

# Evaluation of CAP measures applied to the Cereals Sector

## Introduction

Cereal-specific measures have remained at the heart of the Common Agricultural Policy (CAP), reflecting the status of cereals as the most widely grown arable crop in the EU. The regional diversity of agricultural land and crops across Europe is a consequence of the varied climatic and soil conditions and it is this diversity which has given rise to a complex range of measures.

## Key policy developments reviewed

The Common Market Organisation (CMO) for cereals, regulated under the CAP, provided the legal framework for measures that applied from 1967 to 2007. The reforms under the 'Agenda 2000' reform package set the framework until 2003/2004.

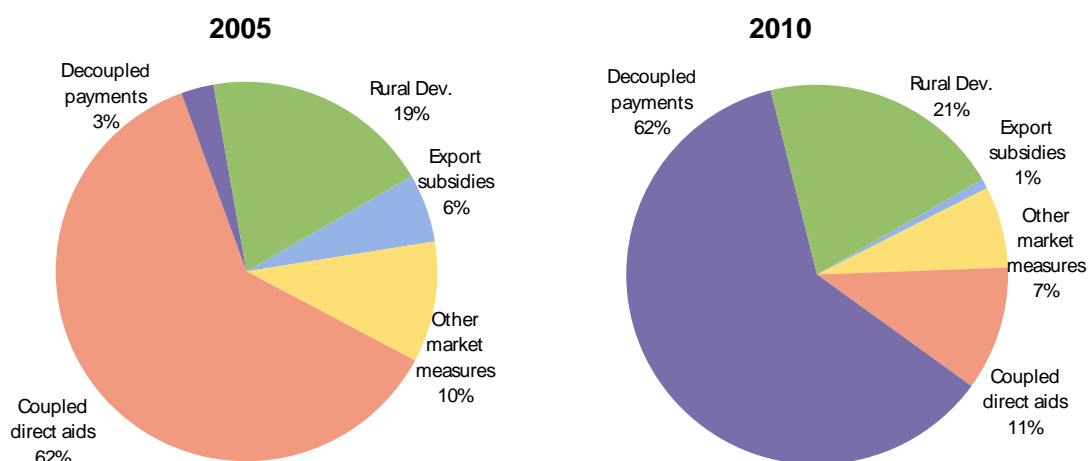
Before 2003, cereal measures consisted mainly of 'coupled' crop-specific payments, a supply control obligation known as 'set-aside', production refunds for starch processors, market support through intervention stocks and measures governing trade. Agenda 2000 sought to bring about a greater degree of market orientation but it was the 2003 Mid-Term Review (MTR) that radically reshaped the CAP and cereal policy.

The most recent adjustments to the way these measures operate was under the CAP 'Health Check' of 2008.



Under the MTR, most direct farm payments were 'decoupled' (i.e. no longer tied to the type or level of production). In addition, 'cross compliance' and 'modulation' reinforced the trend away from traditional market support that had characterised the CAP for many years, towards sustainable farming practices. Diagram 1 reveals that by 2010, over two-thirds of expenditure had shifted away from the old style of market management towards decoupling and the CAP's Rural Development Pillar II, symbolising the 'greening' of the CAP.

Diagram 1: CAP expenditure in 2005 and 2010



Source: European Commission - DG Agriculture and Rural Development.

## Current measures applicable in the cereals sector

The main components of the existing policy framework applicable to the cereals sector, agreed by the Health Check comprise:

- Internal market support with a public intervention system acting as a safety net.
- Border measures governing external trade (imports and exports).
- Direct payments, the Single Payment Scheme (SPS) providing income support. Although this is paid regardless of sector, the SPS is an important element of cereal producers' incomes. In addition 'Article 68' measures by individual MS provide a further means of support for cereals, both directly or indirectly through the livestock sector.

