Commodity Market Development in Europe—Outlook Workshop 2014

Proceedings

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2014
Abstract
This report contains a summary and the presentations of the expert workshop "Commodity Market Development in Europe—Outlook", held in October 2014 in Brussels. The workshop was held in order to present and discuss the preliminary results of the DG AGRI outlook on EU agricultural market developments. The workshop gathered high-level policy makers, modelling and market experts and provided a forum to present and discuss recent and projected developments on the EU agricultural and commodity markets, to outline the reasons behind observed and prospective developments, and to draw conclusions on the short-/medium-term perspectives of European agricultural markets in the context of world market developments. Special focus was given to the discussion of the influence of different settings/assumptions (regarding, for example, drivers of demand and supply, macroeconomic uncertainties, etc.) on the projected market developments.
Commodity Market Development in Europe—Outlook Workshop 2014
Proceedings

Disclaimer:
The views expressed are those given and presented at the workshop and may not in any circumstances be regarded as stating an official position of the European Commission or of the other institutions that participated in the workshop.
Workshop background

This report contains a summary of the discussions and the presentations at the “Commodity Market Development in Europe—Outlook” workshop, jointly organised by the European Commission’s Joint Research Centre (JRC), Institute for Prospective and Technological Studies (IPTS) and the Directorate General for Agriculture and Rural Development (DG AGRI). The workshop took place in Brussels on 21–22 October 2014 and is part of the series of workshops on commodity market modelling and development, held annually since 2006.¹

The annual workshops are envisaged, as part of a validation procedure, to present and discuss the preliminary results of the Directorate General for Agriculture and Rural Development’s 10-year projections on EU agricultural market developments. The 2014 workshop gathered high-level policy makers, modelling and market experts from the EU, the US, New Zealand and international organisations such as the Food and Agriculture Organization of the United Nations (FAO), the Organisation for Economic Co-operation and Development (OECD) and the World Bank. It provided a forum to present and discuss recent and projected developments in the EU agricultural and commodity markets, to outline the reasons behind them and to draw conclusions on the short-/medium-term prospects for European agricultural markets in the global context. Special focus was given to discussion on the sensitivity of the projections to different settings/assumptions (regarding, among others, uncertainties concerning macroeconomic or climatic conditions, specific policies, different drivers of demand and supply, etc.).

Suggestions and comments made during the course of the workshop have been taken into account to improve the final version of the outlook. Hence, for reference to the Directorate General for Agriculture and Rural Development baseline projections, refer to the final report:

“Prospects for Agricultural Markets and Income in the EU 2014–2024”

¹ The proceedings of the respective workshops are listed below and can be downloaded from the JRC-IPTS website (http://ipts.jrc.ec.europa.eu/publications/):


Acknowledgments

We would like to acknowledge contributions made by all participants (a complete list is included in Annex 2) and their consent to share their knowledge and ideas, as well as the staff particularly involved in the organisational arrangements, in particular Alexandra Von Der Pahlen. We thank all contributing and participating colleagues from the European Commission, in particular Jacques Delincé, Robert M’Barek, Stefan Niemeyer and Szvetlana Acs, within the JRC, and Tassos Haniotis, Pierluigi Londero, Sophie Hélaine, Koen Dillen, Benjamin Van Doorslaer, Koen Mondelaerts, Livia Galita and Maciej Krzysztofowicz, in DG AGRI, as well as the following invited external experts, who were involved in the chairing of sessions or formal presentations or participated in the discussions:

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<td>Elisabeth Waelbroeck-Rocha</td>
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<td>Francis Reid</td>
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<td>Holger Matthey</td>
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<tr>
<td>Jean-Luc Mériaux</td>
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<td>Joan Bolet</td>
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<td>John Baffes</td>
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<td>Lindsay Jolly</td>
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<td>Mirko Wätjen</td>
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<td>Nan-Dirk Mulder</td>
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<td>Philippe Chotteau</td>
<td>Institut de l’Elevage (IDELE)</td>
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<tr>
<td>Richard Brown</td>
<td>Gira Consultancy &amp; Research</td>
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<td>Seth Meyer</td>
<td>US Department of Agriculture (USDA)</td>
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<td>Stefan Schreiber</td>
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**Date:** 21–22 October 2013  
Organisers: JRC-IPTS and DG AGRI

## Workshop agenda (Day 1)

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<th>Session 3: Milk and dairy markets: The white gold?</th>
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<td>Registration</td>
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<td>09:15–10:00</td>
<td>Policy background</td>
<td>Policy background</td>
<td>Sophie Hélaine, DG AGRI</td>
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<td>Scientific background</td>
<td>Tassos Haniotis, DG AGRI</td>
<td>Thomas Fellmann, JRC-IPTS</td>
<td>Richard Brown, Gira Consultancy &amp; Research</td>
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<td></td>
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<td>Jacques Delincé, JRC-IPTS</td>
<td>Mirko Wätjen, DMK Market Intelligence</td>
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<td>10:00–10:30</td>
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<td>10:30–12:20</td>
<td>Baseline macro assumptions</td>
<td>Baseline macro assumptions</td>
<td>Sophie Hélaine, DG AGRI</td>
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<td>Presentations</td>
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<td>Thomas Fellmann, JRC-IPTS</td>
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<td>Presentations</td>
<td>Mirko Wätjen, DMK Market Intelligence</td>
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<td>Open discussion</td>
<td>Francis Reid, Fonterra</td>
<td>All participants</td>
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<td>12:20–13:30</td>
<td>Networking lunch</td>
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<tr>
<td>13:30–15:15</td>
<td>EU agricultural outlook</td>
<td>EU agricultural outlook</td>
<td>Sophie Hélaine, DG AGRI</td>
<td>Benjamin Van Doorslaer, DG AGRI</td>
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<td>Uncertainties</td>
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<td>Thomas Fellmann, JRC-IPTS</td>
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<td>Mirko Wätjen, DMK Market Intelligence</td>
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<td>Open discussion</td>
<td>Francis Reid, Fonterra</td>
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<td>15:15–15:45</td>
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<td>15:45–17:30</td>
<td>EU agricultural outlook</td>
<td>EU agricultural outlook</td>
<td>Benjamin Van Doorslaer, DG AGRI</td>
<td>All participants</td>
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<th>Topic</th>
<th>Chair</th>
<th>Duration</th>
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<tr>
<td>09:15</td>
<td>Warm-up</td>
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<td>Maciej Krzysztofowicz, DG AGRI</td>
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<td>09:30</td>
<td>Session 5</td>
<td>Biofuels: Still a driver of crop demand?</td>
<td>Holger Matthey (FAO)</td>
<td>10 min</td>
<td>Koen Dillen, DG AGRI</td>
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<td>20 min: Wyatt Thompson, FAPRI</td>
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<td>30 min: Joan Bolet, Abengoa</td>
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<td>10:30</td>
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<td>Coffee break</td>
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<tr>
<td>11:00</td>
<td>Session 6</td>
<td>Sugar: The post-quota dimension</td>
<td>Stephan Hubertus Gay (OECD)</td>
<td>20 min</td>
<td>Koen Dillen, DG AGRI</td>
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<td>20 min: Fabien Santini, JRC-IPTS</td>
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<td>30 min: Thordis Möller, Nordzucker AG</td>
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<td>30 min: Lindsay Jolly, International Sugar Organization</td>
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<td>12:10</td>
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<td>Networking lunch</td>
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<td>13:15</td>
<td>Session 7</td>
<td>Arable crops—cereals and oilseeds: Towards more affordable grains</td>
<td>Tomas Garcia Azcarate (DG AGRI)</td>
<td>35 min</td>
<td>Ignacio Perez Dominguez, JRC-IPTS</td>
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<td>30 min: Stefan Niemeyer, JRC-IES</td>
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<td>40 min: Darren Cooper, International Grains Council</td>
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<td>40 min: Stefan Schreiber, Cargill Europe</td>
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<td>15:00</td>
<td>Session 8</td>
<td>So what's next?</td>
<td>Chris Horsemann (Informa Agra)</td>
<td>15 min</td>
<td>Pierluigi Londero, DG AGRI</td>
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<td>30 min: Jonathan Brooks, OECD</td>
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<td>30 min: Seth Meyer, USDA</td>
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<td>30 min: Tassos Haniotis, DG AGRI</td>
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<td>16:15</td>
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<td>Wrap-up and concluding remarks</td>
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Acronyms

ACP  ACP  African, Caribbean and Pacific (countries)
BRIC BRIC  Brazil, Russia, India and China
CAP  CAP  Common Agricultural Policy
CIS  CIS  Commonwealth of Independent States
DG AGRI DG AGRI  Directorate General Agriculture and Rural Development
EC  EC  European Commission
EFA  EFA  ecological focus area
EIA  EIA  U.S. Energy Information Administration
ENSO ENSO  El Niño Southern Oscillation
EU  EU  European Union
EU-15 EU-15  15 EU Member States before May 2004
EU-28 EU-28  28 EU Member States after 2013 enlargement
EU-N13 EU-N13  13 newest EU Member States, entering in 2004 or later
FAO  FAO  Food and Agriculture Organization of the United Nations
FAPRI FAPRI  Food and Agricultural Policy Research Institute, USA
FTA  FTA  free trade area
GDP  GDP  gross domestic product
IES  IES  Institute for Environment and Sustainability
IGC  IGC  International Grains Council
IMF  IMF  International Monetary Fund
IPTS IPTS  Institute for Prospective Technological Studies
ISO  ISO  International Sugar Organization
JRC  JRC  Joint Research Centre
LDCs  LDCs  least developed countries
LTO  LTO  light tight oil
MENA MENA  Countries in the Middle East and North Africa region
OECD OECD  Organisation for Economic Co-operation and Development
OPEC OPEC  Organization of the Petroleum Exporting Countries
RED RED  Renewable Energy Directive
RFS  RFS  Renewable Fuel Standard
SMP  SMP  skimmed milk powder
TRQ  TRQ  tariff rate quotas
USD  USD  US Dollar
USDA USDA  US Department of Agriculture
UTH UTH  ultra-high temperature-treated
WMP  WMP  whole milk powder
WTI  WTI  West Texas Intermediate
1 Background of the EU outlook and scenario setting for the uncertainty analysis

The workshop started with presentations on the policy and the different steps leading to the publication of the Directorate General for Agriculture and Rural Development’s prospects for agricultural markets and income in the EU.

Tassos Haniotis (DG AGRI) emphasised the importance of the outlook exercise, in particular the annual definition of a baseline and the use of scenarios in answering policy questions. Haniotis highlighted three issues that are particularly important for Europe’s agricultural sector in the near future: the evolution of agricultural crop prices; the effects of the implementation of the new policy reform; and the trade-related issues. The recent fall in the main arable crop prices and energy prices raises questions on the possible duration and magnitude of this price decrease. The latest Common Agricultural Policy (CAP) reform will imply a redistribution of income support, within and also between Member States. In addition, the CAP has moved more towards greening and the provision of environmental public goods.

