



# Economic performance of Ukrainian agri benchmark farms

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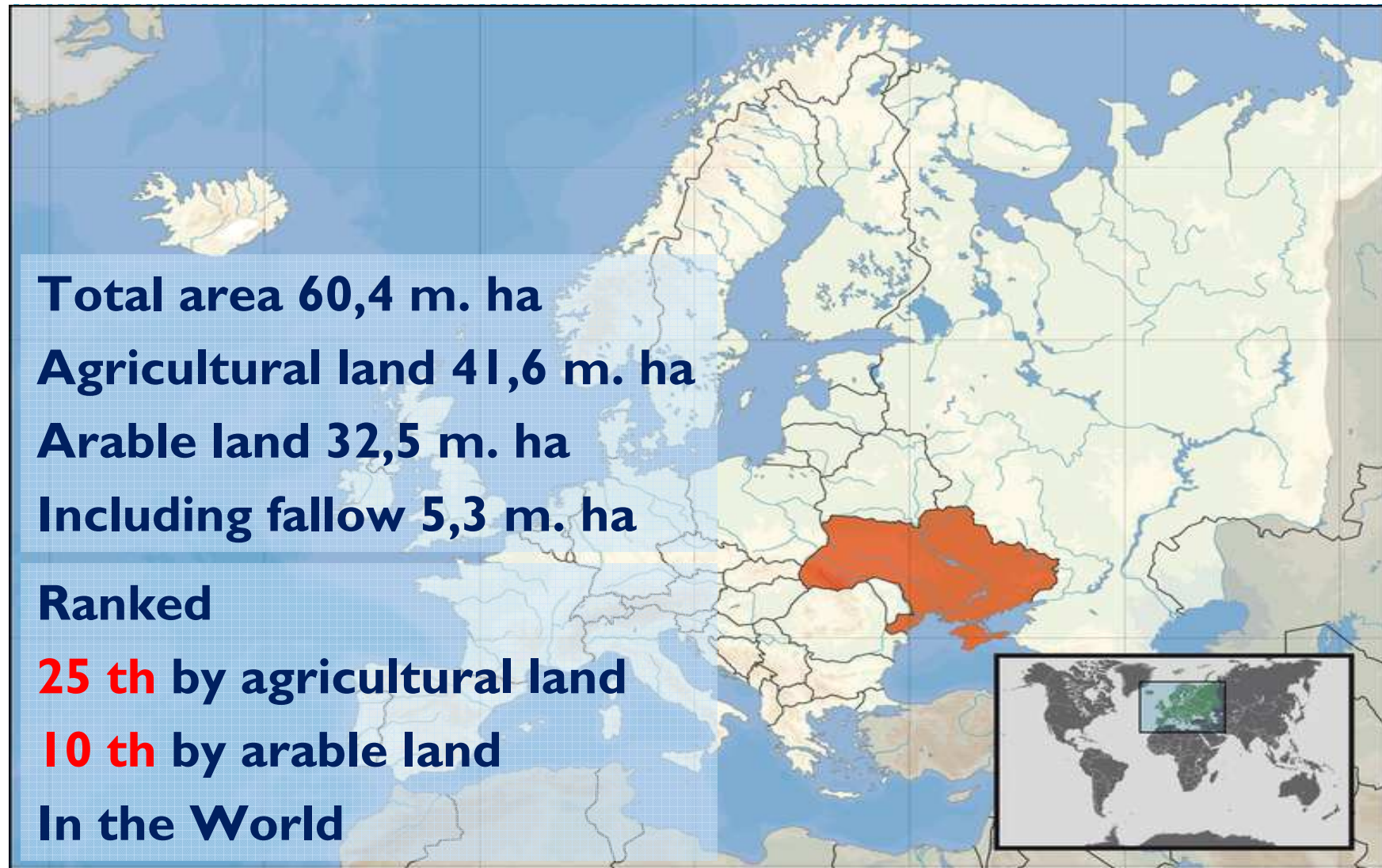
# Highlights

