

# Exploring international competitiveness in grain and oilseed

Samuel Balieiro - Researcher, Agri Benchmark, Cash Crop team

A decorative graphic at the bottom of the slide consisting of several overlapping, wavy, horizontal bands in various shades of green, creating a sense of movement and depth.

# Exploring international competitiveness in grain and oilseed production

Samuel Balieiro, M.Sc.

Thünen Institute of Farm Economics



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Grain Market Outlook, London

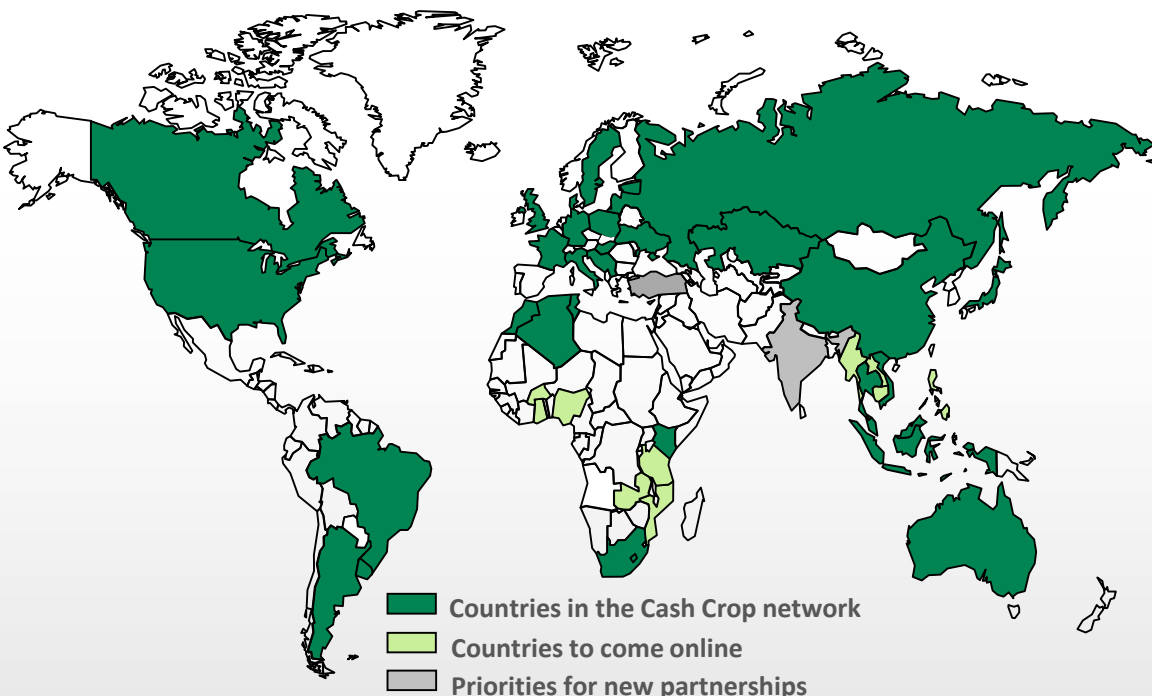
# Agenda

1. Background
2. How profitable are wheat and corn production around the world? Who are the cost leaders?
3. Economics of oilseed production worldwide (soybean & rapeseed)
4. Soybean production systems: a look into Brazil
5. In-farm competitiveness of oilseeds vs. grains
6. Summary

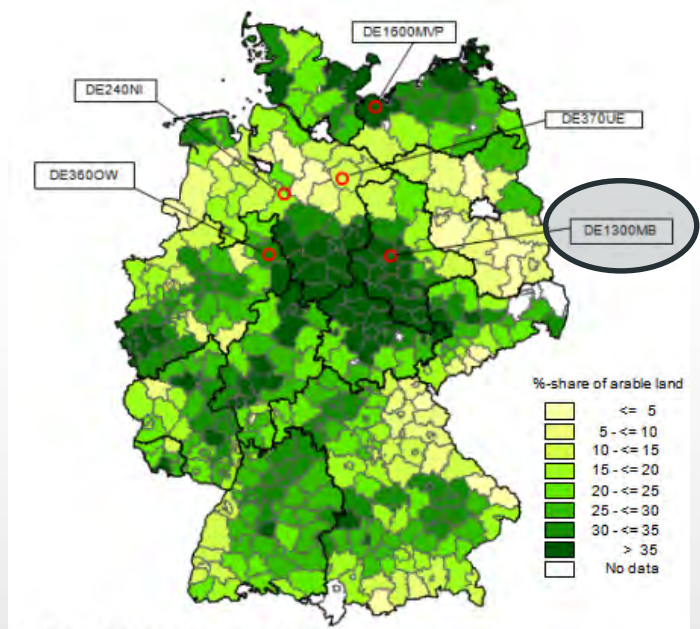
# Background

**Competitive advantage** is a function of either providing comparable buyer value more efficiently than competitors (low cost), or performing activities at comparable cost but in unique ways that create more buyer value than competitors and, hence, command a premium price (differentiation) – (Porter, 1985)

