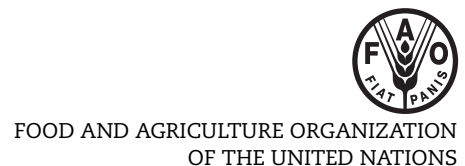


OECD-FAO Agricultural Outlook 2012-2021



Chapter 5

Oilseeds and Oilseed Products

Market situation

In mid-2010, international prices in the oilseed complex embarked on a new upward trend reflecting a progressive tightening of global supplies, combined with steady growth in demand for oils and meals. Spill-over effects from increasingly tight grain markets contributed to this development.

As the 2010 crop season drew to a close, it emerged that supply and demand tightness would continue and possibly intensify during 2011. Although setting out with relatively ample carry-in stocks, the new season began with only a marginal increase in total oilcrop production as increased competition for arable land between oilseeds and grains affected plantings. Adverse weather conditions also impaired the development of several oilcrops, in particular soybeans in Latin America.

With global production not adequate to satisfy demand, a drawdown in global inventories and a drop in global stock-to-use ratios became inevitable. Consequently, after an intermediary period when prices relaxed, quotations in the oilseed complex started firming again at the beginning of 2012. This also resulted because of concerns that competition for land between soybean and maize could be repeated in 2012/13.

Projection highlights

- Strong demand for food, feed and biofuel feedstock combined with high production costs underpin a sustained increase in nominal prices of oilseeds, protein meals and vegetable oils over the projection period.
- Compared to the 2009-11 average, world oilseeds production is expected to expand by only 20% over the coming decade. High costs, environmental constraints and sustained profitability of competing crops limit growth to only about half the rate observed over the previous decade. Production growth is based equally on continued area expansion and yield improvements.
- Oilseeds production and exports continue to be dominated by traditional players, but emerging exporters, such as Ukraine and Paraguay, are expected to increasingly contribute to global export growth. While South American soybean producers continue to dominate global meal exports, Indonesia and Malaysia expand their share of vegetable oil exports to over 60%. Imports of oilseeds and products are less concentrated, yet China and the European Union remain the dominant importers.
- Significant growth in biodiesel use is expected in developed and developing countries. However, food consumption stagnates in the developed world while *per capita* annual food use in developing countries is expected to expand by 2 kg or 12% over the next ten years, leaving it still at only about three-quarters of the level currently found in developed countries.

Market trends and prospects

Prices

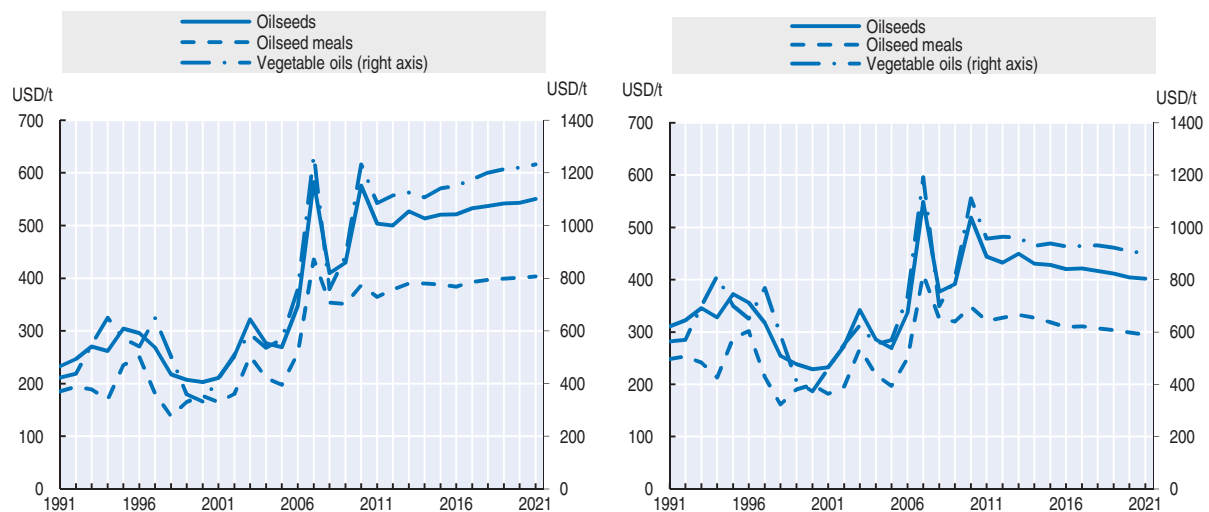
Given crude oil price levels, biofuel mandates and sustained demand for food uses of vegetable oil and for oilseed meal, oilseed and oilseed products prices are expected to increase in nominal terms over the projection period. Real prices are expected to weaken, though remaining at a higher plateau in historical terms (Figure 5.1).

Prices for oilseeds are projected to increase in nominal terms by 9% over the outlook period, significantly more than the rise anticipated for coarse grains and wheat, with which oilcrops directly compete for arable land. The price projections suggest a limited supply response in favour of oilseeds relative to competing crops.

Prices for vegetable oils, after having adjusted from their recent peak, are projected to first remain flat and then accelerate, growing faster than in the case of seeds and meals. The biofuel dimension is expected to continue to be an important market driver and the anticipated high crude oil price should contribute to the projected strength in vegetable oil prices.

The oilseed meal price projections are assumed to show a more steady development, driven by constant growth in meat demand. As meals are an important component in intensive livestock rearing, meals and meat prices tend to follow a similar trend, especially in the case of pork.

Figure 5.1. Oilseeds prices remain at higher plateau
Evolution of prices expressed in nominal terms (left) and in real terms (right)



Note: Oilseeds: Weighted average oilseed import price, Europe. Oilseed meals: Weighted average oilseed meal import price, Europe. Vegetable oil: Weighted average export price of oilseed oils and palm oil, Europe

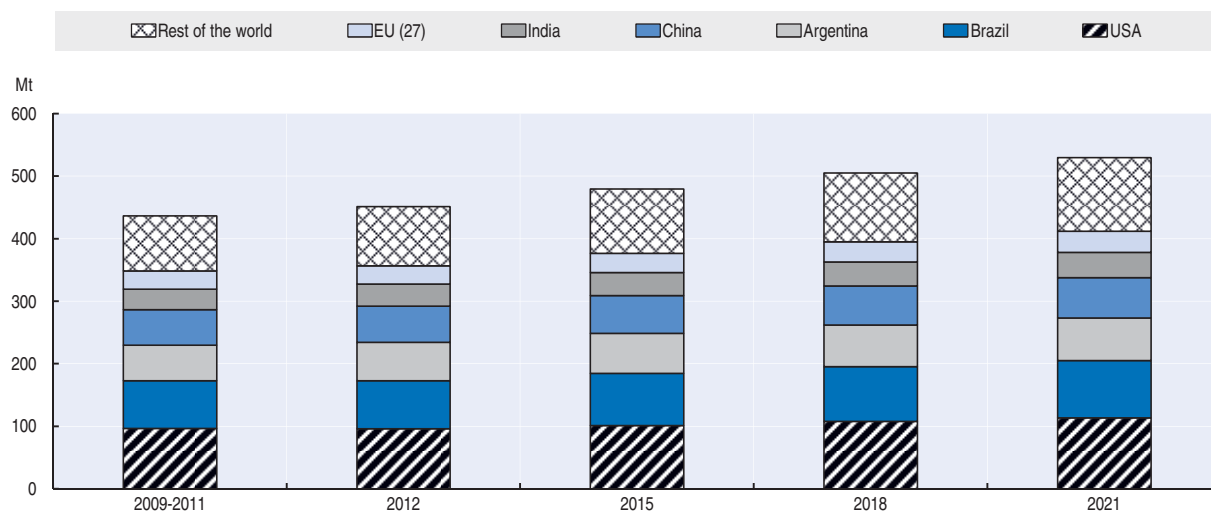
Source: OECD and FAO Secretariats.

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Oilseed output and crush

Compared to the 2009-11 average, world oilseeds production is expected to expand by about 21%, exceeding 529 Mt by 2021, thanks to higher area and yield levels and based on sustained demand for oilseeds products. Compared to the past decade, growth is expected to slow down markedly, mostly on account of a deceleration in area expansion due to high marginal costs of planting increases, environmental constraints and sustained profitability of competing crops (Figure 5.2).

Figure 5.2. **Moderate growth in global oilseeds production**
Evolution of global oilseed production over the projection period



Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932639761>

The United States is expected to remain the world's leading oilseed producer. Compared to the 2009-11 base period, the area planted to oilseeds in the United States is projected to expand by 7% by 2021, partly at the expense of wheat plantings, and yields are expected to expand by 10%.

