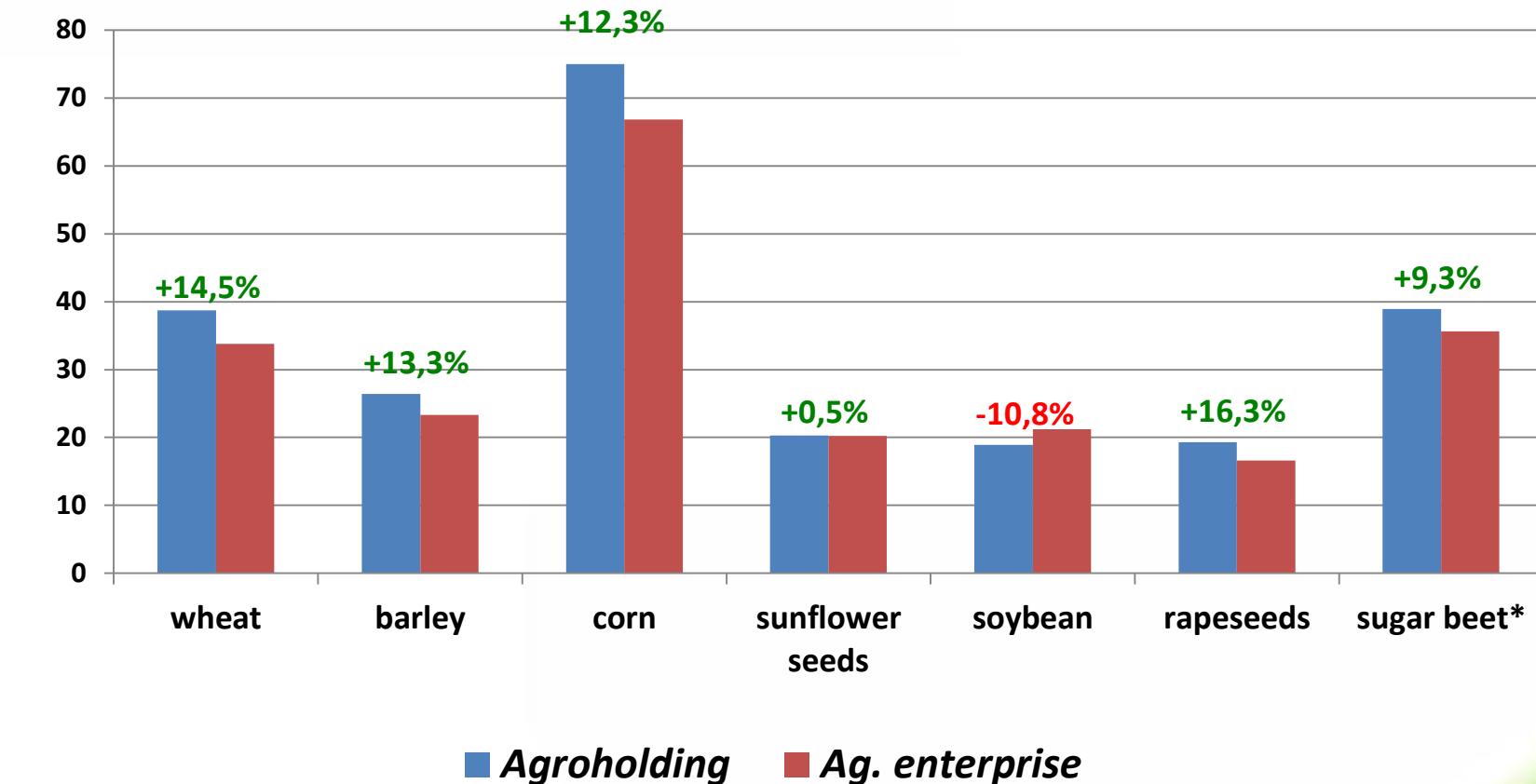


Yield growth



Yields in Ukraine: agriholdings vs. medium-size agricultural enterprises