Another challenge is to assess the real impact, depending on its actual duration, of the import ban imposed by Russia. It is still unclear how the geostrategic changes in the region will affect agriculture in Europe. Furthermore, the EU is involved in several bilateral trade-related discussions and their impact is yet to be quantified.

Pierluigi Londero (DG AGRI) complemented the picture with a description of the assumptions on the policy directly affecting agriculture and on how the economy outside agriculture will look in the next period. As it is not yet clear how the Member States will implement the latest CAP reform, some assumptions were made for the outlook projections concerning voluntary coupled support and the greening measures (i.e. the share of permanent pasture was kept constant and a limited effect on the production of ecological focus areas (EFAs) and crop diversification at EU aggregated level was assumed). In addition to the CAP, assumptions were made regarding the trade agreements with Ukraine (only concessions were included) and Canada (not included in the model). Furthermore, it is assumed that the Russian import ban will be effective for only 1 year.

Jacques Delincé (JRC-IPTS) presented the iterative process of the outlook, whereby two Directorates General of the European Commission (Directorate General Agriculture and Rural Development and the JRC) cooperate closely, starting with the first draft of the baseline, based on the OECD–FAO Agricultural Outlook for the same year, and finishing with different types of outcomes: scientific outputs (such as proceedings, reports, calibrations of other models, etc.) and outputs of policy relevance such as the Directorate General Agriculture and Rural Development annual report “Prospects for Agricultural Markets and Income in the EU”. Delincé also clarified that the baseline cannot (and should not) be seen as a prediction. Comparing ex post the different baselines from different years of release, one can see that there is considerable variability between the past projection and what the reality was. On the contrary, in terms of the longer term trend, successive baselines can be relatively consistent, although in some cases some key development had not (or only insufficiently) been anticipated. This is consistent with the fact that the baseline can be
defined as a unique solution under a determined macro-economic environment, normal weather conditions and no safety/animal disease disruptions. To demonstrate the importance of some particular uncertainties comprising the agricultural outlook projections, three alternative deterministic (i.e. with only one solution) scenarios were tested in addition to this year’s reference baseline:

- lower economic growth in Russia;
- lower energy prices in the US and Canada related to the shale gas boom; and
- different yield patterns following the El Niño–La Niña climatic event.

Furthermore, to capture the effects of variability in the macro-economic environment and yield pattern, partial stochastic analysis is used based on the methodology described in Burrell and Nii-Naate (2013)\(^2\). The results of the partial stochastic analysis (comprising 600 solutions) can be used in two ways in the policy analysis: (1) by looking at the range of variability (e.g. between the 10\(^{th}\) and 90\(^{th}\) percentiles) expressed as a percentage of the baseline value; and (2) by looking at a particular subset (i.e. only those solutions for which one or several variables are contained within determined boundaries). During the workshop, the range of variability was presented for several commodities. In addition, the analysis relating to the following two subsets was presented: lower EU sugar prices (see Section 6.1); and a lower milk price (see Section 3.1).

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2 Macroeconomic and energy context: Back to growth ... at least for the oil price

Macroeconomic variables such as economic growth rate, exchange rate, inflation and energy prices are important elements of the assumptions underlying the baseline. Among these assumptions, the developments in the energy markets, such as the recent decrease in oil prices and the shale gas boom, have a significant impact on future agricultural production and prices. In addition to these developments, the current geopolitical changes and decline in the Russian economy have to be taken into account in the analysis. As a result, this section starts by presenting the macroeconomic assumptions used in the Aglink–Cosimo model.

2.1 Main macroeconomic and energy assumptions of the baseline

The main economic assumptions regarding annual growth in gross domestic product (GDP), exchange rate, population growth, inflation and Brent crude oil price were adapted from the IHS Global Insight projections released in October 2014. In the short term, the forecast US dollar/euro exchange rate is showing a weaker euro with respect to the US dollar than was forecast last year, at least for the initial years of the projected period. In the EU-15 the growth rate is assumed to revert to 2%, while the EU-N13 countries will have a higher growth rate, despite the still-present effects of the double-dip recession. An evaluation of the last 3 years of the International Monetary Fund’s (IMF’s) projections for the Eurozone shows that the level of the crisis was continually underestimated—see the comparisons of the autumn and spring revisions of the growth in GDP in Figure 1.

Figure 1: IMF projections for GDP growth in the Eurozone

Concerning, the energy price, comparison of different oil price projections (OECD–FAO, IHS and the US Energy Information Administration (EIA)) shows a certain consensus on a medium-term increasing trend in the oil price, after some years with lower oil prices.
However, by 2024 the range between the highest and lowest projection reaches USD 15/barrel.

2.2 Presentations on macroeconomic issues

Elisabeth Waelbroeck-Rocha (IHS Global Insight) presented the IHS macroeconomic estimates. In the global economy, there are many uncertainties and risks to take into account in a forecasting exercise. The main four sources of risks are: a potential setback for China owing to the real estate bubble bursting; another possible setback in the Eurozone (deflation being the biggest risk); the development of energy prices; and the US’s recovery stalling (more cautious spending in the private sector).

While the EU economy is picking up at a rate lower than expected, the US economy is showing brighter signs of recovery. In the next period, the former key emerging markets (i.e. Brazil, Russia, India and China (BRIC)) will perform less well, while South East Asian and sub-Saharan African countries will now lead the growth in world GDP. In the previous period, many emerging countries were left to grow without foreign investment, and owing to lack of reforms in many of them this situation might continue. The prices for industrial materials (chemicals and non-ferrous metals) have stagnated, which will help the growth in world GDP.

The euro is likely to continue to depreciate against the US dollar until 2016, when it might start appreciating again. Within the Eurozone, countries such as Spain and Italy should see the highest economic growth.

There are several risks that could affect the current projections: turmoil in the Middle East, China’s rising debt, the Ukraine crisis, geopolitics, central banks’ “exit strategies”, etc.

The crisis between Russia and Ukraine influences the growth perspectives in emerging European countries. Russia’s real GDP will decline in 2014, with a lower projected growth in 2015. Even before the Russia–Ukraine crisis, the Russian economy was declining in the absence of private investors owing to a lack of market reforms and weak domestic demand. In addition, the strong depreciation in the rouble has resulted in additional inflation. Overall, unfavourable demographics, outmoded manufacturing capacity and an overburdened infrastructure will limit the medium- and long-term growth of the Russian economy.

Fabien Santini (JRC-IPTS) presented the results of a what-if scenario (a temporary recession for the next 2–3 years and a depreciation in the rouble) combining the results of two models, a macroeconomic one (Global Link of IHS Global Insight) and an agricultural partial equilibrium one (Aglink–Cosimo).

Owing to the relative unresponsiveness of Russia’s economy to the world market, except for energy, the impact of the recession in Russia on the economy of the rest of the world will be limited, with the EU–N13 being the most affected zone.

Concerning agricultural markets, the main impact will be seen in the decrease in Russian domestic consumption, due to the decrease in its GDP and reduced net imports. The impact on world agricultural prices will, however, remain very low, below 1%, with the greatest impact being on the cheese and wheat markets. EU exports to Russia are decreasing, but
part of the direct impact is offset by increased world consumption. In the case of cheese, for example, despite the fact that the EU is a major processor of cheese and exporter to Russia, the total impact on EU exports of an economic slowdown in Russia is not significantly greater than that for other large cheese exporters, such as New Zealand, the US or Argentina.

Using stochastic analysis, the possible effect of an increase in oil price was quantified in the light of the economic slowdown in Russia. It showed clearly that the impacts of any change in energy prices are far larger than those of a simple economic slowdown in Russia. In conclusion, Russia’s economic relative isolation (except for energy) explains the fact that the impact of changes in the Russian markets, other than those related to energy, might not result in the longer term in strong effects on agricultural commodity markets. This might not be the case, however, in the event of a sudden and complete disruption of trade, such as was the case in August 2014 with the ban on agri-food trade.

Some concerns were raised in the discussion about China’s debt, the sustainability of the real estate boom and its effect on the rest of the world. Experts explained that domestic debt is mostly due to increases in lending on the shadow lending market, which is not controlled by the Bank of China.

The slowdown in the Russian economy was seen to be more related to the lack of foreign investment and lack of structural reform than to the world economic crisis. Uncertainties in all sectors will prevent investors from returning to Russia. The scenario presented does not provide the answer to the question of whether or not exporters will go back to the Russian market after things improve. Some of the experts agree that companies will be cautious before returning and rebuilding the confidence will take some years. Russia is an important importer of goods, and its domestic production can produce very few substitutes for imported goods, hence the small reduction in imports despite the decrease in the growth in GDP.

### 2.3 Presentations on energy-related issues

Elisabeth Waelbroeck-Rocha (IHS Global Insight) also commented on the oil price projection of her institution. The oil price is likely to increase to meet the growing energy demand, while new sources of supply are yet to be discovered. At the same time, the cost of oil exploration has gone up and margins have gone down. If energy prices remain high, then there might be a greater chance of deflation.

Stephen George (KBC Advanced Technologies) presented the view of KBC on the outlook for crude oil. In recent months, the oil market has registered a decrease in price, down to USD 86/barrel, owing to oversupply (increase in US production of light tight oil (LTO) and return of Libya to the export market). Saudi Arabia announced recently that supply will be maintained even if the price falls to USD 80/barrel, but the result of this autumn Organization of the Petroleum Exporting Countries (OPEC) meeting could, on the contrary, drive the oil price upwards.

KBC’s medium-term outlook is very similar to the EU preliminary baseline assumptions for the price of crude oil, except for the final years of the projection period where KBC sees a lower increase in oil price compared with IHS (see Figure 2). It is expected that the oil price
will return to values above USD 100/barrel. The medium-term factors driving the oil markets are: the production of US LTO; the return of major exporters such as Libya, Iran, Iraq and Nigeria; the increase in the global demand for crude oil; and the role and stance of OPEC. In the short run, the global demand for crude oil is expected to rise owing to the low prices, but after 2020 a steady decline in world demand is expected as a result of a possible economic slowdown in the Chinese and other emerging economies. The demand for oil in the developed countries will decline as new fuel-efficient transport technologies gain importance.

Figure 2: KBC and DG AGRI estimates of crude oil price for the medium-term outlook

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<td>104</td>
<td>106</td>
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<td>105</td>
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<td>104</td>
<td>107</td>
<td>109</td>
<td>111</td>
<td>113</td>
</tr>
<tr>
<td>Brent</td>
<td>62</td>
<td>79</td>
<td>111</td>
<td>112</td>
<td>109</td>
<td>108</td>
<td>104</td>
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<td>104</td>
<td>107</td>
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<td>113</td>
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</table>

Sources: DG AGRI estimates based on the European Commission macroeconomic forecasts and IHS Global Insight.