## agri benchmark coverage

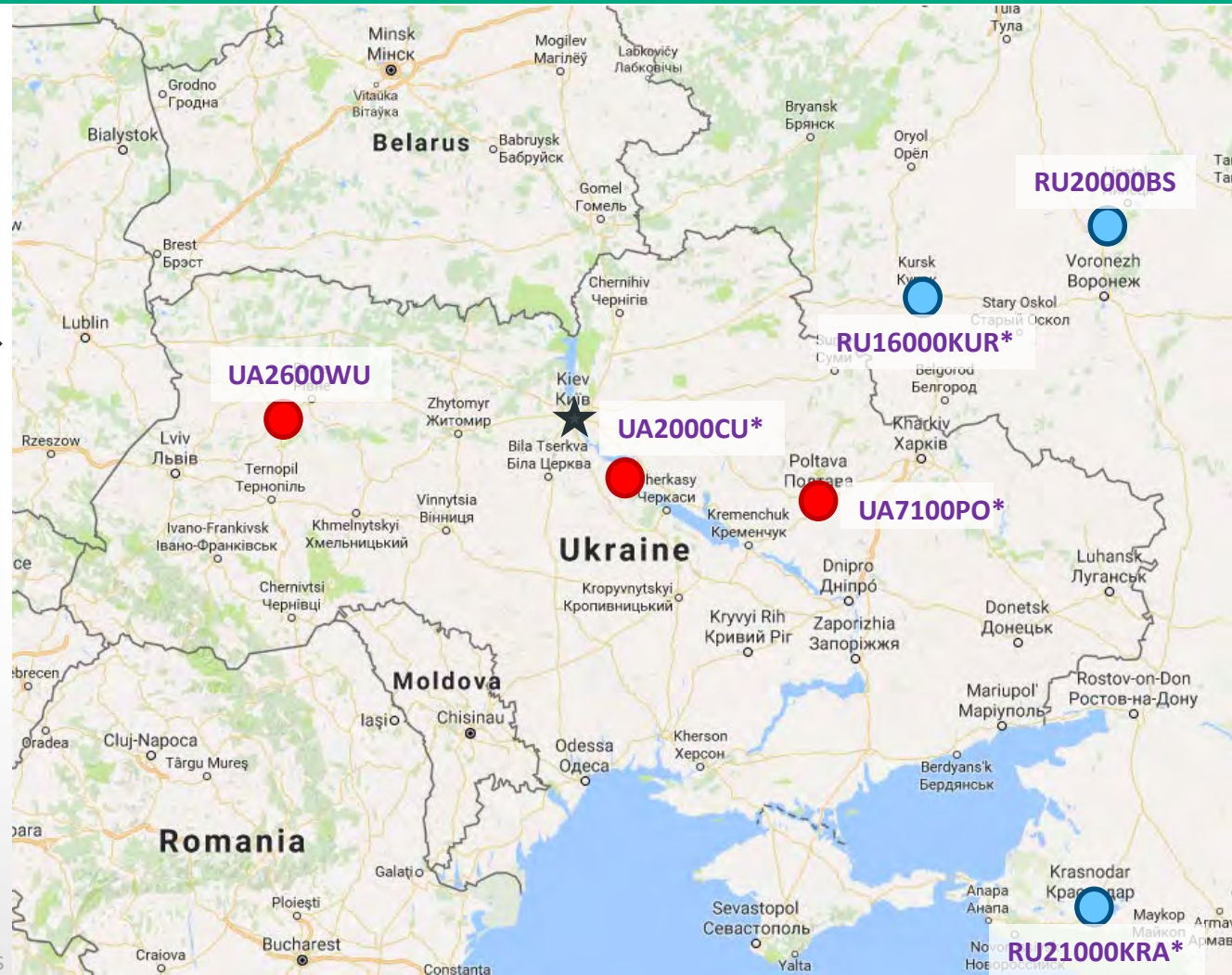


country ha region  
DE 1300 MB



Source: Statistisches Bundesamt 2010

# Location of the Russian and Ukrainian typ. farms

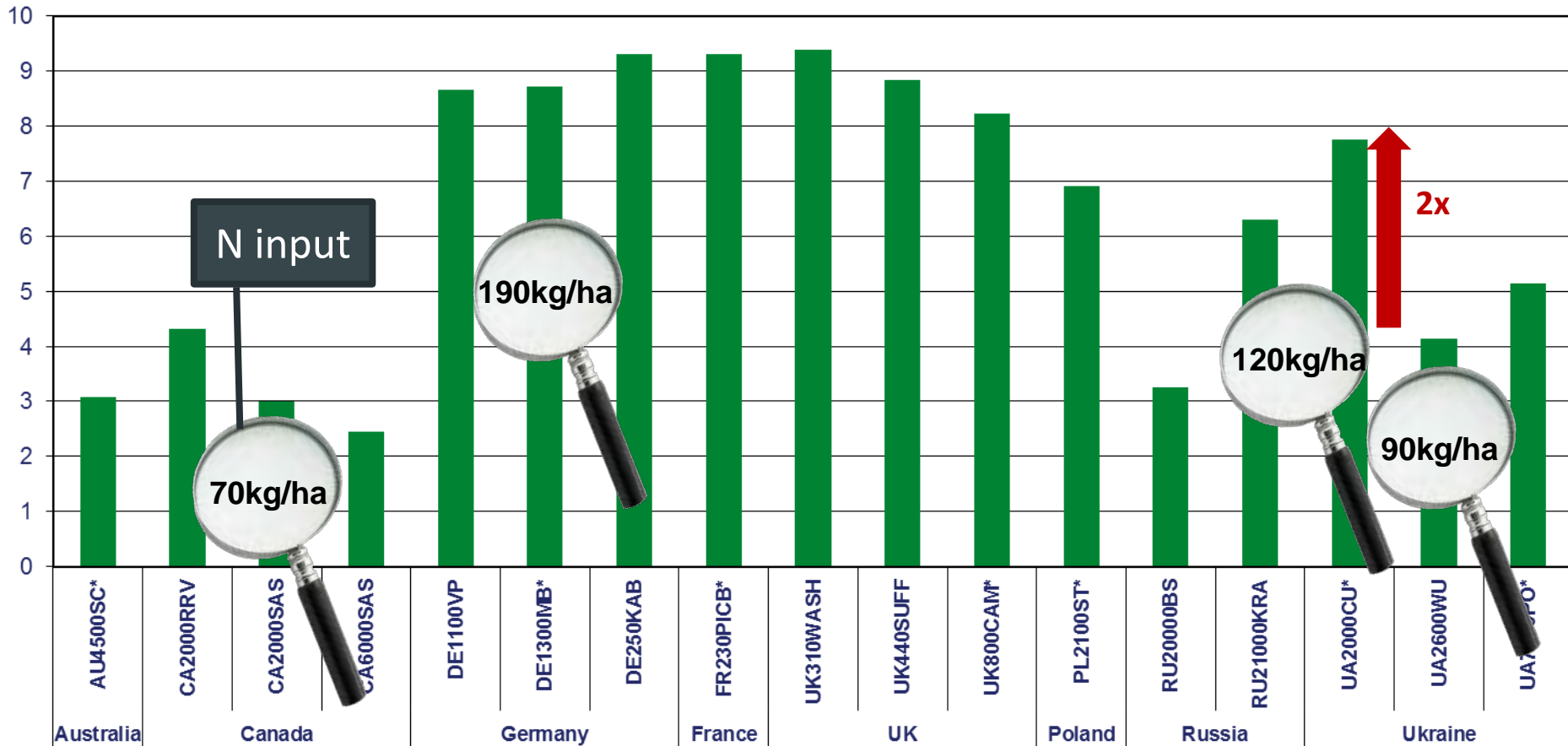


source: google maps

# Agenda

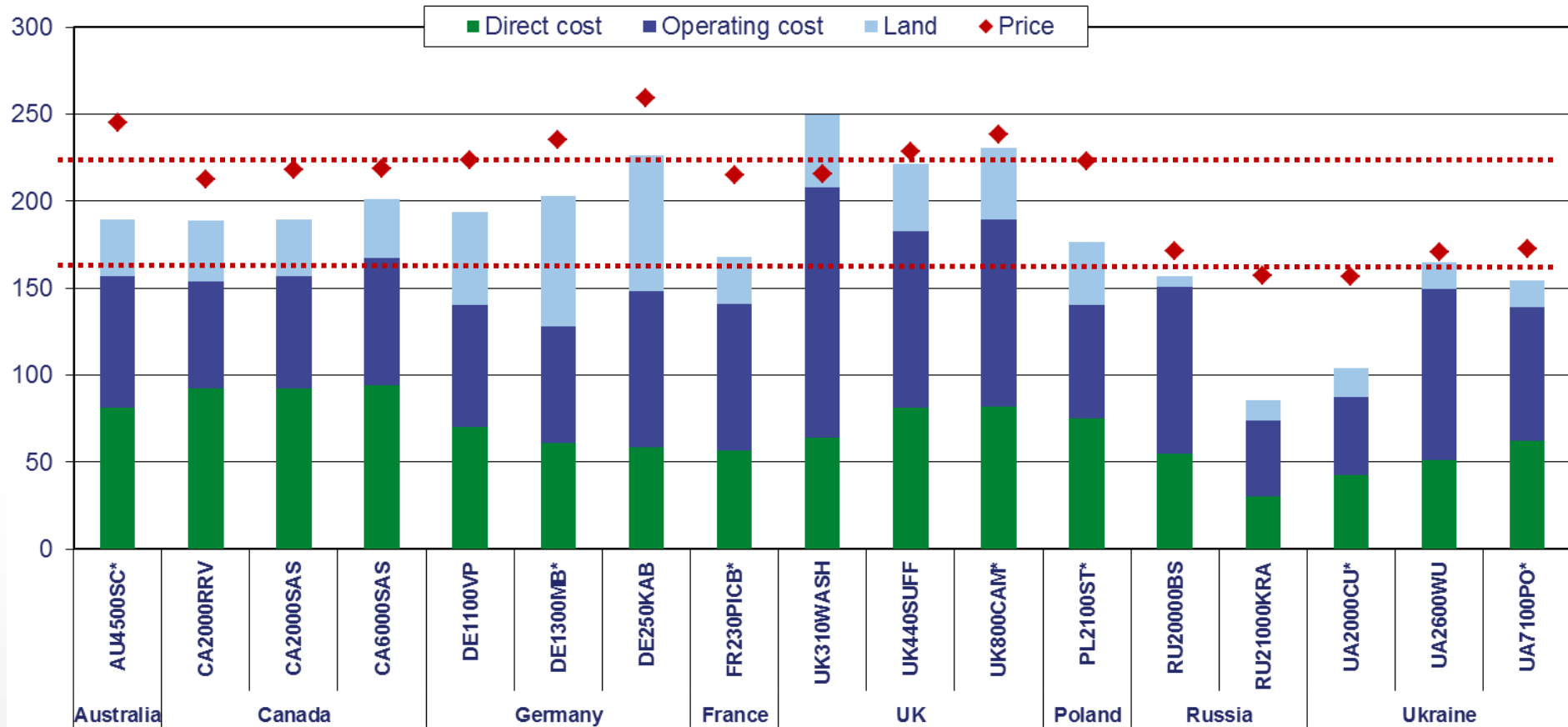
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# Wheat yields in t/ha (avg. 2008 – 2015)



