EU Agricultural and Farm Economics Briefs No 11 |July 2016

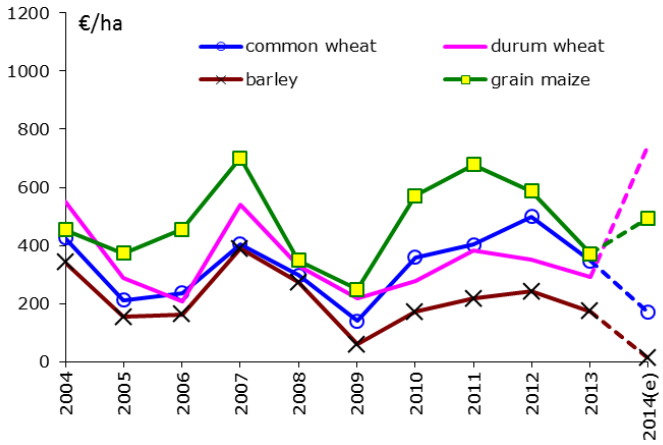
FARM ECONOMY OVERVIEW: CEREALS SECTOR

Information based on FADN data up to 2013

This brief provides **an overview of the production costs, margins and incomes of EU farms specialised in cereal production** based on the latest available data (to 2013) from the Farm Accountancy Data Network (FADN). Trends from 2004 to 2013 are provided for EU common wheat, durum wheat, grain maize and barley producers. This work summarises a report presenting more detailed information, including tables at Member State level.

EU cereal producers' **margins** shrank by a third in 2013 as compared to the previous year and a further decline of around 20% is expected for 2014. In fact, in view of the expected rise in production, most cereal prices fell by a third between the end of 2012 and 2013; the exceptions were durum wheat and maize, for which prices fell more slowly. Cereal yields improved slightly, but in line with previous years, while input **costs** increased by 5% from 2012 to 2013, mainly due to higher prices for fertilisers, seeds and fuel/energy, resulting in narrower margins for all crops. The indicators for farm **income** and family income show a loss in profitability in 2013.

CHART 1: CEREAL GROSS MARGINS - EU-ALL[1] (AVG)



Costs of production still increasing

For all four cereal crops, operating costs of production[2] increased by almost 60% over the period of 2004-2013. Chart 2 shows average operating costs per hectare for the EU, whereas Chart 3 describes operating costs by Member States referred to 2013. From 2012 to 2013 operating costs kept growing on average by 3%. For common wheat, specific costs increased by 4% in one year, whereas a moderate decrease is expected for 2014. The main cost items contributing to the rising trend were seeds (+5%) and fertilisers (+3%). As regards durum wheat, the most appropriate data refers to the main producers. Spain had the lowest operating costs in 2013, made up mainly of fuel/lubricant (+90%) and crop protection costs (+30%), while there was a significant decrease for machines and building upkeep and for energy. Operating costs in Greece rose by 6%, driven primarily by fuels/lubricants (+30%), while in Italy were rather stable with the highest growth by 6% for seed, compensating the reduction in the other items. French producers had the highest costs, mainly due to surges in contract work (+30%), crop protection and seeds (for both +20%). Barley, as compared to other crops, had the lowest level of costs, the most important items affecting overall costs were crop protection (+20%) and seeds (+9%). Operating costs for producing grain maize grew by 3% in a year, mainly due to seeds (+6%) and crop protection (+5%).

The allocation of costs to cereal enterprises

In the FADN, costs are collected for the farm as a whole, not by 'enterprise'. In order to estimate cereals production costs and margins, part of the farm costs has to be allocated to the cereal enterprise. For this purpose, the EU FADN unit has created various models whereby farm costs are allocated according to different ratios for different crops.

[1] The 'EU-all' aggregate refers to the EU-25 until 2006, to the EU-27 from 2007 until 2012 and to EU-28 from 2013 onwards.

[2] Operating costs include seeds, fertilisers, crop protection, water, other specific costs, motor fuels and lubricants, machines and buildings upkeep, energy, contract work and other costs. They do not include depreciation, wages, rent and interests paid, nor opportunity costs for family labour and assets.

