



EU agricultural and farm economics briefs

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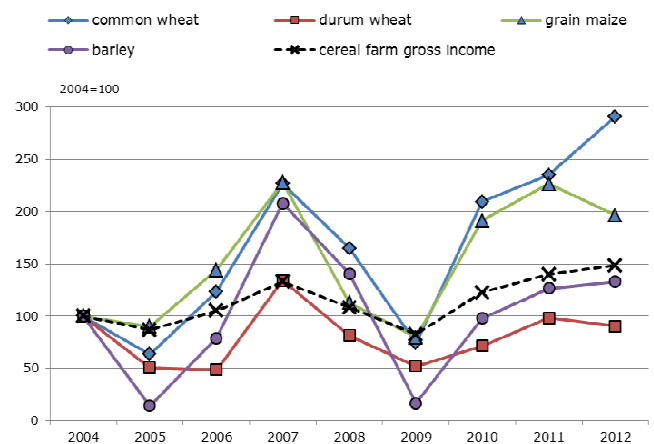
FARM ECONOMY PREVIEW: CEREALS SECTOR

Information based on FADN data 2012

This brief provides a **first overview of the production costs, margins and incomes of EU farms specialised in cereal production** based on the latest available data (to 2012) from the Farm Accountancy Data Network (FADN). Trends from 2004 to 2012 are provided for EU common wheat, durum wheat, grain maize and barley producers. This preliminary work will be followed by a detailed report, including tables at Member-State level and a projection of margins to 2014.

Gross margins in 2012 improved, as compared with the previous year, for farms specialising in common wheat and barley, while durum wheat and grain maize farmers experienced a decrease. While there were variations, margins for common wheat and maize in 2004-2012 grew two- to three-fold, while those for the other cereals are more in line with past values. **Operating costs** increased for all types of farm over the period, total subsidies slightly reduced, but cereal farms' **income** rose significantly thanks to rising grain prices.

CHART 1: CEREAL GROSS MARGINS WITHOUT COUPLED PAYMENTS, EU-ALL¹



Operating costs of production: an upward trend

For all four cereal crops, operating costs of production² increased over the period 2004-2012. Chart 2 shows average operating costs per hectare as an index (2004=100). In 2012, these were 80 % higher than in 2004 for durum wheat and barley, while for grain maize and common wheat they had grown by 31 % and 33 % respectively.

For durum wheat, the rise ranges from 34 % for seeds to 112 % for fuels, maintenance and energy; for barley, it ranges from 57 % for the former to 86 % for the latter. Energy costs show a marked growth to four to six times the initial value, although they account for a limited proportion of total costs. Other costs that changed significantly are labour (contract works) for durum wheat (+66 %) and crop protection for barley (+85 %). For these crops, each component of operating costs shows a different dynamic from that affecting common wheat and grain maize, but while durum wheat and barley costs were significantly lower than those for the other crops in 2004, by 2012 the levels had converged. Fertiliser costs increase significantly for all crops over the decade, although their relative weight remains fairly constant (20-27 % of overall costs), except in the case of common wheat, for which it grows from 21 % to 27 %.

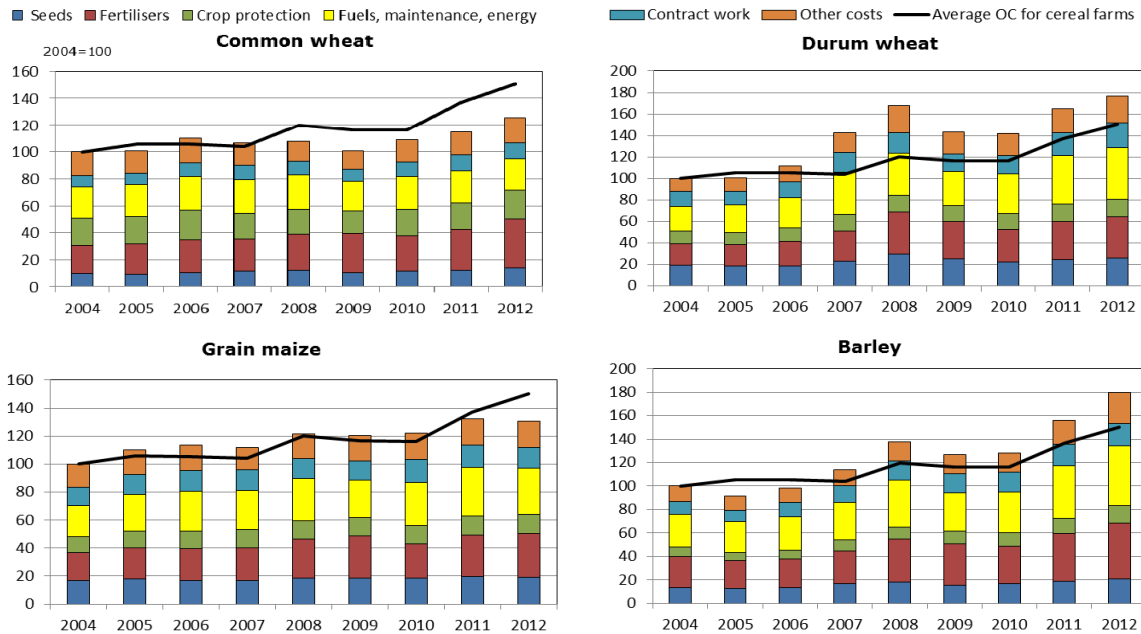
The allocation of costs to cereal enterprises

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 and to the EU-27 from 2007 onwards. Data for Croatia will be available in the FADN from the 2013 accounting year.

