agri benchmark

IKAR Institute for Agricultural Market Studies

Russian Wheat – Competitiveness and Perspectives

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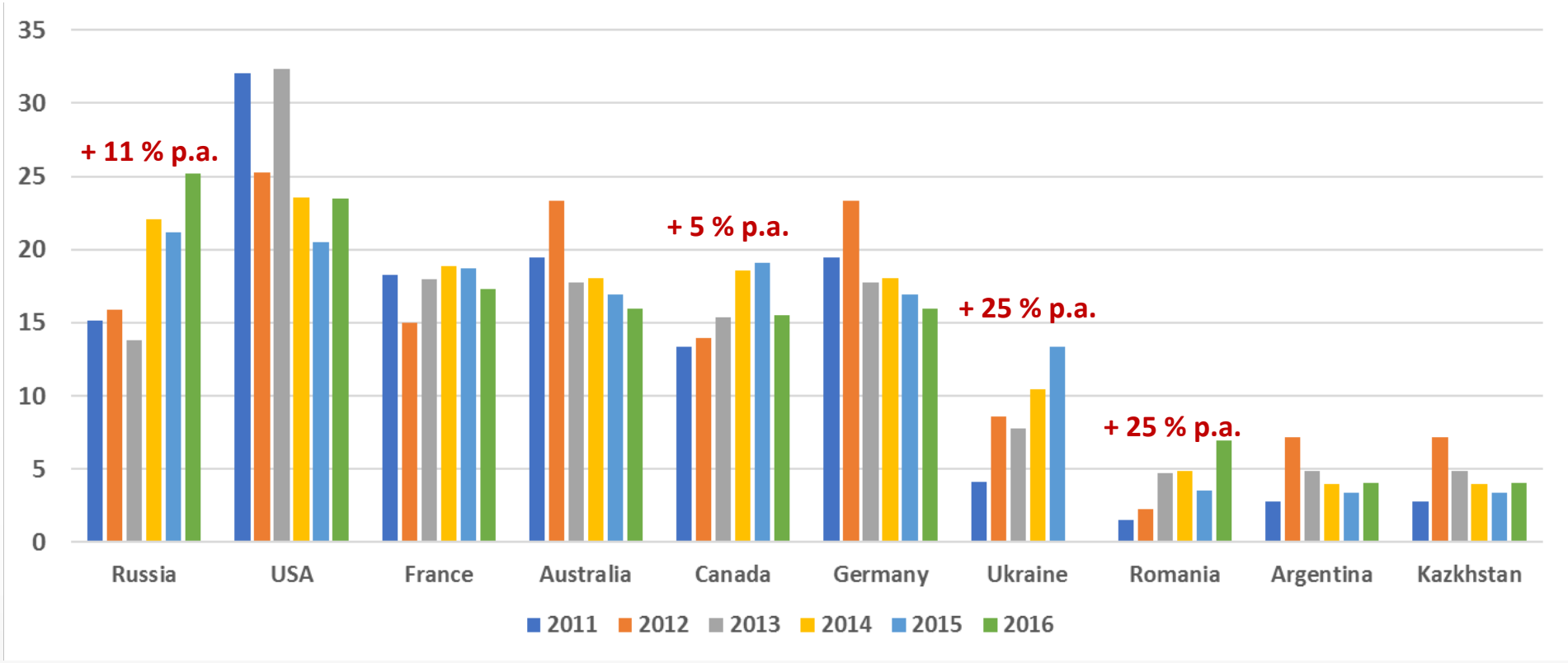
Commercial partners

Global Forum Berlin 2017
June 14th

Agenda

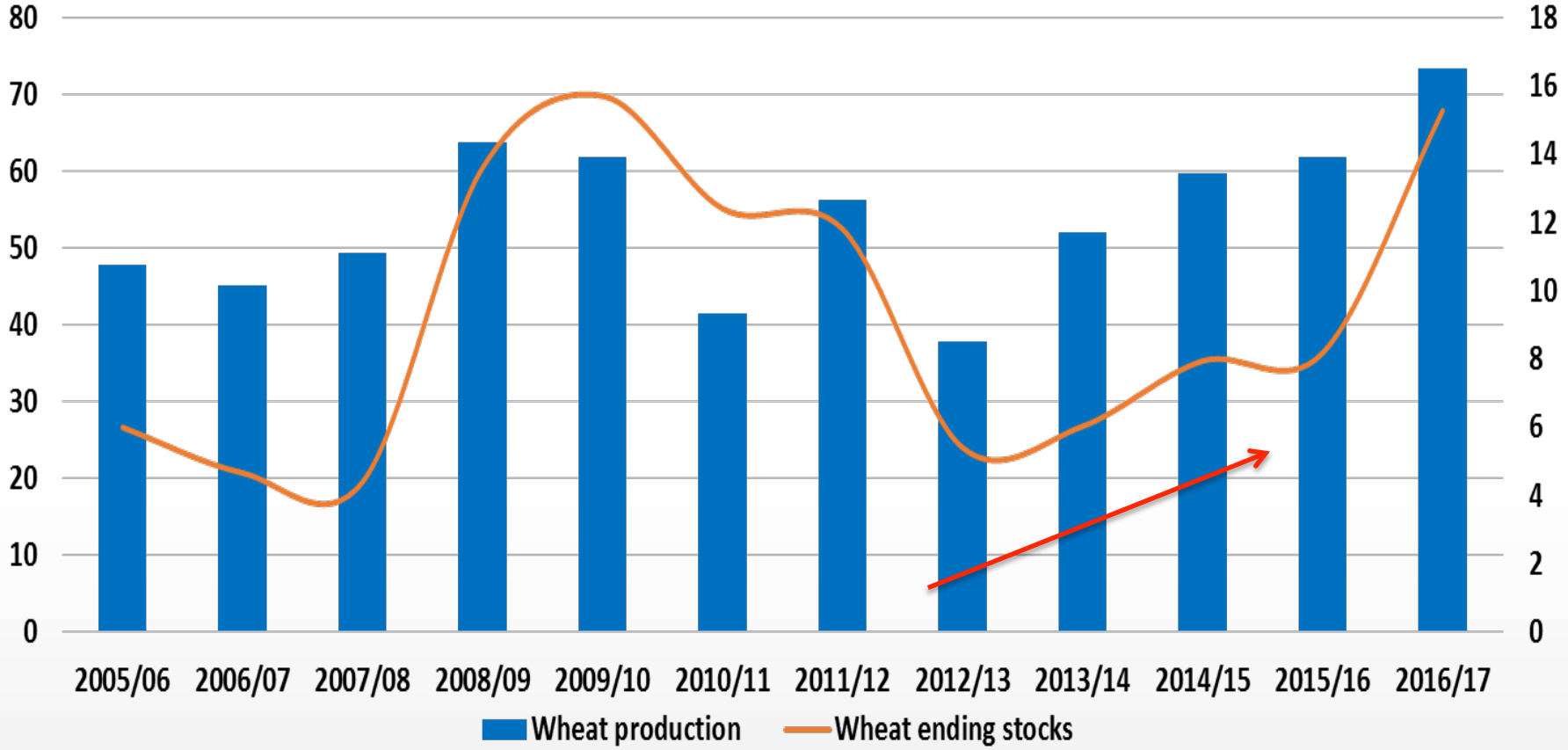
1. Russia – a key player in global wheat markets
2. Russian wheat production –
   How does it compare to major global competitors?
3. Productivity potential in Russian wheat production
4. Conclusions

Major global wheat exporters (mln t)



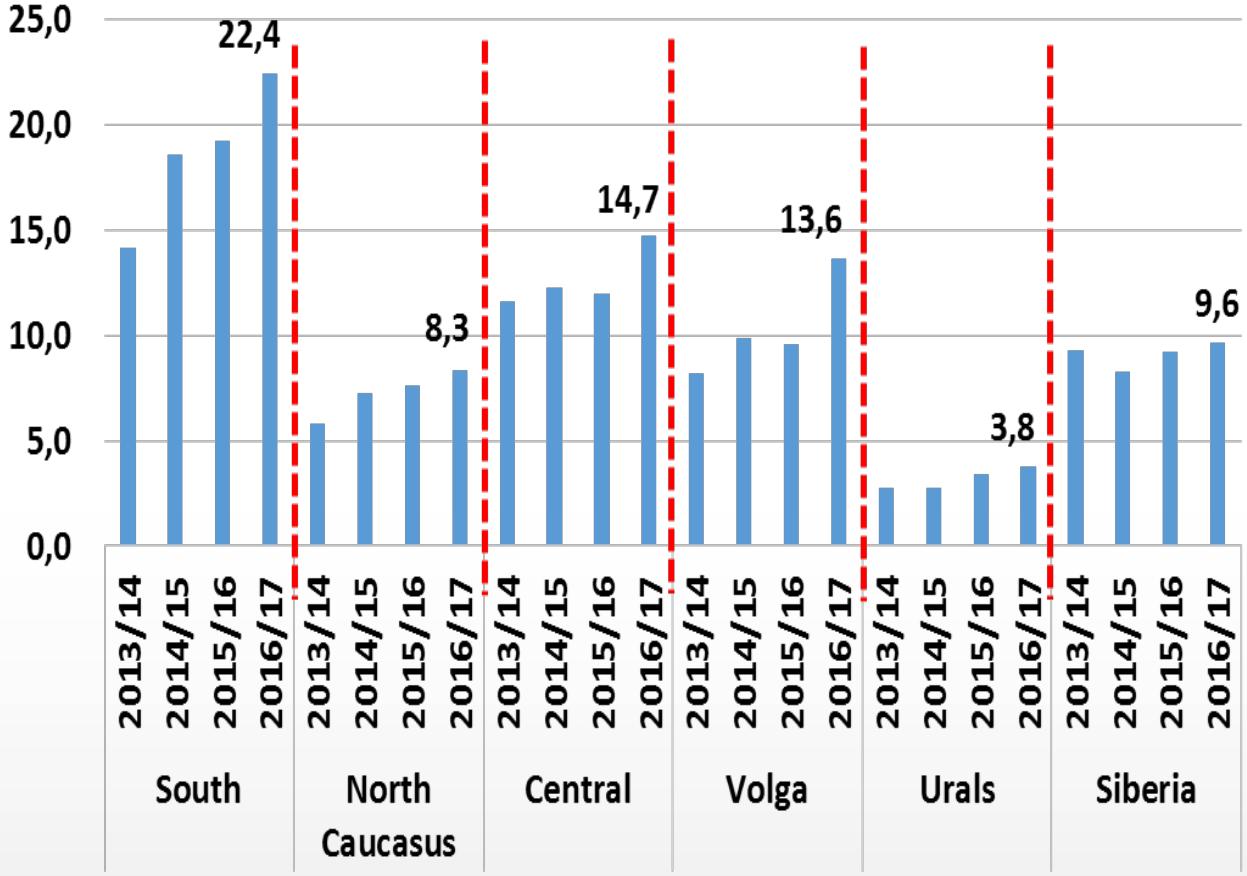
1. **Since 2015: Russia is #1 in global wheat exports**
2. **Ukraine, Romania and Canada with strong growth as well**
3. **All the others: Either slight decreases or flat**

Russian wheat production & stocks (in mln t)



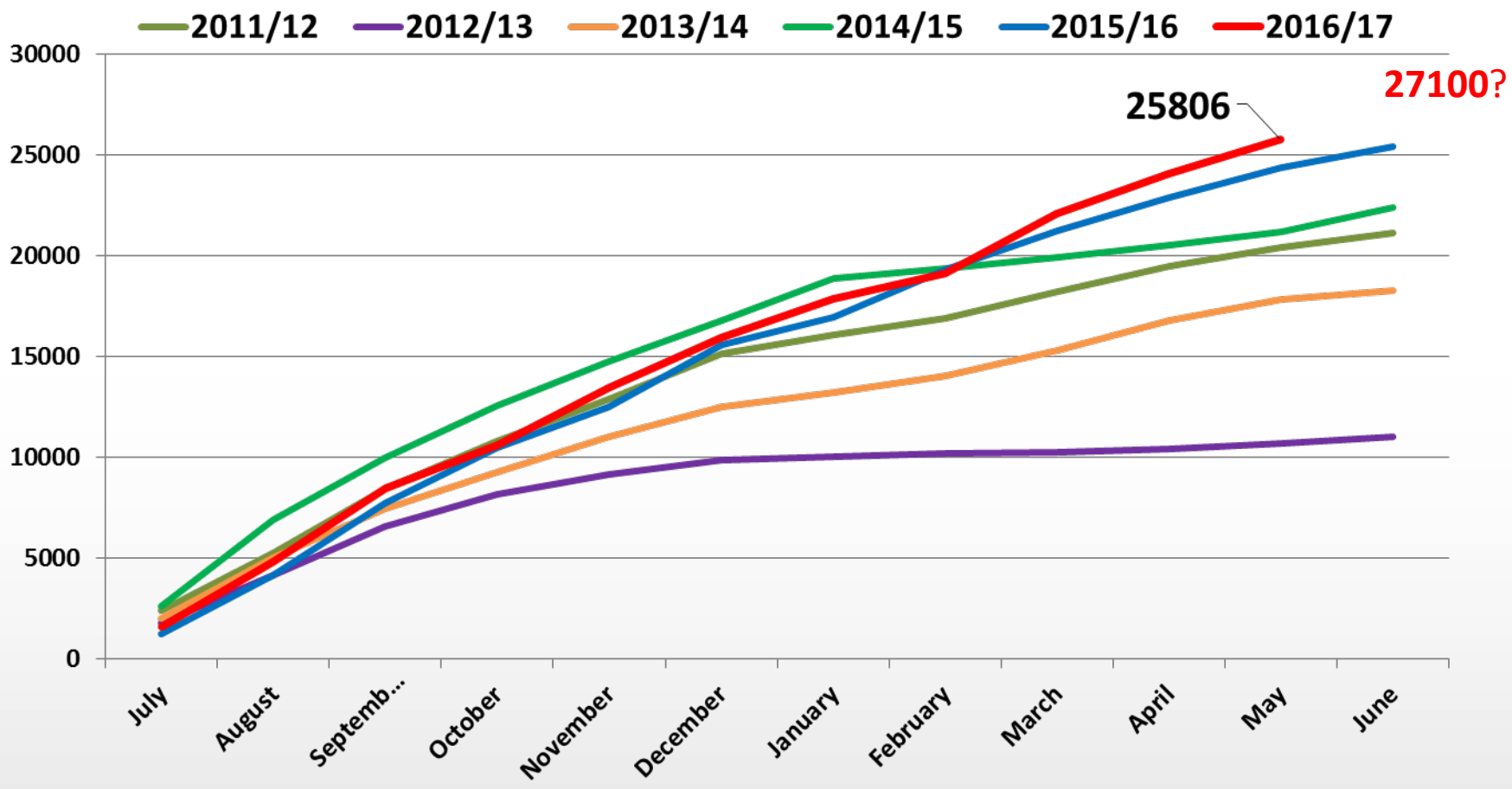
1. **Strong growth since 2012/13 – however in the long run increase more moderate**
2. **Russian variation of output significantly higher than in the US and Canada.**