dt/ha

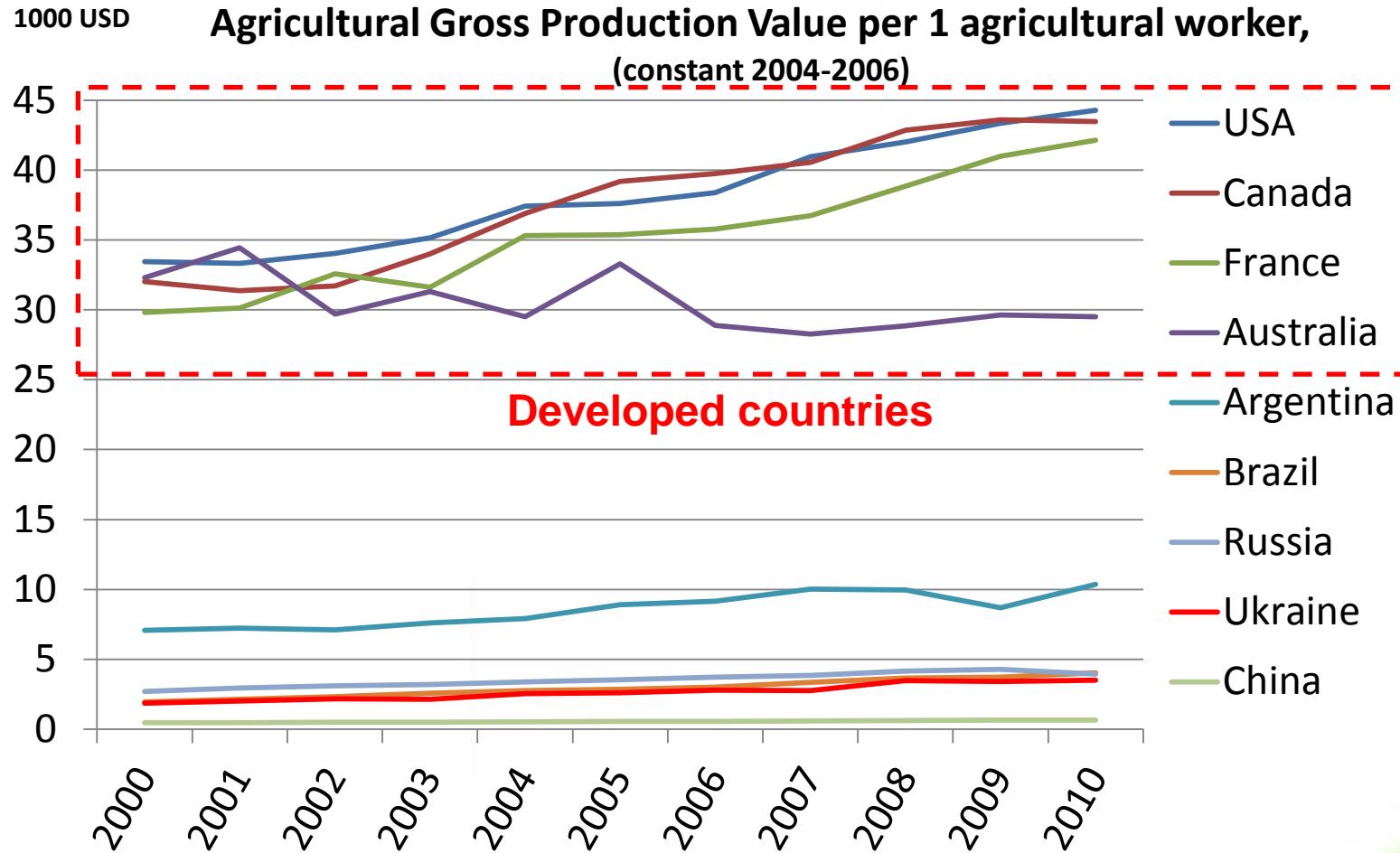


Source: Largest holdings in crop production of Ukraine – 2012 (AgriSurvey)