Brazil and Argentina together should represent over 30% of global production in 2021. Production in these two countries is expected to rise by 20%. In the case of Brazil, growth should be largely based on area expansion. In China, production should continue rising at an average annual rate of about 1% over the projection period. China, despite being the world's fourth largest oilseeds producer just behind Argentina, would import oilseeds in amounts exceeding domestic production to satisfy the country's growing demand for oilseed products.

In the European Union, rapeseed plantings are expected to remain virtually unchanged from their current level, after increasing about 3 Mha in the past decade under the influence of biofuel utilisation mandates. Nonetheless, significant improvements in yields should lead to a 15% rise in oilseed production, which would enable the European Union to almost meet its biodiesel target. In the rest of the world, production is set to expand by as much as 34% due to traditional producers like Canada and a number of emerging, fast-growing countries, such as Paraguay, Ukraine and the Russian Federation. Overall, global oilseed production is projected to remain fairly concentrated, keeping the world market vulnerable to production shortfalls in major producing areas.

Based on the projected smaller rate of growth in global oilseed production, annual growth in world oilseed crush is expected to be half of what it was in the previous decade. This, in absolute terms, translates into an expansion of 73 Mt over the outlook period (compared to double that amount during the last ten years). The slowdown would involve most locations with the exception of the United States. The largest expansion in absolute terms should occur in Asia. Although China will experience further growth, expansion there is projected to be much lower than previously.

In line with the projected strength in prices, global stock-to-use ratio is expected to decrease from its 2011 level of 8% in the early years of the outlook period to about 7.1% by 2021.

Vegetable oil production and consumption

World vegetable oil production is expected to increase by 35 Mt compared to 2011 or about 28% over the outlook period – a rate exceeding that anticipated for annual oilcrop production, due to the contribution of two perennial oilcrops, palm and coconut oil. Global vegetable oil production should remain geographically concentrated, with a relatively small number of production centres (Indonesia, Malaysia, China, the European Union, United States, Argentina, Brazil and India) accounting for 79% of total output.

Indonesia and Malaysia are set to remain the world's two largest producers accounting for, respectively, 20% and 14% of global oil output in 2021. Over the next ten years, their combined palm oil output is projected to increase by 37% or 12 Mt. As a result, palm oil production is expected to account for one-third of global vegetable oil production in 2021. Compared to the last decade, however, palm oil production would grow considerably less, mainly reflecting possible limitations to area expansion in Indonesia and increasingly binding labour shortages in Malaysia. In Argentina and Brazil, where much of the growth in soybean oil production occurs, output levels are projected to exceed the 2009-11 average by more than 36%, which slightly lifts the share of the two countries in global output. In China, the European Union and the United States, output would expand by between 19 and 24%. The three countries' combined share in global production is expected to remain stable over the projection period. In China, vegetable oil production continues to rely on both domestically grown and imported seed.

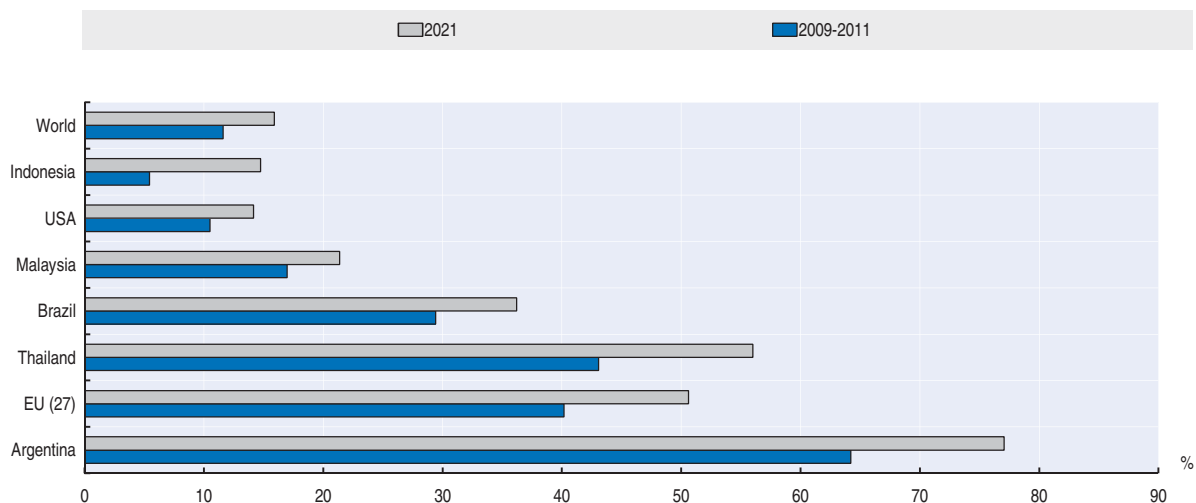
Global vegetable oil consumption is expected to grow by about 2% per year, less than half the rate observed in the last decade. Geographically, consumption should remain less concentrated than production; excluding the world's four leading consumers, other countries around the world may account for about half of total utilisation and present strong annual expansion levels, reflecting robust population and income growth rates in many countries. China should remain the single largest user, followed by the European Union, India and the United States.

At the global level, food consumption and biofuel demand are estimated to account for, respectively, around 64% and 33% of the increase in total utilisation when compared to 2009-11. Demand from the biodiesel industry is set to grow less than in the previous decade when biofuel demand accelerated as policies were put in place. The use of edible vegetable oil for biodiesel is still expected to expand to 30 Mt, which corresponds to a 76% increase over the base period and raises the share of vegetable oil consumption used for world biodiesel production from 12% in 2009-11 to 16% in 2021 (Figure 5.3). Although rapeseed and soybean oil are projected to remain the main feedstock, the use of palm oil is expected to more than double over the coming decade, with around 9% of global palm oil production absorbed by the biofuel industry in 2021.

In the developed world, food use and biodiesel demand should account for, respectively, 27% and 73% of total consumption growth. Biodiesel demand growth should continue to be led by the European Union, where, by 2021, biofuel producers are expected to absorb 51% of domestic vegetable oil up from 40% in 2009-11. In the United States, the absorption rate should rise slightly to 14%. The underlying growth projections for biodiesel output are close

Figure 5.3. **Biodiesel to use a large share of global vegetable oil consumption**

Share of vegetable oil consumption used for biodiesel production in selected countries



Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932639780>

to 6% per year for the European Union and less than 2% for the United States. As to developed country food use, it is expected to grow by 10% over the entire outlook period with the average *per capita* consumption about unchanged at 24-25 kg per year.

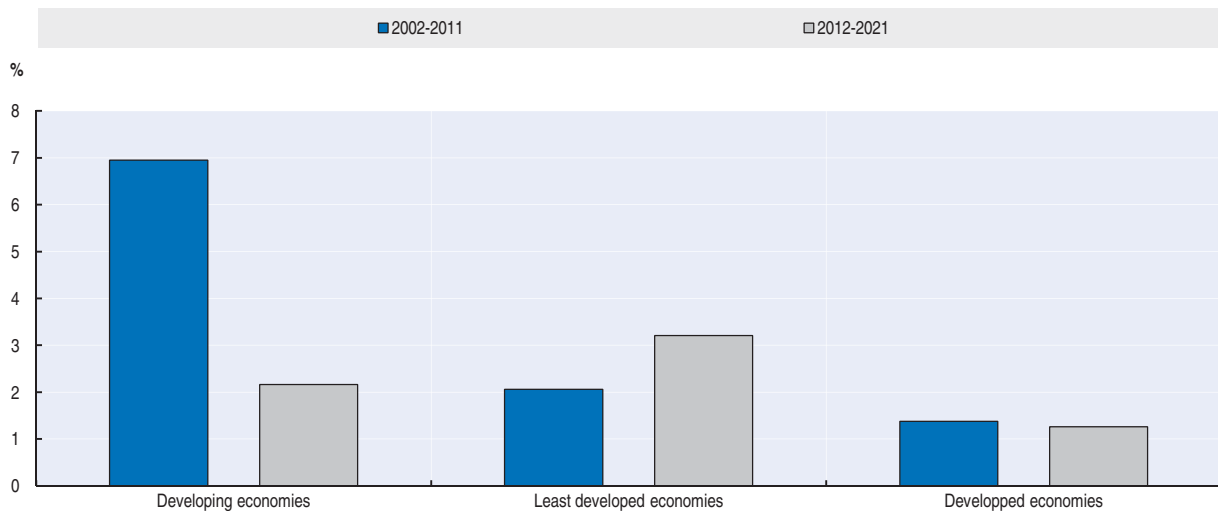
In developing countries, food demand is projected to continue to drive consumption. Although the average *per capita* intake of vegetable oil is set to rise by about 2 kg to 18 kg per year, the pace of growth would decrease considerably compared to the past. Starting from a relatively small base, demand from the biodiesel industry is expected to almost double in the developing world, with growth in absolute terms not far behind that projected in developed countries. Growth is expected in the traditional producers, Indonesia, Malaysia and Argentina, but also in other parts of Asia (Thailand, India) and South America (Brazil, Colombia). Argentina further expands its export-oriented biodiesel industry, which, by 2021, could absorb 31% of domestic vegetable oil output.