Russian wheat output – A regional break-down... (in million t)

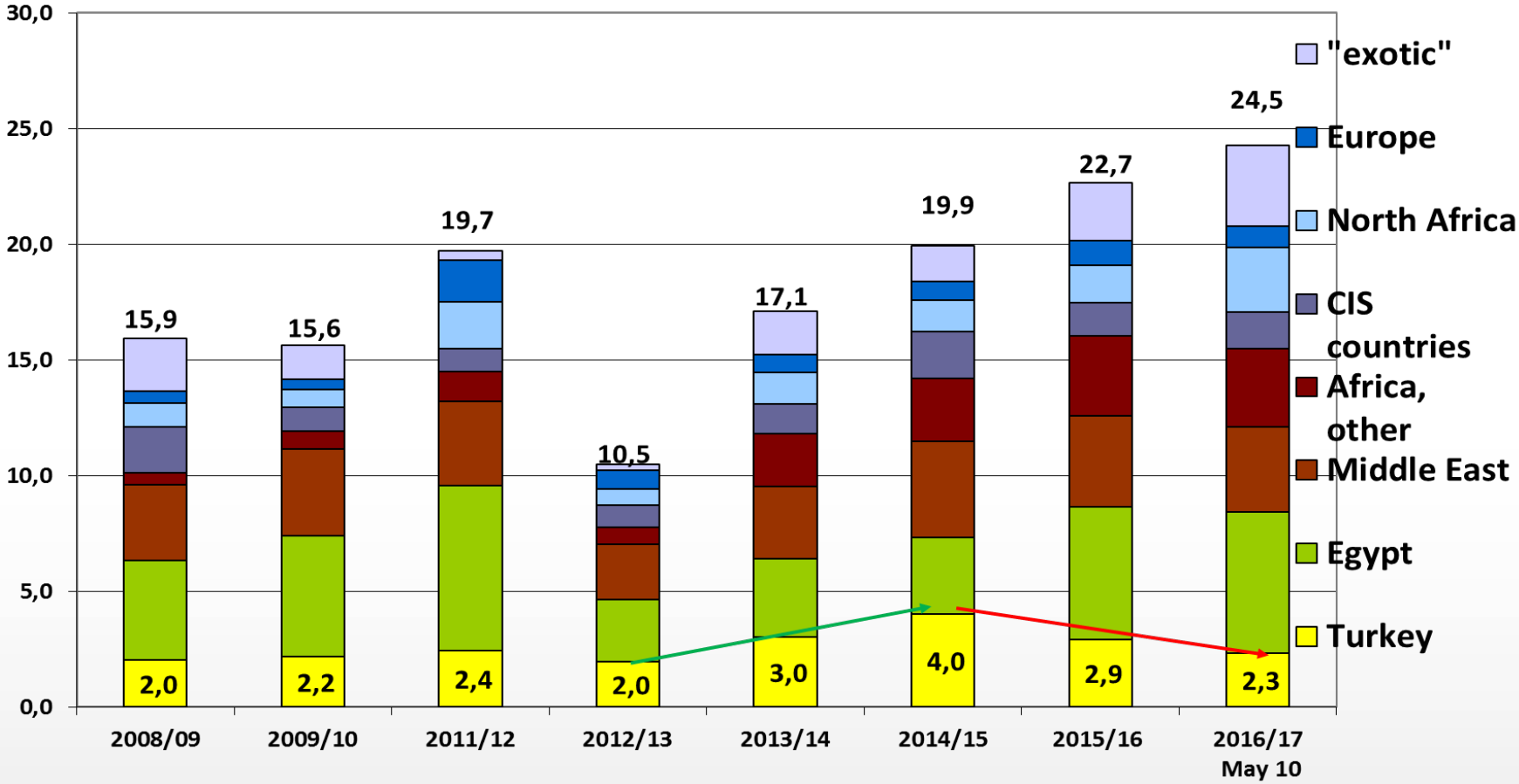


1. **Clear growth path except for Ural and Siberia**
2. **South by far the most important region**

Record high Russian wheat exports

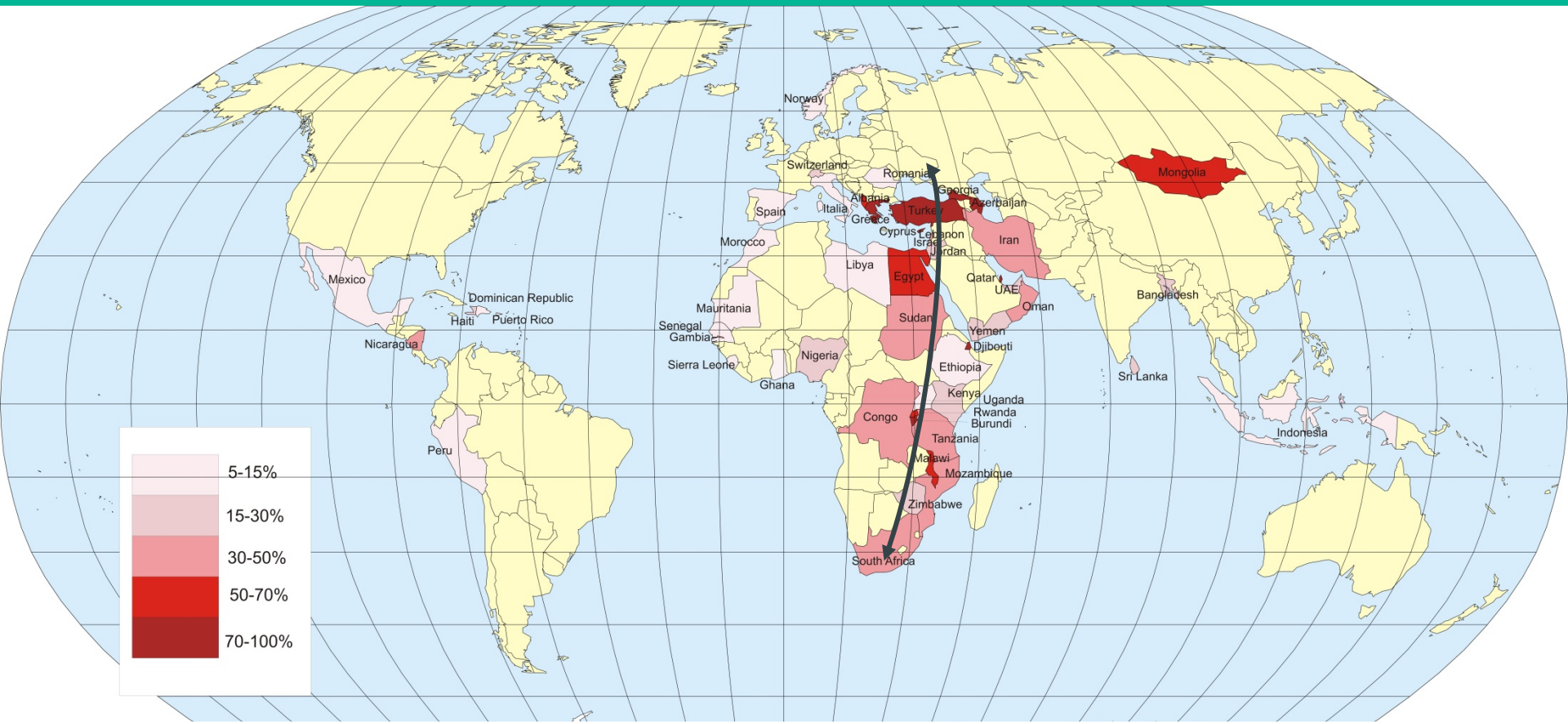


Structure Russian wheat exports



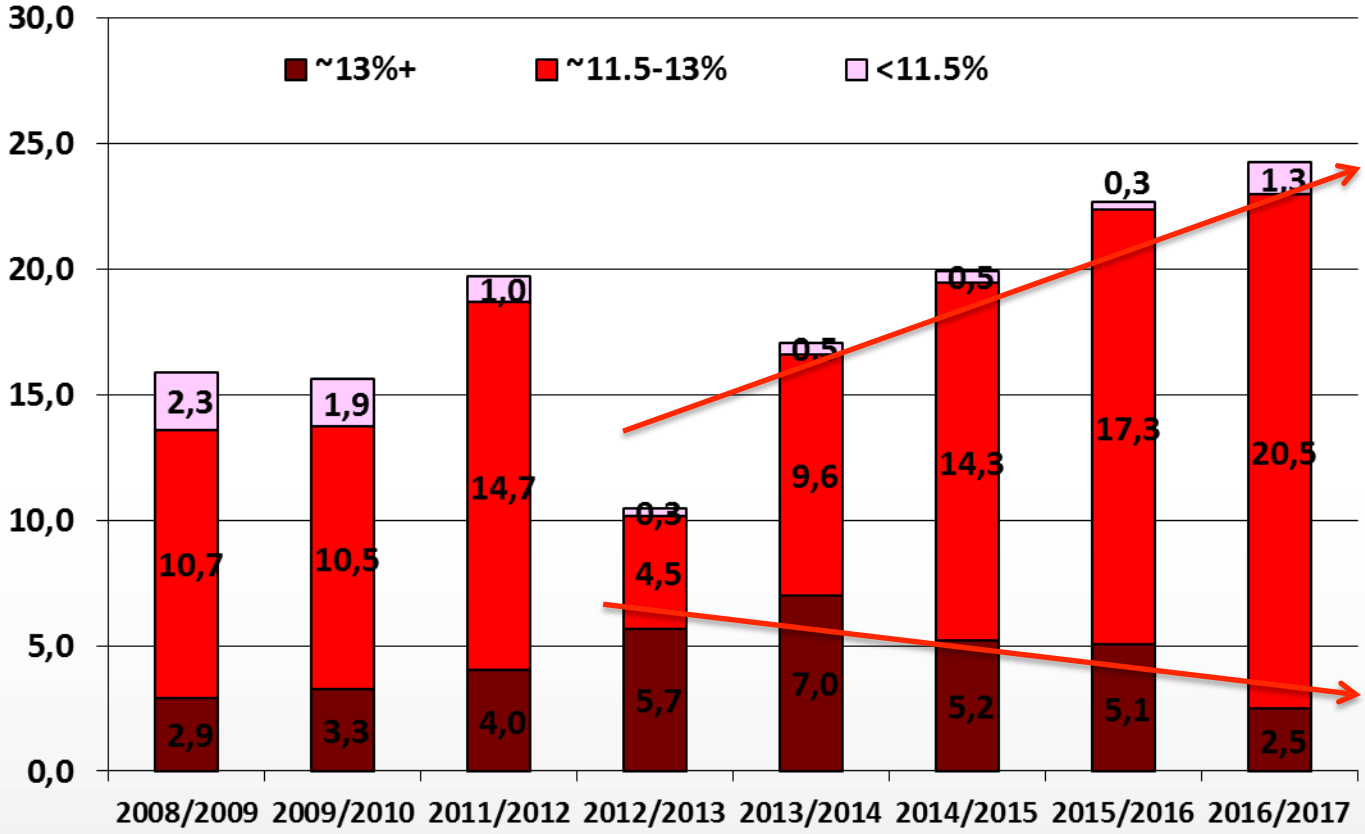
1. **Turkey, Middle East and Africa account for +60 % of exports – traditional European export destinations**
2. **Europe doesn't play a role as importer of Russian wheat**