Source: Presentation of Stephen George (KBC Advanced Technologies)

John Baffes (The World Bank) presented the recent developments in commodity markets. Price indices for agriculture, metals and energy have recently declined. However, all price indices still remain higher than their historical levels. Although linked with energy prices, fertiliser prices have declined much more since early 2012. In the short term (the past months), however, price index development shows that all commodity markets have been characterised by a remarkable stability in prices.

Agricultural markets have, in general, experienced price volatility. Since 1998 and until the financial crisis (2008), they were stable. During the period 2008–2009, they experienced excess price volatility, which stabilised afterwards, with price levels declining in all sectors. Energy is an important input to agriculture. Although natural gas prices were following crude oil prices until 2010, they have now joined the coal price. The recent gap between the West Texas Intermediate (WTI) and Brent oil prices is expected to close. On the supply side, the US brought more oil into the market to compensate the reduction in supply from the Middle East and North Africa (MENA) producers. On the demand side of oil, demand in OECD countries has been constant in the past, with some seasonal fluctuation; however, their consumption was five times that of non-OECD countries. Furthermore, the increase in demand from non-OECD countries might lead to an increase in the price of oil.
In conclusion, lower energy prices will relieve the pressure on agriculture. However, it is still uncertain how the oil price will develop.

Ignacio Pérez Domínguez (JRC-IPTS) presented an analysis of the potential consequences of the development of new shale gas sources on agricultural markets. Energy prices have both a direct and an indirect effect on agriculture. The indirect effect is in particular through the impact of low natural gas prices on the fertiliser market. US natural gas prices are currently 40% lower than those in the EU, but it is unclear for how long this gap will continue to be that wide. Different sources predict that the effect could persist for the next 10 years.

Using the Aglink–Cosimo model, a simulation was performed to capture in the medium term the effect of a reduction of 5% in the oil price and of 20% in the fertiliser price in the US and Canada on agricultural commodity prices and on those countries’ agricultural competitiveness.

The cost of production of three commodities (maize, soybeans and sugar beet) resulting from this scenario was compared with the baseline. The largest decrease in the cost of production is observed in the case of maize, which has the most energy-intensive production system. Among the three crops, sugar beet will see the largest drop in prices.

In terms of net trade changes in coarse grains, the EU is slightly affected by the increased competitiveness of US maize production, while Canada will be more affected owing to the neighbouring effect. In the case of the oilseeds trade, the US will reduce its world exports of soybeans, but the EU will not be much affected and will find alternative sources.

The discussion showed that there are still uncertainties in the oil market. New technologies are being developed to improve efficiency and thus cost margins; however, there is a risk of overestimating the availability of oil.

In the case of fertilisers and their link to natural gas prices, participants asked why the price of nitrogenous fertiliser remains high in the EU. The experts remarked that there is a delay of at least 2–3 years until the US production of fertiliser increases significantly enough for the US to become a net exporter (if this ever happens) and thus a decline in the nitrogen fertiliser price can be observed. The EU is a price taker on the fertiliser market, so the impact of lower US natural gas prices will not be seen in the next few years.
3 Milk and dairy markets: The white gold?

The Directorate General for Agriculture and Rural Development preliminary baseline for milk and dairy products was presented and discussed during this session. The impact of uncertainties based on a subset of lower EU domestic milk price scenario was also presented. Furthermore, some specific reflections on the EU and world markets were presented and discussed.

Experts were asked a question: “After the end of the Russian import ban, do you think EU dairy exports to Russia will return to their previous levels?”. The responses are summarised in the table below:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>67%</td>
<td>33%</td>
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</table>

3.1 Prospects and uncertainty analysis for dairy markets in the EU 2014–2024

Sophie Hélaine (DG AGRI) presented the prospects for the dairy market in the medium term. Owing to dynamic world demand and a steadily growing domestic demand, the projections show a favourable outlook for the dairy market. Currently, however, world trade is affected by the Russian import ban, which is modelled for 1 year.

In the medium term, the EU production of milk is expected to increase. The additional milk produced will principally be used in cheese and powder production. In the next decade, however, the world trade in dairy products will show a lower annual growth than in the previous decade, thus limiting the potential for greater growth in supply in the EU.

In the EU, milk production is expected to increase at a rate of 0.6% per year, on average, after quotas are removed in April 2015. There has already been a very large increase in deliveries in the last couple of years before quota abolition. In 2016, a decrease in production is anticipated, following the price decrease in 2015. Compared with the other milk producers in the world, the EU-28 has the lowest annual growth in the medium term (expect for Russia, whose domestic production will increase slowly). Among the producers, India might become an important player on the world market.

The outlook shows an increase with respect to exports of cheese. Most of the fresh dairy products will be kept for domestic consumption. Although on the butter world market the EU is still not competitive, it is an important exporter of whey, with China as the main importer. Furthermore, the EU retains a high market share of world cheese exports. An optimistic projection for whole milk powder (WMP) and skimmed milk powder (SMP) is also envisaged.

With respect to domestic consumption, an increase in per capita consumption of cheese is expected mainly in the EU-N13. A decrease in the consumption of fresh dairy products (e.g. yoghurt) is projected for the EU-15. In addition, over the medium term, prices are expected to remain firm at around EUR 350/t until 2024.
In conclusion, market prospects are favourable for the EU dairy sector.

Using stochastic analysis, Thomas Fellmann (JRC-IPTS) presented some of the uncertainties related to the baseline projections for the milk and dairy markets. The subset focused on a situation in which the EU milk price is about 10% (about 4 cents/kg) lower than in the baseline situation. The lower EU milk price corresponds to a situation in which EU milk production is about 1% (−1.8 Mt) lower than in the baseline. This subset comprises lower feed costs and other input prices (e.g. lower oil prices), which implies that the gross margins are decreasing by less than 10%. An appreciated euro and lower growth in world GDP were identified as major causes leading to reduced EU milk and dairy prices in the analysed subset. The appreciation of the euro, in particular, leads to reduced dairy exports from the EU (e.g. −1.2% for cheese). However, total world exports are increasing, especially as a result of increased production and exports in Australia and New Zealand. The world price for dairy products would be lower by about only 3%.

3.2 Presentations and discussion on the outlook for dairy markets

Mirko Wätjen (DMK Market Intelligence) presented the DMK view on the EU dairy market. An increase in world population and urbanisation implies an increase in the demand for milk. In addition, the middle class share of the world population is expected to double by 2050. For these reasons, DMK is even more positive than the European Commission's draft baseline concerning the development of world and EU milk and dairy markets.

While the developed countries' consumption per capita will stagnate, the developing countries in Asia and Africa are expected to increase their consumption per capita. Moreover, in 2015, the BRIC countries are expected to have the largest increase in food markets. Despite the Russian ban, in 2015 Russia might have a strong increase in its food market compared with that in 2010.

In the EU market, the increase in milk production started before the abolition of milk quotas. Since 2008, EU exports of dairy products have increased, with the highest increase in SMP exports owing to good product availability and a competitive price level. Ultra-high temperature-treated (UHT) milk exports increased further in 2014 compared with 2013, China being the main importer. The demand for import of dairy products in China has grown continuously since 2009, with WMP having the stronger increase in demand.

On a world level there are few main dairy regions with a surplus, too few to feed the world. In Germany, over the next decade dairy farmers expect to grow their output to over one billion kilogrammes of raw milk.

In the next decade, DMK expects more milk price volatility and an increase in the supply of milk production from EU countries with good dairy infrastructure, such as Germany, the Netherlands and Ireland. In addition, higher yields per cow and per hectare are expected. To meet the growing demand, greater investments will be made in powder and cheese production.

Francis Reid (Fonterra) also provided feedback on the DG AGRI baseline for dairy markets and explained that he was also expecting greater growth in milk production; investments in industry and farms support this evidence. The world consumption of milk and dairy
products is expected to rise by 36% over the next decade to in excess of 710 million tonnes on a liquid milk equivalent basis.

New Zealand’s production is constrained by land availability and environmental factors. As a result, the elasticity of its milk supply is low. On average, New Zealand produces only 2–3% of the world’s milk. However, New Zealand is a major dairy exporter, albeit France and Germany each produce more than New Zealand.

Significant investment in high-quality powder, ingredients and food service manufacturing assets underpins Fonterra’s strategy to optimise its New Zealand milk business to meet the growing demand for dairy nutrition globally.

WMP prices have been characterised by extreme volatility. China’s excess WMP inventories, high milk production in the EU, the US and New Zealand, and the Russian import ban will be the main drivers for the WMP price in the near future. While Chinese demand maintained high international milk prices until the second quarter of 2014, when they started to decline, there still a large gap between China’s domestic production and consumption.

In the past, agricultural policy (e.g. CAP reform, US energy policy) had an important impact on long-run dairy prices. In addition, milk and cheese continue to face high tariffs in most markets, including emerging markets with high growth potential.

In conclusion, the long-term dynamics for dairy markets are positive; however, current market conditions are challenging.

At the end of the session, the discussion concentrated on the EU and world milk production after the abolition of the quota. The growth in milk production will differ among the EU regions. Furthermore, environmental constraints will play a role in production decisions, as they will limit the increase in the number of cows in certain regions.

In the case of China, the experts believe that the switch from small to large farms will not be enough to meet the growing domestic demand. As a result, China will still be depending upon imports.

A decline in demand for fresh dairy products is expected in many regions. For this reason, exports of powder milk are increasing. In New Zealand, where production systems are pasture based, milk production is very low during winter. As feed imports are very expensive, there will not be a switch from pasture-based to feed-based production in New Zealand.

The main conclusion of the panellists was that Directorate General for Agriculture and Rural Development might have under-projected the increase in milk production.
4 Meat markets: A whiter meat mix in the EU

This session was dedicated to the discussion of the preliminary baseline results for meat markets. Furthermore, some specific reflections on the beef world market and EU pork and poultry markets were presented and discussed.

Experts were asked a question: “Do you think there will be more vegetarians and flexitarians in the EU, leading to a reduction in EU meat consumption by 2024?”. The responses are summarised in the table below:

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<td>32</td>
<td>17</td>
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<td>%</td>
<td>65</td>
<td>35</td>
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4.1 Prospects for the meat sector in the EU 2014–2024

The medium-term outlook for the EU meat sector was presented by Benjamin Van Doorslaer (DG AGRI). In the next decade, the increase in EU meat exports will be driven by a positively oriented world demand. At the same time, EU beef production will decrease but at a slower pace than in the last decade. At EU level, total meat consumption per capita will go down, while the meat price will be firm, driven by world price developments.