Oilseed meal production and consumption


Global meal output is projected to increase by 23%, reaching almost 315 Mt by 2021. Production remains highly concentrated, with six countries (Argentina, Brazil, China, the European Union, India and the United States) accounting for over 80% of global production. In China and the European Union, meal production would continue to rely on both domestically grown and imported seed. The growth in domestic meal production in the European Union is largely due to the expansion of rapeseed production used to produce biodiesel.

Global meal consumption should rise by 23%, with developing countries accounting for close to three quarters of the increase. Compared to the past decade, annual consumption growth would slow down markedly (Figure 5.4), mostly reflecting the situation in developing countries, where livestock industries are expected to grow at a much slower pace than over the previous decade. Relatively low but stable growth is expected among developed nations, where livestock industries are mature. Consumption growth is expected to accelerate only in the group of least developed countries, in line with expanding domestic meat production.

Figure 5.4. **Oilseed meal use growth rates to slow down**
Comparison of average growth rates of oilseed meal use



Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932639799>

The developing countries' share in global consumption rises to 60% in 2021. China should remain the world's single biggest consumer with a share of 26%, although the country's projected annual increase is anticipated to drop markedly as the structural change in the livestock industry should near completion. To meet rising demand, the country would continue to rely strongly on the crushing of imported oilseeds. In the second largest group of consumers, the European Union, annual growth should drop below 1%, whereas in the United States meal use expands again, following a period of decline that was caused by rising availability of dried distillers grains (DDG). Increased growth is also projected for a number of smaller consumers, notably Argentina, Indonesia, Iran and the Russian Federation.

Trade in oilseeds and oilseed products

Growth in world oilseed trade is projected to slow down significantly compared to the last decade. This development is a direct result of the deceleration in the Chinese crushing sector. The country is expected to expand its crush by about 20 Mt less than in the previous decade, which results in an import slowdown of the same amount. Because most other major traders are expected to roughly maintain their growth patterns, global trade growth projections range about 20 Mt lower than observed in the previous decade. Imports by the European Union remain by far the second largest, but should increase only marginally, as increased crush demand is met primarily via rising domestic oilseed production. Many smaller importers are expected to expand their imports significantly relative to the base period, but in absolute volumes these additional shipments are small.

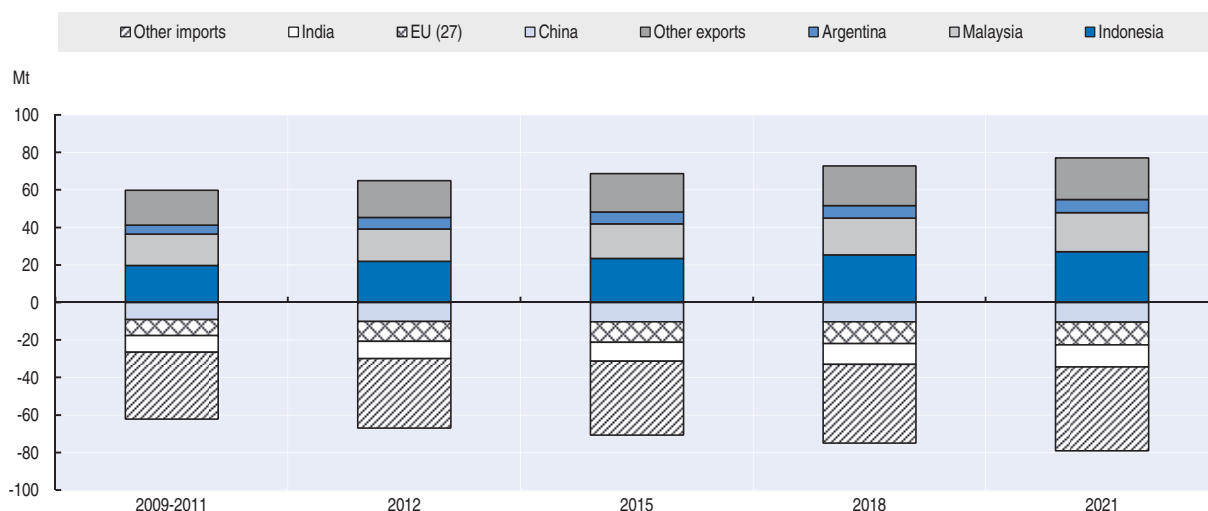
As to global oilseed exports, the slowdown in growth is expected to apply equally to developed and developing countries. In the United States, exports should grow by 12% over the projection period. While Brazil's shipments should grow by 9% over the next ten years, Argentina's exports are expected to remain almost unchanged as the country's export tax regime is expected to continue favouring the exportation of processed products. Overall, world trade in oilseeds remains highly concentrated, with the four leading exporters

holding a market share of over 80%, and Brazil and the United States alone accounting for two-thirds of the market.

For oils and meals, the projections point to a slowdown in trade growth. Deceleration should be more pronounced in developed than in developing countries. Regarding vegetable oil exports, the combined share of Indonesia and Malaysia in total exports is set to climb to 65% by 2021 (Figure 5.5). Argentina should remain the third largest exporter of vegetable oil (with a share of 9%) as well as the world's top supplier of oilmeals (with a share of 40%). The country should ship over 60% of its oil output and close to 90% of domestic meal production. The United States and Brazil, by contrast, are expected to continue concentrating on the exportation of seeds.

Figure 5.5. **Vegetable oil exports to be dominated by Indonesia and Malaysia**

Evolution of vegetable oil trade over the projection period



Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932639818>

As to vegetable oils, the share of developing countries in Asia – led by India and China – in global imports should rise to 54% in 2021. On average, about 50% of consumption in developing Asia would come from imports. In India, where foreign purchases expand by 33%, the rate of import dependence should reach 60%. China, in addition to covering a considerable part of its oil requirements *via* the crushing of imported oilseeds, is set to expand oil imports by 13%, implying that about one-third of total domestic consumption will be covered *via* imports.

In the European Union, the growth pace of vegetable oil imports should slow down compared to the past. To meet both industrial and traditional vegetable oil demand, imports will rise by about 35% over the outlook period. Combined, the European Union, India and China are expected to reach a market share of 44%. During the outlook period, India is set to surpass the European Union as the world's top importer. The group of least developed countries is expected to form a growing deficit region. Vegetable oil production in these countries would not be sufficient to satisfy strong internal demand growth.

With respect to protein meals, when compared to 2009-11, over 80% of the anticipated expansion in global import demand is projected to occur in the developing world, with developing countries in Asia accounting for over 50% of the increase. In China, meal

imports should expand but remain insignificant compared to consumption, as growth in domestic meal demand would continue to be primarily met by crushing imported oilseeds. In the European Union, by far the world's largest importer of meals, purchases are projected to grow only marginally, in line with the livestock sector's stable consumption.

Main issues and uncertainties

In addition to the issues and uncertainties common to most commodities (macroeconomic environment, crude oil prices, weather conditions), each sector has its specific supply and demand sensitivities.

Supply side

Area

The *Outlook* projects a significant slowdown in area expansion of oilcrops compared to the previous decade. Relative stagnation in harvested area expansion is expected in the soybean producing countries of South America, rapeseed producing Western Europe and the palm oil producers in South East Asia. These lower growth expectations are based on continuously increasing marginal costs of pasture and forest land conversion into arable land, tightening restrictions on such land use changes and sustained high prices for competing commodities such as cereals and pasture based livestock products. While substitution of crops within the current arable area is mostly guided by economic and agronomic considerations, direct and indirect land use change of pasture and forest areas will be increasingly controlled by government regulations addressing environmental concerns. These policies have to address the complex balance between protecting consumers from high prices, maintaining a viable farm sector and commitments to climate/environment protection goals. The type and magnitude of impact these regulations will have on future area developments is difficult to predict and requires continued monitoring and analysis. Box 5.1 illustrates these issues using the example of the palm oil industry in Indonesia.