“Russian wheat meridian”
Share of Russian wheat in national imports



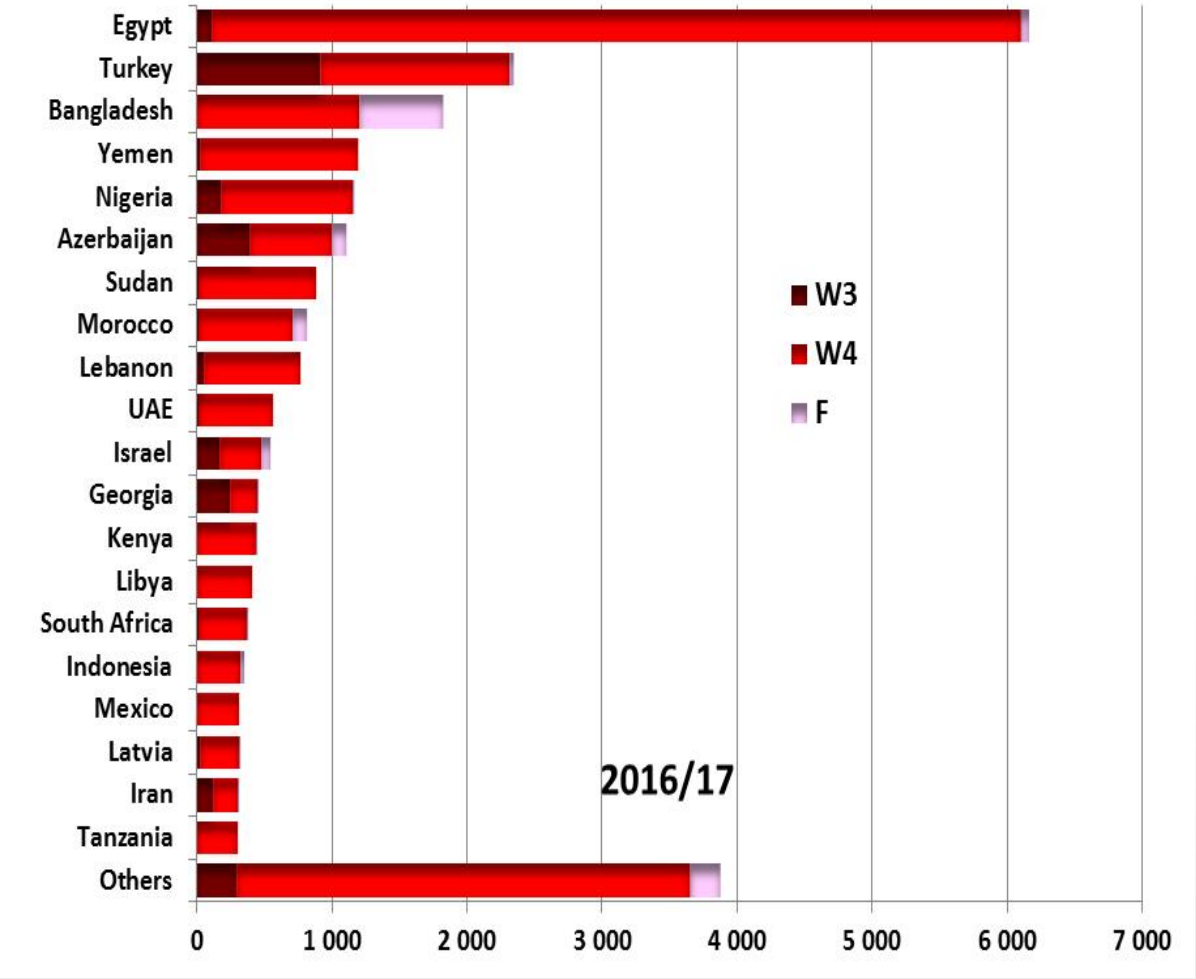
1. **Due to proximity and quality preferences, “going South” is the predominant strategy**
2. **Deviations to the West and the East are hard to realize for Russian exporters**

Russian wheat exports by quality classes



1. **Increasing share of ordinary quality (but average went up from 11,5 to 12/12,5)**
2. **High quality wheat is decreasing in relative and in absolute terms**

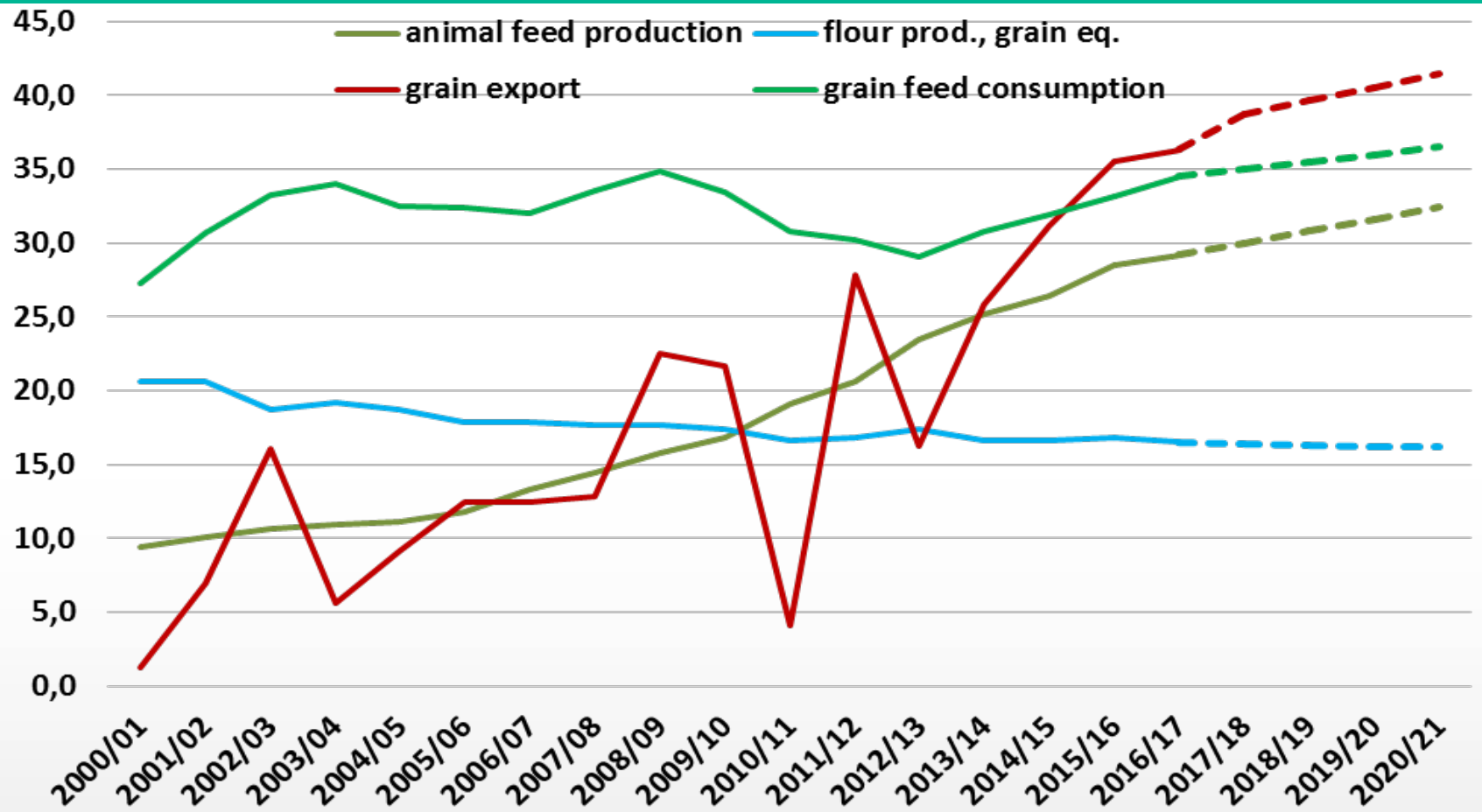
Quality of export destinations (in 1,000 t)



W3 ~ 12.5%+ protein
W4 ~ 10.5-12.5% protein
F ~ feed wheat

Half of Russian high quality wheat goes to only two countries...

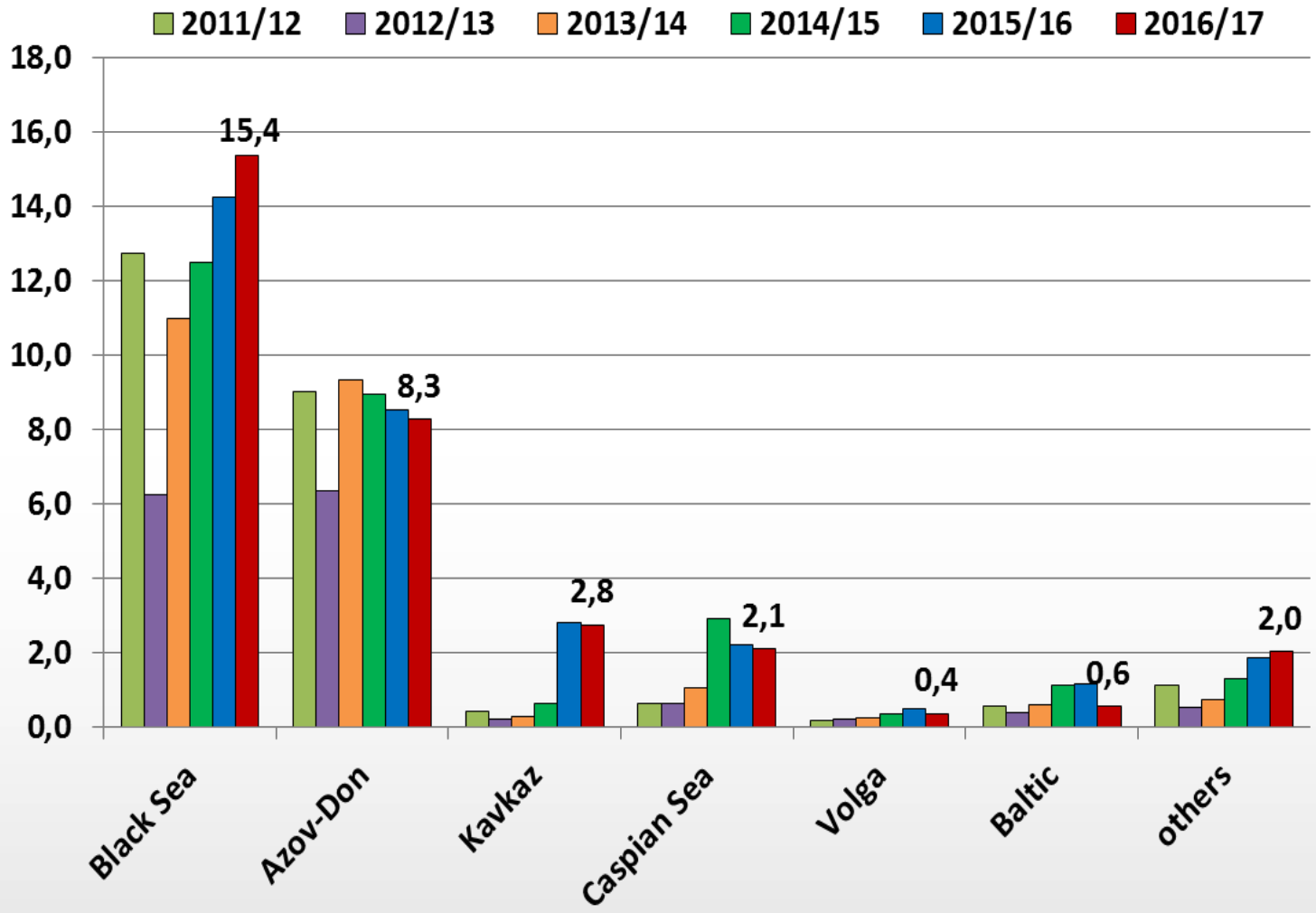
Grain end use: exports now # 1 (in mln t)



1. **Domestic food consumption is slightly decreasing (diets, population)**
2. **Export became the dominating end use**

Export channels for Russian grain

Export channels Russian grain (in mln t)