CHART 2: OPERATING COSTS OF PRODUCTION, EU-ALL, €/HA

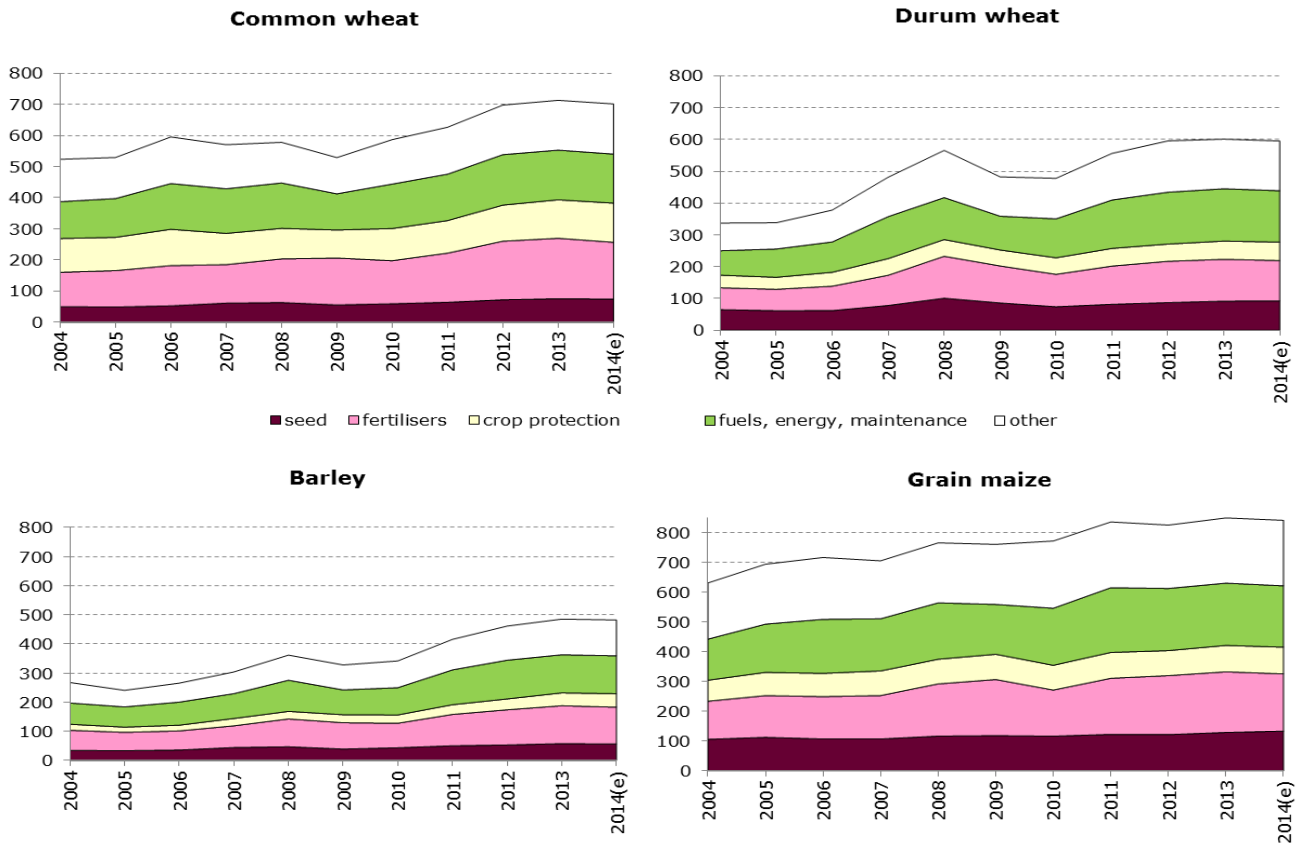