- Strong differences in yields: production systems and input intensity
- High performing farms in UA and RU show their potential in wheat production

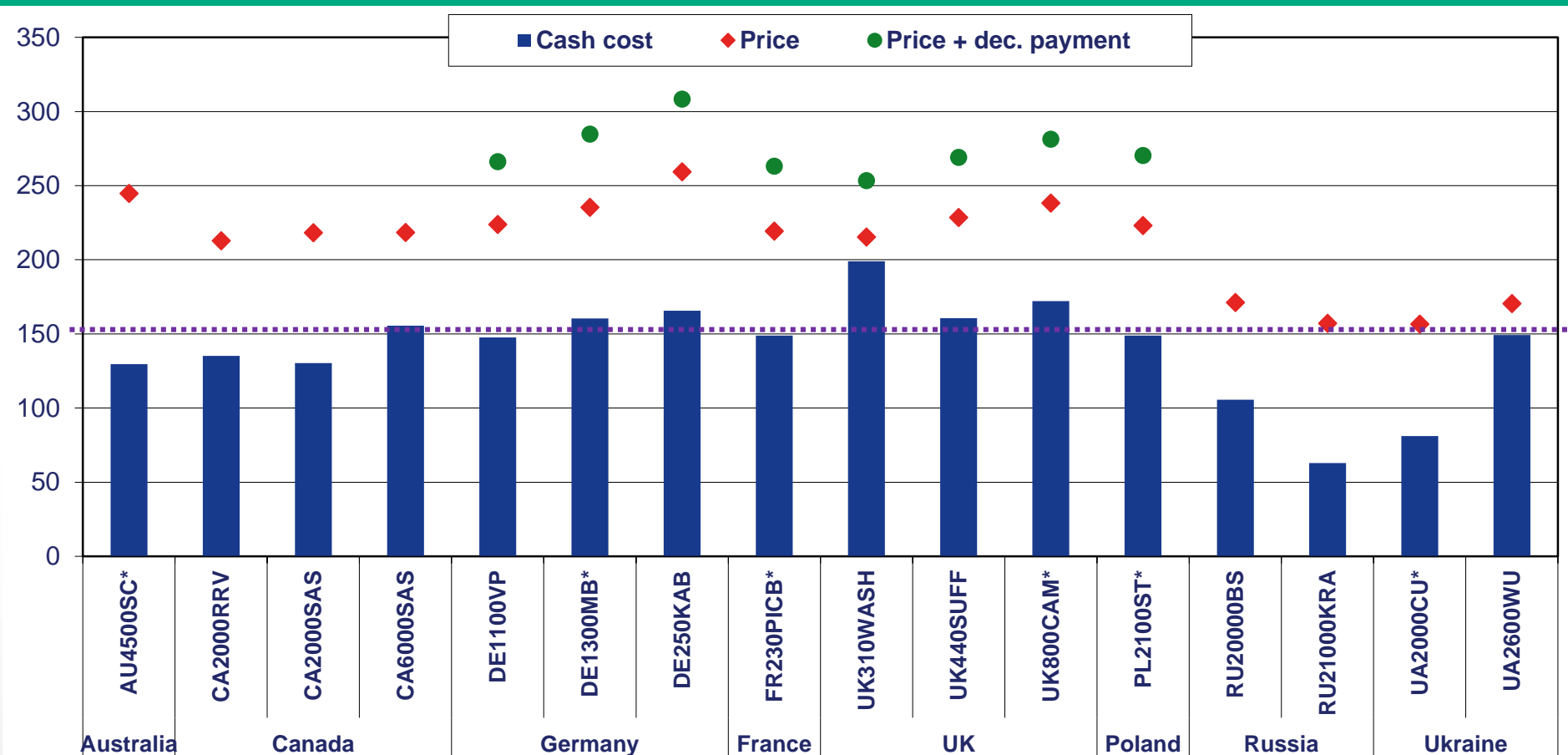
# Wheat key costs and prices in USD/t (avg. 2008 – 2015)



- Most countries with **total cost around \$160 – \$250/t**; UK farms with higher costs
- RU and UA farms: **cost leaders** but facing much lower farm gate prices (-\$50/t)