Yields

The projected development of global supply patterns is equally driven by yield improvement expectations. As yield growth is based on advances in the production frontier as well as improvements in the commercial realisation of the existing possibilities. The *Outlook* needs to make assumptions about both aspects, as the relative contributions of both factors shape the projections for production, trade and market share development. Depending on the development stage of an agricultural sector, growth potential and main drivers vary. Making adequate assumptions by country and across different oilcrops remains a challenge in this *Outlook*. Chapter 2 provides background information and scenario analysis illustrating this issue.

Demand side

Vegetable oil food uses

Growing food use remains globally the most important driver of vegetable oil consumption. In the developing world, *per capita* consumption is projected to increase by about 12% over the coming decade. In developed countries, on the other hand, no further increases are projected.

Box 5.1. Palm oil development vs. forest conservation in Indonesia-issues and challenges

Supported by the rapid demand growth for vegetable oils, palm oil production in Indonesia has expanded rapidly over the last two decades. Output grew almost tenfold between 1990 and 2011. In 2005, Indonesia passed Malaysia as the world's largest palm oil producer (OECD, 2012). While the palm oil sector has undoubtedly emerged as an important contributor to export revenue and rural employment, the environmental impacts of these developments (loss of biodiversity, soil loss/degradation, carbon sequestration issues and GHG emission levels) have been controversial. In particular, the conversion of primary forests into plantations has been criticised. The existing palm oil production is concentrated in Sumatra and to a lesser extent in Kalimantan. Further expansion is likely to occur in Sumatra, Kalimantan, Papua, and Sulawesi with a projected production increase from 25 Mt in 2012 to 32.5 Mt in 2021 (OECD, 2012).

With more than 100 Mha of forested land, Indonesia holds the world's third largest area of tropical forests after Brazil and Congo. Due to significant efforts, the annual decline in primary forests has slowed since 1997-98 to reach slightly above 1 Mha in 2009-10 (OECD, 2012). Indonesia, with its fast growing economy, faces strong challenges to find a sustainable balance between economic development and environmental protection. The logging and plantation crop industries are often at the centre of this debate.

The political decentralisation process was launched in 2001. Inconsistent legislation, together with planning and institutional difficulties created uncertainty on the rights of each government level to control forest resources. The multi-layer legal framework can give rise to conflicting interest between different levels of government. As a result, land allocation problems have occurred (World Bank, 2010), because of the primary use of forests for logging and the subsequent conversion of the cleared land into perennial crop plantations, the land administration process has been complicated and cases of license abuse have been reported (Sawit Watch, 2006). Further improvements in the transparency of the allocation of forest use rights are expected to contribute to the implementation of a consistent and sustainable development strategy (World Bank, 2006).

In May 2011, a two-year freeze on new logging, mining and agricultural development permits for more than 44 Mha of primary forest and 21 Mha of peat land came into effect. Based on existing palm oil development permits for 11.4 Mha, slower but continuing oil palm area expansion is, however, projected (GAIN, 2011; OECD, 2012). In addition to the carbon market mechanism REDD (Reducing Emissions from Deforestation and Forest Degradation) launched in September 2010, Indonesia started the Indonesia Sustainable Palm Oil (ISPO) scheme in November 2010 to promote environmental sustainability in palm oil production. It has been implemented voluntarily since February 2011 and will become mandatory for all Indonesian palm oil producers in 2012.

As Indonesia continues its economic and social development, environmental protection issues will remain an important concern for all levels of government, private industry and society in general. As a broad range of interests have to be addressed, well targeted solutions will need to be found in order to provide an enabling environment for sustainable growth in this vast and diverse country.

Interestingly, *per capita* food use seems to have levelled off at about 36 kg per year in the United States, 24 kg in the European Union, and only 17 kg in Japan. Such differences in consumption levels show the challenges involved in anticipating the type of consumption pattern that developing countries are likely to follow. It becomes clear that

beyond a certain income level, culture and lifestyle are the crucial factor in determining the consumption level of vegetable oils. As more and more countries approach income levels where food demand becomes virtually inelastic, assessing the cultural aspect becomes an important aspect in food consumption projections. Careful observations of trends in diets and demographic processes, such as urbanisation, are needed to supplement the economic modeling underlying this Outlook.

Vegetable oil non-food uses

Increased demand for oils and fats from biodiesel producers has become over the past few years one of the driving forces of the global vegetable oil market. Any changes in biofuel policies in the European Union and in the United States – but also in several other countries, including developing ones – as well as any advances being made on the next generations of biofuels is bound to alter the demand of vegetable oils for non-food purposes. Furthermore, in the coming years, national biofuel policies may also increasingly affect international trade in vegetable oils used as biodiesel feedstock as well as trade in biodiesel itself.

Protein meal use

Meal demand projections have to take into account two offsetting developments. Currently, mostly in developed countries, feed rations are being optimised, reducing the feed need per unit of output. In developing countries, the livestock industry is becoming more industrialised which means commercial feed replacing table scraps and pasture, thus increasing the use of protein meals per unit of output. Once this process is completed, countrywide optimisation will start to shape the national picture. Over the course of a ten-year projection, the relative importance of both of these developments constantly shifts and alters the relationship between feed demand and livestock output. The assessment of such developments presents a source of uncertainty and its evaluation requires diligent market monitoring and adaptation of model specifications.

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Table A.11. World oilseed projections

		Avg 09/10- 11/12est	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
OILSEED (crop year)¹												
OECD²												
Production	mt	150.1	151.9	154.9	158.2	160.8	163.9	166.4	169.5	172.0	175.0	177.6
Consumption	mt	132.9	140.2	141.6	144.4	146.3	148.6	150.5	152.3	153.8	155.4	156.7
Crush	mt	117.8	124.9	126.1	128.7	130.6	132.7	134.6	136.3	137.7	139.2	140.5
Closing stocks	mt	16.3	15.9	15.4	16.2	16.5	16.6	16.2	16.3	16.4	16.6	16.7
Non-OECD												
Production	mt	286.3	299.4	305.2	312.6	318.7	324.9	329.5	336.0	342.3	348.3	352.2
Consumption	mt	300.7	315.1	321.6	327.8	335.3	342.2	348.4	355.2	362.4	369.7	375.7
Crush	mt	245.8	258.6	264.1	269.3	275.6	281.4	286.5	292.2	298.2	304.2	309.2
Closing stocks	mt	22.2	18.6	18.7	19.1	19.4	19.8	19.8	20.2	20.8	21.5	21.3
WORLD												
Production	mt	436.5	451.3	460.2	470.8	479.5	488.8	495.9	505.4	514.4	523.3	529.7
Area	mha	205.3	221.4	223.6	226.0	228.2	230.4	231.4	233.6	236.0	238.3	238.9
Yield	t/ha	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2
Consumption	mt	433.6	455.3	463.2	472.2	481.6	490.9	498.9	507.6	516.3	525.1	532.5
Crush	mt	363.7	383.5	390.2	398.0	406.2	414.2	421.1	428.5	435.9	443.4	449.7
Exports	mt	96.5	113.4	115.2	117.4	120.6	123.4	125.3	127.2	129.2	131.3	133.2
Closing stocks	mt	38.5	34.5	34.1	35.3	35.9	36.4	36.0	36.5	37.2	38.1	38.0
Price ³	USD/t	503.1	499.9	526.6	513.5	520.6	521.2	533.1	537.2	542.1	542.9	550.3
PROTEIN MEALS (marketing year)												
OECD²												
Production	mt	80.9	85.4	86.1	87.9	89.0	90.5	91.7	92.8	93.8	94.7	95.6
Consumption	mt	109.8	113.2	113.8	115.2	116.8	118.5	119.7	120.6	122.1	123.4	124.7
Closing stocks	mt	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.5	1.5	1.5
Non-OECD												
Production	mt	174.9	183.3	187.2	190.9	195.4	199.6	203.3	207.3	211.5	215.7	219.3
Consumption	mt	142.6	152.7	156.3	160.3	164.2	168.2	172.1	176.2	179.8	183.7	186.8
Closing stocks	mt	13.5	14.1	14.4	14.8	15.2	15.5	15.7	16.0	16.3	16.6	16.9
WORLD												
Production	mt	255.8	268.7	273.3	278.8	284.4	290.0	294.9	300.1	305.2	310.5	314.9
Consumption	mt	252.4	265.8	270.1	275.5	281.0	286.7	291.8	296.8	301.9	307.1	311.6
Closing stocks	mt	15.0	15.7	15.9	16.3	16.7	17.1	17.2	17.5	17.8	18.1	18.4
Price ⁴	USD/t	367.2	378.4	389.9	390.3	387.4	384.2	392.9	396.5	399.4	401.1	403.6
VEGETABLE OILS (marketing year)												
OECD²												
Production	mt	32.1	33.6	34.0	34.9	35.5	36.2	36.8	37.3	37.7	38.1	38.5
Consumption	mt	44.9	48.2	48.5	49.5	50.4	51.1	51.9	52.6	53.4	54.3	55.0
Closing stocks	mt	3.1	2.9	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8
Non-OECD												
Production	mt	112.2	119.8	122.8	125.7	128.7	131.6	134.3	137.2	140.2	143.2	146.0
Consumption	mt	99.5	107.7	109.7	112.6	115.5	118.3	121.0	123.7	126.3	128.8	131.4
Closing stocks	mt	17.5	18.0	18.6	19.0	19.3	19.6	19.7	19.8	20.0	20.3	20.4
WORLD												
Production	mt	144.3	153.4	156.8	160.5	164.2	167.7	171.1	174.5	177.9	181.3	184.5
Of which palm oil	mt	48.1	51.9	53.4	54.9	56.3	57.7	59.1	60.5	61.9	63.3	64.6
Consumption	mt	144.4	155.9	158.2	162.1	165.8	169.4	172.9	176.3	179.7	183.1	186.4
Food	mt	113.2	126.9	128.4	130.9	133.1	135.7	138.1	140.5	142.8	145.1	147.4
Biofuel	mt	19.9	20.7	21.3	22.6	24.0	25.0	25.9	26.8	27.7	28.8	29.6
Exports	mt	55.2	65.0	66.1	67.6	68.8	70.0	71.5	72.9	74.4	75.7	77.1
Closing stocks	mt	20.7	20.9	21.5	21.9	22.2	22.5	22.6	22.7	22.9	23.1	23.2
Price ⁵	USD/t	1 066.9	1 113.9	1 124.8	1 107.4	1 140.6	1 150.3	1 174.9	1 200.9	1 213.6	1 219.9	1 232.5