In the case of pig meat, while Russia will reduce its demand, China will increase its total imports, up to a total of two million tonnes. On the EU domestic market, consumption will decrease slightly by the end of the period (driven by the decrease in pig meat consumption in the EU-15), despite a small recovery in the short run (potentially driven by the increase in the EU-N13). As a result, EU production will increase to meet the rise in exports, China becoming the main importer on the world market.

In the case of poultry meat, Saudi Arabia is expected to increase its demand, while Russia will reduce imports. Overall, world demand will increase. EU imports will slightly increase following the increase in the tariff rate quota (TRQ). In the EU, consumption and production of poultry meat are expected to increase.

Both dairy and suckler cow herds are expected to decrease in the EU, and EU production and consumption of beef are expected to decrease but at a slower rate than that up to now. Imports will remain stable, as South America is not expected to return strongly to EU markets.

The sheep and goat meat market will be characterised by a decrease in exports, as a result of not meeting TRQs dedicated to Oceania. On the consumption and production side, a slowdown in the decrease has already been observed and the current level will be maintained in the future.

Overall, EU-28 meat consumption per capita will go down, but with different movements in the EU-15 (decrease) and EU-N13 (increase) in the pork market. The competitiveness of the meat market will not improve much, as the price gap between the EU and the world will remain high.
4.2 Presentations and discussion on the outlook for EU meat markets

Richard Brown (Gira Consultancy & Research) started his presentation with feedback on the DG AGRI baseline. The expert’s opinion is that the aggregated EU meat balance is rather optimistic, especially for the EU-15. Furthermore, Gira’s view is that world and EU meat prices will increase more than those projected in the baseline, especially for beef; as a result, EU consumption per capita might not increase as much as assumed.

While the expert found the pig meat production projection to be too optimistic in view of the current import ban and environmental and animal welfare concerns, Gira has a more optimistic view on the poultry market.

In the beef market, the global supply will be tight, despite the increase in the supply of Indian buffalo. Overall, the number of cattle could increase, given the excellent maize and pasture production in the northern hemisphere. However, the cattle supply remains low, with a lot of constraints on land, environment and animal welfare.

Among the importers, China is a significant importer of beef and the high Chinese price is encouraging exporters.

In the EU, beef prices are going down, although world prices have gone up in the past 2 years. The US is expected to increase production in the future owing to a reduction in the cost of production. Brazil’s increase in production was generated by an increase in intensification (e.g. intensive breeding). In the last 5 years, India’s exports of buffalo have increased dramatically.

Nan-Dirk Mulder (Rabobank) presented the Rabobank projection for EU pig meat and poultry markets. The macroeconomic assumptions of the model are: similar economic conditions as the Directorate General for Agriculture and Rural Development model; no significant trade liberalisation; no big disease outbreaks or food safety scandals; no major changes in biofuel policy; and an increase in global demand for animal protein. A fast-growing demand for animal protein is expected, 85–90% of which is coming from emerging countries (mostly from Asia).

Poultry and pork price changes are mostly feed related. The Directorate General for Agriculture and Rural Development price outlook for grains and oilseeds is realistic. For EU meat markets, however, Rabobank’s projections are less optimistic: while total meat and egg demand will decrease, only poultry meat consumption will increase.

In the case of the EU pork market, the decline in domestic demand can be compensated by increased exports to Asian countries. While the EU pork sector is still competitive in Asian markets, the risk of competition with more competitive partners exists. Overall, EU production is expected to decline, but growth can be achieved in some northern and eastern European countries.

In the case of poultry, an increase in production of up to 1% per year is expected, similar to that in the Directorate General for Agriculture and Rural Development baseline. The EU is less competitive than the US. Within the EU, faster growth is expected in some northern and eastern EU countries.

In conclusion, the pork and poultry sectors are facing several big changes in the future, e.g. social concern and a rise in input costs (feed, energy).
The discussion of this session concentrated on the changes in meat consumption patterns and the competitiveness of the EU meat sector.

Concerning consumption patterns, pork consumption per capita has decreased and a switch towards poultry meat has been observed; as a result, the increase in pork production will go to exports. Overall EU meat consumption should go down. The experts believe that price sensitivity and ageing of the EU population, rather than a switch to more vegetarianism, will be the driver of the reduction in meat consumption.

Concerning productivity, there is potential to decrease the feed conversion rate in all EU meat sectors. In the case of poultry, it is expected to decrease from 1.8 to 1.4–1.5.

The cost of production for beef remains high in the EU, but coupling is an important mechanism to maintain the current herd levels. In addition, experts believe that marketing could help producers sell good-quality beef at a price reflecting the cost of production. The coupled payments are also important for sheep farms.

The development of the Ukraine poultry industry, driven by large investments, might be considered a threat to EU producers.
5 Biofuels: Still a driver of crop demand?

The latest developments in the biofuel market were discussed in this session. The discussions were opened by the presentation of the preliminary baseline results for the next decade, followed by experts’ feedback and presentations on world development in this sector.

Experts were asked a question: “Will EU first-generation biofuel use increase from today to 2020?”. The responses are summarised in the table below:

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<td>22</td>
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<tr>
<td>%</td>
<td>33</td>
<td>67</td>
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5.1 Prospects for the biofuel market in the EU 2014–2024

The medium-term prospects for the EU biofuel market were summarised by Koen Dillen (DG AGRI). The developments in the EU market are fully policy driven. Biofuel consumption is expected to increase slightly. The increase will be for ethanol in the early years, while biodiesel consumption will increase only slightly.

It is assumed that the share of biofuels in transport fuels will reach 7% by 2020, around 5% coming from first-generation biofuel. The gap between that and the 10% target for renewables in transport fuels will be filled by other renewables. The current assumption is based on the policy up to 2020; beyond that it is still not decided what the policy will look like, but the decreased importance of first-generation biofuels towards reduced greenhouse gases is clear from current proposals.

By the end of the outlook period, the total fuel used for transport is expected to decrease because of lower emission standards for the European fleet. Growth in domestic ethanol production is expected until 2020, based on lower cereal prices. After that, domestic production is expected to decrease, following the decline in ethanol use. The increase in biodiesel production is based principally on waste oils, as well as on oilseeds (both imported and EU production), mainly rapeseed. In the next decade, a further increase in the use of waste oil is expected in the production of biodiesel. The proportion of domestic feedstock used for biofuel production is not high, with the exception of vegetable oils.

5.2 Presentations and discussion related to the EU biofuels outlook

Wyatt Thompson (FAPRI) discussed the biofuel market and the US biofuel mandates. Overall, the expert gave positive feedback on the EU biofuel outlook.

Some questions were raised during his presentation. The reduction in fuel use per capita was found too pessimistic in view of the assumed increase in GDP. Considering feedstock prices, it has become more profitable to make ethanol. After 2020, the increase in profitability should not lead to a decrease in production unless policy interferes.
The US is changing the method of setting the mandate in the future. The proposed Renewable Fuel Standard (RFS) will lead to decreased targets, and less maize or feedstock may be used to make ethanol. Moreover, the new mandate proposal will have variable targets, set based on annual production and use of the ethanol. It might lead to fewer imports and more exports. However, such new rules are not likely to be adopted prior to the mid-term elections in November.

Concerning the EU, experts from the industry explain that, as the blending rate has not increased, fuel ethanol consumption has remained the same since 2010. Further introduction of E10 would allow the EU ethanol market to be more market driven, as it is in the US. Blenders would have more potential to increase the rate of ethanol in gasoline. At the same time, the EU demand for gasoline has decreased and that trend is to continue as a result of the increase in the EU diesel fleet at the expense of the gasoline one, owing to favourable taxation for diesel. Moreover, for the next decade, the industry projection for the demand for ethanol remains flat, while Directorate General for Agriculture and Rural Development projection is more optimistic. As a result, the demand for cereals for bioenergy could also be flatter than that presented by the Directorate General for Agriculture and Rural Development. Consequently, the ethanol net export balance is expected to increase more than that projected by the Directorate General for Agriculture and Rural Development up to around six million tonnes. At the same time, with less protein-rich ethanol co-products being produced, the net deficit in protein meals might increase with one million tonnes compared with the baseline.

Currently, only 65–70% of the EU installed capacity for fuel ethanol production is used, owing to lack of competitiveness with other world producers, as the investments were made to meet EU targets set in the Renewable Energy Directive (RED). In 2013–2014, the installed production capacity increased further (following decisions taken some years ago at a time when biofuel production was increasing), but the demand has not increased. Since EU biofuel is more expensive, it is not competitive on the international market.

In conclusion, as the current EU policy is not enforced and there are no targets post 2020, it is not sufficient to boost confidence to invest in second-generation biofuel production. A separate target for renewables in petrol of a minimum of 7.5% would be required to incentivise the performance of ethanol in the EU for first-generation biofuels, and a binding sub-target for advanced biofuels would also be needed.

The link between the oil and biofuel prices and the biofuel policy in the EU and the US were discussed in particular by the participants at this session. Experts considered the influence of the oil price on ethanol production to be limited in the EU. The EU demand for ethanol comes mostly from policy requirements (mandate), and it is not market driven. Greater development of blends such as E10 would be needed to encourage a stronger market for ethanol production in the EU. The difference in price evolutions (spread) between the Brent oil price and cereal prices is considered more important.

The double counting rules for biofuel feedstock, which is considered more environmentally friendly as it is recycled, were mentioned as affecting the reliability of decisions made by stakeholders and therefore the reliability of the projection. The rules could be adjusted to avoid such double (or even triple) counting.
Some participants in the audience expressed their doubts about the decline in total fossil fuel consumption despite GDP growth. The experts answered that policies on carbon dioxide emissions and the related gains in efficiency will be the driver of lower fuel consumption after 2020.

Most experts believe that at Member State level the 10 % target will not be reached. Some countries may fulfil it through the mandate with biodiesel, if no separate targets are introduced. But, in the long run, experts do not assume profits for the EU biofuel sector. Moreover, if the current level of demand is maintained, some of the plants might need to be closed. EU exports of biofuels are unlikely to be feasible, as US exports are more competitive.
6 Sugar: The post-quota dimension

This session was dedicated to the discussion of the preliminary baseline results for sugar and the impact of macroeconomic uncertainties in this sector. In addition, some market developments were presented from the industry’s and the main world producers’ perspective and then discussed.

Experts were asked a question: “Do you think the gap between the world and the EU price of sugar will be larger than EUR 50/t after the quota abolition?”. The responses are summarised in the table below:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>11</td>
<td>12</td>
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<tr>
<td>48 %</td>
<td>52 %</td>
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6.1 Prospects for and uncertainties in the sweeteners market in the EU 2014–2024

Koen Dillen (DG AGRI) summarised the medium-term prospects for the EU sugar market, in the context of the abolition of sugar quotas at the end of 2017. The EU sugar price is expected to drop significantly. The EU production of isoglucose is expected to increase. Moreover, the EU could become self-sufficient in sugar over the projection period.