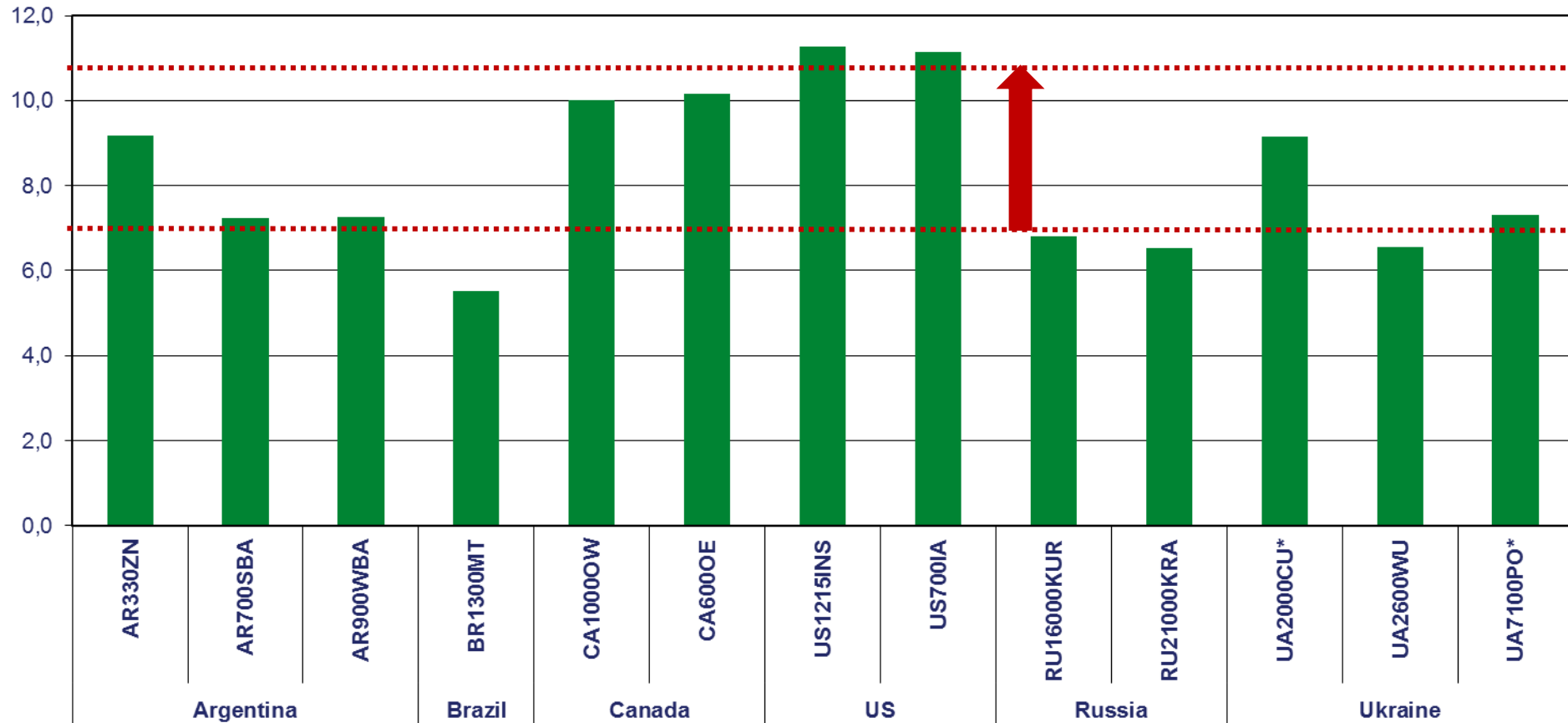


# Wheat cash costs and revenues in USD/t (avg. 2008 – 2015)



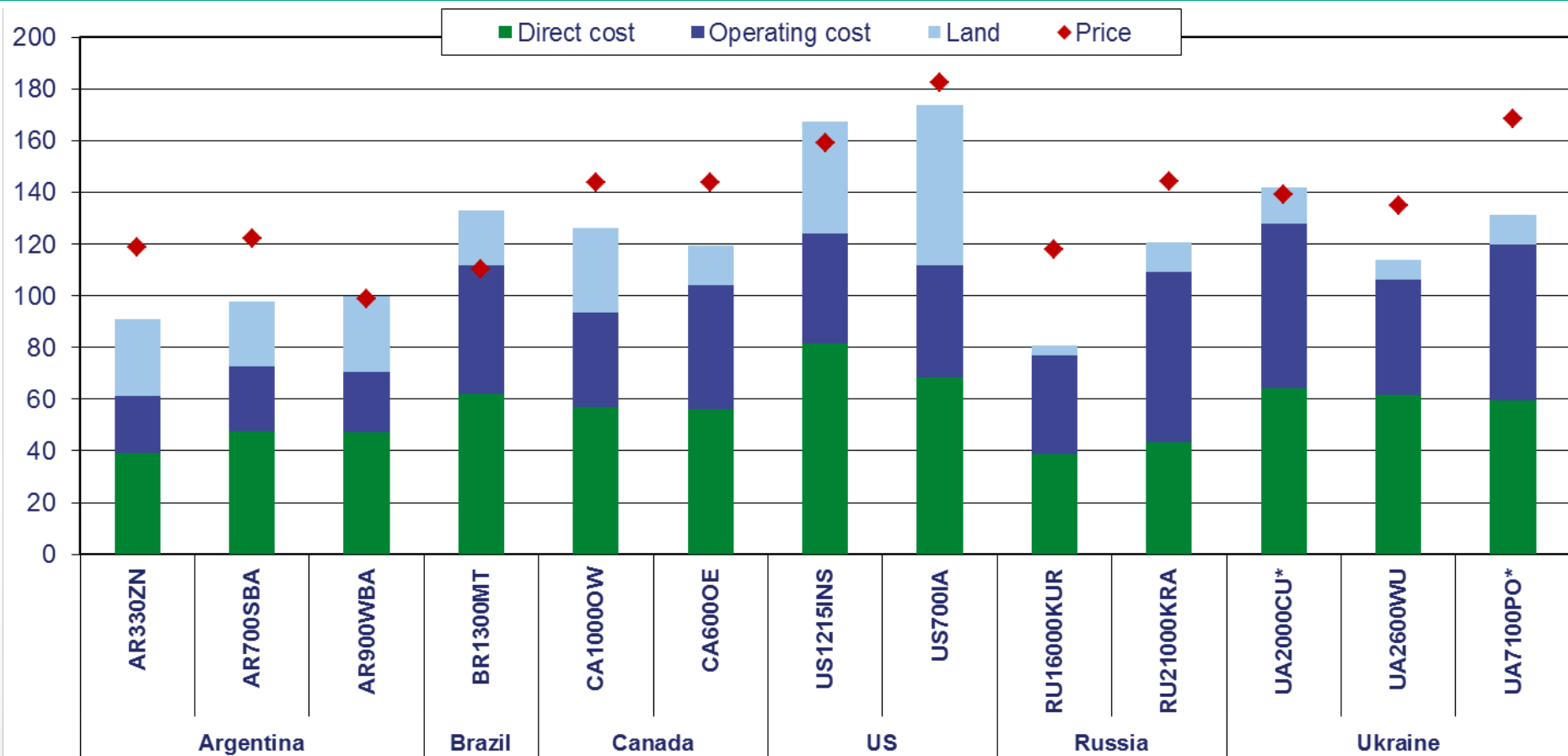
- Short term most farms can produce wheat with less than \$150/t
- Direct payments increase the price gap between EU and Eastern countries (+\$100/t)

# Corn yields in t/ha (avg. 2008 – 2015)



- US and CA > 10 t/ha – more intense production systems (>175kg N/ha)
- Brazilian farm grows corn as a second crop after soybean – lower intensity

# Corn key costs in USD/t (avg. 2008 – 2015)

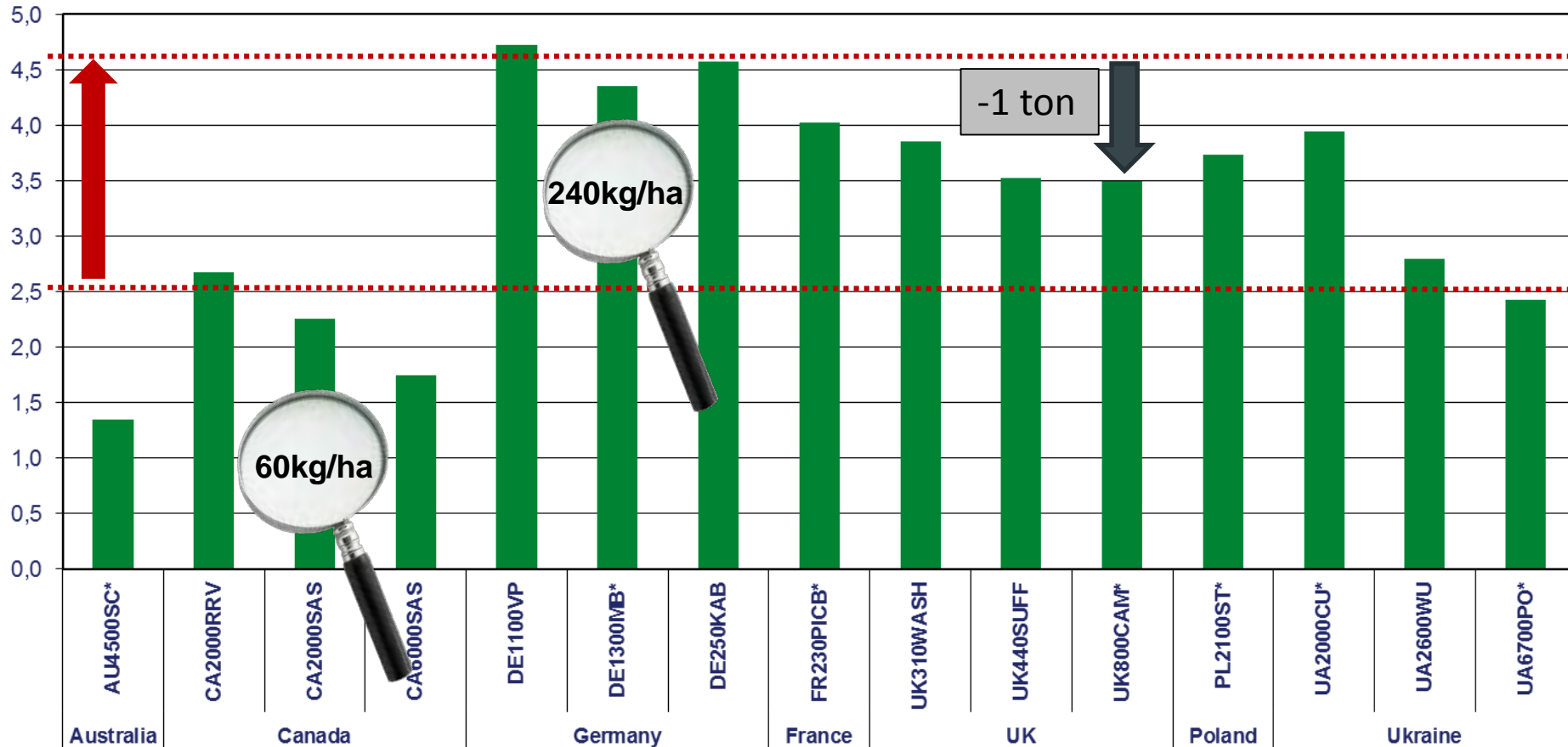


- All farms with direct and op. costs < \$130/t; AR und RU lower than \$80/t
- US facing high land costs, eating up the price advantage at farm level.