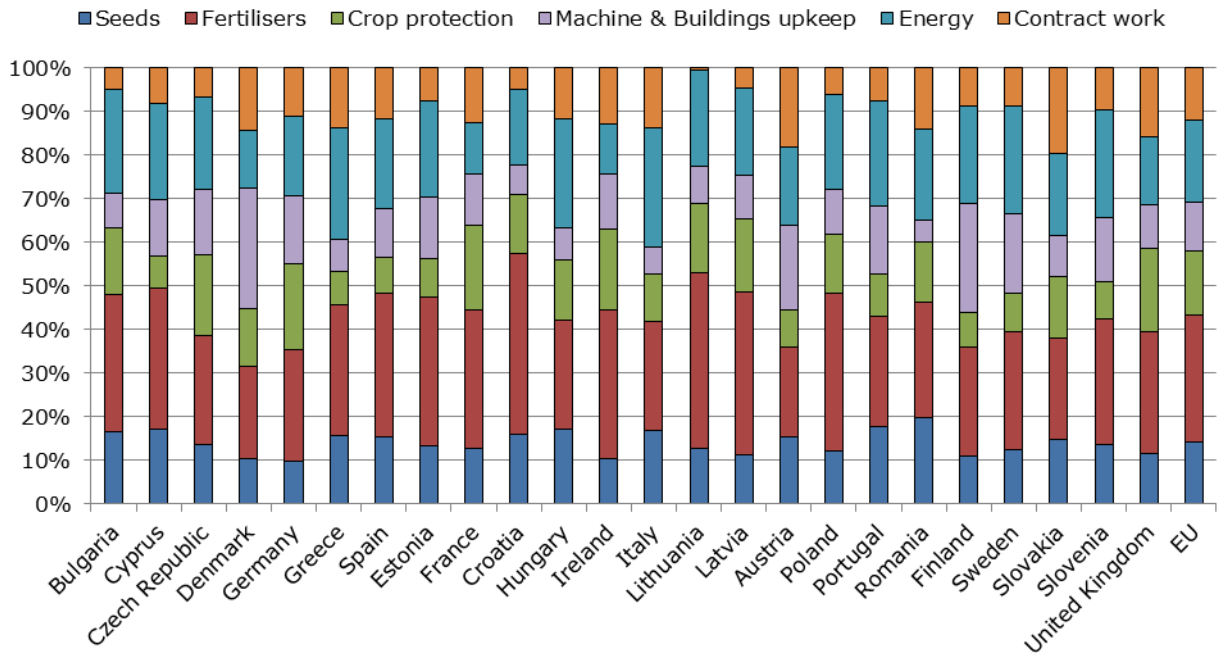
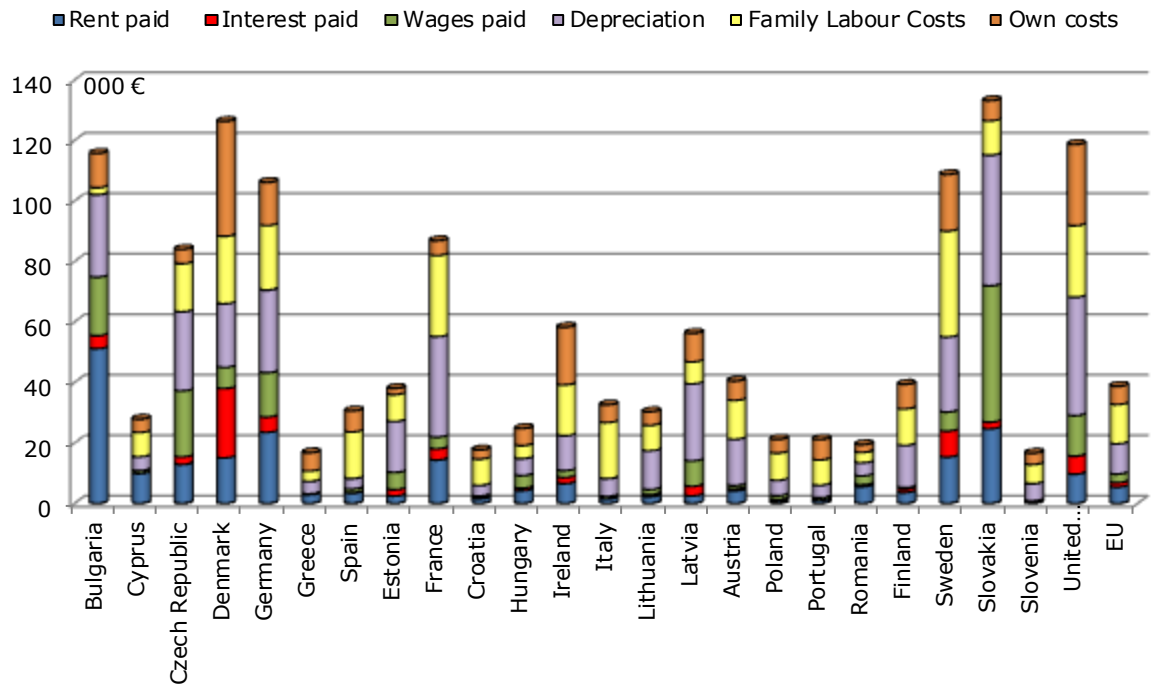