1. Beginning crop marketing year - see Glossary of Terms for definitions.
2. Excludes Iceland but includes all EU27 member countries.
3. Weighted average oilseed price, European port.
4. Weighted average protein meal, European port.
5. Weighted average price of oilseed oils and palm oil, European port.

Source: OECD and FAO Secretariats.


StatLink  <http://dx.doi.org/10.1787/888932642782>

Table A.12. Oilseed projections

Crop year

	PRODUCTION (Kt)		Growth (%) ⁴		IMPORTS (Kt)		Growth (%) ⁴		EXPORTS (Kt)		Growth (%) ⁴	
	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021
WORLD	436 466	529 707	3.56	1.79	110 707	135 812	6.61	1.79	113 148	133 199	6.38	1.83
DEVELOPED	174 412	213 898	3.78	2.02	27 684	30 477	0.37	0.80	55 505	68 532	6.36	2.67
NORTH AMERICA	114 212	135 960	2.46	1.82	1 723	1 961	2.38	-0.05	49 640	56 997	5.91	2.19
Canada	17 372	22 168	9.64	1.26	608	730	-5.99	2.28	9 969	12 542	12.41	1.15
United States	96 841	113 792	1.47	1.94	1 115	1 231	9.95	-1.17	39 671	44 456	4.66	2.50
EUROPE	51 294	66 015	6.94	2.41	18 900	21 726	1.22	1.30	3 983	8 375	13.09	6.37
EU(27)	29 223	33 508	4.83	1.58	17 247	19 742	0.50	1.21	810	631	1.21	-1.23
Russian Federation	8 587	12 052	7.47	2.99	1 019	1 323	49.69	3.00	241	974	-2.03	8.03
Ukraine	11 323	17 520	14.38	3.69	21	10	1.64	-7.30	2 690	6 226	26.37	7.30
OCEANIA DEVELOPED	3 378	4 699	7.53	1.98	86	69	1.12	0.00	1 607	2 564	6.37	2.47
Australia	3 368	4 689	7.51	1.98	72	62	1.72	0.00	1 606	2 563	6.37	2.47
New Zealand	10	10	13.88	0.00	14	7	1.01	-0.05	0	0	-0.17	-1.44
OTHER DEVELOPED¹	5 527	7 224	3.76	2.28	6 975	6 720	-2.11	-0.43	275	596	11.44	7.06
Japan	253	251	0.26	-0.01	5 963	5 767	-2.78	-0.38	0	0	-4.07	0.00
South Africa	1 583	2 145	6.70	2.54	149	148	3.81	-0.51	177	390	24.74	9.62
DEVELOPING	262 053	315 809	3.41	1.64	83 023	105 335	9.58	2.10	57 643	64 667	6.30	1.01
AFRICA	12 726	16 129	1.01	2.00	2 913	3 731	12.55	2.58	524	408	3.01	-2.55
NORTH AFRICA	762	922	-2.23	0.40	2 774	3 590	13.65	2.60	37	50	-3.14	-2.96
Algeria	105	121	0.75	-0.70	206	232	13.55	0.70	0	0	0.00	-0.05
Egypt	488	586	-4.01	0.18	1 729	2 407	20.73	3.20	31	47	9.38	-3.09
SUB-SAHARAN AFRICA	11 963	15 207	1.24	2.11	139	141	-0.18	2.13	487	358	3.45	-2.49
LATIN AMERICA and CARIBBEAN	145 912	178 357	4.86	1.81	8 474	9 254	1.85	0.58	55 668	63 224	6.67	1.14
Argentina	56 971	68 288	4.43	1.20	1 294	1 686	15.13	1.16	14 454	14 566	4.70	-0.65
Brazil	76 253	91 380	4.86	1.89	79	58	-28.50	1.50	34 298	37 225	6.48	0.90
Chile	83	89	1.11	0.33	295	350	4.06	2.98	7	5	-2.79	-2.96
Mexico	300	328	0.08	2.11	5 297	5 739	1.10	0.51	7	5	-5.32	0.33
Uruguay	2 028	4 300	18.87	8.06	10	5	-2.99	-8.28	1 767	3 752	18.83	8.28
ASIA and PACIFIC	103 415	121 324	1.90	1.35	71 636	92 351	10.77	2.24	1 451	1 034	-2.36	-4.04
Bangladesh	320	438	0.89	2.48	164	347	3.07	9.16	0	0	0.00	-0.65
China ²	56 375	64 373	0.74	1.21	55 078	72 754	13.35	2.41	866	559	-5.14	-5.51
India	33 032	40 679	4.77	1.68	227	265	50.58	-3.91	316	243	7.46	-2.80
Indonesia	2 070	2 554	1.57	2.13	2 076	2 585	5.78	1.76	6	5	-1.79	-0.17
Iran, Islamic Republic of	744	870	4.07	0.67	828	1 334	3.75	4.71	8	12	3.20	-0.84
Korea	135	135	0.63	0.00	1 587	1 955	-0.39	1.45	0	0	-7.78	0.00
Malaysia	6	7	3.26	1.18	662	615	0.24	0.12	21	27	-7.90	-0.02
Pakistan	4 915	5 817	1.67	1.45	1 372	1 422	6.25	0.34	46	50	77.90	-0.05
Saudi Arabia	4	4	0.00	0.09	52	78	5.04	2.21	0	0	0.00	-0.32
Turkey	2 365	2 393	0.69	-1.22	2 520	2 785	9.31	1.96	28	30	19.19	-0.39
LEAST DEVELOPED COUNTRIES (LDC)	8 595	10 729	1.14	1.92	299	507	1.13	6.93	234	249	-0.04	-0.29
OECD³	150 141	177 553	2.94	1.73	35 830	39 547	0.48	0.85	52 120	60 253	5.82	2.16
NON-OECD	286 325	352 155	3.90	1.82	74 878	96 265	10.95	2.21	61 028	72 946	6.82	1.57

Note: Crop year: Beginning crop marketing year - see Glossary of Terms for definitions.

1. Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.
3. Excludes Iceland but includes all EU27 member countries.
4. Least-squares growth rate (see glossary).

Source: OECD and FAO Secretariats.

Table A.12. Oilseed projections (cont.)