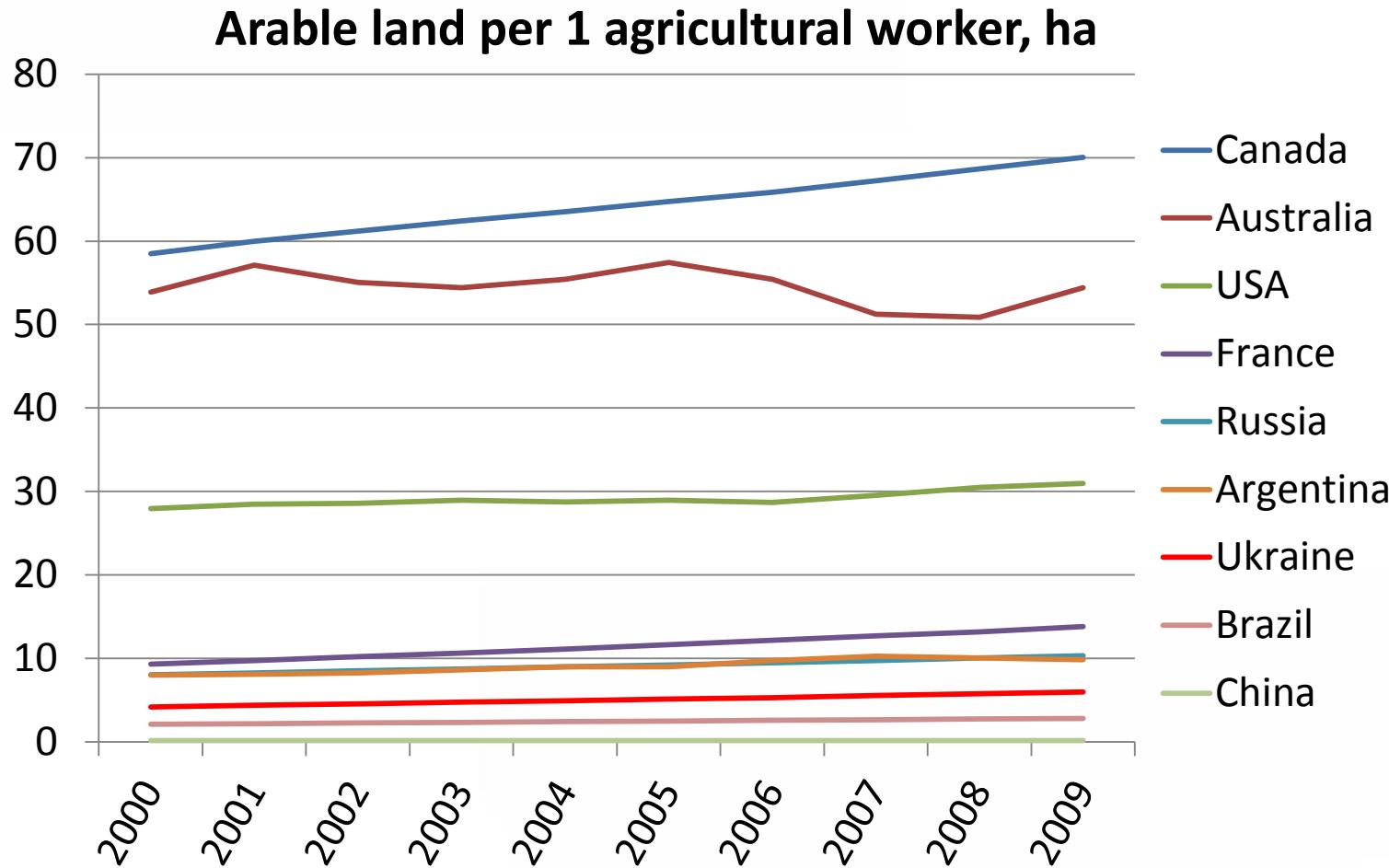
Labor productivity



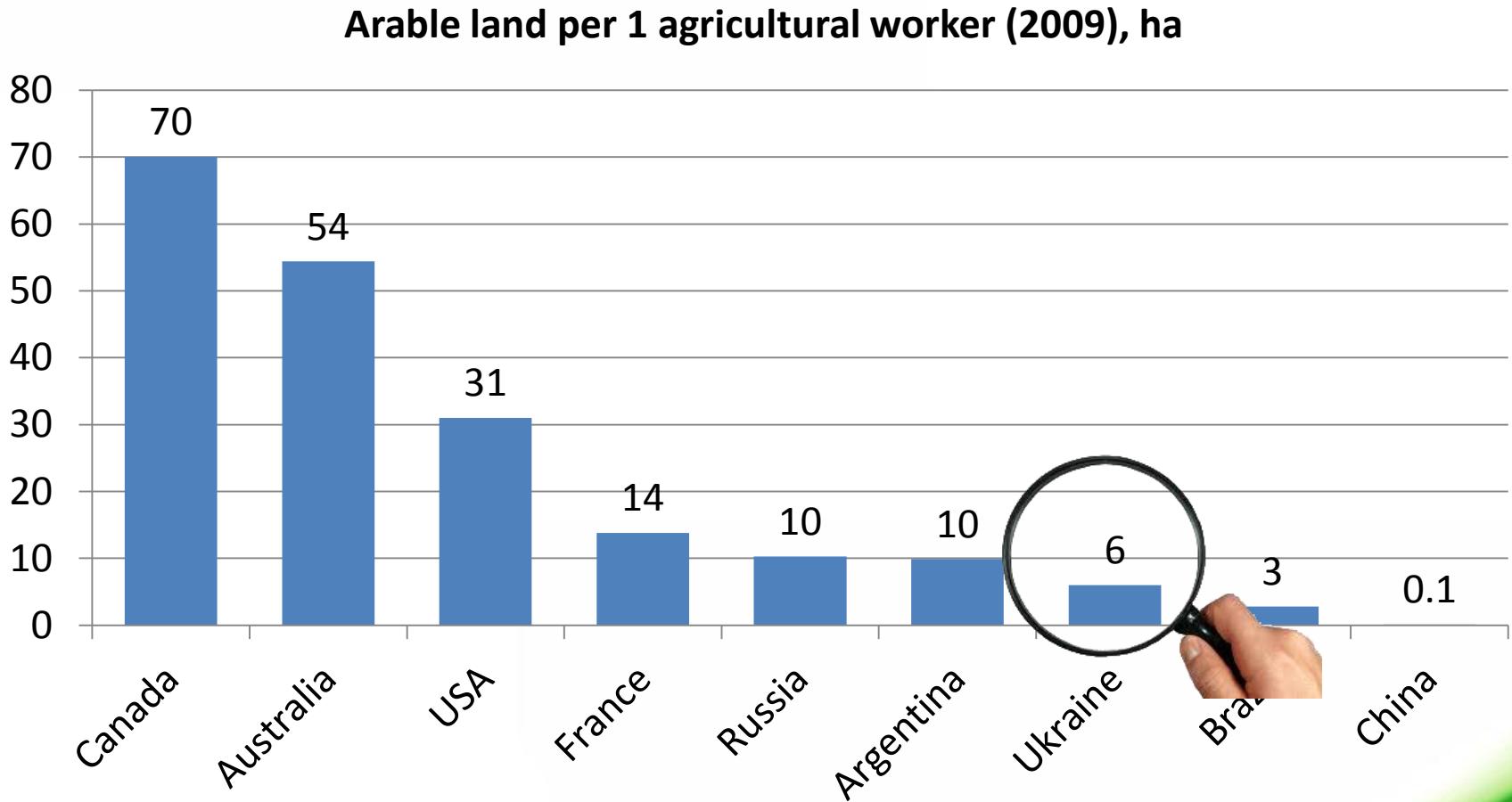
Labor productivity



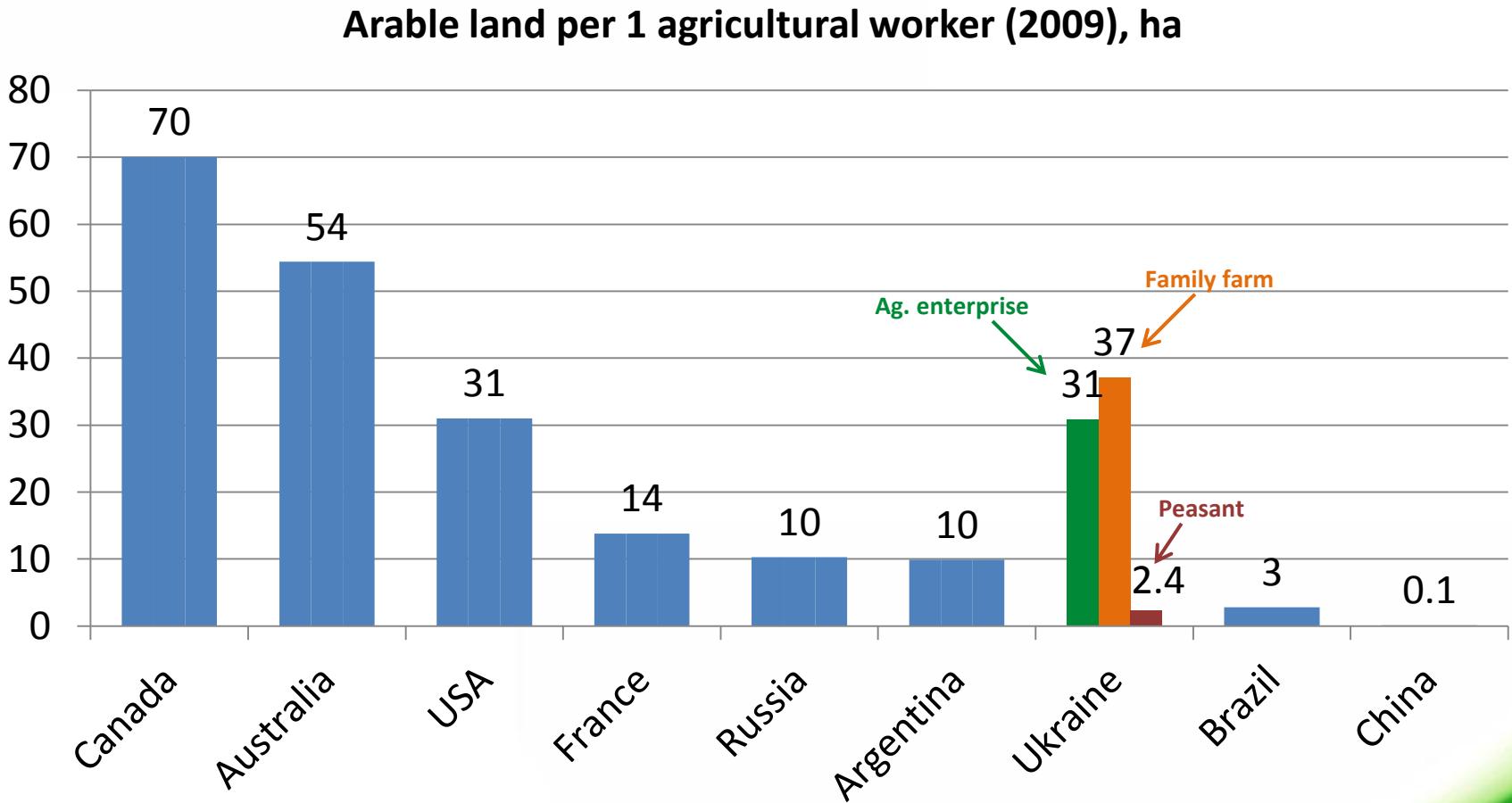
Labor productivity



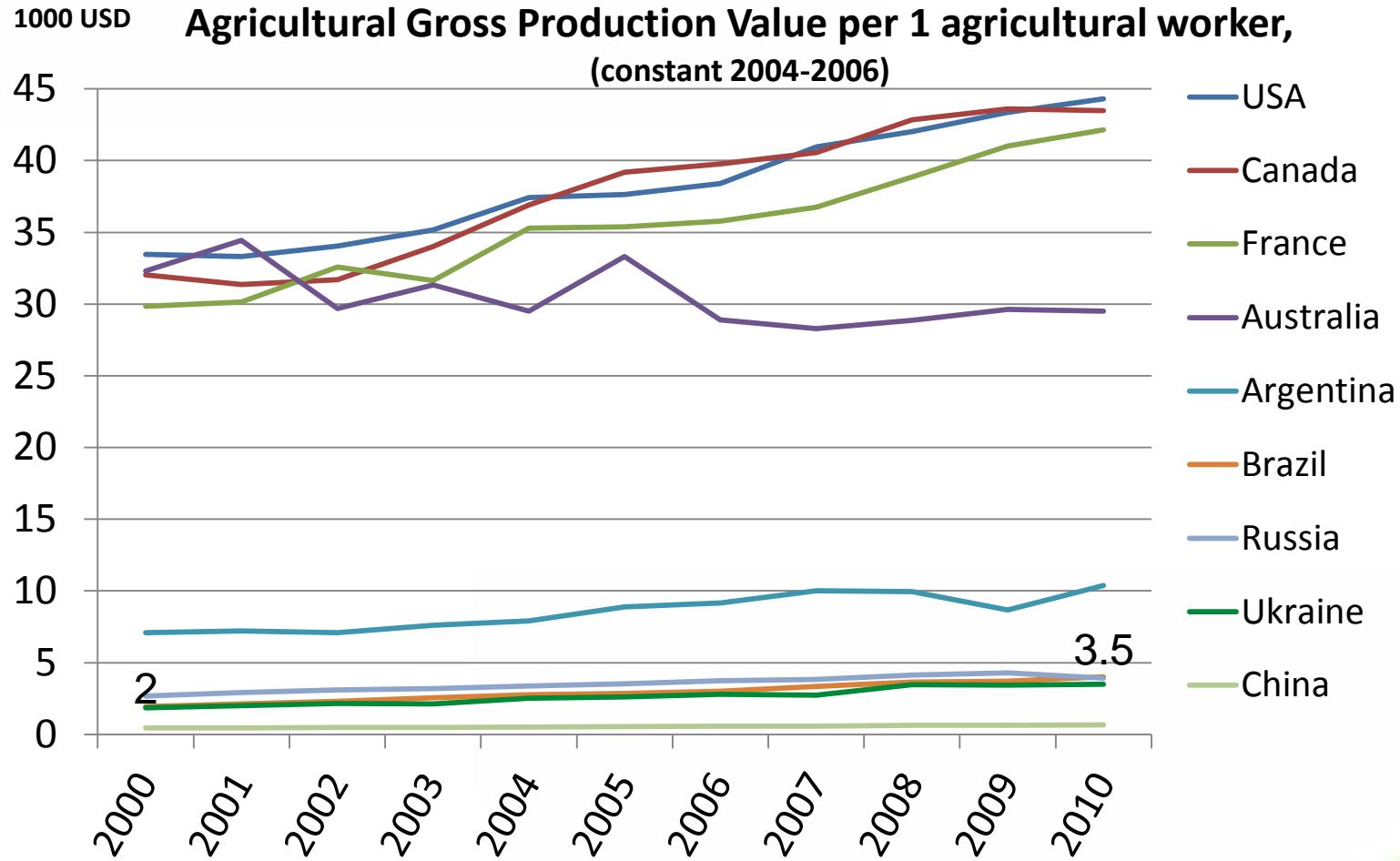