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   How does it compare to major global competitors?
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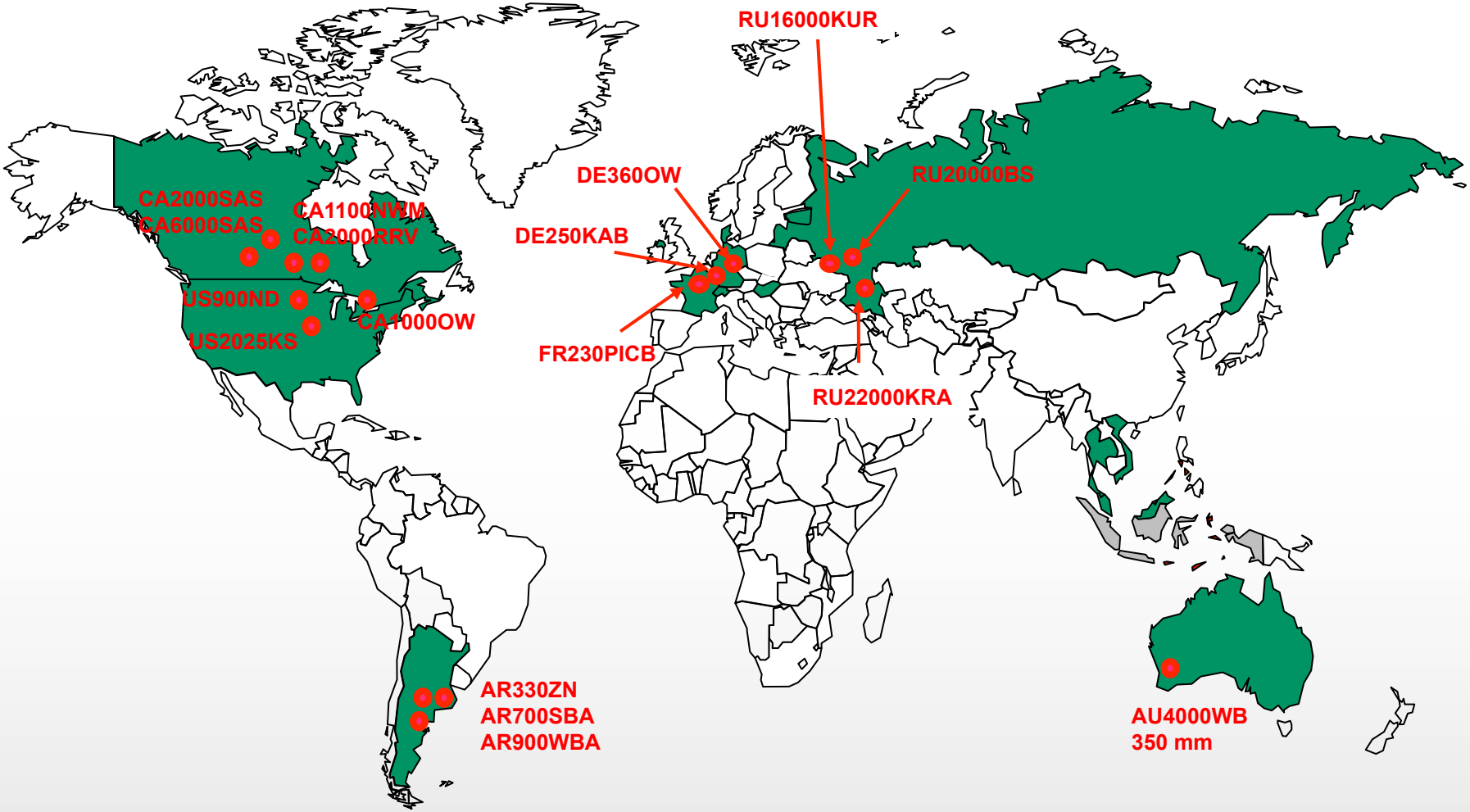
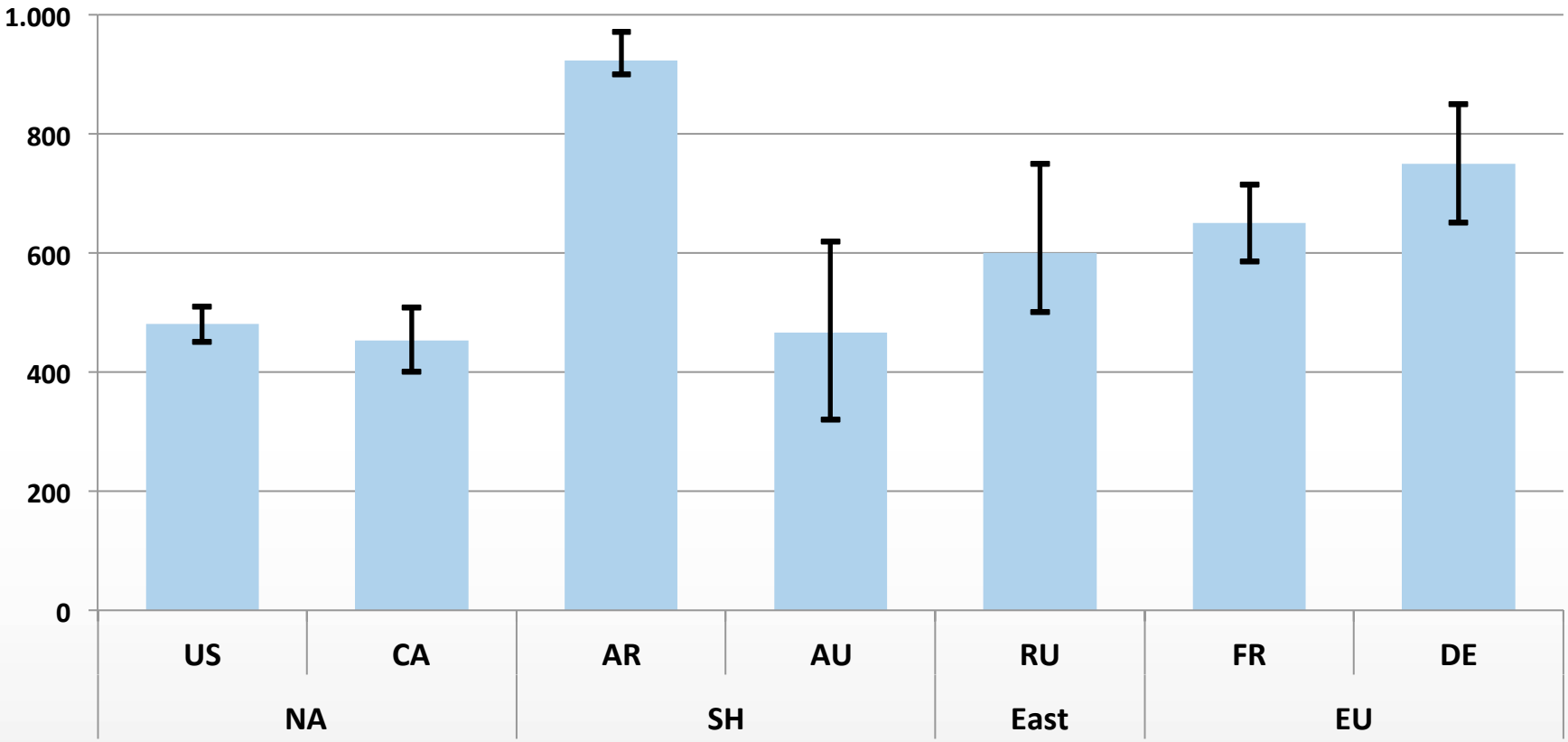
Typical *agri benchmark* farms used for this analysis

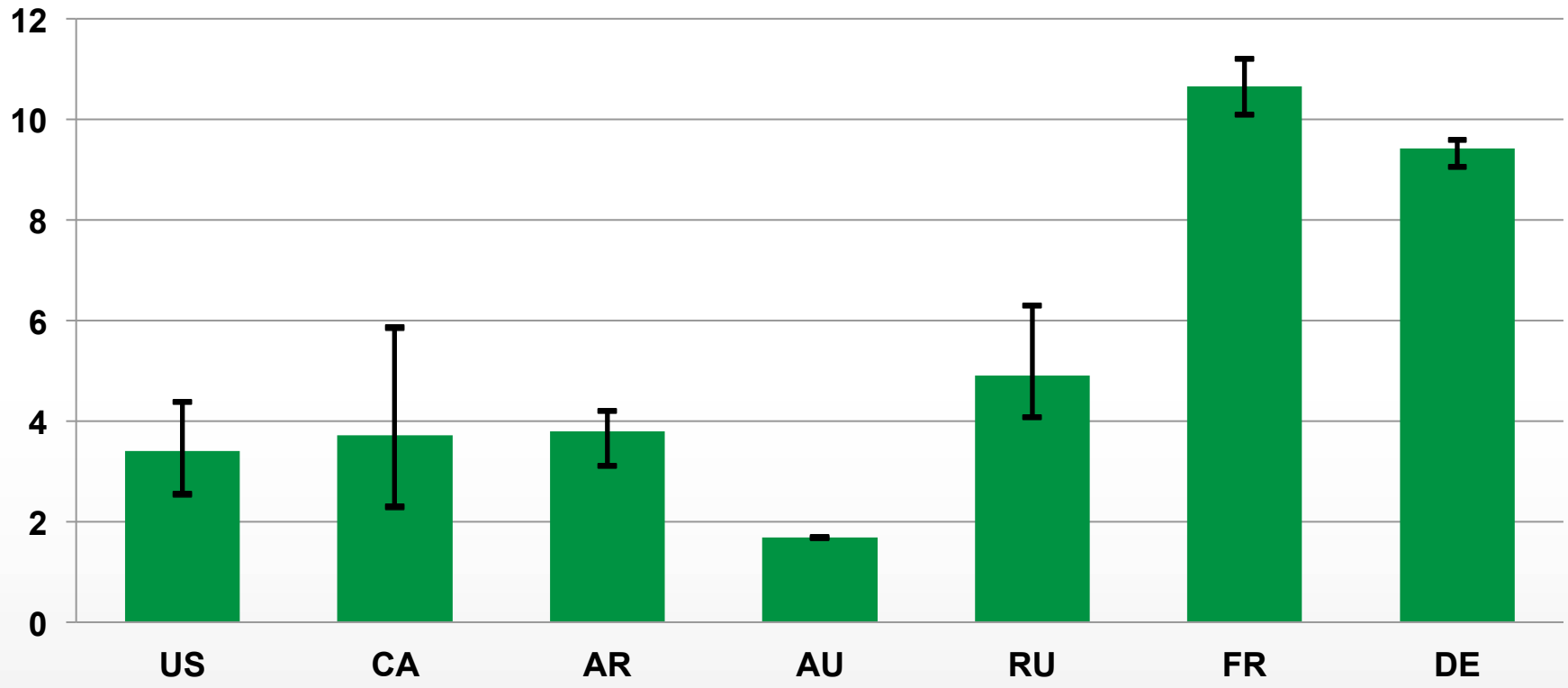


Annual precipitation & variation (mm)



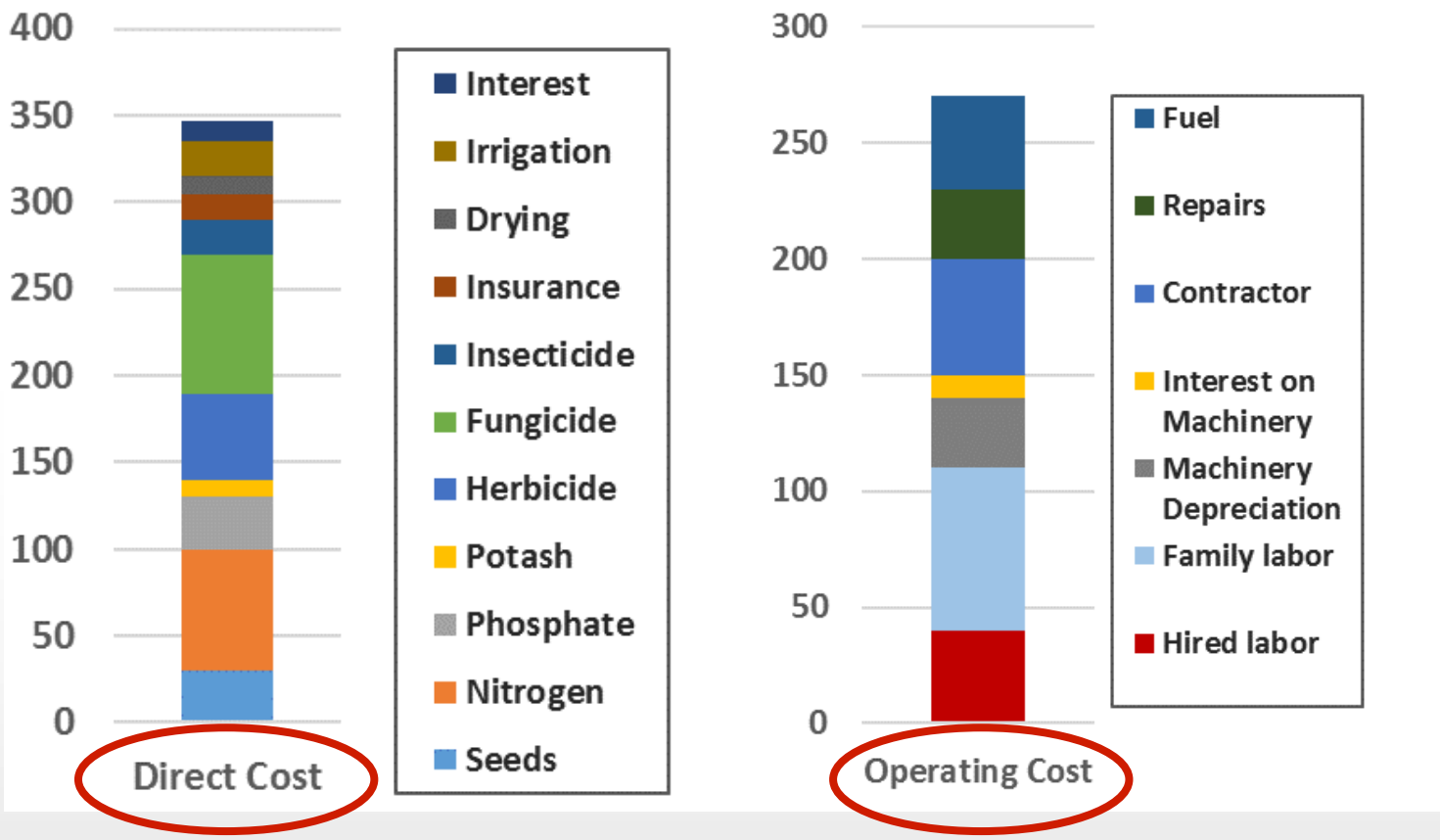
1. **Variation of precipitation is rather strong for different production sites.**
2. **Russian precipitation significantly higher than in the US and Canada.**