## Introduction to the Evaluation

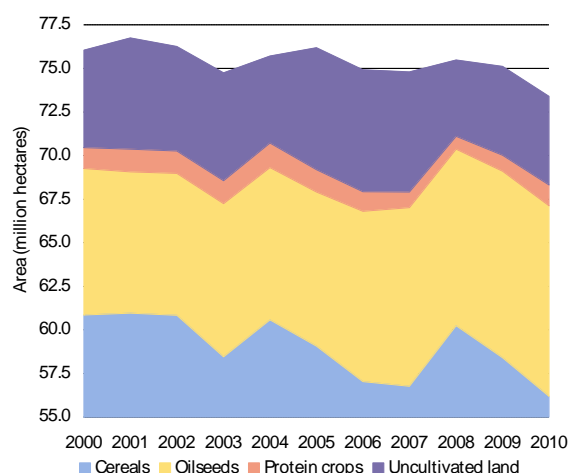
This evaluation examines the impact of measures applied, under the CAP, to the cereals sector from 1 January 2005. The crops examined are common wheat, durum wheat, barley, maize, rye, oats and triticale and policy impact is assessed for the EU-27 as a whole, complemented with analysis from case-study Member States (MS). Comparisons are made between the situation in 2000-2003 ('pre-reform'), 2004-2006 ('transition') and 2007-2010 ('post-reform').

### 1.3 Overview of developments in the cereals sector

Between the pre- and post-reform periods, Diagram 2 reveals that EU-27 cereal areas fell from 60.4 to 58.0 million hectares, but the major change in cereal, oilseeds and protein (COP) areas was a sharp expansion in the oilseeds area (comprising rapeseed, linseed and sunflowerseed primarily).

- Cereals occupy the largest share of the total arable area in the EU and, since 2000/01, there has been a steady decline.
- Oilseeds grew impressively led by a rapid expansion in rapeseed.
- Protein crops (dry pulses, field peas and field beans) declined and continued to occupy less than 2% of the COP area displaying little change from ten years earlier.
- Uncultivated land (comprising fallow and set-aside land) initially rose and then fell back with the application of zero rates of set-aside.

**Diagram 2: EU-27 cereal, oilseed and protein crops and uncultivated areas**



**Table 1: EU-27 areas under cereals and other crops, 2000-2010 (million hectares)**

	2000-2003	2004-2006	2007-2010
Cereals	60.4	59.0	58.0
Oilseeds	8.3	9.1	10.5
Protein crops	1.7	1.9	1.3
COP area	62.1	60.9	59.3
Sugarbeet	2.0	2.0	1.6
Uncultivated land <sup>1</sup>	6.1	6.3	5.4
Utilised agricultural area	188.3	184.2	179.4

Source: DG Agri, *Prospects for Agricultural Markets (March 2012)*. Includes set-aside land in the uncultivated total.

In terms of the individual crops, common wheat was the only cereal to expand its share of the cereals area, rising from 37% to 40% over the decade. Barley's share remained steady at 23%, but that under maize fell slightly from 16% to 14%. The share of durum wheat fell from 5% to 4%, while that under rye and 'other cereals' remained stable at 5% and 14% respectively.

Cereal output rose by 5%, but its rate of increase was dwarfed by that of oilseeds, up 46% in the same period. Yields for all five main cereal crops increased, with maize and common wheat consistently recording the highest yields.

In terms of self-sufficiency, common wheat, barley and oats all produced surpluses throughout. Durum wheat was the only cereal with a consistent deficit.

### End-use developments

Biofuel added nearly 7 million tonnes to cereal demand over the period. Without this growth, EU-27 cereal consumption in 2007-2010 would have grown by less two million tonnes above the 2000-2003 level. In feed, the largest end-use for cereals, the cereal share of industrial feed output rose, from 43.1% to 47.5%.

Milling for human consumption, the second largest end-use, experienced relatively stable demand. In industrial use, the starch sector witnessed expansions in processing capacity in Western, Central and Eastern Europe, mainly the latter two regions.

### Main conclusions on the impacts of reform

#### *Impacts on the production of cereals*

One outcome of the reforms was that it gave greater producers greater freedom in their production decisions. The net effect was an increase in the cereals share of the EU-27 utilised agricultural area (UAA) from 31.5% to 32.3%, pre- to post-reform, led by growth in the EU-12.