Labor productivity



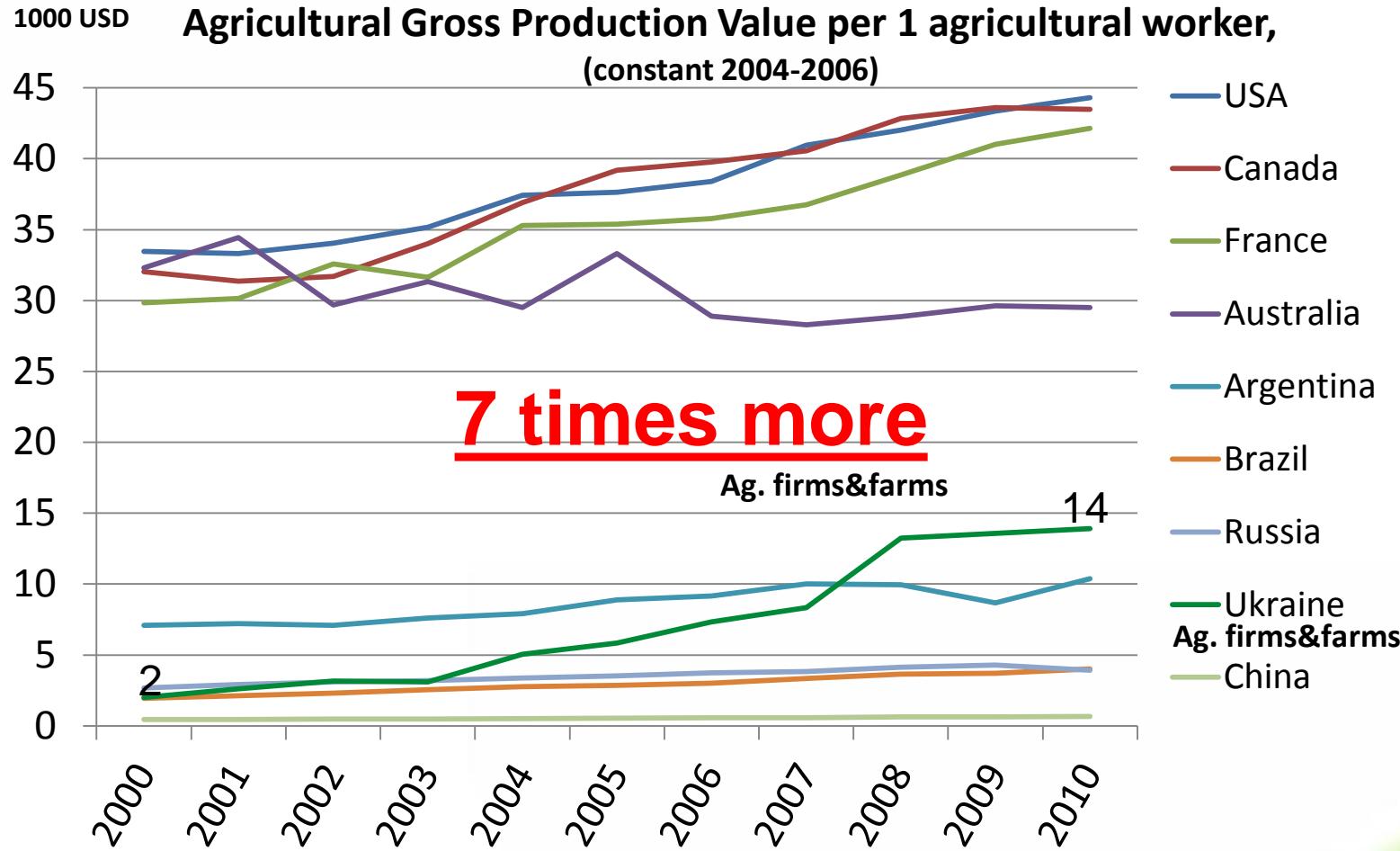
Labor productivity



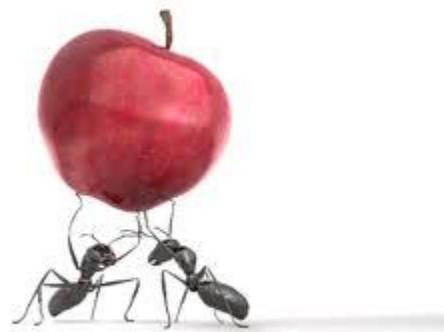
Labor productivity



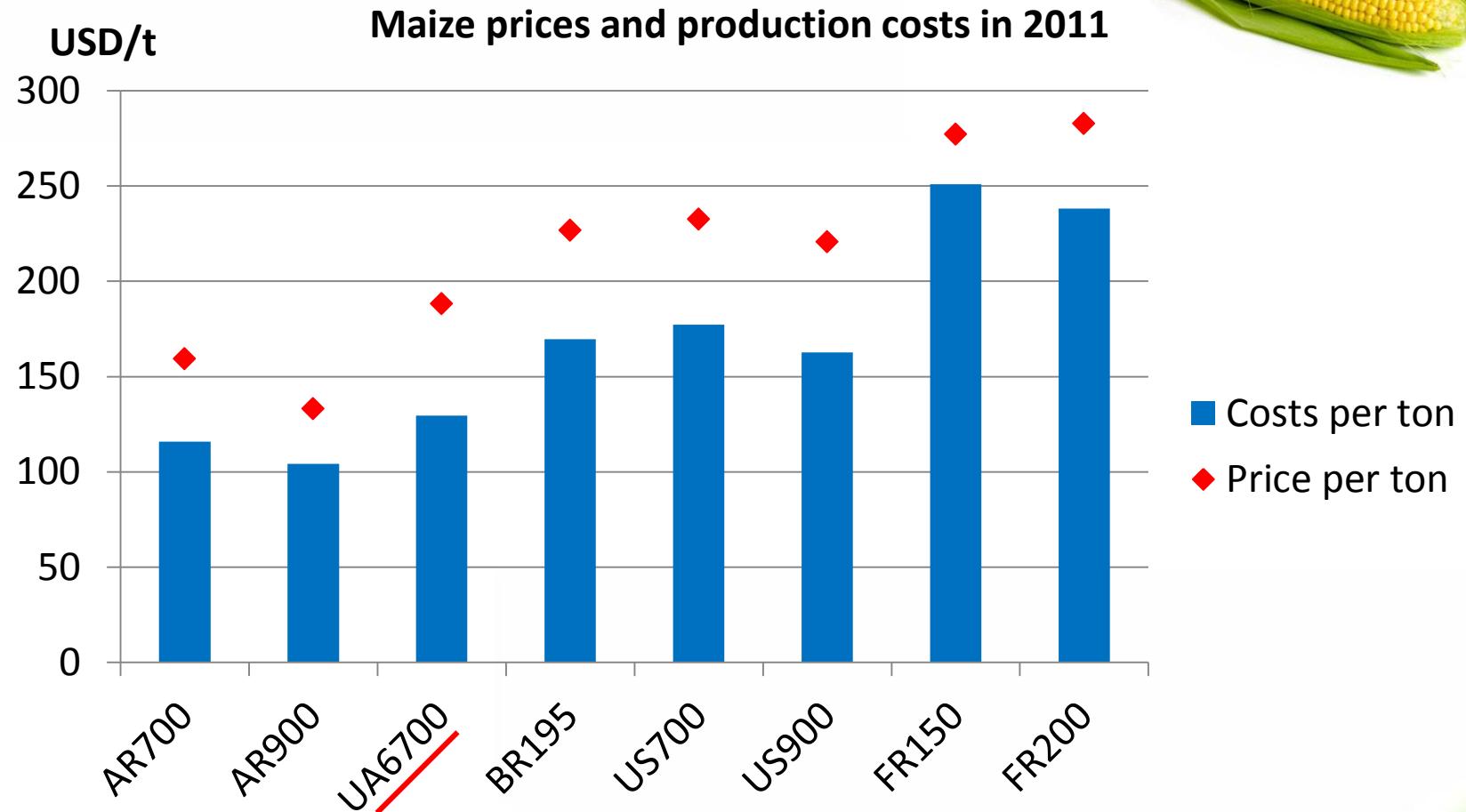
Labor productivity



Farm Efficiency