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- ▶ Location: Ukraine, zones, farms
- ▶ Typical farms: introduction
  - ▶ Size and structure
  - ▶ Rotation and tillage
  - ▶ Machinery, labor force
  - ▶ Intensity of input usage
- ▶ Difference between typical and average Ukrainian farms

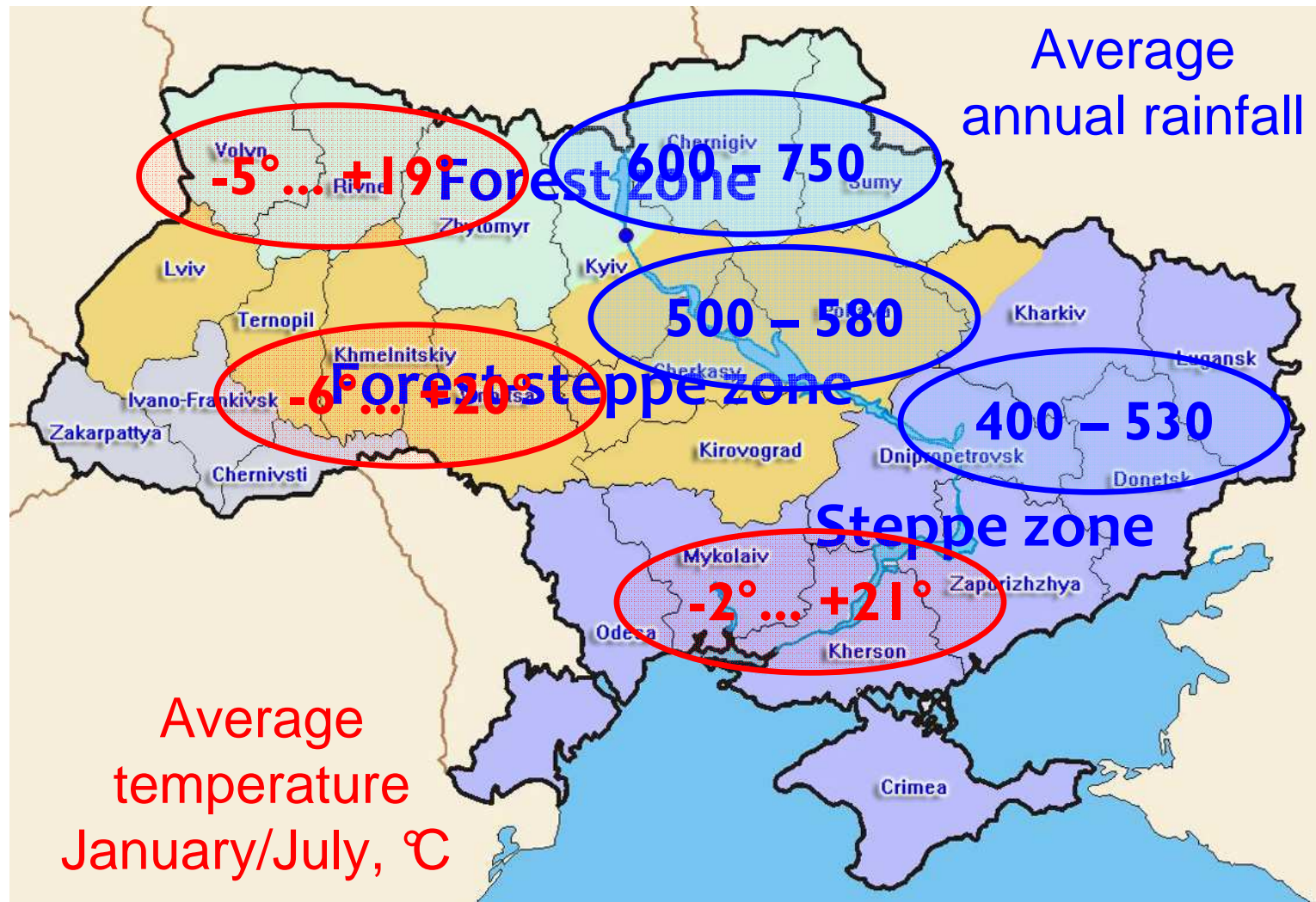


# Ukraine on the map of Europe



Source: FAOSTAT, 2007; SSCU, 2009

# Agro climatic zones

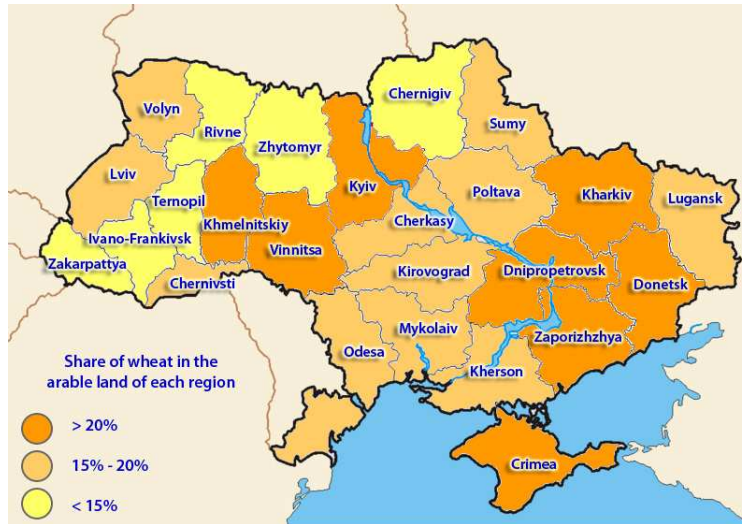


Source: Hydro Meteorology Center of Ukraine, 2008



# Crops distribution

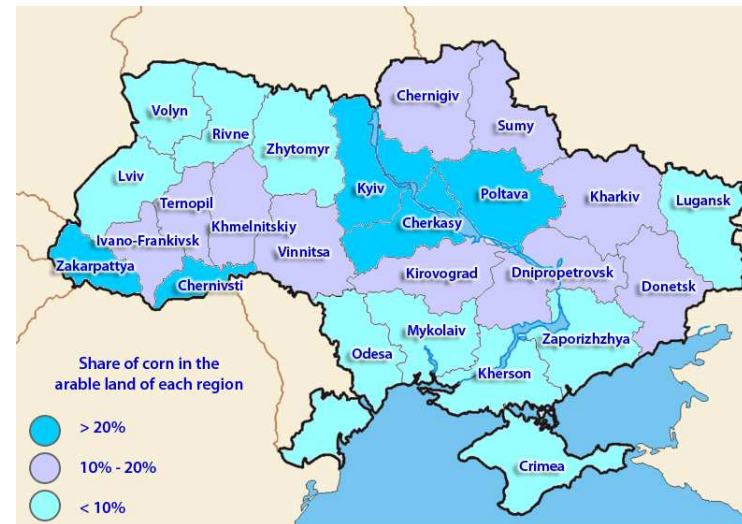
w. wheat



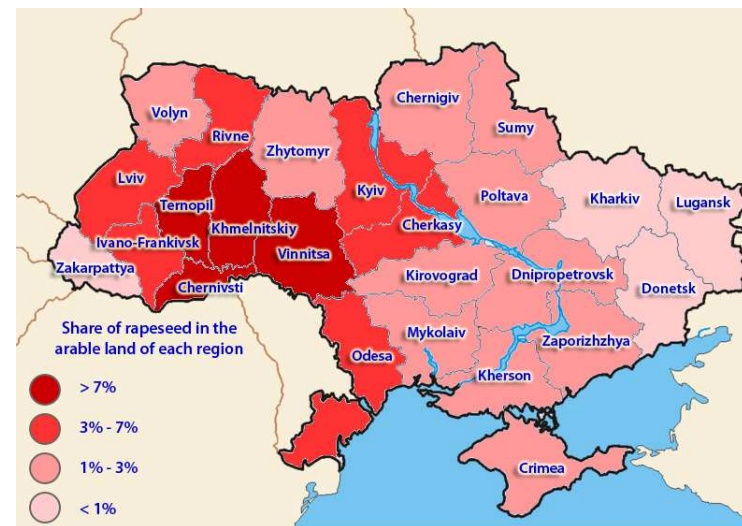