- Common wheat significantly expanded its share of the cereals area.
- The decline in coupled aids for durum wheat led to a sharp drop in its share.
- EU-15 MS that provided higher coupled payments for maize pre-reform cut maize plantings after decoupling; those that did not, actually increased their areas.
- Average EU-27 cereal yields were the highest among the leading producers of common wheat and barley, but were close to the world average for maize. The volatility of EU yields was generally below that of most other major producers.

- A growing number of producers, encouraged by the appeal of oilseeds, are pushing their crop rotations to the limits. This will eventually have adverse implications in terms of pest and disease cycles as well as soil quality/fertility.
- There were clear changes observed in the production practices in response to CAP reforms. Cross compliance was unexpectedly encouraging some producers to operate 'zero-grazing' methods or opt for more collaborative farming.
- Analysis of the relationship between gross margins and areas estimated that a 1% increase in average gross margins on all COP crops raised total COP areas by 0.4%. Simulations of the removal of income support to producers indicated that areas of individual cereals would have fallen sharply without these aids in 2007-2010: a 7.3% fall for durum wheat; a 3.3% drop for barley; and falls of 2.3-2.5% for common wheat, maize and rye.

### ***Impacts on the supply to the EU processing industry***



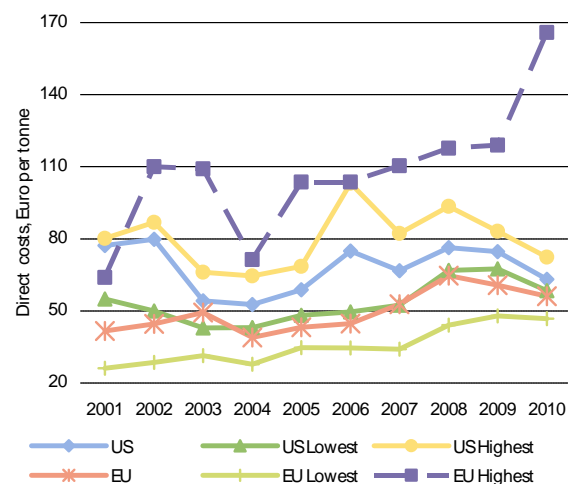
- In most years, the EU malting barley sector, which produces malt for brewing and distilling uses, maintained steady malt exports of 4-5 million tonnes.
- Common wheat use in flour milling, for breads and baked goods, increased. Interviews revealed few concerns over supplies. Moreover, access to imports, particularly of high protein supplies were meeting users' needs.
- Durum wheat was the one sector with a growing reliance on imports whose share of supply rose from 13.7% to 17.4%.
- In the feed sector, the balance between domestic cereals, imported 'cereal substitutes' (such as tapioca) changed significantly. Cereals increased their share at the expense of a 70% drop in imports of cereal substitutes.

### Competitiveness of the cereals sector

Direct production costs were compared for the three major cereals against Ukraine, Russia and different regions of the US. The EU was cost-competitive versus the US in common wheat and barley. In maize, the US was always more cost-competitive. This is presented in Diagram 2.

Average costs of common wheat in Russia were significantly below those in the EU, while those in Ukraine were similar to the EU. Barley costs in both countries were below those in the EU. Ukraine's and Russia's maize costs were also competitive.

**Diagram 2: Direct production costs per tonne of common wheat, US vs EU**



Source: Derived from USDA ERS, G Brookes 'European Arable Crop Profit Margins' and LMC Black Sea Gross Margins data

- The EU's share of total world exports of wheat and flour rose from 5.2% to 7.7%, pre- to post-reform while it fell for other cereals, indicating that the reforms promoted the EU's comparative advantage in common wheat production.
- Both the price level and volatility of EU cereal prices increased, post-reform, indicating greater openness of the EU market.
- Farm holdings most heavily dependent upon cereals experienced an increase in producer incomes in real terms. The cause was external, namely higher world market prices, rather than the impact of CAP support.

### Administrative costs for cereal producers

Decoupling shifted the focus over the period from crop-specific area payments to the SPS.