In the next decade, important changes are expected in the development of prices of white sugar owing to the quota abolition. The current gap between the EU and world prices of white sugar will diminish, and the EU price decrease could begin before the quota is abolished because of some destocking in the EU. A major uncertainty in the sugar market is how the change in Brazilian ethanol policy will impact the world price of sugar.

The sugar beet price is expected to fall following the abolition of the quota. Currently, two prices are developing on the market: the price of sugar beet within the Common Market Organisation (quota system) and the price of industrial sugar beet. After the abolition of the quota, both prices should converge; the industrial sugar beet price is therefore supposed to increase, reducing the incentive to produce sugar beet-based ethanol.

In the sweeteners market, EU isoglucose production is expected to increase, with a sudden increase expected after the quota abolition in countries with an abundance of cereals and existing starch-producing facilities. It is still uncertain how much isoglucose will be used by the industry to replace sugar.

In conclusion, the EU is expected to become self-sufficient in white sugar. Less white sugar will be imported while production will increase slightly.

Fabien Santini (JRC-IPTS) presented a stochastic analysis on the EU white sugar market. One subset in which EU white sugar prices are lower than those in the baseline was selected. The macroeconomic conditions that lead to a 10 % lower EU white sugar price are characterised by a stronger euro against the US dollar and Brazilian real, and a lower oil price.
In such a context, the gap between the EU sugar domestic price and the world price decreases slightly. A lower world price is followed by increased world consumption of sugar and an increase in total world sugar exports. Brazil is the country driving the increase in world exports, as most other countries are decreasing their exports. While total world imports increase, the reactions of the different importing countries are of different magnitudes. The EU-28 will significantly increase imports of sugar owing to their increase in consumption, as exports and production will decrease.

Lower EU sugar prices would have a moderate negative effect on EU isoglucose production. Moreover, the proportion of sugar beet used for biofuels would increase slightly.

**6.2 Presentations and discussion related to the EU sugar outlook**

Thordis Moeller (Nordzucker AG) presented an industry view on European sugar market developments. The Directorate General for Agriculture and Rural Development baseline was found to show realistic development after 2017. At the EU level, consumption is stagnating because the market is saturated; low population growth and health concerns may play a role. However, global market demand is expected to increase in the future. In the period after the quota abolition, according to the Directorate General for Agriculture and Rural Development baseline, because less sugar beet is used in biofuel production, more sugar will be produced. It is questionable whether or not the cultivated area of sugar beet will remain constant, as suggested by the Directorate General for Agriculture and Rural Development baseline, unless Member States will opt for voluntary coupled support for sugar beet production.

The world price of sugar is expected to increase, reflecting an increase in the cost of production. When the world price increases, the EU-28 could become a net exporter. The next period will be characterised by increased price volatility for EU sugar prices too.

An increase in the production of isoglucose might be expected, especially in the EU-N13 and if cereal prices maintain their lower trend. However, production is influenced by the high transport costs and the ability of sugar processors to switch between sugar and isoglucose.

After 2017, increased sugar production will be achieved in the more competitive Member States. However, in the regions less productive for sugar beet, coupled payments might be reintroduced, which could support less competitive producers. An increase in EU exports and reduction in EU imports can be achieved. However, there are also free trade areas (FTAs) in place, which allow potential tariff-free imports to the EU, such as the recent FTA with South Africa.

In conclusion, sugar beet production will continue to be competitive, and low sugar prices (e.g. closer to world prices) are unlikely to occur. Given the tariff import protection, it is unlikely that the EU sugar industry will be excessively affected by imports.

Lindsay Jolly (International Sugar Organization) presented the probable implications that will arise after 2017 as a result of the reform of the EU Sugar Regime in the EU and in the world, particularly in the African, Caribbean and Pacific (ACP) countries. According to an International Sugar Organization (ISO) study released in 2014, isoglucose is not a serious potential threat as a replacement for sugar after the liberalisation of production in 2017.
Isoglucose is produced from grains, especially maize and wheat. As a result, only in those countries (e.g. France, Germany and Eastern Europe) that have a grain surplus is isoglucose production expected to potentially grow.

For the EU sugar market post 2017, ISO forecasts higher sugar production, slightly lower sugar consumption, significantly lower imports and higher exports. These results are similar to the Directorate General for Agriculture and Rural Development baseline ones, the difference being only in import and export quantities, which are higher in the ISO forecast. ISO assumes higher EU prices and lower world prices than the Directorate General for Agriculture and Rural Development does. The ISO forecast is an average of the results from two scenarios: one with low world sugar prices and one with high world prices.

In conclusion, slightly higher EU production and lower imports are expected post 2017. The impact of the EU reform will be greater in some least developed countries (LDCs)/ACP countries, e.g. in sub-Saharan Africa and South East Asia, with currently a greater of concentration of exports towards the EU market.

The participants discussed the developments in the sugar market after the abolition of the quota. Smaller non-EU Member States with a high reliance on sugar, ACP countries and/or LDCs in particular, will suffer from changes in trade. However, the UK will continue importing raw sugar to feed its refineries. In some EU countries, such as Germany, rapeseed will compete with sugar beet.
7 Arable crops—cereals and oilseeds: Towards more affordable grains

In recent years, arable crops prices have decreased. This session is dedicated to the presentation of a preliminary baseline, the possible uncertainties raised by extreme climatic events such as El Niño–La Niña on arable crop production, and different views on the world market.

Experts were asked a question: “If the energy prices increase in the next decade, do you believe that grain prices can remain stable?”. The responses are summarised in the table below:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>10 %</td>
<td>90 %</td>
</tr>
</tbody>
</table>

7.1 Prospects for and uncertainties in the arable crops market in the EU 2014–2024

Ignacio Pérez Domínguez (JRC-IPTS) presented the medium-term prospects for EU arable crop markets. In the next decade, the total agricultural area is likely to decrease slightly, the share of grassland area remaining unchanged (greening policy assumption). The current high production of cereals will continue its trend upwards, as the wheat area and coarse grain yields are expected to increase in the medium term. Good prospects are expected for both oilseeds and protein crops for feed.

In the short run, the record production of cereals will lead to lower cereal prices that will stabilise over the medium term. Oilseed prices are expected to remain high in the short run and will continue to increase until 2020.

In the case of wheat, EU production will increase slightly; a larger share will go to feed use and a lower share will be used in the later years for biofuels. In the case of maize, an increase in EU production is expected, with a large share used for feed and an increased share used in bioethanol production. EU imports of maize will decrease. Wheat stocks will be rebuilt in the projection period, while maize stocks will decrease from their current high levels following two bumper crops. Barley production and consumption will remain stable, with the production level above consumption.

A reduction in the imports of oilseeds will slightly improve the EU’s net trade. However, for soybeans, the net trade will worsen in the medium term. Most of the protein meal consumption will be met by imports. The use of vegetable oils will be driven by the reduction in biodiesel demand and a slight decrease in food use. Production of protein crops may increase owing to coupled payments gaining in importance and their eligibility for the EFA.

Stefan Niemeyer (JRC-IES) explained the El Niño–La Niña phenomenon (ENSO, El Niño Southern Oscillation) and its impact on agriculture. El Niño is characterised by a warm oceanic phase with high air surface pressure and high surface water temperatures in the
central eastern Pacific, while La Niña is the opposite phase, with lower than average surface water temperatures and lower air surface pressure.

This year, El Niño is expected to develop during October–December and continue into early 2015. So far, the experts are confident that this year El Niño will be weak, but its duration cannot be predicted. Changes in weather patterns, e.g. wetter weather in some parts and drier in some others, are expected. However, these effects occur in different months in different regions, as explained in the map (Figure 3) below.

**Figure 3: El Niño impacts**

**El Niño and Rainfall**

El Niño conditions in the tropical Pacific are known to shift rainfall patterns in many different parts of the world. Although they vary somewhat from one El Niño to the next, the strongest shifts remain fairly consistent in the regions and seasons shown on the map below.

![Map of El Niño impacts](image)

Source: Presentation of Stefan Niemeyer (JRC-IES)

Depending on the crop calendar and its reproductive stage at the time of El Niño, the impact on crops and regions will differ. For example, the effect on the yields of soybeans is predominantly positive. In South East Asia, rice yields are also differently affected. At the world level, higher variability in yields can be expected but no shortages. EU agriculture is not affected by this phenomenon.

In conclusion, the weather patterns of an El Niño–La Niña event are well known, but experts are still unable to quantify the effects and their duration.

Building on the yield impacts described above, Sergio René Araujo-Enciso (JRC-IPTS) presented a deterministic scenario based on a strong El Niño event happening in 2015 and a strong La Niña in 2016, followed by a weak El Niño and a weak La Niña in 2020 and 2021, respectively. As the EU is not directly affected by this phenomenon, only changes in the yields in North and South America, Australia, China and the Commonwealth of Independent States (CIS) countries are assumed. The analysis is limited to three major crops: maize, wheat and soybeans.
In the case of soybeans, a positive effect is observed in both the US and Brazil during El Niño years. During La Niña years, yields in North America are affected negatively, while in South America yield is affected positively. Despite some compensation between regions, an overall negative effect in terms of production can be observed for coarse grains and wheat during El Niño years, whereas a positive impact can be expected for oilseeds. Climatic events of this sort can have a lag effect, driven by the expected returns and prices that influence production decisions and consumption, buffered partly by counter-cyclical stock developments.

World prices of oilseeds and related products (protein meals, vegetable oils) are more affected than those of cereals but in different directions: oilseeds see their world price decrease significantly during an El Niño event and increase in the following years, while cereals prices generally increase.

Overall, the impacts of this phenomenon are moderate; there can be a shock on a 2-year basis owing to the lag effect, but nonetheless markets recover in the following years. For the EU, this effect is indirect, as a result of imports of oilseeds and mainly soybean meal. The impact on producers in the meat and dairy industries is very small, the effects being diluted in the processing chain.

7.2 Presentations and discussion related to the EU arable crops outlook

Darren Cooper (IGC) presented the International Grains Council (IGC) 5-year outlook. Since July 2014, the IGC daily grains and oilseeds index has gone down; most crop prices have decreased owing to high supply levels. For wheat, the price index has gone down by 8% since July owing to the exceptional quantity harvested, but adverse weather meant that the wheat sold was of poor quality. A greater decrease in price was observed for maize and soybeans on the daily price indices.

The ending stocks projected for this year are important for maize and soybeans. In the case of wheat, the stocks are slightly above last year’s average; US stocks are expected to increase. Overall, rice stocks have slightly decreased because of the bad monsoon season in India.

In the coming months, a weak El Niño event is likely to happen in the southern hemisphere, which could have a positive effect on soybean production.

In conclusion, there are small differences between the Directorate General for Agriculture and Rural Development and IGC projections for the harvested area of cereals and oilseeds, with the exception of maize, for which the IGC projection is more pessimistic than the Directorate General for Agriculture and Rural Development one.