barley



corn



rapeseed



Source: State Statistics Committee of Ukraine, 2009

# Location of *agri benchmark* farms



# Typical farms: size

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## UA2500ZH\*

- ▶ Before 2006 it was post-kolkhoz independent farm
- ▶ In 2006 farm was merged by Agro holding with total 12000 of land
- ▶ In 2010 UA2500ZH expanded to **3100 ha** by taking over another 600 ha

## UA6700PO\*

- ▶ Large farm unit joined in one
- ▶ Lands have been collected from major lands of three former independent post-kolkhozes
- ▶ Farm belongs to a very large Agro holding



# Typical farms: structure

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UA2500ZH\*

- ▶ Mixed production: cash crop, milk and swine production
- ▶ 2/3 of land allocated for cash crop production, the rest is for fodder crops
- ▶ Farm has its own drying and storage facilities

UA6700PO\*

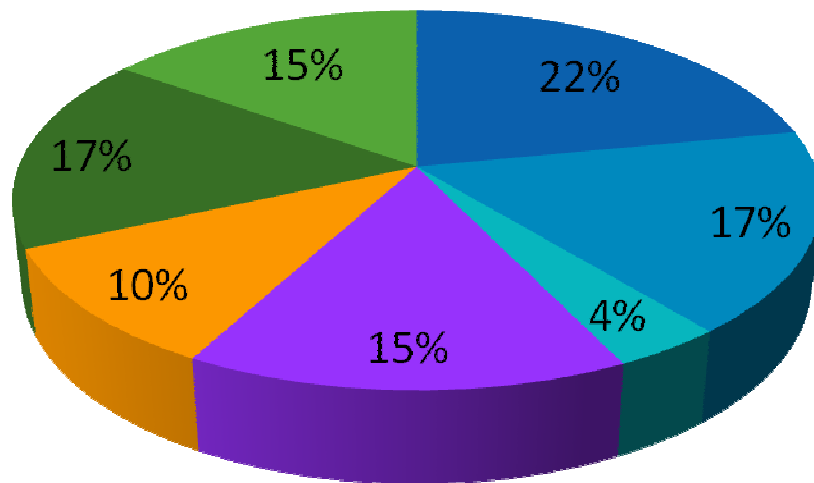
- ▶ 100% cash crop farm
- ▶ 2/3 of all land is under grains, the rest is under oil crops
- ▶ Farm has own drying and storage facilities





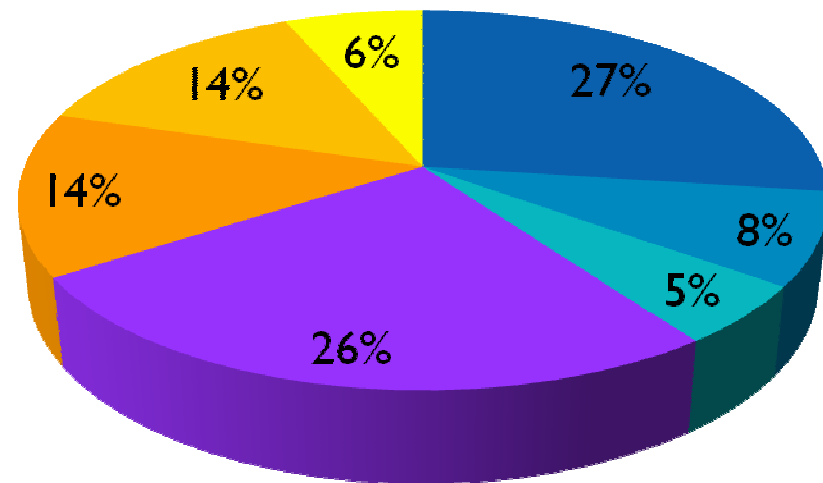
# Typical farms: structure of crops

UA2500ZH\*



- w. wheat      ■ s. barley
- s. wheat      ■ corn
- w. rapeseed   ■ fodder grass
- corn silage