Typical farms: Av. wheat yields and variation (t/ha)



1. **Russian wheat yields only slightly above Argentina, USA and Canada – despite higher precipitation.**
2. **Western Europe by far the most productive wheat area.**
3. **Typical Australian farm with rather low yields.**

Key cost elements *agri benchmark*



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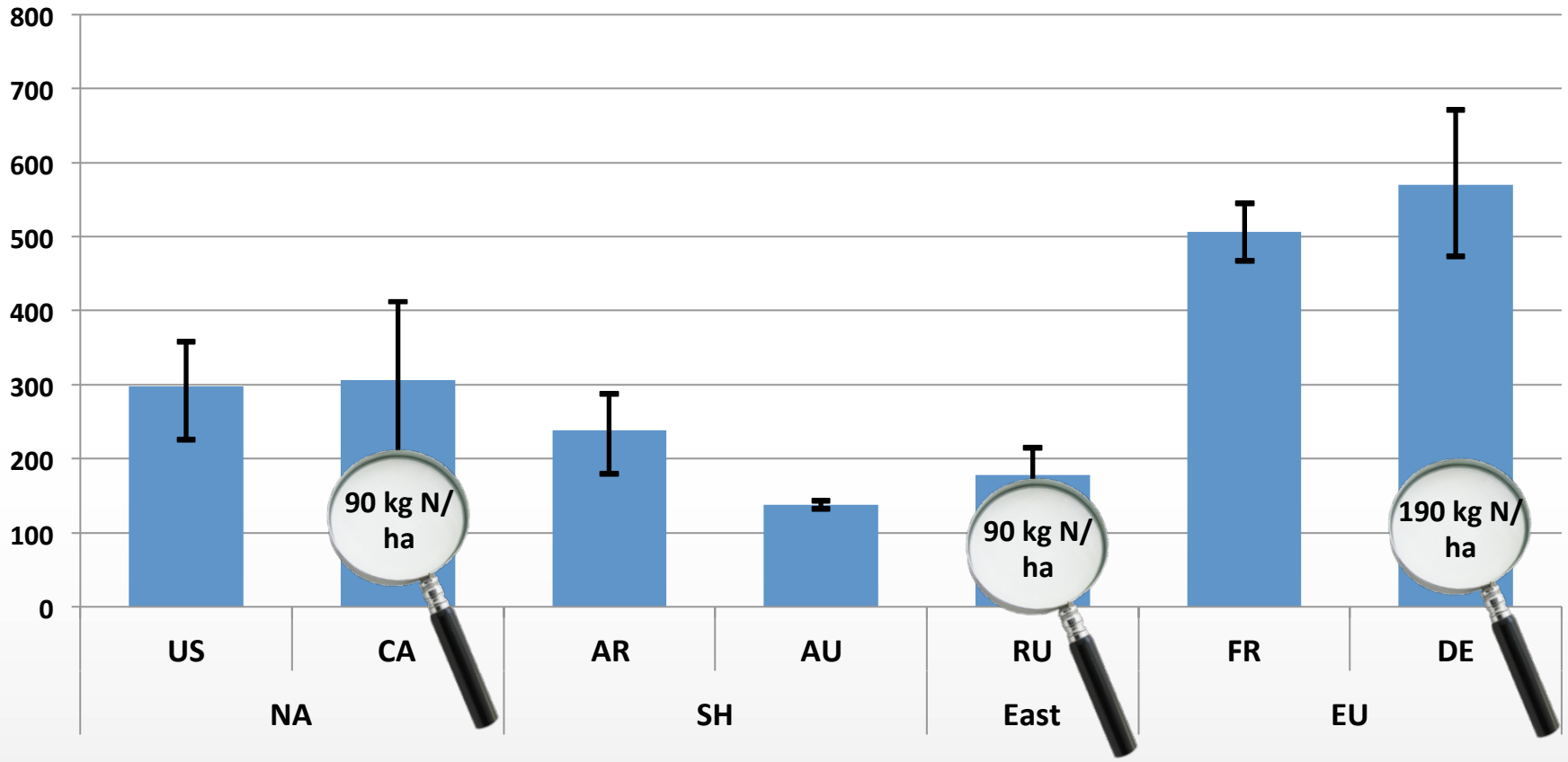
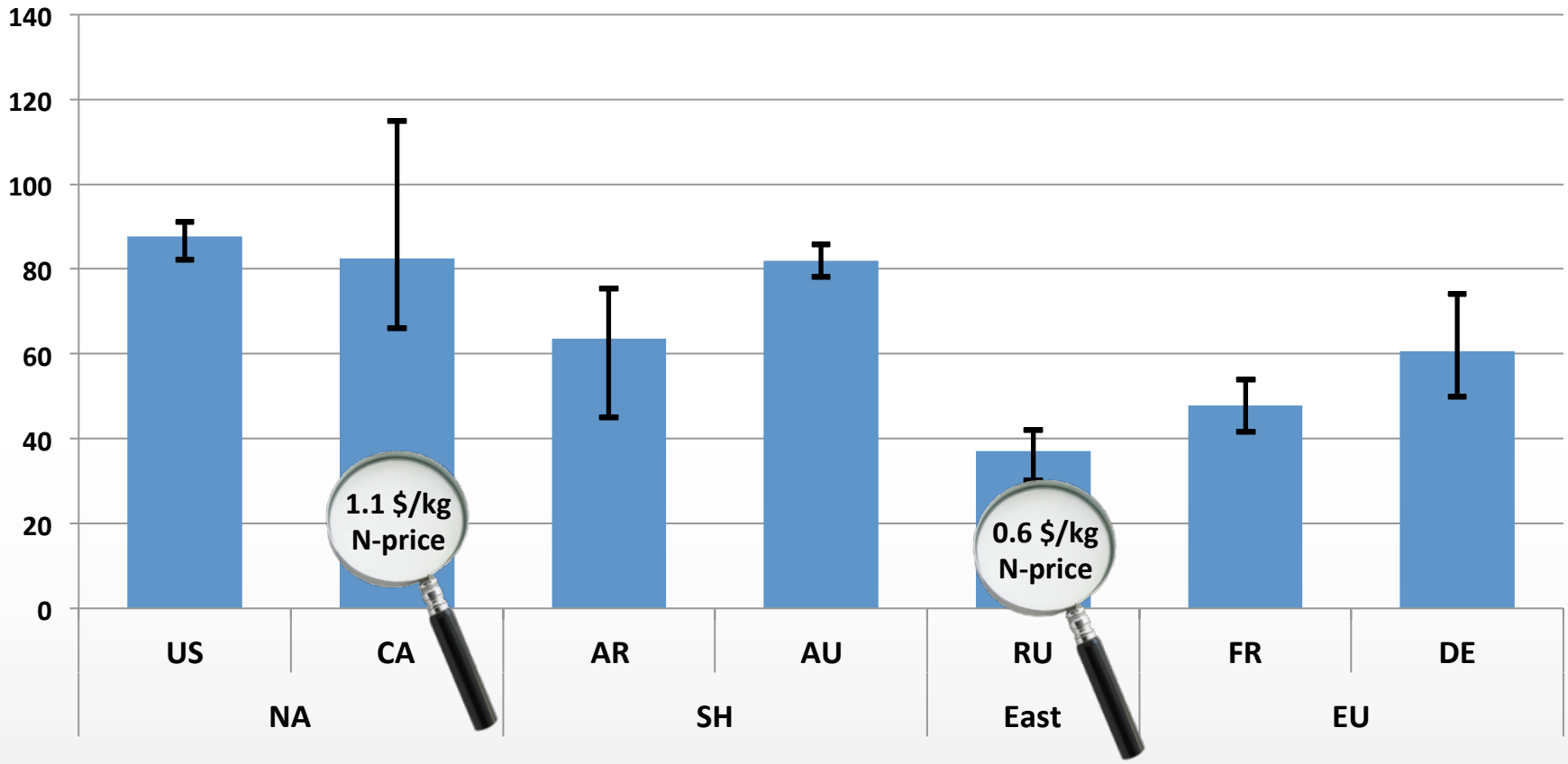
Direct cost wheat - per hectare (USD/ha)



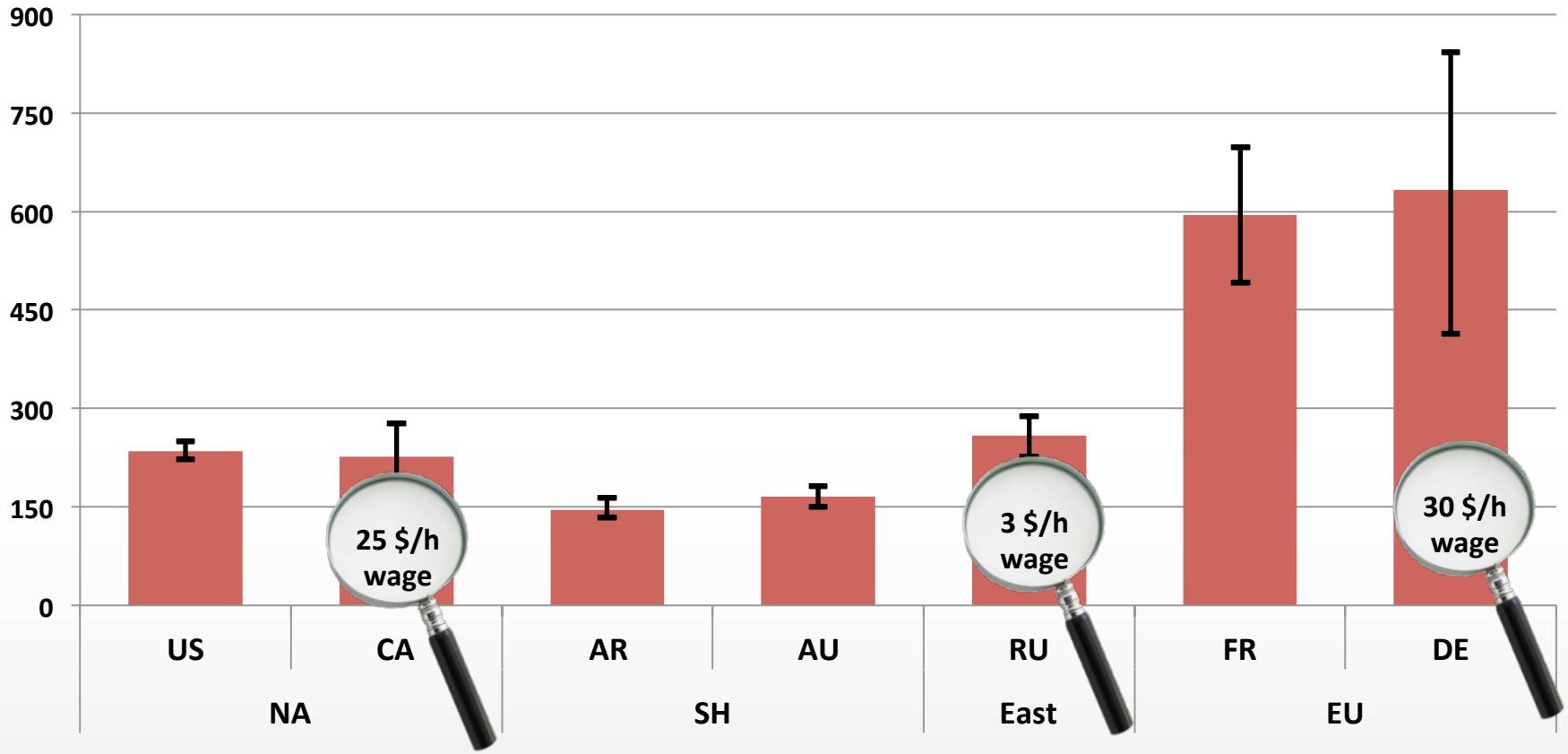
1. Russia's per ha direct cost tend to be the lowest
2. Only Australia's farms have lower direct costs per ha comparing to Russia
3. Russian and Canadian farms similar in N-use, German farm in a different league.