Stefan Schreiber (Cargill Europe) presented the industry perspective on the outlook for arable crops. Up to 2018, a downward trend in the prices of arable crops can be observed. The cultivated areas of wheat and maize depend on each other, and a switch from wheat to maize cultivation is expected in the coming years. Overall, owing to CAP requirements, the total cultivated area is expected to decrease. Yields will increase only moderately, maize doing better than other cereals. In the EU-15, yields are expected to stagnate, while
some increase is expected in the EU-N13. Weather conditions and fertiliser usage will be the main drivers of changes in yields in the future.

The EU has a high dependency on imports of protein meals, which decreased recently through the growth of biofuel production in Europe.

In the last decade, the biofuel policy has strongly influenced production decisions, especially in the case of oilseeds. As a result, farmers’ decisions and income will be affected by any changes in the biofuel policy post 2020.

The participants also discussed the possible effects of the changes in arable crop prices on production decisions and consumption. Some comments were made on the El Niño phenomenon regarding the possible negative impact on the sugar market and on wheat and fruit production in southern Europe. Climate change represents an additional complication, as it is hard to quantify its impact. Some experts said that it is not evident that climate change will have a significant impact on markets in the next 10 years.

The current record level of harvests triggered a discussion on the issue of storage capacity. Experts believe that it is possible to increase the storage capacity for maize; in the case of wheat, it is assumed that the EU surplus will be exported. The increase in the Thai intervention on rice stocks and the reduction in Chinese imports could lead to a decrease in the world price for rice.
8 So what’s next?

As an introduction to the final session on challenges for agricultural markets, Pierluigi Londero (DG AGRI) presented a wrap-up on income developments in the Commission’s preliminary outlook for agricultural commodity markets.

The income baseline was derived from subsidy levels, the value of production, the intermediate consumption of feed and seed, and depreciation. Additional assumptions were needed on the possible evolution of the number of annual working units. After the slowdown owing to the economic crisis, the decline in the workforce is expected to continue more rapidly. The rate of decline will depend mainly on demographics but also on the increase in productivity and the use of machinery.

In the EU-28, the real income per annual working unit will stabilise over the projected period. At the same time, a higher value of production is expected. Among intermediate consumption costs, the cost of energy, fertilisers and other costs will increase in particular.

In conclusion, while the price of crops is expected to stabilise, the cost of production will rise, leading to questions on the sustainability of such a situation.

A panel discussion followed led by Chris Horseman (Informa Agra), with Jonathan Brooks (OECD), Seth Meyer (USDA) and Tassos Haniotis (DG AGRI). Participants in the workshop were asked to answer to the question: “What struck you most in market developments over the last 2 years?” The following answers were given:

- the increase in trade by BRIC countries;
- the price volatility (mainly increases) of agricultural commodities;
- the high prices in the dairy market;
- the increase in milk production;
- the recurrence of the 2008 price spike in 2012;
- no progress being made in trade agreements;
- the impact of energy (oil) prices on agricultural markets;
- the changes to the CAP with “no quota”.

The discussion started around anticipated price levels for crops. Despite the recent decrease in crop prices, prices remain higher than they were in the early 2000s. The experts discussed whether this recent decrease could be seen simply as a return to normal prices or as a transition into a new period of prices that are lower in the long run and closer to the costs of production (putting a strong squeeze on margins).

The participants discussed whether or not this recent evolution reflects a change in paradigm compared with the 2007 change from a low-food-price economy to a high-food-price economy. Commodities other than agricultural ones are also affected by the downward trend in prices.

Another issue raised was whether or not cereal prices would remain relatively stable while the price of energy and fertiliser would keep on increasing. Land prices have also increased owing to an increase in urbanisation.
On the impact of environmental constraints and policies on agricultural markets, the participants concluded that there might be pressure on natural resources, i.e. sustainable use of water resources and land erosion, in some countries. However, some of these pressures can be compensated by increased imports. In addition, more investment can be shifted towards innovation and increasing productivity to address such constraints.

Another topic of discussion was the potential emerging players on the world market. Some Asian countries have increased their imports. India has become an important exporter of meat. However, there is a trend towards adopting self-sufficiency policies in certain countries, for example Indonesia. African countries have also improved and still have a lot of potential to increase both their production, with the help of investment, and their consumption (therefore also their imports).

As a wrap-up, Tassos Haniotis (DG AGRI) thanked the participants and announced that the outcome of all the sessions of the workshop will allow the European Commission’s services to improve their baseline and finalise the report “Prospects for Agricultural Markets and Income in the EU 2014–2024”. This report will be presented on 5 December 2014 to a large audience at a specific conference in Brussels.
Workshop Presentations
Prospects for Agricultural Markets and Income in the EU 2014–2024 – Scientific Background

Jacques Delincé (JRC-IPTS)

Modelling tools

- Agro-Economic Modelling Platform (IMAP) developed by JRC-IPTS in cooperation with DG AGRI widely used, robust and scientifically acknowledged tools
- partial-equilibrium (PE) and general equilibrium (GGE) models
- Modelling tools used for EU baseline and uncertainty analysis
  - AGLINK-COSIMO (EU module of OECD-FAO model)
  - CAPRI (highly disaggregated in regions and products)
  - ESM (EU Member States)
  - MAGNET or GLOBE (multi-regional, multi-sector GGE model)
  - IFM-CAP (Farm model)

Not a prediction? – uncertainty analysis

The baseline assumes normal yield conditions: yield uncertainties should be captured

Uncertainties

- Partial stochastic (probabilistic) analysis of about 40 macroeconomic and 70 yield variables
- Macroeconomic uncertainty (GDP index, GDP deflator, CPI, exchange rate, oil price)
  - Based on forecast error
- Yield uncertainty for crops (cereals, oilseeds, sugar beet and cane) and milk
  - Based on deviation to ±10% range
- Part only or all the variables concerned can be treated stochastically
- Stochastic model is run 600 times, of which more than 90% solve

Outlook Process

- First draft of baseline (based on OECD-FAO)
- Baseline review (discussed with DG AGRI market experts)
- Preliminary baseline & uncertainty assessment
- Outlook workshop
- Scientific outputs: proceedings, reports, calibration of models etc.
- Policy outputs: "Prospects for Agricultural Markets" report, etc.

Back into the future

- DG AGRI and JRC-IPTS in a policy – science regular partnership since 2008
  - Workshops / 2010 (full process)
  - Iterative process between DG AGRI, JRC stakeholders
  - Feeds further scientific work, calibration of other models, baseline for more in-depth scenario analysis

Uncertainties

- Brief introduction into methodology
  - Baseline: macroeconomic environment, normal weather conditions, no safety / animal disease disruptions - only one solution
- Alternative deterministic scenarios
  - alternative macroeconomic environment and/or yield pattern - only one solution
  - 3 examples this year:
    - Lower economic growth in Russia
    - Lower energy price in North America - shale gas boom
    - Different yield pattern following El Niño / La Niña
- Partial Stochastic Analysis
  - alternative macroeconomic environment and yield pattern - many (600) solutions
Prospects for Agricultural Markets and Income in the EU 2014-2024 – Main Assumptions

Pierluigi Londaro (DG Agri)

Policy assumptions
- CAP 2013 as far as possible
- Voluntary coupled support (Detail)
- Greening:
  - Permanent pasture kept constant,
  - Assumed limited effect of EPA & crop diversification at aggregated level
- Trade agreements only if ratified:
  - Concessions to UKRAINE included
  - FTA with CANADA not included
- Russian import ban assumed to remain 1 year

Macroeconomic assumptions

GDP recovery, Euro Area

Assumptions: coupled support

Oil price forecast, Brent
World Economic Outlook – Impact of a further slowdown in Russia’s growth on the world economy

Elisabeth Waelcroec-Rocha (HIS Global Insight)
Commodity Market Development in Europe—2014 Outlook Workshop

- Industrial materials prices quasi-stagnant as new supplies are sufficient to meet demand growth
- Crude oil prices have weakened ... but should resume an upward trend in the longer term
- Most oil consumed in 2040 – 88 million bpd – has yet to be developed or even discovered
- Upstream returns are much lower in recent years, due to rising costs and projects complexity
- Due to the softness in commodity prices, consumer price inflation remains subdued nearly everywhere
- Stronger interest rates and relative economic growth point to an increase in the dollar
- Western Europe will achieve modest growth
  - The Eurozone’s recovery stalled in the second quarter, as setbacks in Germany and Italy offset advances in Spain and the Netherlands.
  - In response to low inflation and a strong euro, the European Central Bank has cut interest rates and taken steps to boost liquidity.
  - Low interest rates, expanding export markets, and pent-up demand for durables will support growth.
  - Extended fiscal austerity, banking sector problems, and weak consumer finances will, however, limit progress in some countries.
  - The United Kingdom, Ireland, Sweden, and Germany will lead the region’s growth; Italy, France, Greece, and Portugal will lag.
  - Risks include price deflation, Japan-style stagnation, tight credit, social unrest, and escalation of the Ukraine crisis.

The euro will continue to depreciate against the US dollar until 2016, then will slightly appreciate.
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Summary
- The global economy will accelerate modestly in 2014–16.
- The US expansion will gain momentum, sparked by a pickup in capital spending, a housing market recovery, and an energy boom.
- The Eurozone will slowly recover as credit conditions improve.
- Emerging markets will not regain the peak growth rates of the 2000s, but another crisis is also unlikely.
- The Asia-Pacific region will make the strongest contribution to global economic growth in the decade ahead.
- Risks abound: wars in the Middle East, China’s rising debt, the Ukraine crisis, geopolitics, central bank “exit strategies,” and other policy mistakes.

The crisis between Russia-Ukraine influences growth perspectives in emerging Europe
- Russia’s sanctions in Ukraine have led to new sanctions, capital flight, reduced credit availability, and declining investment.
- The central bank has raised its policy rate from 5.5% to 8.0% in 2014 and will intervene in foreign-exchange markets to support the rouble.
- High inflation is eroding consumer purchasing power and confidence.
- Real GDP is projected to decline 0.5% in 2014, followed by just 0.9% growth in 2015.
- Sanctions will reduce access to oil field technology and Western capital, leading to a decline in oil production in 2016 and beyond.
- Unfavorable demographics, outdated manufacturing capacity, and an overburdened infrastructure will limit medium- and long-term growth.

Russia Slowdown Scenario Assumptions
- The worsened outlook starts in 2014q4
- There is no impact on gas or energy prices—Russia maintains its export levels in order not to deepen further the crisis.
- Low investment levels eventually damage Russia’s output potential, so the economy takes many years to fully recover.

Russia Slowdown Scenario: Exchange rates
- The political crisis impacts the exchange rate against the USD, the rouble depreciates by an additional 6% over 2014 and 2016

Russia Slowdown Scenario: Commodity prices
- The commodity prices show a significant decline due to the economic slowdown in Russia.

