MANY OPTIONS to choose from

After rapid growth between 1970 and 2000 (+1.7%/year), the rise in world demand has since increased steadily by +1%/year, which now corresponds to a need for +6.5 million tonnes of wheat and +13.7Mt of maize and other cereals (excluding rice) every year.

World demand for cereals should reach three billion tonnes by 2050, i.e. +50% compared with 2010, to help feed 9.3 billion people worldwide by then. Countries like France with a high excess production potential have a role to play in meeting this demand.

Agricultural areas (arable land, grassland, perennial crops) occupy almost half of the land in France (44%). 53% of arable land grows cereals *(1)*, while 18% is grassland, 14% produces oil protein crops and 8% maize silage. Almost two thirds of the 470,000 agricultural businesses partly or exclusively grow arable crops, 9,000 of which do so organically.

10Mt of cereals for animal feed

France produces just over 20 million tonnes (Mt) of compound or complete feed, two thirds of which is for monogastric species (pigs and poultry). The animal feed industry is French cereals' main internal market. It utilises over 10Mt. Wheat takes the lead (47%), followed by maize (34%). In that respect, Europe, and France especially, is different from the rest of the world, where maize is the cereal most used to feed animals. Barley also plays an important role, especially in sow and piglet rations. Animal feed accounts for up to 70% of the 290,000 French livestock farmers' production costs. Raw materials are chosen or dismissed according to their nutritional profile. If they offer similar nutritional value, as cereals do, it then comes down to price.
Some cereals are also used by other sectors such as milling, starch manufacturing and ethanol production. Those generate a wide range of by-products that are then utilised as animal feed (bran, gluten, distiller dried grains, etc.).

Wheat is in the lead

France produces 35-37Mt of bread wheat per year, 5 to 6Mt of which are processed into flour. In 2014-2015, over 51% of the bread wheat grain produced was exported (EU 40%, other countries 60%), a large proportion of which to North Africa and Central Africa (11.4Mt).
The milling industry comprises around 440 mills. 97% of the wheat they use is French. 2.9Mt out of the 4.9Mt of flour produced are used for bread-making, and 1.3Mt for biscuit-making (2014-2015 data). Artisan bread, which represents two thirds of the bread market in France (25% for mass-produced bread and 10% for supermarket bread) is the main market for French flour (1.4Mt).
In 2014, the 1.6 million hectares dedicated to grain maize produced 17.8Mt. France is the first EU producer in terms of volume and the second in terms of area, behind Romania. 56% of French grain maize is used for animal feed in France. The second largest market is food processing (starch manufacturing, semolina manufacturing and ethanol). In 2015, 3,900 farms dedicated

1.4 Mt: quantity of flour used by French artisan bakers

70,000 hectares to seed maize production, 60% of which was exported.
In 2014-2015, 364,000 tonnes of maize were processed by the semolina manufacturing sector. The semolina is then used to produce beer, breakfast cereals, savoury biscuits and polenta (65% of this production is exported). In 2015, sweetcorn, reserved exclusively for human consumption, covered 20,000 hectares.

Nearly one third of French barley is malting barley

In 2014, 1.8 million hectares of barley were grown in France. On average, 11Mt are harvested each year, and around 30% is malting barley, three quarters of which is exported. This is why France is the second largest malting barley exporter in the world. The malting industry uses around 15% of the barley production, and in 2013 88% of the malt was exported.
The beer sector is characterised by a very high concentration of malting companies, that produce high volumes for the French and international markets, but also by the explosion in the number of micro-breweries throughout France. Some breweries produce their own malt, and some farmers become brewers and create their own brand. 2015 saw the creation of around 100 micro-breweries in France, to bring the total to 800.

Wheat is the cereal most used to produce animal feed in France, while maize dominates in the rest of the world.

2.8Mt of wheat and 2.3Mt of maize used by the starch manufacturing sector

Starch manufacturing consumes 7% of the bread wheat production, i.e. 2.8Mt. It is also the second largest user of French maize, with 2.3Mt for the 2014-2015 season. 75% of the starch, glucose and derived product production is exported. This sector is characterised by a wide variety of markets: food industry, paper-cardboard industry, chemical sector, pharmaceuticals and cosmetics, building materials, textiles, adhesives, etc. Starch manufacturers also have a presence in the ethanol production sector, as well as the green chemistry sector, including bioplastics. The latter represented 2% of the plastics market worldwide in 2014, and should grow from 1.7Mt in 2014 to 6.7Mt in 2018.