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



For the aggregated cost item of fuels, maintenance and energy, prices are more volatile over the period, *inter alia* due to the impact of oil price dynamics. However, for common wheat and barley it remains quite stable between 2004 and 2012 as a proportion of total costs (around 23 % and 28 % respectively), while for durum wheat and grain maize the proportion increases by 4-5 percentage points, to 27 % and 25 % respectively.

Better margins for common wheat and barley in 2012

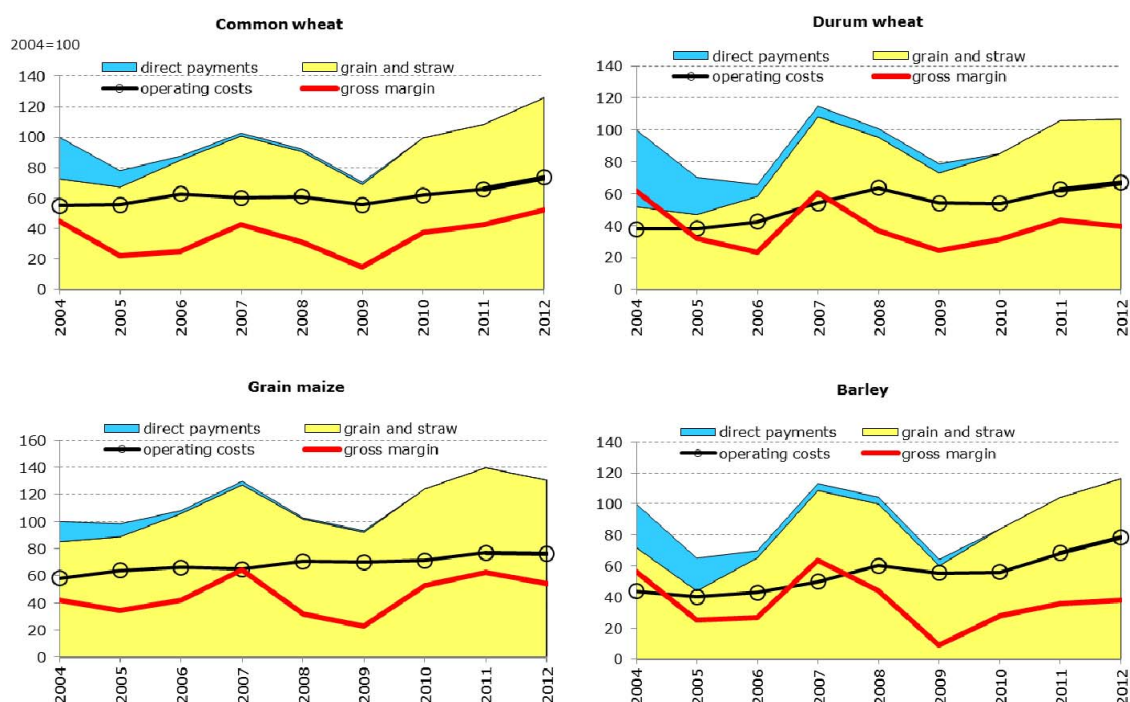
Chart 3 shows 2004-2012 trends in gross margin components in index form (2004=100), output for grain and straw and direct coupled payments on the one hand, and operating costs on the other. This allows us to gauge the extent to which revenues cover variable costs, and farmers' dependence on coupled payments. Over the period (see above), **operating costs** fluctuate somewhat for common wheat and grain maize, but for durum wheat and barley they almost double. After peaking in 2007 and then falling in 2009 (on the back of price volatility and variations in stocks), **revenues** from grain and straw rose again for all four crops, with durum wheat and grain maize regaining 2007 levels and common wheat and barley exceeding them. Common wheat **output** in 2012 is 106 % higher than in 2004, durum wheat output 73 % higher and barley and grain maize output up by between 50 % and 60 %.

Decoupling under successive reforms of the common agricultural policy led to the phasing-out of **coupled direct payments** and the four cereals no longer benefited from these from 2010 onwards.

Trends in **gross margins** vary according to crop: there are losses for durum wheat (-36 %) and barley (-33 %) as compared with 2004, but increases for common wheat (+17 %) and grain maize (+30 %). In particular, analysis of margins in 2010-2012 (no coupled support) highlights the first steps in an adjustment process: for common wheat, the increase accelerates as output grows more than costs and the trend for barley is also positive. For grain maize and durum wheat, on the other hand, margins expand in 2011 but then take a downward turn. Nevertheless, absolute margins are positive over the period for all cereal crops, with revenues sufficient to cover operating costs.