Russia Slowdown Scenario: Regional impacts
- The impact on regions such as Asia Pacific, Europe, and the Middle East is discussed, with emphasis on the decline in GDP and inflation rates.
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Prospects for Agricultural Markets and Income in the EU 2014-2024 – Impact of a slowdown of Russia’s economic growth on agricultural commodity markets

Fabien Santini, Sergio Rene Araujo, Ignacio Perez Dominguez (JRC-IPTS)

Context

The Russian economy future looks gloomy
- Pre-2014 economic downturn: from over 4% annual growth in 2010-11 to 2.4% in 2012 and 1.3% in 2013
- End of large scale investments
- Absence of structural reforms and privatization
- Erosion of confidence: higher volatility of capital outflows, deterioration of the Balance of Payments
- 2014: Russia under sanctions
- Domestic demand weak, Ruble depreciated, inflation, reduction of investments

Macroeconomic model

Relative isolation of Russia’s economy result in a weak impact on the rest of the world
- Assumptions: agricultural prices unchanged and energy prices exogenous
- The impact on world price is limited and principally explained by the slowdown in Russia
- Sensitivity analysis: In case of comitant oil price peak, direction and magnitude of shocks are opposite
Commodity Market Development in Europe—2014 Outlook Workshop

10-Year Outlook for Crude Oil Price
Stephen George (KBC Advanced Technologies plc)

**US LTO Production**
- US production has risen higher than most principal forecasts had imagined possible.
- New technology boosting LTO production also has the possibility to reinvigorate US “conventional” oil fields offshore.
- US exports are reaching the market as products rather than crude oil.
- The US is producing an increasing volume of natural gas liquids (NGLs) that will displace some demand for conventional oil.

**Global Demand Growth To Slow**
- Although there have been cutbacks, total growth for oil demand has been around 1.1 million bpd since 2000.
- In recent years, the US has started to slow.
- Slow economic recovery in OECD countries.
- Transport fuel efficiencies in US, EU (EU-28 standards, CO2 reduction).
- Rapid growth has been led by China, but now this too is starting to slow.
- Weak economic growth, driving demand down.
- Chinese drive to boost energy efficiency of new GDP growth.
- A question of whether pace of demand growth (6%) will be sustained.
- Substitution effects (gas for oil, NGLs for oil).

**Oil Market Today – Seeking Direction**
- After several steady years, a Brent price of around $100 per barrel, the outlook is for a downturn over the course of the summer months.
- A rebound rise in OPEC's light oil (LTO) production, coupled with the return of export forestry from Libya, has seen the market move from balanced to oversupplied.
- Recent reported suggestions of Saudi Arabia that OPEC could be flexible in the market, seeing prices to continue to find a new level closer to $80 before recovering to $80 in recent days.

**LTO vs Geopolitics: The Balance Tips**
- From 2010 – mid-2014, global supply disruptions had balanced the increase in US production.
- With the return of Libyan barrels from mid-2014, this is no longer offsetting the rising supply of Atlantic Basin products and light sweet crude, which is pressuring the price of Brent.
- Libya’s production has risen from around 180,000 bpd to 660,000 bpd since 1 July.
- Brent-related crude – some North Sea, but primarily West African – are being sold to Asia to clear the market.

**OPEC Intervention**
- OPEC production has been capped at 30 million bpd since 2009. There are no official country level quotas, but OPEC has managed to supply roughly this amount in spite of geopolitical issues.
- Non-OPEC production of crude oil and NGLs, along with weaker oil demand, will lower the call on OPEC by around 1 million bpd in 2015 and again in 2016.
- Since the Arab Spring, Middle Eastern OPEC countries have boosted spending on social and economic development, which has raised fiscal spending levels and fiscal “breakaway” income requirements from oil and gas revenues.
- The recent announcement by Saudi Arabia that it could live with $50 oil is probably a preliminary negotiating position to help build consensus at the forthcoming OPEC meeting (17 November).
- KBC expects OPEC to adopt an interventionist stance to continue to balance the global oil market with a view to sustaining the oil price above $100 per barrel.
- The absence of such a cut would likely see the oil price drift downward to $80 which would test the viability of higher marginal cost oil (Canada, Angola, North Sea).
**Conclusions and Key Risks**

- The DG AGRIFOR outlook for Brent crude oil price is reasonable given the balance of fundamental factors in the market.
- The longer-term trajectory and sustainability of North American production is unknown – sustained output growth poses a downside risk to the crude oil price.
  - LTC production may spread outside US; this could provide a broader supply of lower-cost oil than marginal “conventional” supplies from deep water.
  - OPEC will struggle to continue to cut in the face of ever-increasing non-OPEC production.
  - This would imply a new lower price equilibrium emerging around $65 to keep higher-cost oil out of the market. (Tweet rate for high prices is high again.)
- It will be difficult to subject returning geopolitical barrels to OPEC discipline.
- These were seen as base load before the outage, and these countries will have a stake and desire to make up for lost time / revenue.
- A rising supply of NGMS and natural gas may see some demand shift to these products.

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**Linkages between agricultural and energy commodities**

**JOHN BAFFES (The World Bank)**

Despite recent declines, prices are still high (1)

**Despite recent declines, prices are still high (2)**

... and relatively stable (1)

... and relatively stable (2)

Volatility of Returns
The Shale Gas phenomenon: potential consequences for EU agriculture

Ignacio Pérez Domínguez (JRC-IPTS)

Introduction

- New shale gas sources expected to change energy prices, eventually to impact agricultural markets → lower costs
- The magnitude and sign of the impact will depend on the energy intensity of the production
- Increasing shale gas production is also likely to affect fertilizer prices, since natural gas is the main production input for nitrogenous fertilizers.
- Different sources seem to suggest that this effect will persist for at least 10 years ... however large uncertainties remain (e.g. lower investments than expected in the US, sustainability concerns)

Methodology

- Simulation exercise with Aglink-Cosimo
- US and Canada oil price 5% below the EU representative price (Brent)
- US fertilizer price 20% lower than world price
- Shock capturing of commodity market dynamics over the medium-term
- Strong assumptions: crude oil and fertilizer prices exogenously shocked, just two segregated markets
Prospects for Agricultural Markets and Income in the EU 2014–2024 – DAIRY

Sophie Hélaine (DG AGRI), Fabien Santini (JRC-IPTS), Maciej Krzysztofowicz (DG AGRI)

Highlights
• Despite the short-term turmoil, a favourable medium-term outlook for milk and dairy products driven by
dynamic world demand
• Still growing domestic demand
• Firm milk prices and rather low feed costs increase of EU milk production by 0.6% a year.
• Cheese production is expected to absorb most of the additional milk delivered to dairies. More powders to be exported.

Dynamic world import demand

Deliveries projected at 158 Mt in 2024

Prospects for Agricultural Markets and Income in the EU 2014–2024

29 November 2017

Sophie Hélaine, Fabien Santini, Maciej Krzysztofowicz
EU Agriculture and Rural Development and Joint Research Centre
European Commission
Commodity Market Development in Europe—2014 Outlook Workshop

Thanks to productivity gains

A lower growth in the EU compared to other regions

More cheese mainly for domestic consumption and more exports of powders

Domestic consumption

The EU competitiveness on the world market

High EU share in world exports

Firm EU milk producer price around 350 EUR/t

Change in milk deliveries (%)
Uncertainties in milk and dairy markets

Thomas Fellmann, Fabien Santini, Sergio René Araujo Enciso, Ignacio Perez Dominguez (JRC-IPTS)
Milk and dairy markets: A Fonterra perspective

Francis Reid (Fonterra)
Commodity Market Development in Europe—2014 Outlook Workshop

Feedback on EC baseline for agricultural commodities markets 2014-2024

- The projected milk growth seems to be quite conservative.
- An allowance has been made for the current production growth in 2014. Potentially, 0.5% or even more, before growth will slow back to around 0 to 1.2% per annum.
- The revised growth assumptions of some member states and their farmers need to be considered, as the investment patterns of processors and farmers.
- In terms of which products will be produced, short-term price variations will lead to production volatility season to season.
- Longer-term production patterns will be increasingly driven by international (as opposed to intra-EU) market conditions e.g. investment in cheese will be negatively impacted if Russia remains closed to EU exports.

Consistent consumer trends influencing our business—the future for dairy is bright

New Zealand only produces 2-3% of the world’s milk

Current EU, USA and NZ Milk Production

Future milk production growth in New Zealand is likely to be constrained relative to the rest of the world. Fonterra is investing in New Zealand’s processing capacity and infrastructure:

- Sustainable dairy and environment constraints
- Investment for our New Zealand and international customers
- Increased regulatory restrictions—e.g. carbon, water
- Land availability and water use constraints
- Significant investment in high quality, reliable and sustainable manufacturing assets and infrastructure facilities to continue to New Zealand’s milk business to meet growing demands for dairy products globally
- New Zealand is the world’s largest dairy milk exporter and we continue to invest in and enhance the quality of our dairy milk.
- Turning over NZ milk into higher value products
Prospects for Agricultural Markets and Income in the EU 2014-2024 – MEAT SECTOR

Benjamin Van Doorslaer, Livia Galita, Sophie Hélaine (DG AGRI)

Highlights

- Increase in EU exports of pork and poultry, driven by world demand
- EU beef production goes down but at a slower pace
- Total EU meat consumption per capita goes down slightly, but different picture according to commodity and region
- EU meat prices follow the developments of the world market
Commodity Market Development in Europe—2014 Outlook Workshop

Questions

- What will determine the potential of the EU to increase its exports of pork and poultry?
- Will New Zealand come back to the EU sheep market as before the economic crisis?
- Will the EU beef price go below 3500 EUR/ton?
- What will happen with EU meat consumption per capita in the medium term?
EU Pork and Poultry Outlook: Rabobank projections for 2025 market compared to EC draft outlook

Nan-Dirk Mulder (Rabobank)

Rabobank
A leading global F&A bank

Key assumptions Rabobank model
1. Weak economic conditions at least until 2018 (in line with IMF forecasts)
2. Ongoing high and volatile feed prices - but slightly lower average as 2008-2013
3. No significant trade liberalisation with sensitive exporting areas
   a. Mercosur (Brazil especially risky for pork)
   b. United States
   c. China
4. No big disease outbreaks or food safety scandals
5. Beef and pork market to remain mature with no major changes in policy
6. Global dynamics remain bullish for animal protein industry

Asia and Middle East lack resources for production expansion

Grains and oilseed prices to remain high and volatile but with lower average

European Commission price outlook looks realistic

Setting up global supply chains to meet future Asian and Middle East demand
Commodity Market Development in Europe—2014 Outlook Workshop

Prospects for Agricultural Markets and Income in the EU 2014–2024 – BIOFUELS

Koen Dillen (DG AGRI), Rene Araujo, Ignacio Perez (JRC-IPTS)

Highlights

- Biofuel consumption could pick up but an important role is to be played by other renewable energy sources
- Ethanol consumption to increase in early years while biodiesel is rather stable
- Biodiesel production from non-agricultural sources increases importance
Comments Relating to the European Commission Biofuels Outlook
Wyatt Thompson (FAPRI)

**Two topics**

1. Outlook biofuel numbers

2. Biofuel mandates in the United States
Commodity Market Development in Europe—2014 Outlook Workshop

1. Falling fuel use
   If it is stronger, then maybe more biofuel use
   - 2011-13 to 21-23 per person
   - Petro: -10%
   - Diesel: -8%
   - GDP: -2%
   - Real petro (in euro): -3%
   (Futures: WTI – $80/pr to 2022)

   Affects Outlook?
   Fuel demand ↓ → Biofuel demand ↓

   Source: calculations from national data, EIA, and national data from countries
   Notes: data on fuel prices is mostly from two sources in the European Union, as oil and biodiesel are linked. The data, as well as understanding the ratio
   between fuel and diesel, is from 2011 to 2013 for all countries. Average prices in 2011-2012 and 2012-2013 are: WTI $105-$110, $90-$95, and $80-$85.