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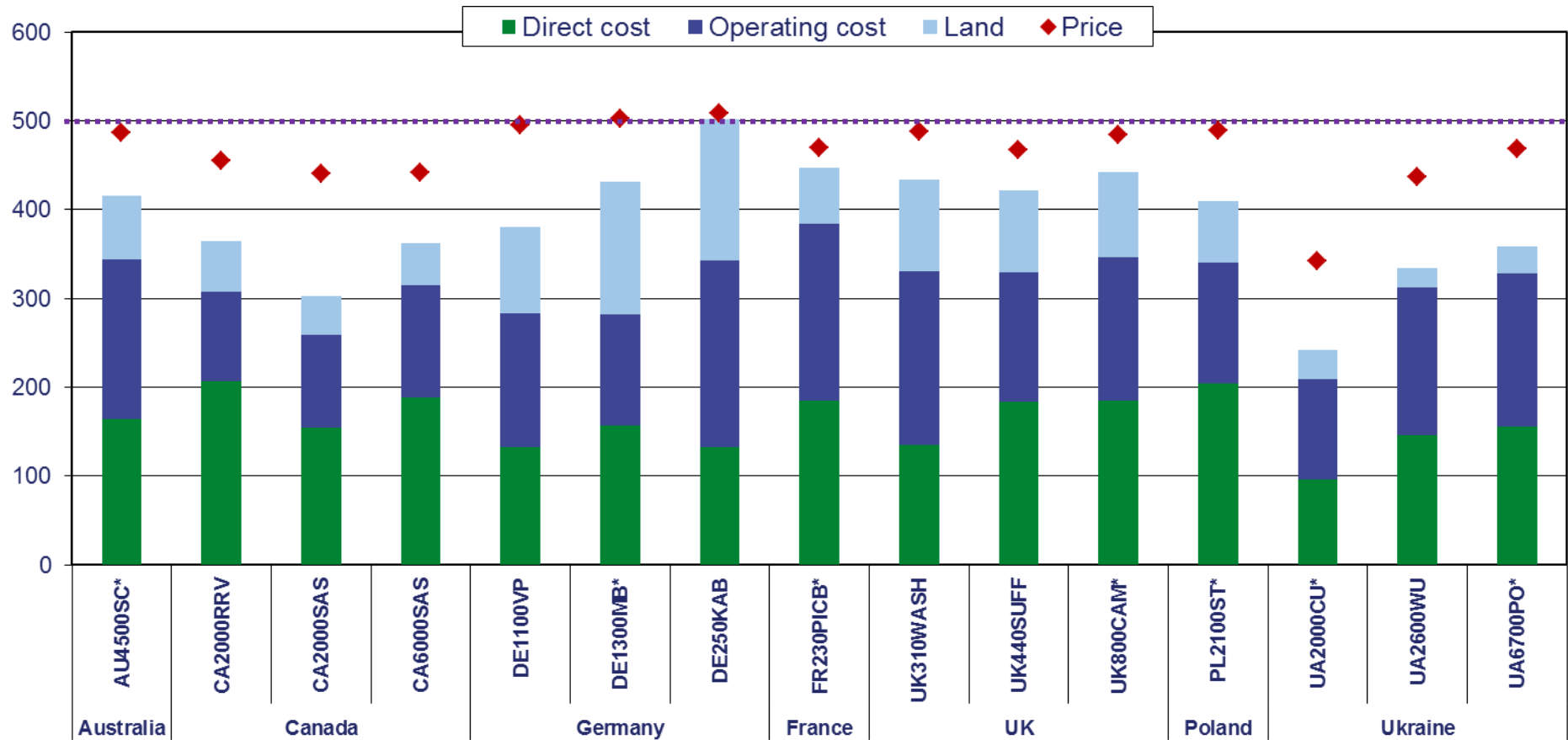
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# Rapeseed yields in t/ha (avg. 2008 – 2015)



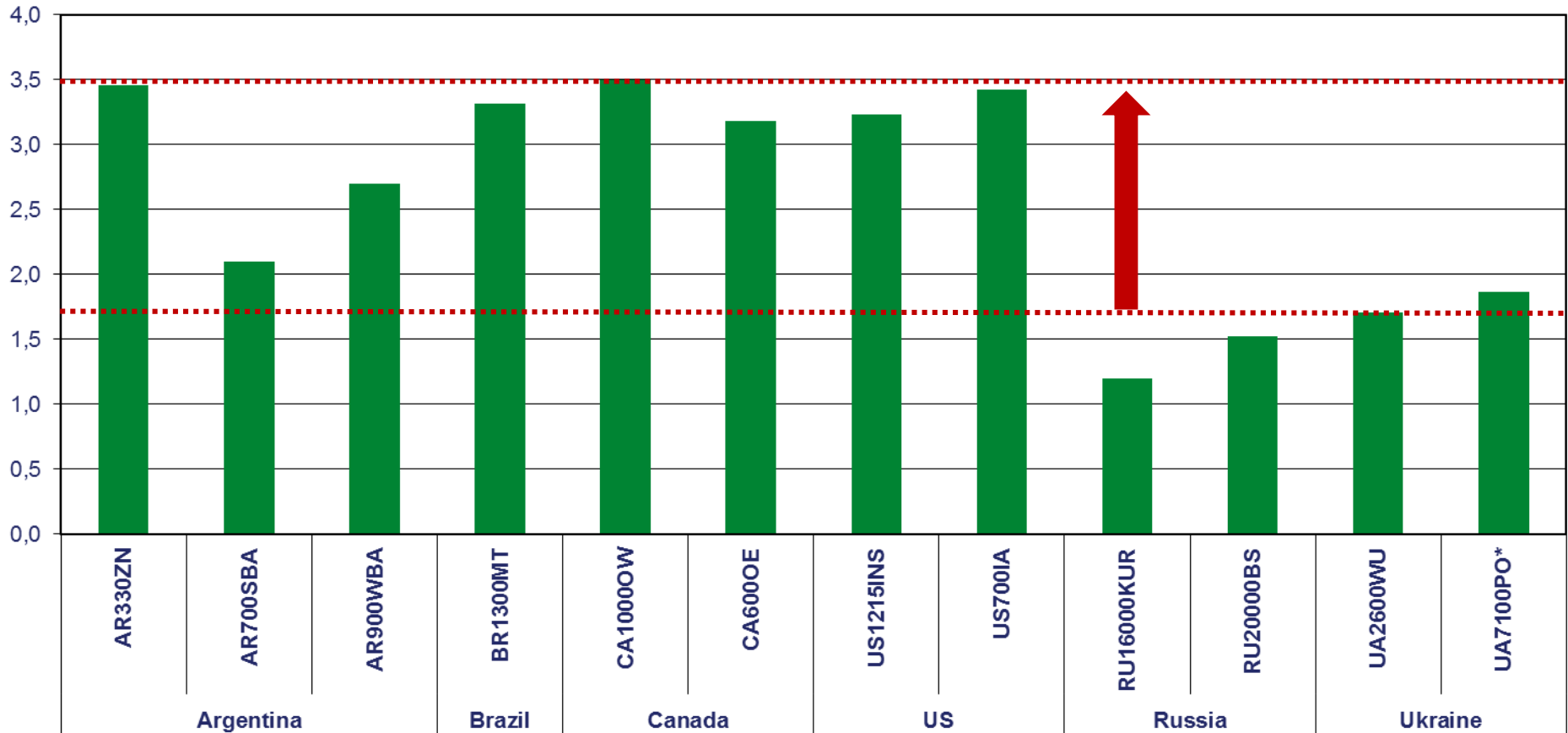
- Similar to wheat, European farms with higher yields; DE farms around 4.5 t/ha
- Canada and Australia with yields similar to most Ukrainian farms