In 2012, the gross margin for **common wheat** improves significantly (+24 %) as compared with the previous year to around €500/ha, as the increase in output (+16 %), driven mainly by prices, exceeds the rise in costs (+11 %).

CHART 3: COMPONENTS OF GROSS MARGIN WITH COUPLED PAYMENTS - EU-ALL



For **barley**, margins grow by 5 % in 2012 to €230/ha, with revenues growing by 12 % on the back of higher prices, and operating costs rising by 15 %. By contrast, the margin for **durum wheat** drops to €350/ha in a negative (-8 %) trend as a result of operating costs rising more than revenues (+7 % as against +0.9 %). **Grain maize** shows slightly lower costs (-1 %), but output falls significantly (-7 %) due to losses in yield offsetting price growth; the margin is 13 % below the 2011 level, but still a solid €590/ha.

Increase in incomes and the decreasing role of direct payments

The lines in Chart 4 illustrate trends in 'farm net value added per annual work unit' (FNVA/AWU) in farms specialised in cereals production³ 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 2004 to 2012, EU-27 cereal farms' total output increases by 74 % on average. Nevertheless, the trend is not consistently positive: in 2008-2009, output drops as a function of world cereal price developments, production and stock fluctuations, etc. As a result of decoupling, total subsidies fall by 8 % over the whole period and the ratio of subsidies to output drops from 43 % in 2004 to 23 % in 2012.

Operating costs rise by between 30 % and 80 % depending on the type of crop. The increase for specialised cereal farms is around 50 % for total intermediate consumption (for which account is taken of specific costs and farming overheads) and 44 % for total inputs. Depreciation costs grow by 25 % and total external factors (wages, rents, interest payments) by 40 %, with rents increasing more than wages (+50 % and +46 % respectively).

Output is sufficient to cover intermediate consumption, depreciation and external costs (except in years affected by unusual dynamics) and economic performance improves significantly from 2010. FNVA increases over the period (+57 %) to €32 000 per farm. FNVA/AWU also grows (+34 %), to reach €27 000 in 2012. This is partly thanks to the small workforce in the cereals sector, which remains stable throughout the period at an average of 1 AWU per farm.

³ Farms specialised in cereals production have 66 % or more of farm output from cereals. In FADN 2012, 6 955 sample farms fulfilled this criterion, representing 350 000 cereal farms throughout the EU (see the *EU cereal farms report* for more explanation).

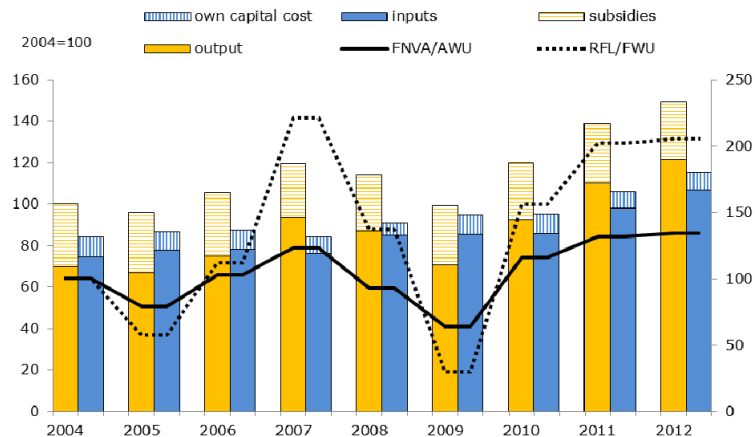
Farm net value added per annual work unit (FNVA/AWU)

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 4: INCOME AND SELECTED DRIVERS — SPECIALISED CEREAL FARMS, EU-ALL



RFL increases by 114 % between 2004 and 2012 to a final value of €18 100 per farm. This stems from FNVA rising more than external costs and own capital costs falling over the period (-14 %).

The RFL/FWU trend follows a striking dynamic, reaching more than twice the 2004 value in 2007, falling to less than a third of the initial value in 2009 and ending in 2012 with a 205 % increase as compared with 2004. The similar FNVA/AWU trend is influenced by the fact that the family workforce is even smaller than the farm workforce and remains stable over the period.

Conclusion

Despite increasing costs for all type of crops, EU-27 specialised cereal farms enjoyed positive income development in 2004-2012, except for short periods. Income indicators (FNVA/AWU, RFL/FWU) show that especially from 2010 onwards, even taking account of an overall reduction in subsidies of around 8 %, the economic performance improves. EU subsidies still represent a significant proportion (around 20 %) of total revenues. Remuneration of family labour seems to be more exposed to fluctuation over time, but still shows a better economic performance than farm income and returns in 2012 to the high levels of 2007. There are some differences among crops, highlighting which are the weaker: in 2012, gross margins improve for common wheat and grain maize, but decrease for durum wheat and barley.

Looking for more information (including at Member-State level) and more recent trends in costs of production and margins? Check the FADN website for the upcoming *EU cereal farms report*.

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.

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