2. Ethanol production versus profits
   Reasons to make more biofuel

<table>
<thead>
<tr>
<th>No Change</th>
<th>Less than 5%</th>
<th>More than 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol from wheat</td>
<td>-8%</td>
<td>+6%</td>
</tr>
<tr>
<td>Ethanol from other grains</td>
<td>-6%</td>
<td>+8%</td>
</tr>
<tr>
<td>Biodiesel</td>
<td>+5%</td>
<td>+8%</td>
</tr>
<tr>
<td>Ethanol from sugar</td>
<td>-5%</td>
<td>+8%</td>
</tr>
</tbody>
</table>

   Greater departure after 2019?
   Profitability keeps rising, but use of these feedstocks falls.

   Source: calculations from national data.
   Notes: data on fuel prices is mostly from two sources in the European Union, as oil and biodiesel are linked. The data, as well as understanding the ratio
   between fuel and diesel, is from 2011 to 2013 for all countries. Average prices in 2011-2012 and 2012-2013 are: WTI $105-$110, $90-$95, and $80-$85.

3. Ethanol adoption possible
   Compare to US case

   - United States ethanol
     - Share ↑ from 6% in 2007 to ≤10% in 2013
     - Ratio of implied retail prices 70-85%

   - Differences
     - US policies (states, too)
     - Mandates, taxes, and labeling
     - EU fuel wholesale and retail prices, margins

   Source: calculations from national data, EIA, and national data from countries.
   Notes: data on fuel prices is mostly from two sources in the European Union, as oil and biodiesel are linked. The data, as well as understanding the ratio
   between fuel and diesel, is from 2011 to 2013 for all countries. Average prices in 2011-2012 and 2012-2013 are: WTI $105-$110, $90-$95, and $80-$85.

4. Trade
   Uncertainties!

   Markets and policies around the world?

   Second topic: US RFS Proposal

   1) Why propose changes?
      (Proposal! – not final.)
   2) What is different?
   3) Why do you care?

   Why change RFS (US biofuel mandate)?

   - RFS costs ↑ in 2013
   - RIN prices
   - EPA's Renewable Identification Numbers
   - Blend wall
   - Little cellulosic biofuel
   - EPA implements RFS
   - Waivers mandate
   - Gas gives reason
   - November 2013 proposal

   Notes: the overall RFS volume was 22.3 billion gallon (2012) with cellulosic biofuel
   222 million gallon (2012, 2013) the overall compliance rate was 99.76% and 99.38% respectively.

   Proposed RFS implementation
   Decide feasible volumes

   - Short summary of proposed method
     1. cellulose ethanol
     2. biofuel capacity
     3. biodiesel capability
     4. other advanced biofuels
     5. ethanol consumption, E10 or higher blend

   Notes: the overall RFS volume was 22.3 billion gallon (2012) with cellulosic biofuel
   222 million gallon (2012, 2013) the overall compliance rate was 99.76% and 99.38% respectively.
Prospects for Agricultural Markets and Income in the EU 2014-2024 – SWEETENERS

Koen Dillen, Bence Toth (DG AGRI), Rene Araujo, Ignacio Perez (JRC-IPTS)

Highlights

- White sugar prices to drop significantly
- Isoglucose will become a substantial part of the sweetener complex
- EU could shift from a net importer to being self-sufficient

Decline in white sugar prices (€/t)

The EU reaching self-sufficiency for sweeteners

Less exposure to the world market

- Will production increase further after 2017 despite low world prices?
- Will the EU price be considerably above the world market level?
- Will isoglucose become even more important than anticipated?
Uncertainties in sugar markets

Fabien Santini, Rene Sergio Araujo Enciso, Ignacio Perez Dominguez, Thomas Fellmann (JRC-IPTS)

Macroeconomic context

A macroeconomic context characterised by a stronger Euro and a lower oil price

World Market

Lower world prices imply larger consumption and production

World Market

The expansion of world sugar exports (1000t) is at the benefit of Brazil ...

EU Market

At EU level, increased consumption is covered by extra imports and fewer exports...

EU Market

... and EU isoglucose production is penalised

and sugar beet used for biofuels slightly increases
Sugar beet to ethanol +0.4% , EU ethanol production -1.4% 
> Sugar beet share in ethanol production = 2 pp
The European Union Sugar Market Post 2017
Lindsay Jolly (ISO)

- EU Sugar Market Post 2017
  Iso glucose: How Big a Threat?
  Sugar/Grain Balances:
  Sugar and grain surplus
  Sugar surplus / Grain deficit
  Sugar deficit / Grain surplus

- EU Sugar Market Post 2017
  EU and Import Parity Prices
  Scenario 1: Low World Sugar Prices
  EU sugar prices fall less
  Scenario 2: High World Sugar Prices
  EU sugar prices fall more

- Conclusions
  - EU post 2017: higher production is on the cards, on the back of a more efficient and leaner industry
  - The EU will lose its status as the world’s largest sugar importer
  - LDC/ACP countries may have to aim at expanding shipments to regional as well as other world markets

- Implications for ACP/LDC Countries
  - The higher the world sugar price, the less the EU will rely on imports and instead on domestic sweetness sources.
  - A decline in EU imports would divert sugar to regional/world markets from preferred suppliers.
  - Higher cost producers with limited alternative markets will likely face stiff challenges to remain viable.
Commodity Market Development in Europe—2014 Outlook Workshop

EU Sugar Market
The World’s Largest Importer 2008-2011
(Hundred Thousand Metric Tons)

Implications for ACP/LDC Countries
- ACP/LDC group contains a wide variety of sugar industries, ranging from some of the world’s lowest cost producers to high cost industries that are heavily reliant on protected markets for survival.
- Impact of EU reform will be greater for some industries than others.
- The depends on 2 main factors:
  - Exposure to the EU market;
  - Cost competitiveness.

Implications for ACP/LDC Countries

Sub Saharan Africa: Growing exportable surplus?
- Surplus Producers: Shift in focus away from EU towards:
  - Intra-regional trade
  - To be conducted within terms of RTAs
  - Deficit markets in MENA/Asia

Thank you!

Tuesday 25 - Wednesday 26 November 2014
23rd ISO Seminar
Canary Wharf, London.

www.isosugar.org
Prospects for Agricultural Markets and Income in the EU 2014–2024

Arable crops – cereals and oilseeds: "Towards more affordable grains"

Ignacio Pérez, René Araujo (JRC-IPTS), Koen Dillen, Sophie Helene (DG AGRI)

Highlights

- Total agricultural area slightly decreases over the outlook (-0.1% per year) with grassland area unchanged
- Good short-term production prospects for cereals, accompanied by low prices (5-year lowest)
- Medium term cereal production on trend: wheat mainly driven by area increase and coarse grains by larger yields
- Good production prospects for oilseeds
- Imports dependency of oilseeds for meals crushing continues high
- Good prospects for protein crops for feed (beans and peas)
El Niño and its impacts on agricultural production

Stefan Niemeyer (JRC-IES)
El Niño Impacts – Uncertainties

S. René Araujo-Enciso, Fabien Santini, Ignacio Pérez (JRC-IPTS)
Commodity Market Development in Europe—2014 Outlook Workshop

Assumptions
- A strong El Niño event in 2015 and a strong La Niña in 2016, followed by a weak El Niño and a weak La Niña in 2020 and 2021 respectively.
- Shocks to the yields based on scientific studies, historical yields and expert judgment.
- Analysis is limited to three major crops: maize, wheat and soybeans.

<table>
<thead>
<tr>
<th>El Niño</th>
<th>North America</th>
<th>Europe</th>
<th>China</th>
<th>South America</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean</td>
<td>-5%</td>
<td>2%</td>
<td>-1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Wheat</td>
<td>-4%</td>
<td>-6%</td>
<td>-6%</td>
<td>-6%</td>
<td>-6%</td>
</tr>
</tbody>
</table>

Soybean Yield

Change in the World Production (%): Crops

Change in the World Stock to Use Ratio (%): Crops

Impact in the EU-28
- The impact of an ENSO event is limited in Europe and is indirect:
  - Small increase in oilseeds, meals and oils production and trade.
  - Price effect on oilseeds, meals and oils declines the year of the shock but increases the next year in line with world markets.
  - Meat and dairy impacts are very small, less than 1% change in prices.

Concluding remarks
- El Niño has a bigger impact on agricultural markets than La Niña.
- The impact on the agricultural markets depend on when the ENSO strikes (overlapping with the crop or marketing year), its magnitude, and the area/regions affected.

Thanks for your attention!
Global markets for grains and oilseeds – current situation and points to note
Darren Cooper (International Grains Council)
Prospects for Agricultural Markets and Income in the EU 2014–2024: Income
Pierluigi Londero, Koen Mondelaers, Sophie Hélaine (DG AGRI)
Commodity Market Development in Europe—2014 Outlook Workshop

Highlights

- Assumption: after the slowdown due to economic crisis, the decline in workforce is expected to continue
- Real income per work unit fairly stable across outlook period
- Increasing share of energy, fertilizer, service and depreciation costs in total value of production

Stable real income per work unit in EU-28

Costs increase faster than value of production

Decreasing share of Net Value Added

Annexes - INCOME
Annex: List of participants

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European Commission
EUR 26965 – Joint Research Centre – Institute for Prospective Technological Studies

Title: Commodity Market Development in Europe – Outlook Workshop 2014

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Luxembourg. Publications Office of the European Union
2014 – 74 pp. – 21.0 x 29.7 cm

EUR – Scientific and Technical Research series – ISSN 1831-9424 (online)
doi:10.2791/669705
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