Crop year

	CONSUMPTION (kt)		Growth (%) ¹		DOMESTIC CRUSH (kt)		Growth (%) ¹	
	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021
WORLD	433 620	532 451	3.79	1.76	363 651	449 699	4.10	1.79
DEVELOPED	145 954	175 739	2.31	1.50	129 865	158 231	2.70	1.59
NORTH AMERICA	65 425	80 855	0.44	1.39	58 071	73 135	0.89	1.49
Canada	8 110	10 338	5.43	1.46	7 224	9 336	6.54	1.44
United States	57 315	70 517	-0.15	1.38	50 847	63 799	0.23	1.50
EUROPE	66 632	79 340	4.86	1.76	60 470	72 463	5.25	1.84
EU(27)	45 900	52 587	3.13	1.48	41 957	48 301	3.37	1.55
Russian Federation	9 543	12 415	9.55	2.67	8 917	11 643	9.71	2.72
Ukraine	8 648	11 298	12.15	2.14	7 697	10 177	14.27	2.21
OCEANIA DEVELOPED	1 651	2 204	6.80	1.37	1 447	1 948	7.33	1.57
Australia	1 628	2 188	6.82	1.38	1 434	1 934	7.33	1.58
New Zealand	23	17	5.33	0.02	13	14	7.74	0.01
OTHER DEVELOPED²	12 247	13 340	-0.06	0.71	9 876	10 685	-0.39	0.64
Japan	6 225	6 019	-2.67	-0.36	5 273	5 123	-3.03	-0.29
South Africa	1 591	1 902	4.30	1.22	1 400	1 663	4.46	1.15
DEVELOPING	287 666	356 712	4.61	1.89	233 786	291 468	4.94	1.91
AFRICA	15 111	19 446	2.54	2.23	9 330	11 624	3.30	1.87
NORTH AFRICA	3 500	4 457	8.65	2.19	2 869	3 711	9.27	2.29
Algeria	306	353	7.16	0.25	185	228	5.51	0.71
Egypt	2 186	2 943	10.65	2.65	1 846	2 534	12.05	2.76
SUB-SAHARAN AFRICA	11 611	14 989	1.14	2.25	6 461	7 913	1.31	1.68
LATIN AMERICA and CARIBBEAN	97 764	124 230	3.97	2.05	90 435	116 161	3.83	2.14
Argentina	43 348	55 281	4.39	1.71	42 355	54 235	4.47	1.73
Brazil	41 597	54 214	3.96	2.61	36 907	49 053	3.35	2.84
Chile	372	434	3.55	2.47	330	390	3.58	2.50
Mexico	5 589	6 062	1.01	0.59	5 098	5 571	1.63	0.64
Uruguay	275	543	19.18	6.62	236	499	20.34	7.22
ASIA and PACIFIC	174 791	213 036	5.18	1.77	134 021	163 683	5.89	1.74
Bangladesh	486	785	1.71	4.95	415	689	1.81	5.24
China ³	112 263	136 520	6.04	1.87	89 876	110 906	7.07	1.97
India	32 666	41 150	4.86	1.71	25 962	32 138	4.58	1.48
Indonesia	4 139	5 132	3.53	1.96	119	139	2.57	1.36
Iran, Islamic Republic of	1 555	2 191	3.90	2.97	1 357	1 933	4.03	3.09
Korea	1 721	2 090	0.03	1.35	1 247	1 415	-0.25	0.82
Malaysia	637	595	0.56	0.14	546	483	0.67	-0.34
Pakistan	6 229	7 187	2.52	1.25	4 728	5 068	2.97	0.59
Saudi Arabia	55	82	4.43	2.13	38	56	4.98	1.64
Turkey	4 754	5 148	4.18	0.44	3 676	3 796	3.64	-0.20
LEAST DEVELOPED COUNTRIES (LDC)	8 655	10 986	1.17	2.16	5 873	7 433	1.33	2.09
OECD⁴	132 906	156 746	1.36	1.28	117 831	140 468	1.69	1.35
NON-OECD	300 714	375 704	5.01	1.97	245 820	309 231	5.43	2.00

Note: Crop year: Beginning crop marketing year - see Glossary of Terms for definitions.

1. Least-squares growth rate (see glossary).
2. Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.
3. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.
4. Excludes Iceland but includes all EU27 member countries.

Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932642820>

Table A.13. Protein meal projections

Marketing year

	PRODUCTION (Kt)		Growth (%) ⁴		IMPORTS (Kt)		Growth (%) ⁴		EXPORTS (Kt)		Growth (%) ⁴	
	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021
WORLD	255 808	314 887	4.16	1.79	71 895	87 935	3.98	1.63	73 930	90 956	3.45	1.59
DEVELOPED	84 980	102 343	2.12	1.49	38 840	41 698	2.03	0.67	16 585	20 559	7.94	1.12
NORTH AMERICA	43 079	53 499	0.72	1.50	3 115	3 678	3.16	1.84	11 710	15 418	6.81	1.30
Canada	4 369	5 702	4.98	1.49	1 186	1 397	1.07	0.57	2 794	4 078	10.42	1.57
United States	38 710	47 797	0.30	1.50	1 929	2 282	4.64	2.70	8 916	11 339	5.81	1.20
EUROPE	35 202	41 455	4.61	1.61	30 029	31 562	0.72	0.52	4 604	4 836	11.11	0.68
EU(27)	26 269	29 807	2.61	1.33	27 887	28 836	0.31	0.37	753	681	2.82	1.38
Russian Federation	4 464	5 816	12.17	2.60	461	727	1.90	5.26	865	490	12.32	-5.41
Ukraine	3 636	4 814	16.48	2.21	68	51	-3.58	-1.90	2 724	3 417	14.90	1.90
OCEANIA DEVELOPED	822	1 094	7.30	1.57	1 896	2 606	17.55	1.63	22	22	5.93	0.00
Australia	815	1 086	7.29	1.58	627	851	5.39	3.51	22	22	5.94	0.00
New Zealand	8	8	8.29	0.00	1 269	1 756	33.60	0.81	0	0
OTHER DEVELOPED¹	5 877	6 295	-1.04	0.54	3 800	3 852	8.61	0.20	248	283	11.60	-0.85
Japan	3 627	3 524	-3.38	-0.29	2 196	2 058	9.21	-0.80	0	0
South Africa	757	920	5.23	1.14	1 144	1 397	7.52	2.40	84	76	38.33	-2.40
DEVELOPING	170 828	212 544	5.29	1.94	33 054	46 236	6.70	2.58	57 345	70 397	2.40	1.73
AFRICA	5 589	6 997	4.18	1.96	2 727	4 367	3.94	4.08	418	254	-0.15	-6.76
NORTH AFRICA	2 107	2 710	10.86	2.31	2 410	3 794	3.67	4.01	5	6	4.17	-0.49
Algeria	119	148	6.87	0.71	836	1 084	8.47	2.26	0	0	0.00	2.06
Egypt	1 370	1 867	14.28	2.76	566	1 012	-6.83	5.13	2	2	0.00	-0.42
SUB-SAHARAN AFRICA	3 482	4 287	1.32	1.75	316	572	6.08	4.61	412	248	-0.20	-6.87
LATIN AMERICA and CARIBBEAN	68 196	86 828	3.90	2.14	6 504	8 279	4.36	2.48	43 665	55 274	1.52	1.95
Argentina	32 063	40 496	4.64	1.69	0	0	0.00	0.00	28 679	35 978	3.64	1.53
Brazil	27 694	36 584	3.34	2.89	30	7	-29.77	-7.72	12 755	16 623	-2.30	3.15
Chile	239	277	3.86	2.50	914	1 032	5.23	0.82	10	9	92.67	-0.67
Mexico	3 669	3 987	1.74	0.66	637	1 326	16.97	6.87	15	15	48.47	0.07
Uruguay	128	269	19.94	7.22	256	280	16.50	1.14	6	4	3.11	-0.94
ASIA and PACIFIC	97 043	118 719	6.44	1.79	23 824	33 590	7.79	2.43	13 263	14 869	5.92	1.15
Bangladesh	257	422	2.20	5.13	317	478	11.34	3.54	0	0	0.00	-0.25
China ²	61 931	75 995	7.87	1.96	2 205	6 339	31.61	3.27	883	327	-2.60	2.48
India	16 419	20 343	5.03	1.48	81	84	3.94	-0.30	4 943	6 253	8.01	1.85
Indonesia	3 633	4 758	8.46	2.13	3 086	4 047	7.33	2.16	3 142	3 991	8.17	1.52
Iran, Islamic Republic of	969	1 371	4.23	3.09	2 086	2 983	20.11	3.01	290	229	27.90	-3.01
Korea	942	1 070	-0.27	0.87	3 209	3 432	3.25	0.49	0	0
Malaysia	3 040	3 765	2.63	1.90	1 111	1 082	7.46	-0.22	2 359	2 520	3.34	0.22
Pakistan	2 771	2 975	2.93	0.59	531	695	19.56	3.07	164	119	21.24	-2.96
Saudi Arabia	20	29	5.21	1.57	478	571	-3.18	1.87	4	0	17.68	0.00
Turkey	2 009	2 056	4.07	-0.20	989	1 616	4.37	5.39	43	45	-2.44	-2.08
LEAST DEVELOPED COUNTRIES (LDC)	2 853	3 626	1.12	2.11	484	912	7.74	6.11	219	134	-0.11	-5.89
OECD³	80 905	95 597	1.26	1.30	41 677	45 403	2.05	0.80	12 614	16 252	6.50	1.28
NON-OECD	174 903	219 290	5.73	2.01	30 218	42 532	7.19	2.60	61 316	74 704	2.91	1.66

1. Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.
3. Excludes Iceland but includes all EU27 member countries.
4. Least-squares growth rate (see glossary).