CHART 3: CEREAL FARMS OPERATING COSTS BY MS, 2013



As regards other cost items, Chart 4 provides an overview of costs faced by cereal farms in 2013 by Member States, for which usually the amount of expenses is linked to their economic size. At EU level, in the 2004-2013 period, depreciation costs grew by almost 40% and total external factors (wages, rents, interest payments) by almost 45%. From 2012 to 2013 depreciation rose by 11% and total external factors costs (wages, rent, interest) were 2% higher than the previous year.

CHART 4: CEREAL FARMS EXTERNAL FACTORS AND OTHER COSTS BY MS, 2013



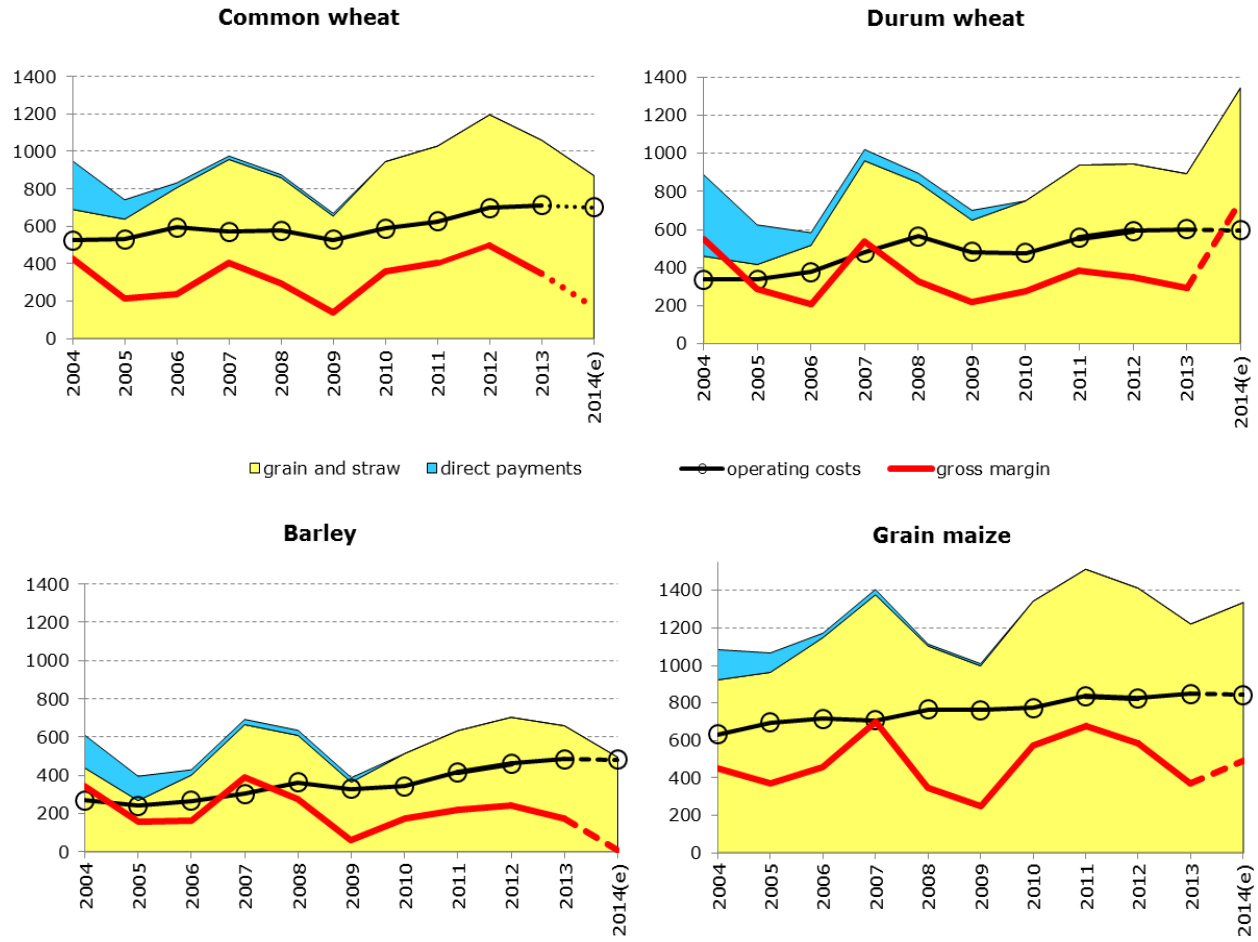
A fall for margins in 2013 for all the four crops