Direct cost wheat – per tonne (USD/t)



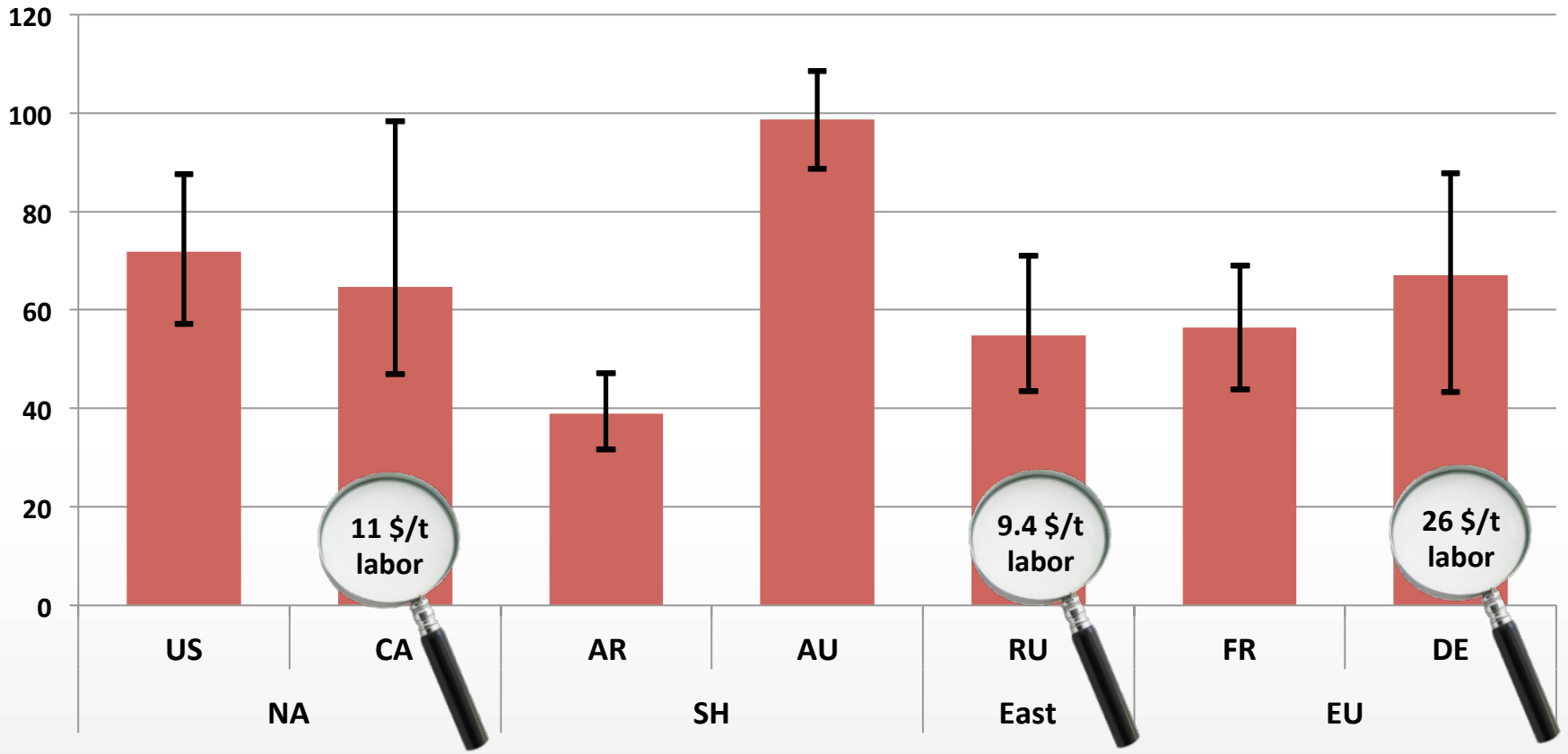
1. Russian farms have the lowest direct cost per tonne .
2. Very low nitrogen prices in Russia one key reason.

Operating cost wheat - per hectare (USD/ha)



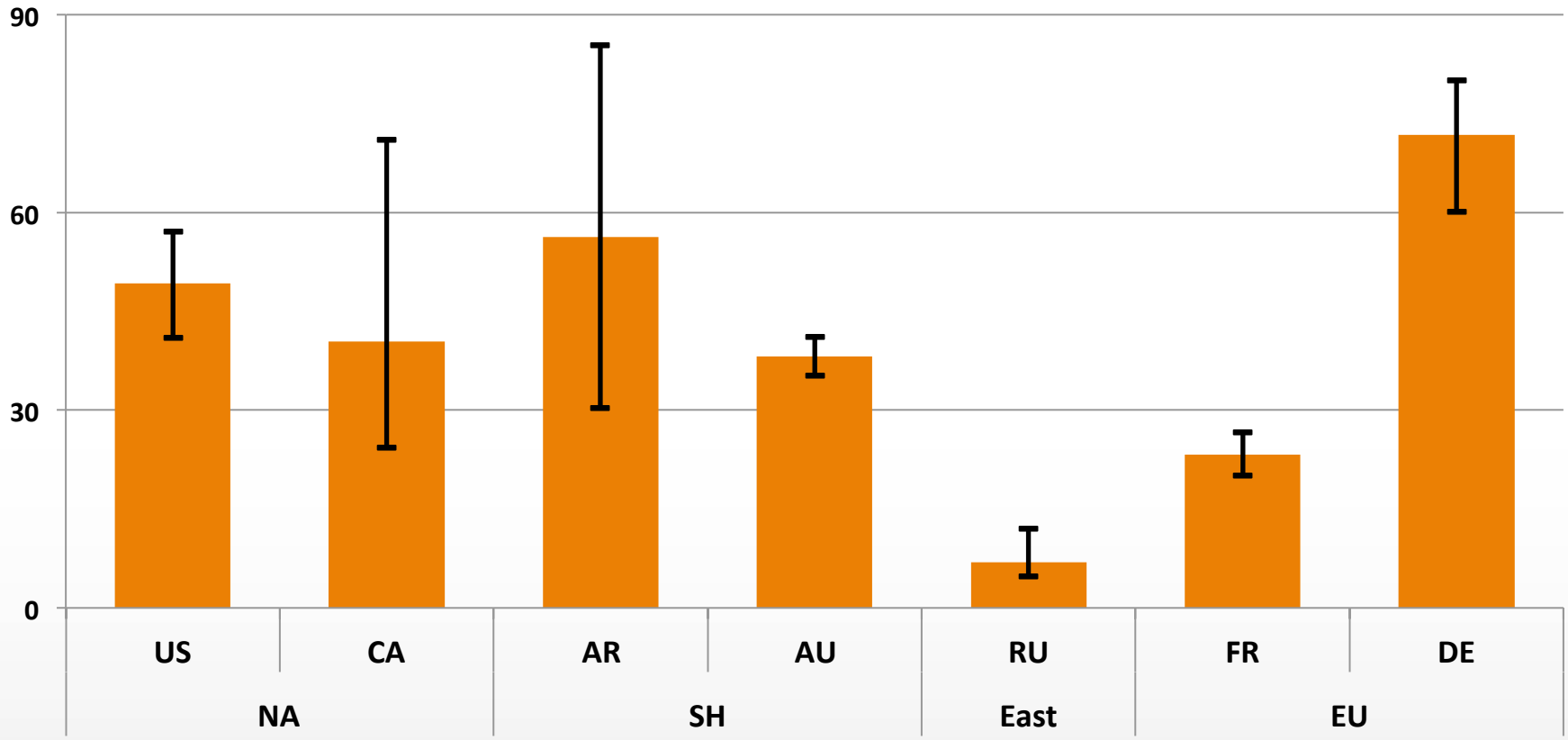
1. North American producers similar to Russian producers, typical farms in AR and AU are the lowest.
2. Typical EU farmers app. 2,5 times more expansive than typical Russian producers.
3. But: wage rates in Russia only app. 1/10 of what typical German or Canadian producer are faced with.

Operating cost wheat – per tonne (USD/t)



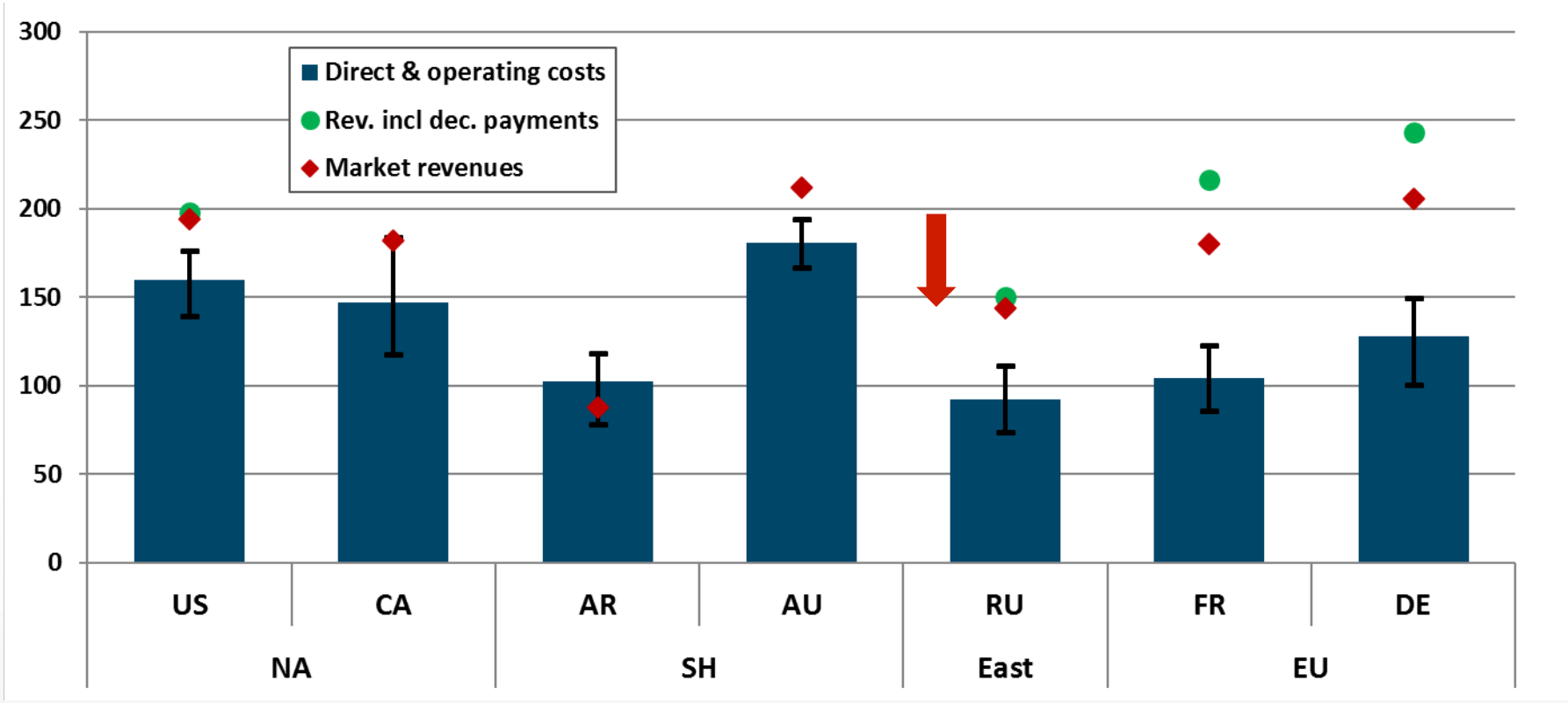
1. Even though Russian wage rates are just a fraction, labor cost per tonne similar to Canadian growers.
2. Typical German farms with very high labor cost due to a lot of "overhead" labor input.

Land cost per tonne of wheat (USD/t)



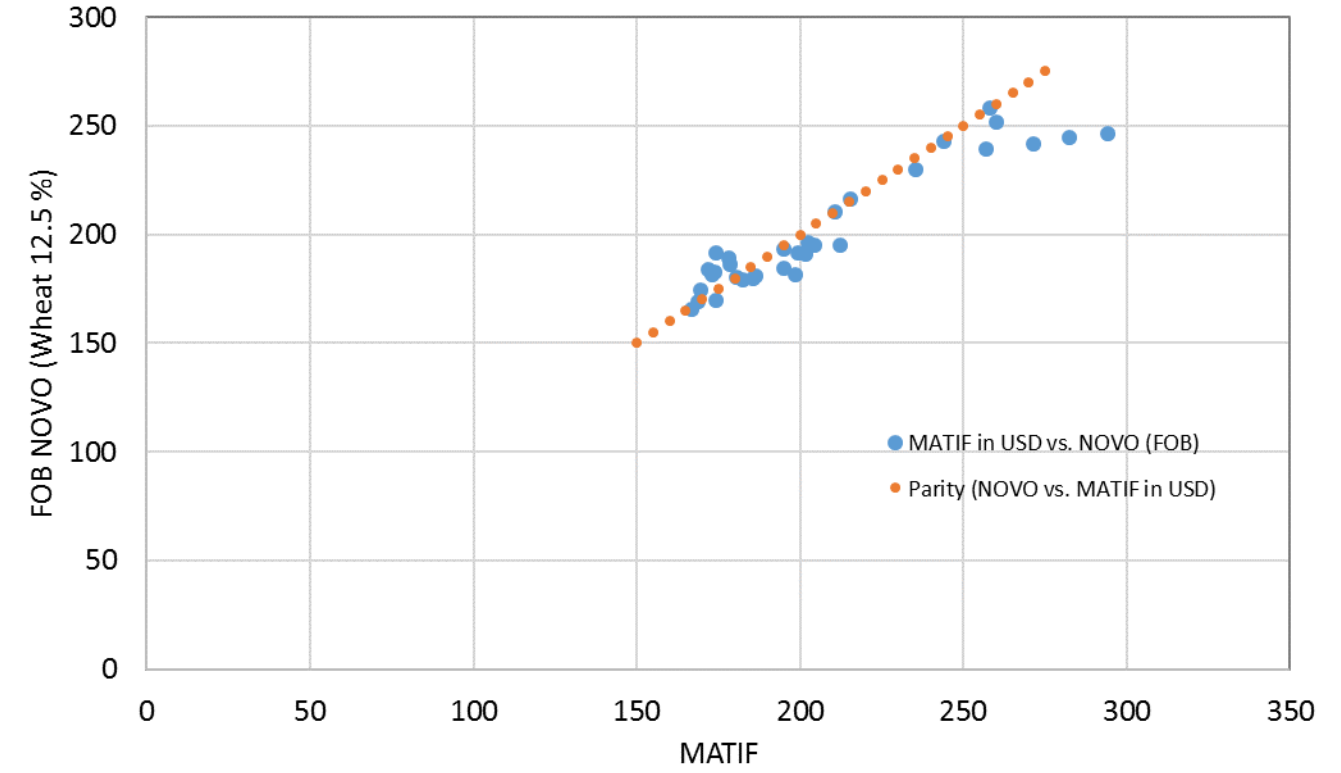
1. **Except for FR and RU: on a per ton-basis land cost are rather similar.**
2. **Typical French farm artificially low due to government restrictions on land rents. Payments "under the table" not included**