# Rapeseed key costs in USD/t (avg. 2008 – 2015)



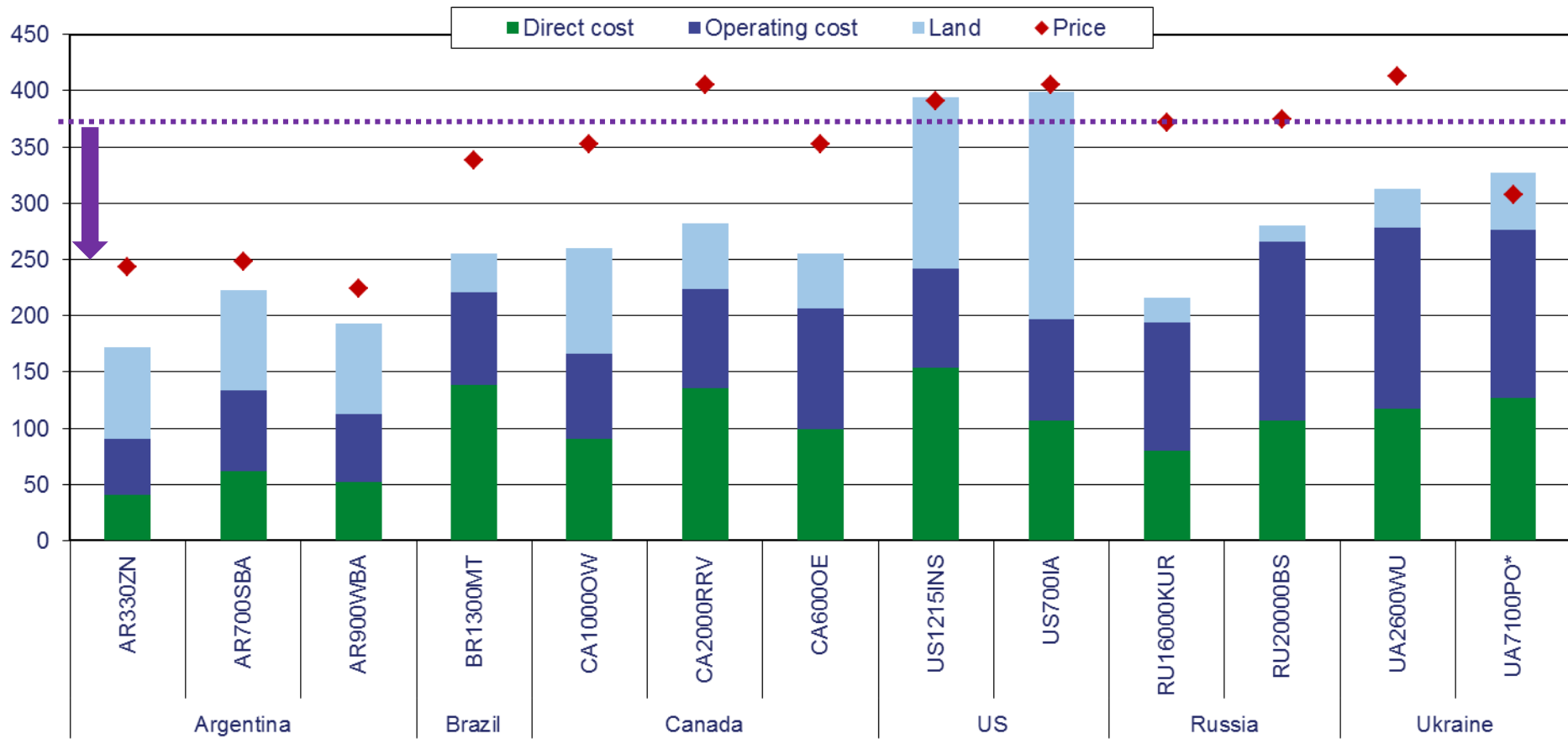
- Even with relatively lower yields, Canada and Ukraine are very competitive
- Short term: **direct + op. costs around \$350/t**

# Soybean yields in t/ha (avg. 2008 – 2015)



- Most farms around 3 to 3.5 t/ha;
- Yield gap in Russia and Ukraine: still a “new” crop but with strong potential

# Soybean key costs in USD/t (avg. 2008 – 2015)



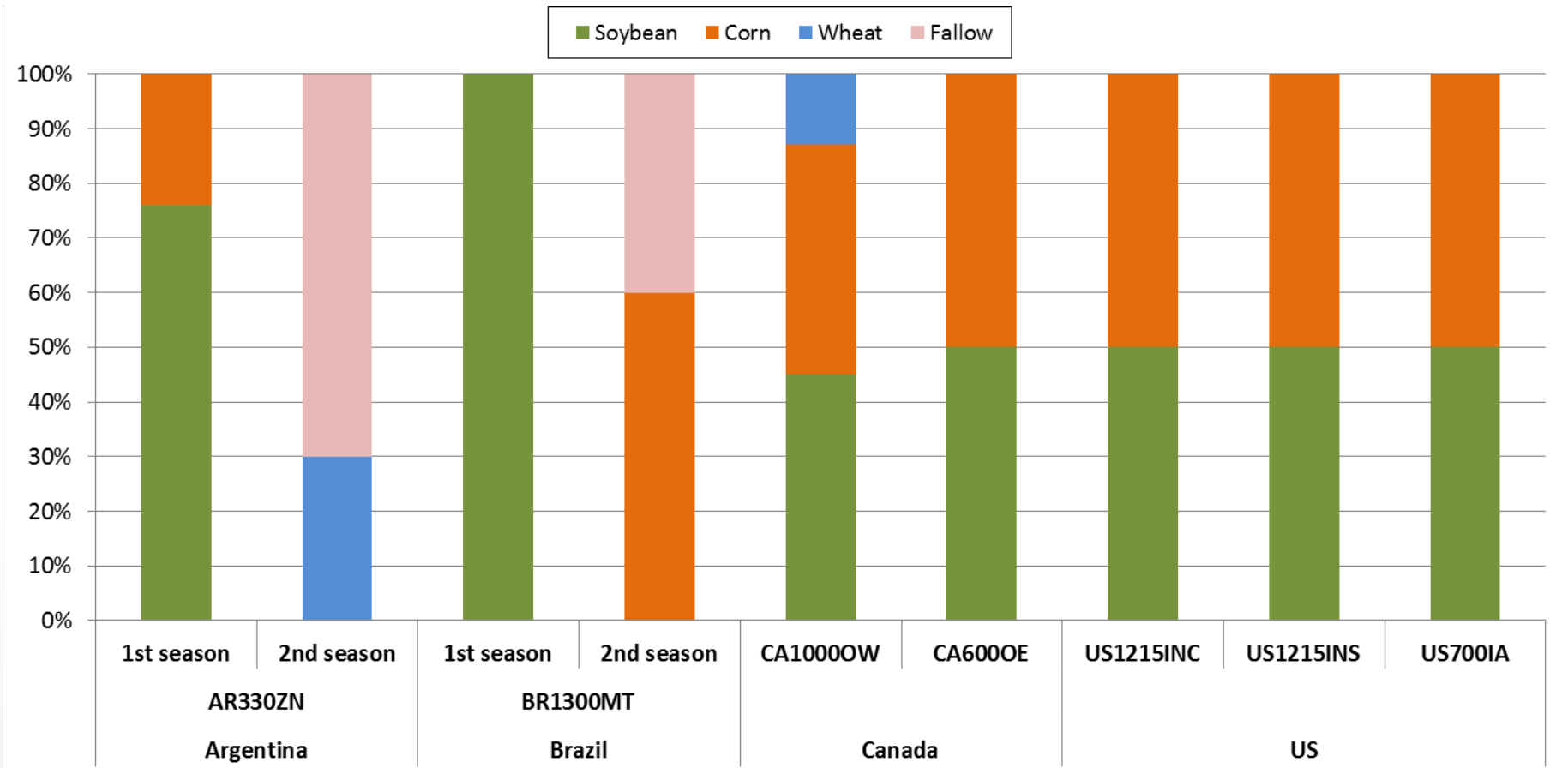
- **AR is the cost leader; however facing much lower farm prices (export tax?)**
- **Even with low yields Russian farms are very profitable; Prices similar to other countries**