Source: OECD and FAO Secretariats.

Table A.13. Protein meal projections (cont.)

Marketing year

	CONSUMPTION (kt)		Growth (%) ¹	
	Avg 2009-11est	2021	2002-2011	2012-2021
WORLD	252 395	311 571	4.30	1.80
DEVELOPED	107 139	123 474	1.38	1.27
NORTH AMERICA	34 409	41 765	-0.64	1.61
Canada	2 716	3 025	-0.41	0.98
United States	31 693	38 740	-0.66	1.66
EUROPE	60 632	68 170	2.22	1.16
EU(27)	53 402	57 958	1.36	0.84
Russian Federation	4 047	6 052	10.77	3.84
Ukraine	999	1 447	18.62	2.82
OCEANIA DEVELOPED	2 700	3 678	13.73	1.62
Australia	1 420	1 915	6.40	2.42
New Zealand	1 280	1 763	33.20	0.81
OTHER DEVELOPED²	9 398	9 861	1.62	0.43
Japan	5 805	5 582	-0.10	-0.48
South Africa	1 803	2 238	5.79	2.00
DEVELOPING	145 256	188 096	6.95	2.16
AFRICA	7 870	11 103	4.33	3.09
NORTH AFRICA	4 478	6 494	6.47	3.27
Algeria	939	1 232	8.10	2.09
Egypt	1 920	2 872	4.48	3.51
SUB-SAHARAN AFRICA	3 392	4 609	1.96	2.85
LATIN AMERICA and CARIBBEAN	30 512	39 768	8.28	2.47
Argentina	3 035	4 500	19.07	3.21
Brazil	14 757	19 927	10.84	2.63
Chile	1 143	1 299	4.90	1.12
Mexico	4 291	5 297	3.19	1.92
Uruguay	380	545	17.15	3.74
ASIA and PACIFIC	106 873	137 225	6.80	2.00
Bangladesh	573	900	6.46	4.25
China ³	62 657	81 872	8.44	2.05
India	11 670	14 149	4.23	1.32
Indonesia	3 471	4 796	7.54	2.65
Iran, Islamic Republic of	2 748	4 117	12.01	3.49
Korea	4 152	4 502	2.22	0.58
Malaysia	1 816	2 324	4.53	2.78
Pakistan	3 131	3 550	4.19	1.18
Saudi Arabia	494	600	-3.10	1.85
Turkey	2 918	3 622	4.25	2.00
LEAST DEVELOPED COUNTRIES (LDC)	3 118	4 403	2.06	3.21
OECD⁴	109 843	124 744	1.05	1.12
NON-OECD	142 552	186 826	7.48	2.28

1. Least-squares growth rate (see glossary).
2. Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.
3. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.
4. Excludes Iceland but includes all EU27 member countries.

Source: OECD and FAO Secretariats.


StatLink  <http://dx.doi.org/10.1787/888932642858>

Table A.14. Vegetable oil projections

Marketing year

	PRODUCTION (Kt)		Growth (%) ⁴		IMPORTS (Kt)		Growth (%) ⁴		EXPORTS (Kt)		Growth (%) ⁴	
	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021
WORLD	144 313	184 530	5.07	2.06	62 052	79 089	5.99	1.87	59 918	77 145	5.30	1.93
DEVELOPED	36 962	45 481	4.41	1.82	17 612	21 910	6.42	1.25	8 861	11 015	10.52	1.85
NORTH AMERICA	12 831	16 093	2.02	1.52	3 849	4 169	11.21	0.50	3 902	4 908	10.60	1.69
Canada	2 796	3 747	9.01	1.60	444	632	8.12	0.13	2 315	3 131	14.80	1.30
United States	10 035	12 346	0.56	1.50	3 405	3 538	11.51	0.56	1 587	1 777	5.91	2.42
EUROPE	21 201	26 085	6.63	2.14	11 526	15 324	5.70	1.50	4 739	5 925	10.40	2.01
EU(27)	14 374	17 113	5.09	1.96	9 448	12 940	5.62	1.65	893	745	-2.11	0.48
Russian Federation	3 118	4 114	8.27	2.86	993	1 221	2.80	1.02	886	1 821	23.81	5.38
Ukraine	3 278	4 325	13.79	2.21	426	406	13.74	-0.92	2 779	3 193	15.49	0.92
OCEANIA DEVELOPED	451	633	8.21	2.29	392	420	3.70	1.02	80	39	3.75	4.27
Australia	447	629	8.21	2.31	288	312	5.52	1.36	80	38	3.76	4.32
New Zealand	5	5	8.99	0.00	104	108	0.01	0.09	0	0	-0.27	-0.23
OTHER DEVELOPED¹	2 479	2 669	0.36	0.57	1 845	1 996	3.50	1.06	140	143	11.65	0.52
Japan	1 455	1 422	-1.58	-0.29	757	746	3.08	-0.28	2	36	30.19	11.13
South Africa	421	489	3.74	1.13	755	807	4.08	1.55	113	91	17.05	-1.55
DEVELOPING	107 351	139 049	5.31	2.14	44 439	57 179	5.82	2.12	51 057	66 130	4.58	1.94
AFRICA	5 055	6 355	2.59	2.06	6 859	9 740	6.25	3.37	719	551	6.37	-1.80
NORTH AFRICA	625	800	7.93	2.16	2 792	3 819	3.25	2.49	149	134	21.12	-0.59
Algeria	55	67	3.33	0.71	563	779	1.78	2.70	20	12	9.75	-2.70
Egypt	346	474	11.41	2.76	1 542	2 081	4.59	2.16	57	42	25.54	-2.16
SUB-SAHARAN AFRICA	4 430	5 555	1.97	2.05	4 067	5 921	8.76	3.98	571	418	4.84	-2.15
LATIN AMERICA and CARIBBEAN	20 242	27 080	3.88	2.19	4 005	5 012	4.53	1.94	7 853	11 597	-2.19	2.19
Argentina	8 488	11 523	3.95	1.81	13	13	4.28	-0.10	4 728	7 086	-2.17	1.80
Brazil	6 617	9 028	3.35	2.80	399	515	13.96	2.31	1 664	3 008	-6.53	4.55
Chile	76	94	2.91	2.50	271	485	2.15	4.70	2	1	-7.24	-2.44
Mexico	1 489	1 675	2.25	0.84	1 029	1 376	5.32	2.39	4	0
Uruguay	67	141	20.87	7.21	82	61	11.93	-2.54	2	2	-3.88	1.32
ASIA and PACIFIC	82 054	105 614	5.87	2.13	33 575	42 428	5.90	1.87	42 485	53 982	6.26	1.93
Bangladesh	175	282	2.89	4.92	1 393	1 590	4.75	1.26	0	0	0.00	-0.09
China ²	20 001	24 704	6.05	2.11	9 229	10 447	5.54	0.25	200	55	4.72	-3.48
India	6 436	7 856	3.33	1.48	8 873	11 791	7.92	2.87	63	48	-4.95	-0.49
Indonesia	27 206	36 888	9.16	2.42	73	36	1.88	-2.38	19 935	27 225	9.57	2.38
Iran, Islamic Republic of	288	407	3.81	3.09	1 333	1 688	0.62	1.67	204	236	3.25	-1.67
Korea	240	270	-0.11	0.82	744	782	5.43	0.57	8	10	4.14	0.00
Malaysia	20 045	26 014	3.54	2.17	2 001	2 496	9.04	1.07	18 645	23 240	4.19	1.90
Pakistan	932	991	4.44	0.59	2 198	3 374	3.85	3.81	80	48	46.84	-3.80
Saudi Arabia	7	10	4.29	1.64	306	388	-1.99	2.26	11	1	-9.18	-0.32
Turkey	1 092	1 129	4.87	-0.20	942	1 166	3.91	1.45	184	214	20.64	-1.45
LEAST DEVELOPED COUNTRIES (LDC)	2 619	3 205	1.69	1.75	4 711	6 395	5.68	3.37	242	255	4.88	0.48
OECD³	32 088	38 520	3.27	1.57	17 791	22 475	6.37	1.38	5 133	6 008	7.39	1.43
NON-OECD	112 225	146 010	5.63	2.19	44 261	56 614	5.85	2.07	54 785	71 136	5.13	1.97

1. Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.
 2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.
 3. Excludes Iceland but includes all EU27 member countries.
 4. Least-squares growth rate (see glossary).
- Source: OECD and FAO Secretariats.