Direct & operating cost vs. market revenue and decoupled payments – per tonne (USD/t)



1. Typical Russian, Argentine and French farms with the lowest cost for inputs and operations.
2. But: Russian farms also very low farm gate prices (- 50 $/t vs. the USA and CA).
3. Due to export taxes and export restrictions, Argentine wheat farm gate prices were extremely low.
4. Dec. payments still rather important in the EU, of rather little relevance for RU producers

FOB wheat prices:
How does Russia compare to MATIF? (in USD/t)



1. **Russian wheat market is perfectly linked to MATIF**
2. **When MATIF goes "crazy" (above 250 USD/t) Russian market does not follow 1:1**
3. **But: Russian wheat is traded at a discount against MATIF of app. 20 USD/t (fobbing fee)**

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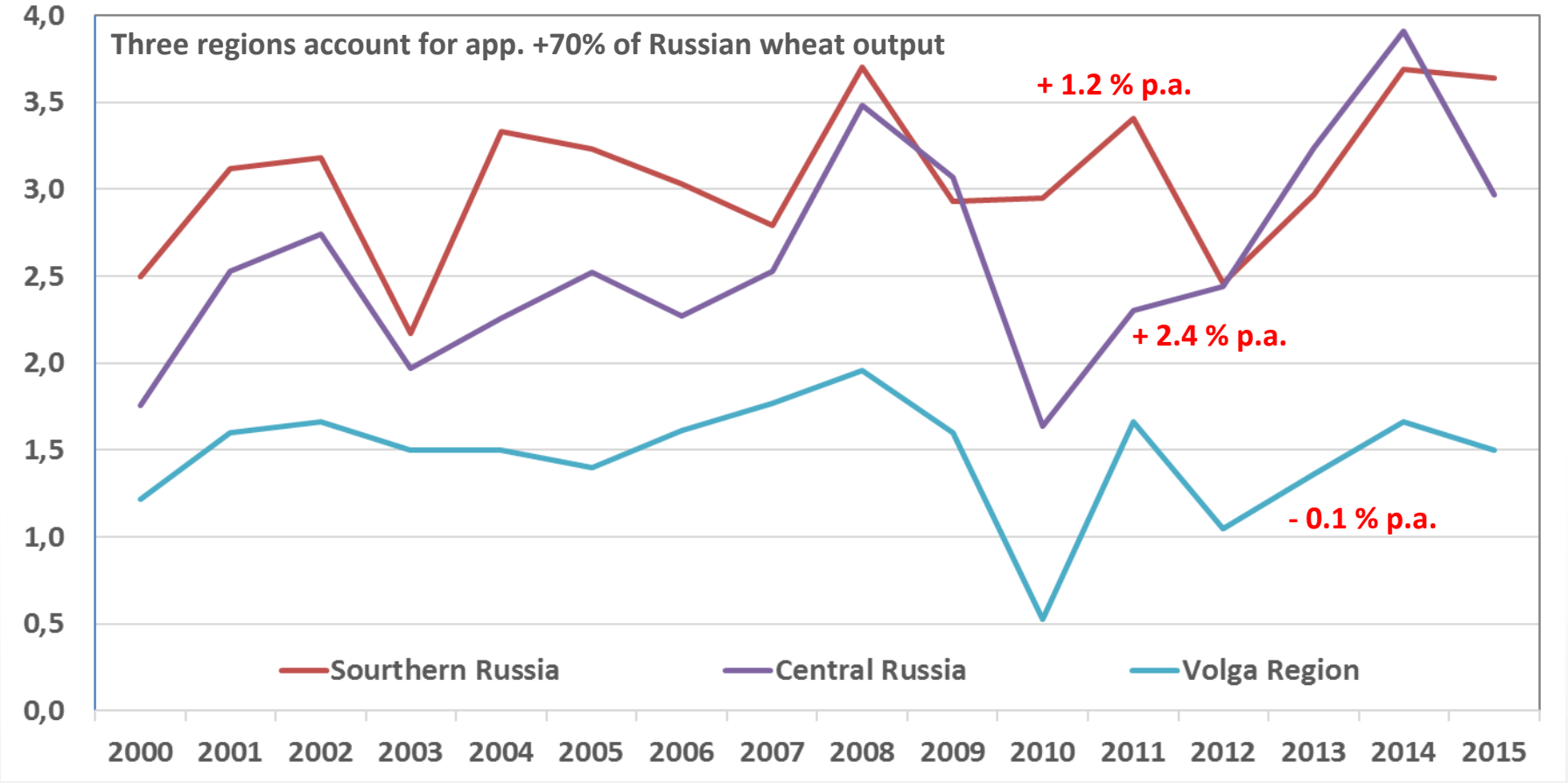
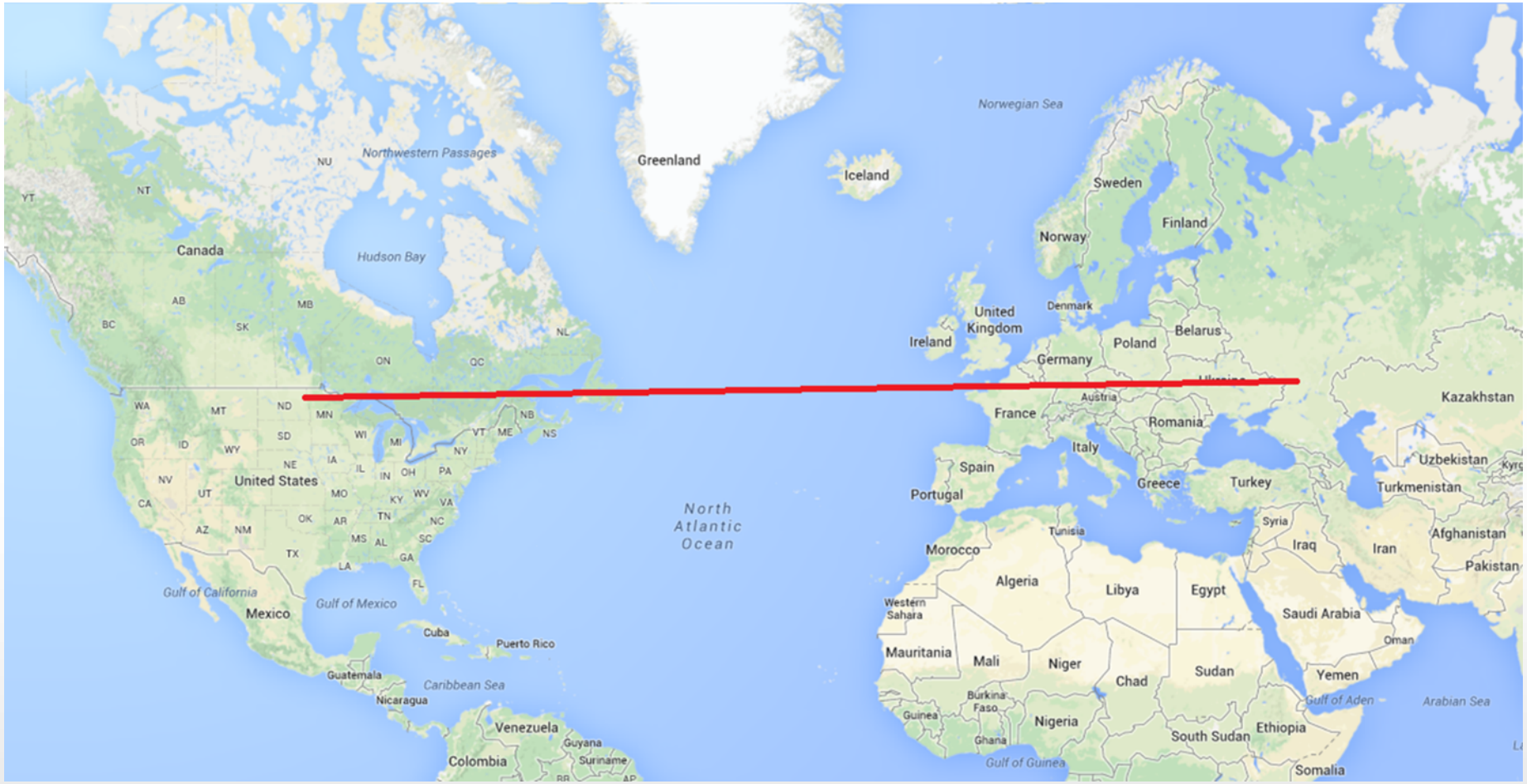
Evolution Russian wheat yields (t/ha)

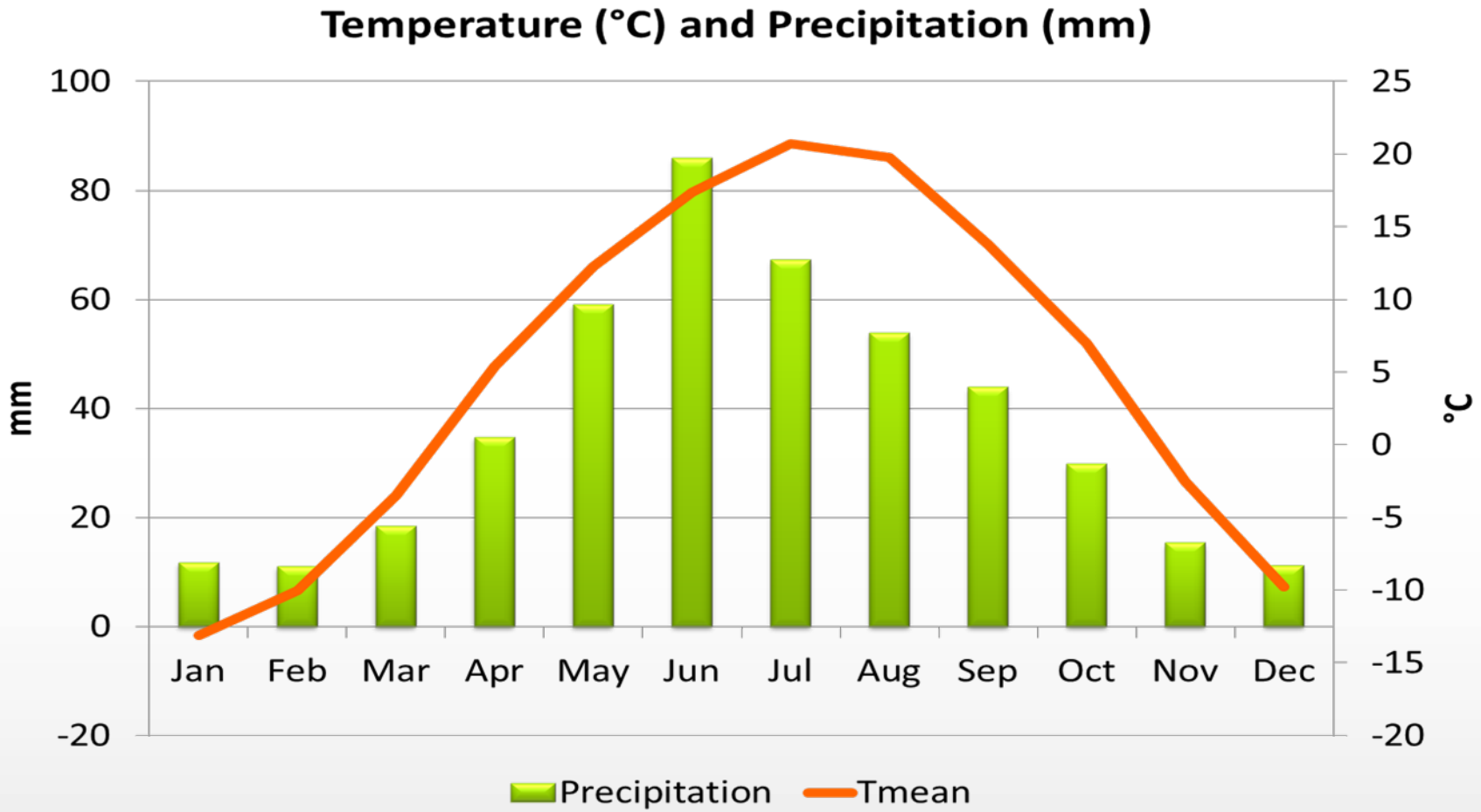


1. Despite low yields, growth rate is rather modest
2. Expansion Russian wheat production/exports so far rather extensive – use more land for wheat production