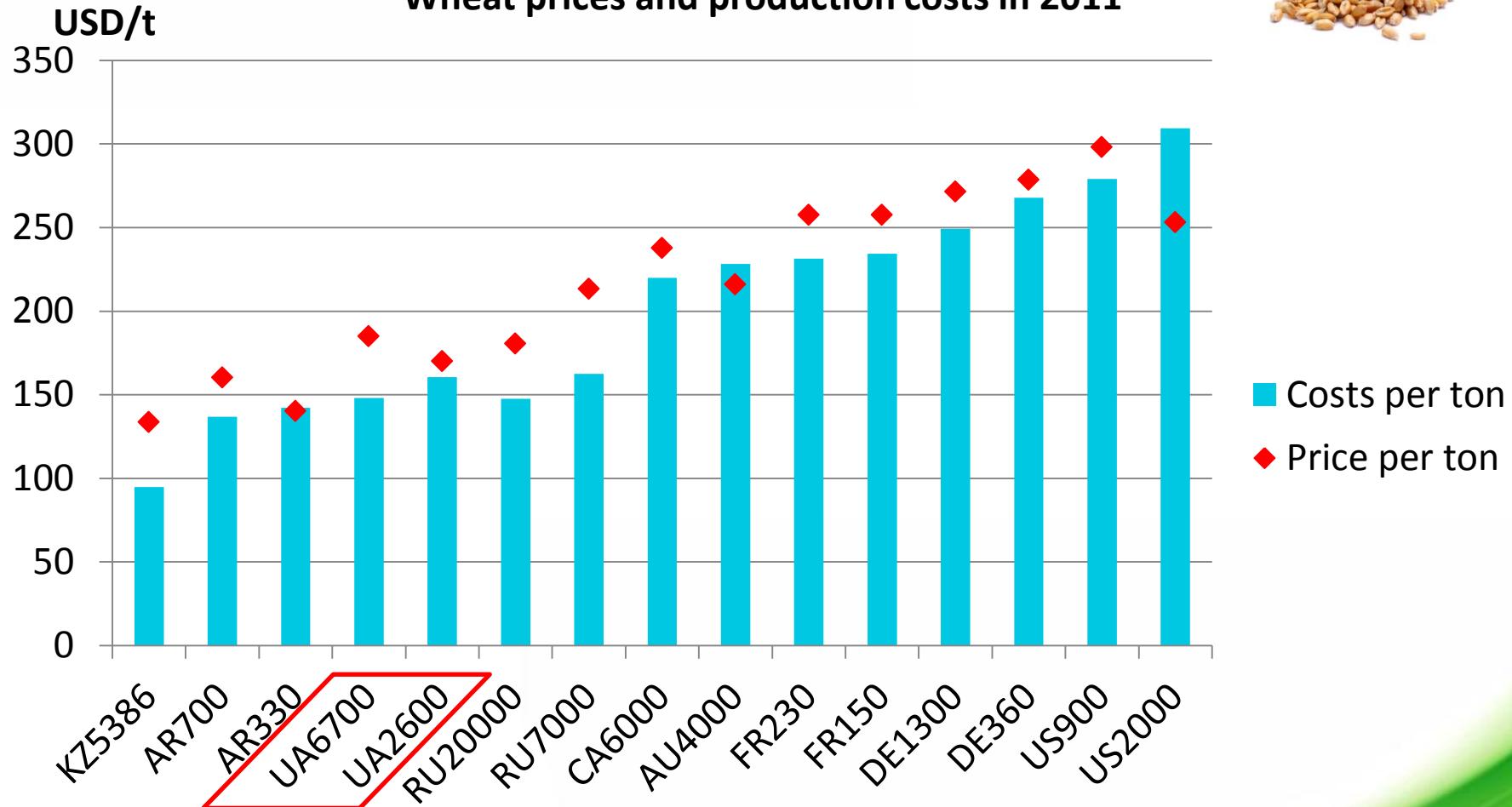
Cost efficiency



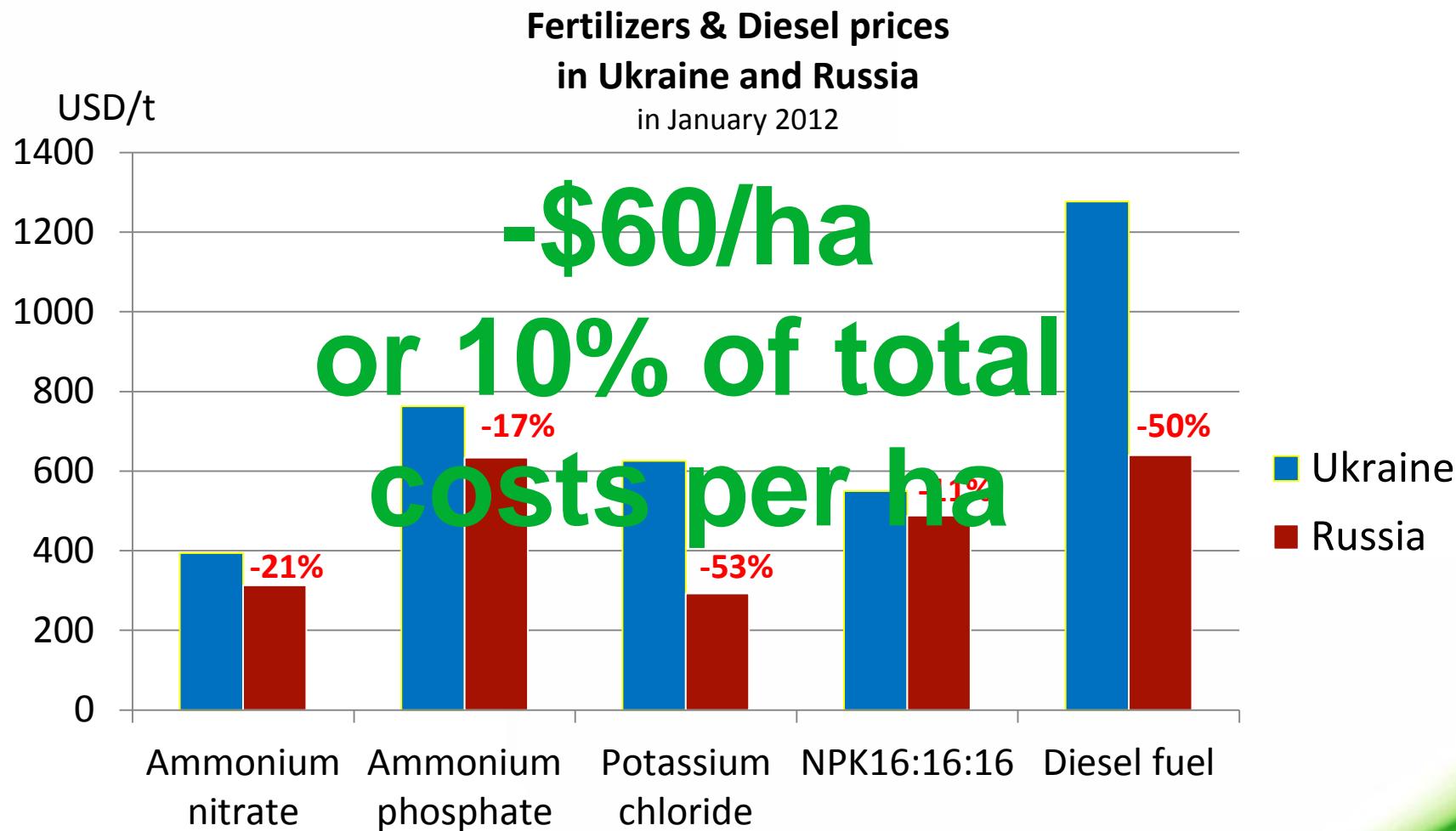
Cost efficiency



Wheat prices and production costs in 2011



Inputs price advantage



Determinants of agricultural productivity

Ag. technology, product and factor price determine output and input and, thus, productivity

- Technology Improvement in agriculture
- Global public spending for agricultural research and development
- Worldwide output price development
- Input Price development



Options for productivity increases

Human Capital Management

New technologies

Precision farming

GM seed

Better ag. machinery

Policy implications and options

- Bioenergy - Yes or Not
- 'Intensification vs. land expansion' in agriculture
- Agribusiness or "traditional farming"
- Agricultural research and education
- Global trade and national food security
- Rural area transformation



Thank you for your attention!