Table A.14. Vegetable oil projections (cont.)

Marketing year

	CONSUMPTION (Kt)		Growth (%) ¹		FOOD VEGETABLE USE PER CAPITA (Kt)		Growth (%) ¹	
	Avg 2009-11est	2021	2002-2011	2012-2021	Avg 2009-11est	2021	2002-2011	2012-2021
WORLD	144 396	186 384	5.23	2.03	17.4	19.1	2.58	0.69
DEVELOPED	45 750	56 399	4.21	1.60	24.2	25.6	0.90	0.50
NORTH AMERICA	12 907	15 432	2.24	1.19	33.7	35.1	-0.02	0.25
Canada	945	1 249	1.34	1.59	27.0	28.4	-0.06	-0.50
United States	11 961	14 183	2.30	1.15	34.4	35.8	-0.03	0.32
EUROPE	27 904	35 437	5.68	1.90	22.7	24.1	1.44	0.60
EU(27)	22 984	29 272	5.73	1.89	23.8	24.2	-0.10	0.34
Russian Federation	3 080	3 511	3.64	1.02	21.5	25.0	3.83	1.18
Ukraine	943	1 532	11.45	4.37	20.6	21.9	12.13	0.26
OCEANIA DEVELOPED	767	1 011	6.04	1.69	25.3	29.5	2.73	0.52
Australia	659	899	7.31	1.90	25.4	30.8	3.63	0.73
New Zealand	108	112	0.28	0.09	24.8	23.0	-0.90	-0.88
OTHER DEVELOPED²	4 172	4 519	1.43	0.78	15.7	16.1	0.67	0.36
Japan	2 209	2 132	-0.05	-0.41	17.5	17.1	-0.09	-0.24
South Africa	1 052	1 202	3.04	1.60	19.6	20.6	1.10	0.94
DEVELOPING	98 647	129 986	5.73	2.22	15.8	17.6	3.43	0.83
AFRICA	11 196	15 533	4.57	3.06	11.3	12.2	2.11	0.77
NORTH AFRICA	3 277	4 481	3.99	2.56	19.6	23.3	2.45	1.30
Algeria	606	833	2.90	2.65	16.9	20.4	1.40	1.49
Egypt	1 834	2 512	5.64	2.38	22.4	25.9	3.84	0.90
SUB-SAHARAN AFRICA	7 919	11 052	4.82	3.27	9.6	10.2	2.15	0.79
LATIN AMERICA and CARIBBEAN	15 320	20 621	7.67	2.31	18.9	20.3	2.23	0.94
Argentina	2 813	4 577	18.13	2.64	23.3	23.8	1.31	0.20
Brazil	5 192	6 526	9.19	2.01	18.7	19.7	3.24	1.40
Chile	345	578	2.22	4.33	19.8	25.5	1.08	2.01
Mexico	2 536	3 051	3.52	1.51	22.4	24.0	2.27	0.52
Uruguay	146	200	15.83	3.35	15.6	17.7	1.89	1.02
ASIA and PACIFIC	72 130	93 832	5.53	2.07	16.4	18.7	3.94	0.93
Bangladesh	1 545	1 869	4.60	1.74	10.3	11.0	3.37	0.61
China ³	28 304	35 042	5.58	1.37	20.9	25.0	5.06	1.06
India	15 295	19 562	5.74	2.34	12.2	13.6	4.07	1.16
Indonesia	6 976	9 704	7.67	2.52	18.6	20.0	2.71	0.50
Iran, Islamic Republic of	1 399	1 855	0.84	2.53	18.7	22.6	-0.35	1.70
Korea	974	1 042	3.72	0.64	20.2	20.9	3.25	0.34
Malaysia	3 542	5 166	3.35	2.84	23.0	27.0	3.21	1.39
Pakistan	3 036	4 318	4.27	3.10	17.3	20.5	2.48	1.48
Saudi Arabia	305	397	-1.22	2.27	11.0	11.5	-4.17	0.36
Turkey	1 800	2 076	3.11	0.92	23.6	24.5	1.88	-0.20
LEAST DEVELOPED COUNTRIES (LDC)	7 052	9 339	4.08	2.87	8.3	8.7	1.71	0.76
OECD⁴	44 904	55 018	4.04	1.52	25.5	26.6	0.45	0.33
NON-OECD	99 493	131 366	5.81	2.25	15.6	17.5	3.57	0.87

1. Least-squares growth rate (see glossary).

2. Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.

3. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.

4. Excludes Iceland but includes all EU27 member countries.

Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932642896>

Table A.15. Main policy assumptions for oilseed markets

Crop year


		Avg 09/10- 11/12est.	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
ARGENTINA												
Oilseed export tax	%	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
Protein meal export tax	%	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
Oilseed oil export tax	%	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
AUSTRALIA												
Tariffs												
Soybean oil	%	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Rapeseed oil	%	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
CANADA												
Tariffs												
Rapeseed oil	%	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
EUROPEAN UNION												
Single farm payment ¹	EUR/ha	187.9	187.9	187.9	187.9	187.9	187.9	187.9	187.9	187.9	187.9	188.9
Compulsory set-aside rate	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tariffs												
Soybean oil	%	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Rapeseed oil	%	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
JAPAN												
New output payments												
Soybeans	JPY/kg	..	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5
Tariffs												
Soybean oil	JPY/kg	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
Rapeseed oil	JPY/kg	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
KOREA												
Soybean tariff-quota	kt	1 032	1 032	1 032	1 032	1 032	1 032	1 032	1 032	1 032	1 032	1 032
In-quota tariff	%	5	5	5	5	5	5	5	5	5	5	5
Out-of-quota tariff	%	487	487	487	487	487	487	487	487	487	487	487
Soybean (for food) mark up	'000 KRW/t	161	150	146	141	138	134	130	127	123	119	115
MEXICO												
Tariffs												
Soybeans	%	33	33	33	33	33	33	33	33	33	33	33
Soybeans meal	%	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Soybeans oil	%	45	45	45	45	45	45	45	45	45	45	45
UNITED STATES												
ACRE participation rate												
Soybeans	%	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Soybeans loan rate	USD/t	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7
CRP area												
Soybeans	mha	1.9	1.8	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8
Tariffs												
Rapeseed	%	3	3	3	3	3	3	3	3	3	3	3
Soybean meal	%	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Rapeseed meal	%	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Soybean oil	%	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
Rapeseed oil	%	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Subsidised export limits												
Oilseed oils	kt	141	141	141	141	141	141	141	141	141	141	142
CHINA												
Soybeans support price	CNY/t	1 643.7	1 815.3	1 885.7	1 951.7	2 014.0	2 079.0	2 149.3	2 219.8	2 291.2	2 364.8	2 440.9
Tariffs												
Soybeans	%	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Soybean meal	%	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Soybean oil in-quota tariff	%	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Vegetable oil tariff-quota	kt	7 998.1	7 998.1	7 998.1	7 998.1	7 998.1	7 998.1	7 998.1	7 998.1	7 999.1	7 999.1	8 000.1
INDIA												
Input subsidy rate, oilseeds ²	INR/t	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3	4 888.3
Soybean tariff	%	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Rapeseed tariff	%	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Sunflower tariff	%	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Oilseed tariff	%	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Soybean meal tariff	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Rapeseed meal tariff	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sunflower meal tariff	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Soybean oil tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rapeseed oil tariff	%	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Sunflower oil tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Palm oil tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Beginning crop marketing year - see Glossary of Terms for definitions.

The source for tariffs and Tariff Rate Quotas is AMAD (Agricultural market access database). The tariff and TRQ data are based on Most Favoured Nation rates scheduled with the WTO and exclude those under preferential or regional agreements, which may be substantially different. Tariffs are simple averages of several product lines. Specific rates are converted to ad valorem rates using world prices in the Outlook. Import quotas are based on global commitments scheduled in the WTO rather than those allocated to preferential partners under regional or other agreements. For Mexico, the NAFTA tariffs on soybeans, oil meals and soybean oil are zero after 2003.

1. EU farmers benefit from the Single Farm Payment (SFP) Scheme, which provides flat-rate payments independent from current production decisions and market developments. For the new member states, payments are phased in with the assumption of maximum top-ups from national budgets up to 2013 through the Single Area Payment (SAP), and through the (SFP) from 2014. Due to modulation, an increasing share of the total SFP will go to rural development spending rather than directly to farmers.
2. Indian input subsidies consist of those for electricity, fertiliser and irrigation.

Source: OECD and FAO Secretariats.

StatLink  <http://dx.doi.org/10.1787/888932642915>