Central Black Soil Region (CBSR): Comparable to North Dakota

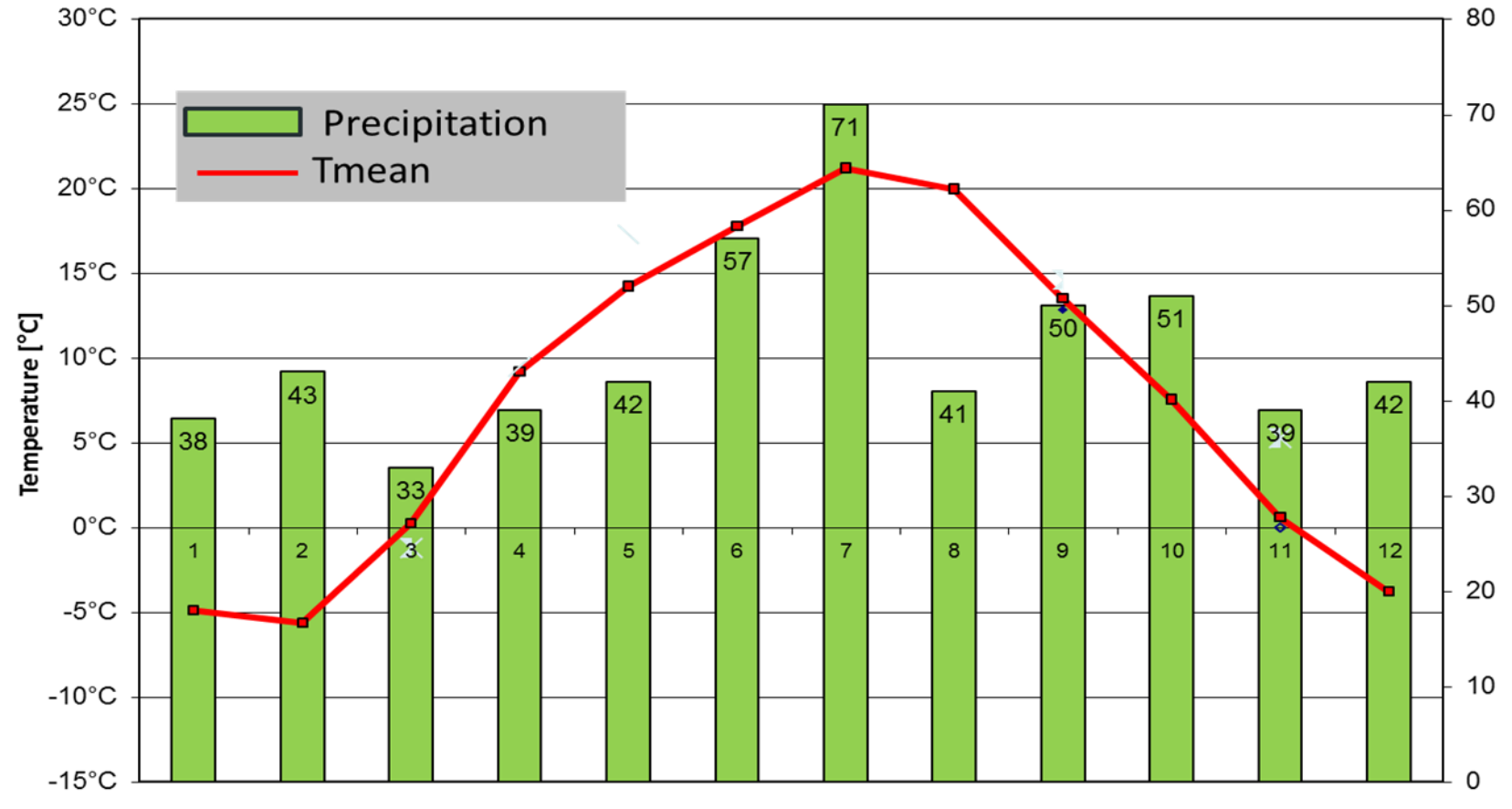


Climate North Dakota



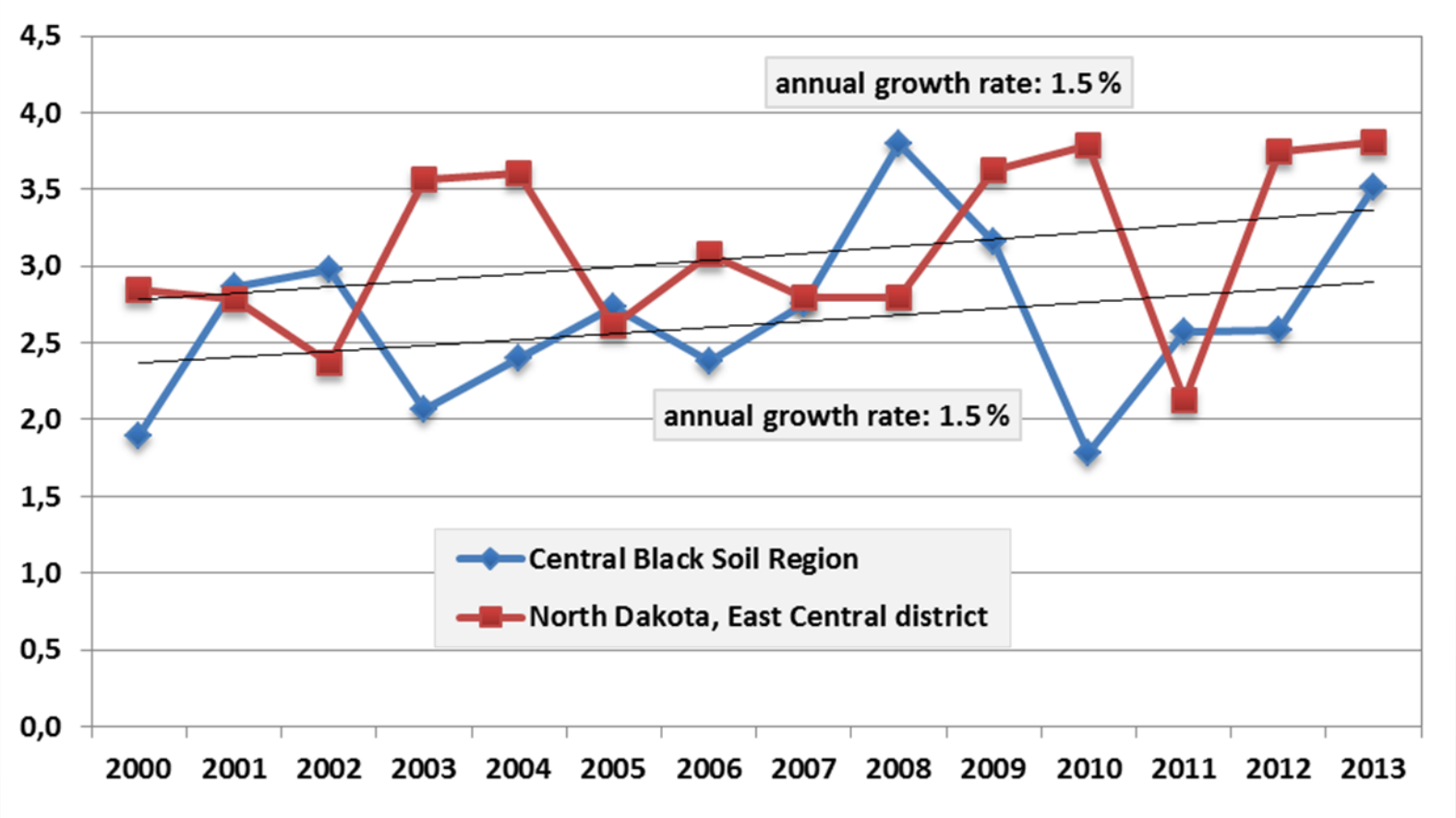
- **Average temperature: 4.5 °C**
- **Average annual precipitation: 450 mm**

Climat Central Black Soil Region (CBSR)



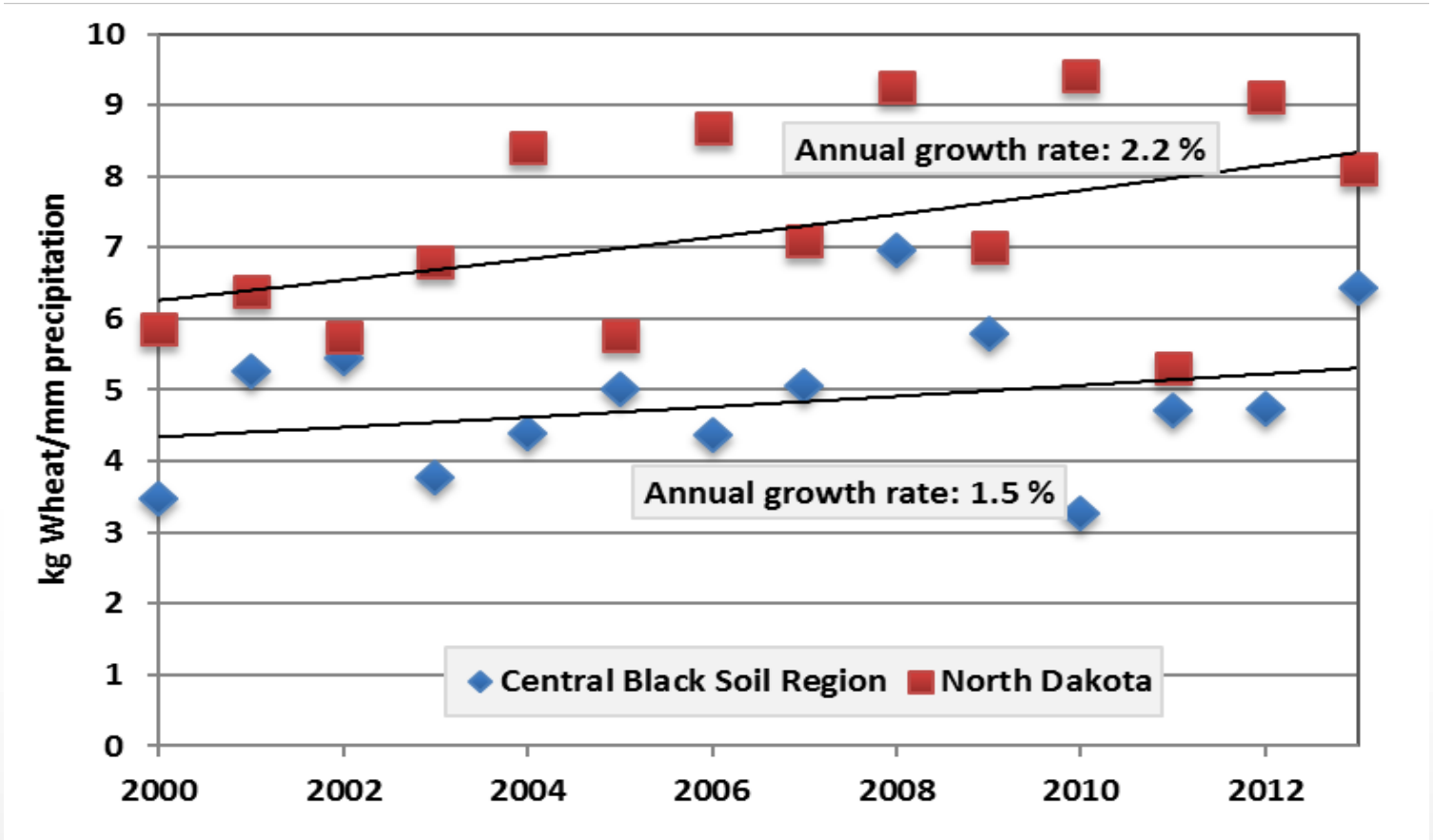
- **Average temperature: 7 °C**
- **Average annual precipitation: 550 mm**

Wheat yields CBSR and North Dakota (t/ha)



Despite lower precipitation (100 mm) North Dakota outcompetes CBSR by app. 0.5 t/ha.

Water productivity in wheat: Central Black Soil Region vs. North Dakota



1. **CBSR wheat production with significantly lower water productivity compared to ND.**
2. **Growth rate in water productivity in CBSR also lower as well.**

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Conclusions: Perspectives Russian wheat (1)

1. Caveat: Our farm data is significantly above average
2. Russian wheat producers are rather competitive.
3. Main advantages: very low wage rates, low nitrogen prices and – most important - weak Ruble.
4. Land prices are extremely low in Russia – if markets function, strong increases in land rents rather likely.
5. Main strategic issues of Russian wheat producers:
   a) Rather low physical labor productivity.
   b) Low wheat prices (which is not the case in corn f.e.)
   c) Low yields relative to soil and climatic conditions
   d) Previous growth in output rather extensive (more land)

Conclusions: Perspectives Russian wheat (2)

5. Significant room for higher yields:
   a) Water losses because of tillage systems?
   b) Issues with crop care products/application? (fungicides & insecticides prevent yield losses).
   c) Low fertilizer application rates

6. Due to
   - ongoing moderate growth of yields,
   - declining domestic food consumption and
   - only moderate increase in domestic feed consumption

   exports will continue to grow (over the last decade about +10% p.a.)

Let's grow together.

Thank you for your interest in agri benchmark

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Russian winter and spring wheat mapping