UA6700PO\*



- w. wheat      ■ s. barley
- w. barley      ■ corn
- w. rapeseed   ■ soybeans
- sunflower



# Typical farms: rotation and tillage

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## UA2500ZH\*

- ▶ Rotation is not fixed yet, because of continuing changes area, number of fields and crops
- ▶ Mostly low-till cultivation but part of land is ploughed
- ▶ Intensive high input production oriented for high yields

## UA6700PO\*

- ▶ Rotation of 7 crops, stable for few last years
- ▶ Mostly low tillage cultivation, don't use no-till technology
- ▶ Intensive high input production oriented for high yields



# Typical farms: machinery and labor

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## UA2500ZH\*

- ▶ Modern high productive machinery is used
- ▶ Two 280 h.p. Claas, four 90-100 h.p. and four 150 h.p. “soviet” tractors used
- ▶ Two 280 h.p. Claas and four 100-200 h.p. older combines in use
- ▶ Own fleet of 10 t. trucks
- ▶ Number of employees is 143 including 57 of non-CC ent.

## UA6700PO\*

- ▶ New modern equipment
- ▶ 500 and 280 h.p. Challengers and eight 80-100 h.p. locally made tractors
- ▶ Four 280 h.p. Claas combines
- ▶ In the harvest time 2-4 combines are contracted
- ▶ Eight 10-12 t. trucks are leased
- ▶ Number of employees is 102 of which 60 are seasonal



# Typical farms: machinery

UA2500ZH\*



UA6700PO\*





# Typical farms: intensity of production

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## UA2500ZH\*

- ▶ High intensity to achieve high yields
- ▶ N application 130 kg for wheat, 170 kg for rapeseed, 150 for corn and 70 for barley
- ▶ P&K by 70 kg for rapeseed, and 40-90 kg for rest crops
- ▶ Plant protection cost varies from 30 to 50 USD/ha

## UA6700PO\*

- ▶ High intensity to achieve high yields
- ▶ N application ~100 kg for wheat, 140 kg for rapeseed, 50 kg for barley
- ▶ P&K by 20-30 kg for wheat and rapeseed
- ▶ Plant protection cost is 20-30 USD/ha



# Average Ukrainian farm

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- ▶ Acreage about 2000-2100 ha
- ▶ Mixed production with 2/3 of cash crop income and 1/3 income from livestock
- ▶ Main crops are the w. wheat, s. burley, corn, rapeseed or sunflower, silage corn, other minor crops and 15% of hay or pasture
- ▶ Mostly reduced and conventional tillage
- ▶ No fixed rotation
- ▶ Financial shortage
- ▶ Low fertilizer application (N–38 kg, P–11 kg, K–7 kg)



# Average Ukrainian farm

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- ▶ Limited plant protection application
- ▶ 4/5 of all machinery is 15-20 years old, 1/5 is a modern equipment
- ▶ All labor is hired, middle level educated, low share of employees can use modern machinery properly (but share increases)
- ▶ Large number of employees, up to 50% of them are seasonal workers



# Average Ukrainian farm: yields (2005-2009)

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<b>Winter wheat</b>	<b>2,9 t.</b>
<b>Summer wheat</b>	<b>2,3 t.</b>
<b>Winter barley</b>	<b>2,5 t.</b>
<b>Summer barley</b>	<b>2,2 t.</b>
<b>Corn</b>	<b>4,3 t.</b>
<b>Rye</b>	<b>1,9 t.</b>
<b>Rapeseed</b>	<b>1,9 t.</b>
<b>Sunflower</b>	<b>1,5 t.</b>
<b>Soybeans</b>	<b>1,7 t.</b>





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**Thank you for your attention!**

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