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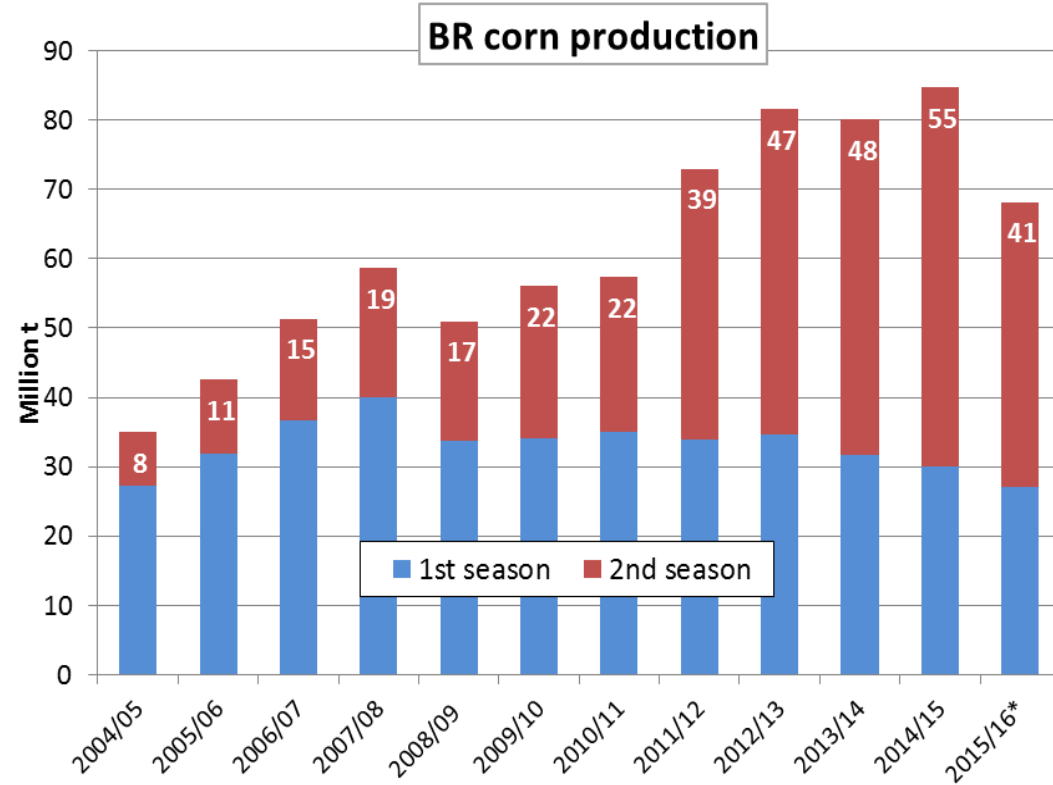
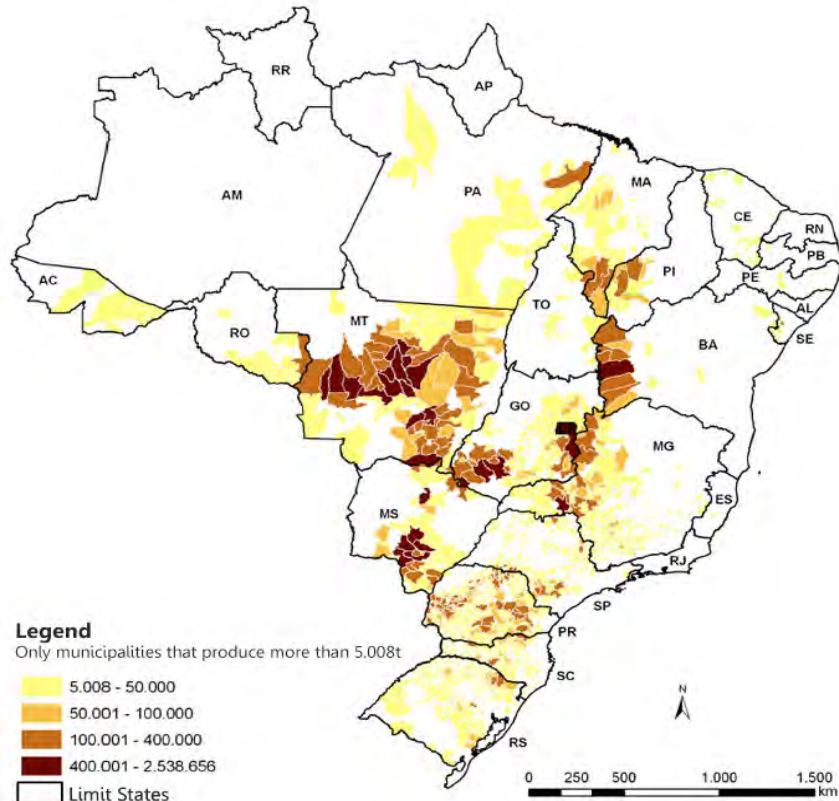
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# Crop rotation: importance of soybean vs. corn (%)



- Corn in Brazil (MT) is as second crop - double cropping: soybean “+” corn instead “or”;
- In the US the acreage competition of these two crops is more severe

# Double cropping (BR): quick response to markets



- Farmers can decide quickly on the acreage to be sown with corn
- Quick responses to market demands (e.g. 2012 drought in the US)
- However, second season corn is highly sensitive to weather – droughts (e.g. 2016)