- The interviews revealed that producers felt that there was an increase in the administrative burden. However, it seems that they were not differentiating between administration for the CAP as a whole or specifically for cereals.
- Cross compliance was one aspect that was cited as becoming more onerous. In addition, there were increased concerns over penalties for errors.

### Innovation in cereal production and use

- The barriers to GM varieties allowed the EU to develop exports of non-GM maize seed, with net trade rising from a deficit of 19,000 tonnes in 2000-2003, to a surplus of 48,000 tonnes in 2011.
- Changes in farming practices were more difficult to relate to specific CAP reforms. The questionnaires revealed that EU-15 producers tended to reduce their use of chemical inputs, while with EU-12 producers, it was the reverse.

- By far the most important development in novel uses of cereals has been the development of biofuel crops policy. It is evident that no other MS matches Germany's expansion in silage maize use for biogas, which now occupies 11% of the German UAA.
- Biopolymers are a growth area developing significantly later in the period. We estimate that by 2010, EU-27 capacity to process cereals into biopolymers was in the region of 175,000-200,000 tonnes of cereals per annum largely in bioplastics.

### ***Sustainability of the cereals sector***



- Decoupling had a generally neutral environmental impact, but it was found that producers were often pushing the frequencies of rapeseed plantings above the recommended rotations.
- Since the removal of set-aside, there was a 20% decline in the fallow area and some adverse impact on biodiversity from data on EU farmland bird populations.
- Agri-environmental payments, under Rural Development schemes, were providing a greater impact on sustainable practices on farms.

### ***1.4.7 Efficiency, coherence and relevance***

The reforms have introduced an increasingly liberalised approach to cereal production and have been relatively efficient, with the cost of coupled aids falling and the administrative burden to the public sector reduced. There were some deadweight effects and inefficiencies in policy measures, however the results were broadly coherent with CAP objectives of promoting the competitiveness of EU agricultural production, while also ensuring that supplies reach consumers at fair prices and help to promote downstream processing.

The retention of some safety nets should add value to the overall EU agricultural sector via market stabilisation and the maintenance of producer incomes; therefore it was unexpected to discover that price volatility was typically higher in internal cereal markets than external.

There are other also other conflicts with the objective to promote market orientation. In the bioenergy sector, the Renewable Energy Directive provides extra incentives. The

sharp increase in silage maize areas in Germany is a good example. In terms of sustainability, however, the reforms have added value. The environmental benefits of sustainable forms of production are, in a fully liberalised market, externalities, which are not captured by producers. Hence, a free market will lead to sub-optimal levels of sustainable agricultural activities. The application of cross compliance gave producers a clear incentive to adopt sustainable practices to a greater extent than would otherwise be the case.

## 1.5 Conclusions and Recommendations

- This evaluation uncovered some unforeseen outcomes. The most surprising is the increase in price volatility. The reasons for this are unclear, since price transmission from the world market to local prices and inside the EU appears to be good.
- A more predictable development is the evidence that, even though commodity prices have been relatively high in recent years, there are still MS in which producers, on average, would have earned very low incomes in the absence of support.
- Higher price volatility encouraged greater interest in price risk management, but so far only wheat futures have generated enough liquidity to handle large numbers of trades. This is an aspect in which a shifting of the responsibility for price insurance is to be encouraged, but it is unclear how policy could assist in this process.
- Within the COP sector, two of the most clear-cut examples of existing policy measures that are creating imbalances in the choice of crops are the continuing growth in oilseed areas, encouraging plantings at a greater frequency than is recommended in a rotation. Cross compliance has no specific guidelines regarding rotational practices. We would recommend, therefore, that on environmental grounds, the cross compliance requirements should include specific minimum rotational standards.
- The second example of a lack of coherence in current measures is the emergence of green silage maize as a major crop in Germany. It is recommended that such excessive incentives for sectors that would not grow without special aids should be discouraged.
- Individual MS' application of Article 69 and 68 measures to durum wheat was clearly intended to soften the blow of reforms, but in terms of the longer-term objective of creating a more market-based sector, we would recommend that a time limit is attached to the provision of these sector-specific aids.