Chart 5 shows 2004-2012 trends in **gross margin** components in index form (2004=100): output for grain and straw and direct coupled payments on the one hand, and operating costs on the other.

Margins between receipts and operating costs (i.e. gross margins) for **common wheat** production at EU level were rather unstable over the 2004-2014, starting from €450/ha in 2004 and falling to less than €200/ha as expected in 2014, clearly showing the impact of price changes and the removal of coupled direct payments. As compared to 2012, margins went down by 30% in 2013. **Durum wheat** farms showed a slighter decrease (-20%), although across the main producers there were relevant differences, from a positive performance (more than doubling the value) in Greece to decrease on average for France. For 2014, a positive performance is expected. In 2013, margins related to **barley** production dropped by 30% as compared with the previous year, with higher yields but lower prices and a slight increase in costs. A drastic decline is expected for 2014. For grain maize farms the reduction was nearly 40% in 2013 as compared to the previous year. Estimates for 2014 suggest a further general improvement of margins, propped up by increased yields and a slight decrease in costs compensating the price drops.

EU gross margins for cereal farms on average faced a 33% decline, with a similar development across the "old" and the "new" Member States, except for an expectation that they will be more stable for the former in 2014 and continue to narrow in the latter.

CHART 5: COMPONENTS OF GROSS MARGIN WITH COUPLED PAYMENTS, EU-ALL, €/HA



Cereal farms face a decrease in income in 2013

The lines in Chart 6 illustrate trends in farm net value added per annual work unit (FNVA/AWU) in farms specialised in cereals production[3] and remuneration of family labour per family work unit (RFL/FWU). The columns show total direct payments and subsidies, own capital costs, output and inputs.

From 2012 to 2013, EU-28 cereal farms' total output decreased by 10% on average. In addition, input costs rose by 5% and own capital costs had a sharp increase that subsidies do not compensate, despite their slight increase (+5%) and their still important role. Operating costs kept growing by 3% from 2012 to 2013, depreciation rose by 11% in the same period and total external factors costs (wages, rent, interest) were 2% higher than the previous year.

From 2007 onwards, output was sufficient to cover intermediate consumption, as well as depreciation and external costs, and economic performance improved significantly to 2012. 2013 marked a setback, with inputs being slightly over the output.