# Double cropping (BR): corn crop 2016



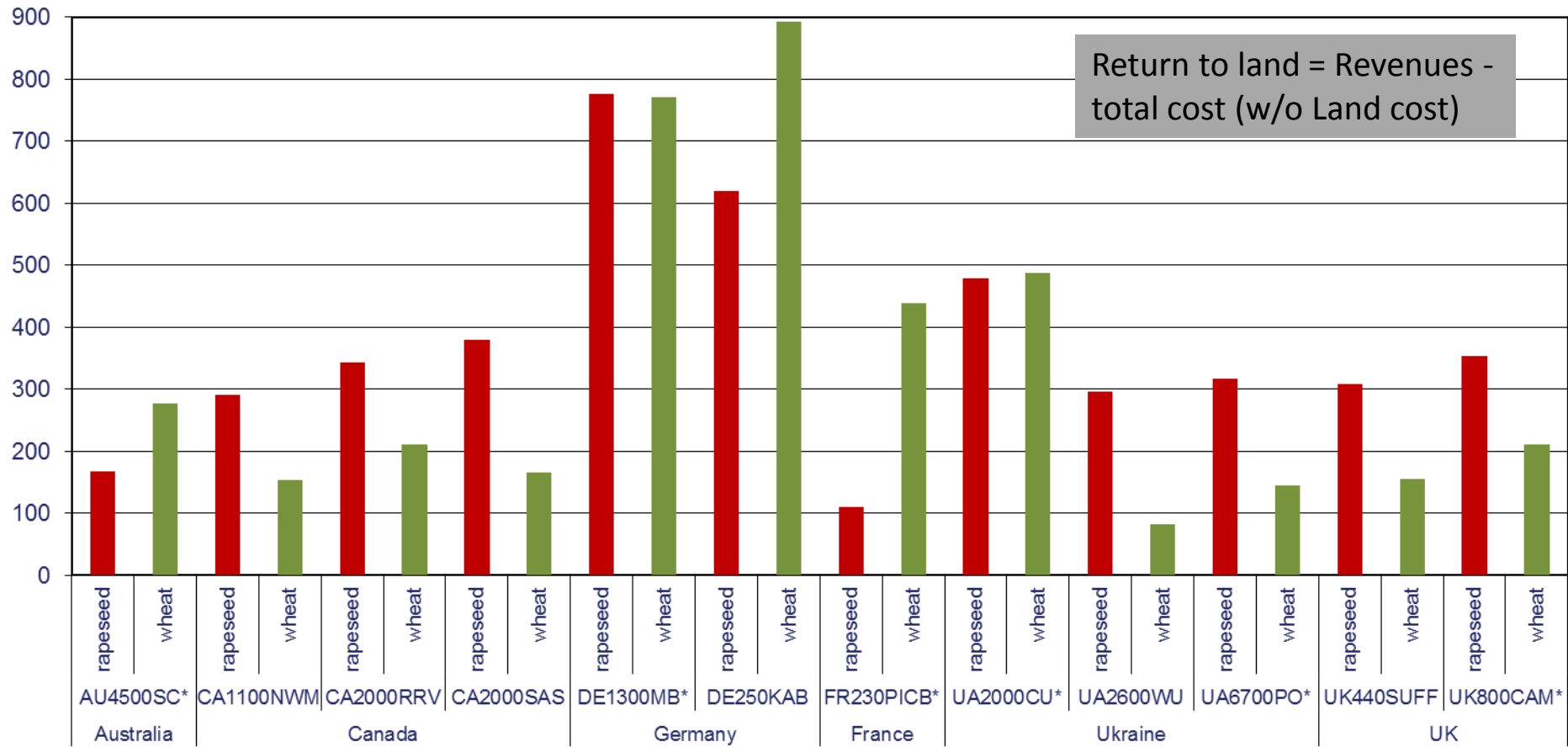
*pictures: noticiasagricolas.com.br*

- In MT state yield losses of ca. 2t/ha (-32%) compared to 2014/15 season;
- 178,000 seeded ha not harvested – MT production 7,2 million t lower than 2014/15

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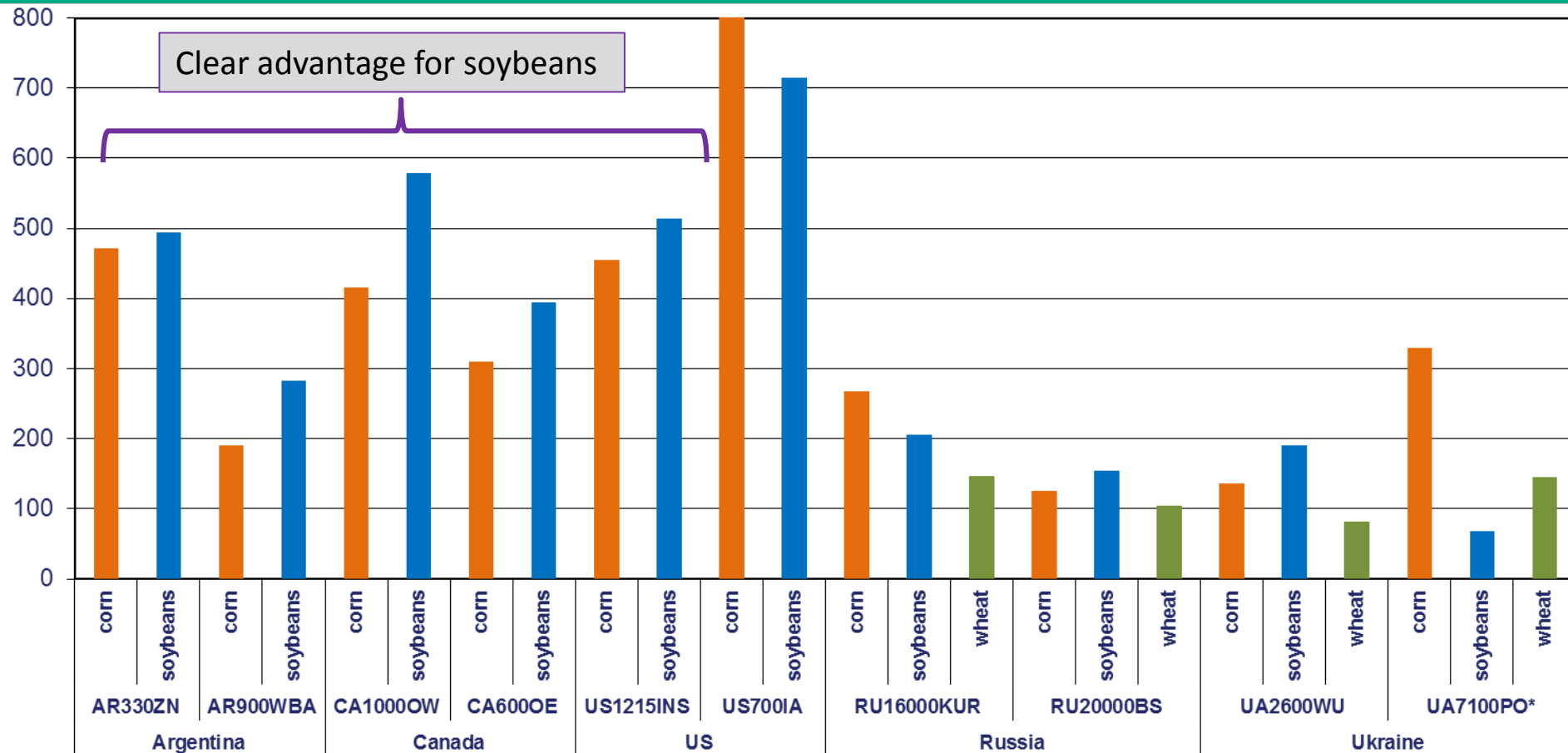
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# Return to land rapeseed vs. wheat (avg. 2008-2015; USD/ha)



- **Canada, Ukraine and UK clear advantage for rapeseed (ca. + 120 USD/ha)**
- **In Germany and France mixed picture;**

# Return to land soybean vs. corn/wheat (avg. 2008-15; USD/ha)



- Except for the Iowa farm, soybean was more profitable than corn in the Americas
- On the Russian and Ukraine farms: corn & soybean outcompeting wheat – future?

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# Summary

- I. UA and RU farms are cost leaders in wheat production. Higher yields can be achieved in several regions – increasing competitiveness?**
- II. As for wheat, RU and UA farms are cost competitive in corn and soybean production. AR is the cost leader – expectation for domestic prices after export tax ban.**
- III. Our UK typical farms have roughly 1 t/ha lower rapeseed yields than the German farms. Nonetheless, rapeseed has been more profitable than wheat**
- IV. Double cropping in Brazil increases the overall competitiveness of farms but this system is more sensitive to droughts (corn)**
- V. Oilseed production has been more profitable than grains in several regions, supporting their observed acreage increase.**

# Knowledge is our business

## Thank you for your attention



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