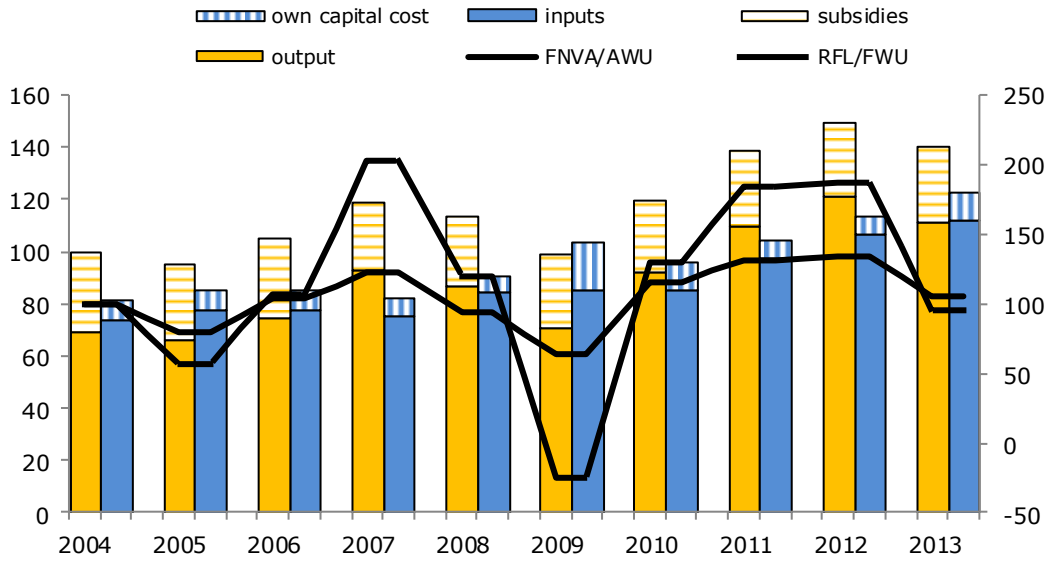
The indicators for EU cereal farms income provide a negative performance for 2013. FNVA/AWU ratio decreased by 20% from 2012 to 2013, to €21 000/AWU, after two or three years of good results. EU-15 farms suffered greater losses (25%), while those in the 'new' Member States were between 10% and 15%. EU cereal farmers' families lost half of their income, as measured by RFL/FLW, (to compensate family labour ad remunerate entrepreneurial risks) as compared with 2012 and 2011.

[3] Farms specialised in cereals production have 66% or more of farm output from cereals. In FADN 2013, 9 170 sample farms fulfilled this criterion, representing 425 000 cereal farms throughout the EU (see the *EU Cereal farms report based on 2013 FADN data* for more explanation).

Farm net value added per annual work unit (FNVA/AWU) is an indicator of income calculated as the sum of total production value plus current subsidies minus intermediate consumption and depreciation. It represents the amount available to remunerate all fixed production factors (work, land, capital), be they owned by the farm or external.

Remuneration of family labour per family work unit (RFL/FWU) is an indicator of family income obtained by subtracting own capital costs from farm net income (FNI). FNI is calculated by subtracting external factors (wages, rent, interests) from the FNVA and adding the balance of subsidies and taxes on investments.

CHART 6: INCOME AND SELECTED DRIVERS (2004=100) FOR CEREAL FARMS, EU-ALL



Conclusion

Following a recovery that started in 2010, which led to improved gross margins until 2012 (thanks also to rising grain prices), 2013 marked a reversal in the positive trend in cereal farms' economic performance, with declining figures probably continuing into 2014. It seems that less favourable market conditions affected cereal farms' economic results. The income indicators for 2013 highlighted declining results as compared to 2012 both in terms of remuneration of fixed factors of production and family income. Across the Member States, EU-15 farmers lost more as compared to those in the "new" Member States, although they still had a higher level of income. In 2013 margins decreased for all the four crops, by between 20% and 40%.

Looking for more information (including at Member State level) on production costs, margins and incomes of EU farms specialised in cereal production? Check the FADN website for the *EU Cereal farms report based on 2013 FADN data*.

THE FADN

The Farm Accountancy Data Network (FADN) is a European system of sample surveys that take place each year and collect farm-related structural and accountancy data (see: http://ec.europa.eu/agriculture/rica). Its main role is to support the common agricultural policy (CAP) by determining the income of European agricultural holdings and providing farm-level analyses based on harmonised micro-economic data collected annually from around 80 000 farms. The statistics presented here are produced by the European Commission from the FADN survey. The variables represent average values at the level of the holding.

Contact: DG Agriculture and Rural Development, Unit Economic Analysis of EU Agriculture
Tel: +32-2-29 91111 / E-mail: Agri-E3@ec.europa.eu