2.1 to 2.3 million hectares of oilseed crops

In France, oilseeds (oilseed rape and sunflowers) have been covering virtually the same surface area since 2010, which is between 2.1 and 2.3M ha. The 2016 harvest comes from 1.5M ha of oilseed rape and 570,000 ha of sunflowers.
The rise in oilseed crops was mainly due to the increased oilseed rape area. Indeed, while this was historically lower than the sunflower crop area, and close to 800,000 ha, it has been boosted since 1997 by the development of the oil market, and the biodiesel sector in particular. After the 1.6M ha peak seen in 2007-2008, there is now 1.5M ha of oilseed rape grown each year.
The oilseed rape production mirrored the changes in the cropped area, albeit with yield variations. Peak production occurred in 2009 (1.48M ha) with a record yield of 3.79t/ha, i.e. 5.6Mt overall. In 2013, low yields (3.04t/ha) and reduced overall area saw production only reach 4.38Mt. The 2014 and 2015 harvests produced more satisfactory yields (3.68t and 3.56t/ha) and helped to get back to production levels close to 5.5Mt in 2014 and 5.3Mt in 2015.
Sunflowers followed a reverse trend to oilseed rape, going from over 1M ha in the 80s to less than 700,000 ha in 2014 and 2015. French production decreased to 1.21Mt in 2015 compared with 1.58Mt in 2014, due to a combination of reduced area and low yields (1.96t/ha against 2.41t/ha).

With the emergence of biodiesel, oilseed rape areas greatly overtook those of sunflowers.

Protein content: an essential criterion for all cereals

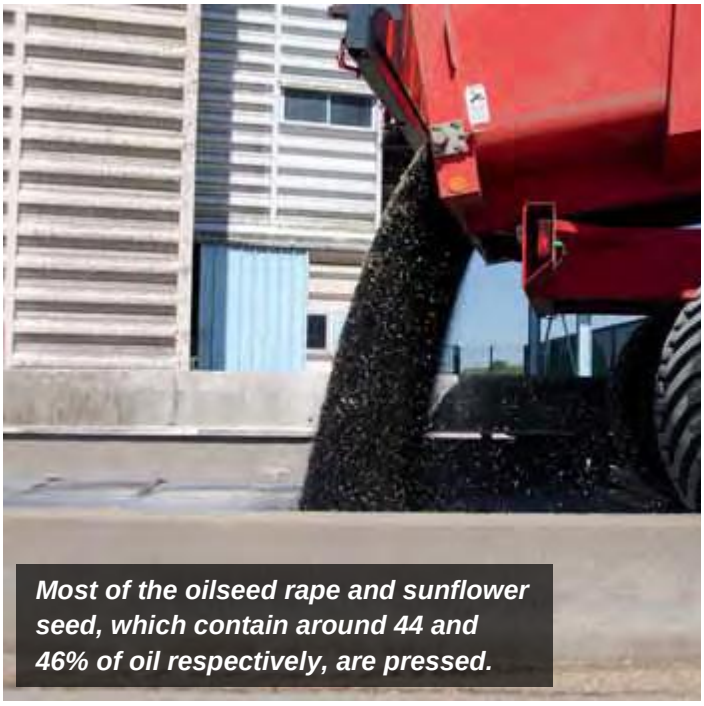
French wheat's markets are very segmented but are all based on essential quality criteria, such as protein content (see http://arvalis.info/fr). It is the primary criterion for exports, be it towards the European Union or other countries. France's competitors, and in particular in the Black Sea region, are increasing their market share with wheat that is richer in protein. And yet the protein content of French bread wheat is on a downward trend, with an average of 11.6% between 1996 and 2013, and a lot less over the past three years.
The Wheat Protein Plan launched in 2013 and led by Intercéréales in conjunction with FranceAgriMer, includes three main action levers: research programmes, communication and contracts.
The issue of decreasing protein contents also applies to durum wheat, maize (drop of about 1 protein point over 20 years) and malting barley. After fearing excessive protein contents for a long time, this sector has now set a 10.5% target.

Germany and France take the lead for oilseed rape

Although the European oilseed rape production only reached around 9Mt in 2000, it has been sitting between 19MT and 24 Mt since 2008. In 2015, it was estimated at 21.7Mt, compared with 24.3Mt in 2014, which was a record year in Germany. France is in the lead as far as oilseed rape areas are concerned, but only just in front of Germany. In 2014, the latter saw a record 6.3Mt being produced, compared with 5.5Mt in France. In 2015, it was the opposite: 5Mt in Germany, and 5.3Mt in France.

As for sunflowers, the 619,000 ha produced in France in 2015 placed it in 5th position behind Romania (975,000 ha), Bulgaria and Spain (745,000 ha) and Hungary (627,000 ha).

At a global level, oilseed rape production jumped back to 68Mt in 2015 against 71Mt in 2014. All the big producing countries noted a downturn in production, including Canada with a 2015 harvest estimated at 17Mt compared with 18.5Mt in 2014. In 2016 world areas were to be further reduced, with -10% in China, not made up for by the expected +4% in Canada. Ukraine (with 11Mt and expected higher production in 2016) and Russia (9.6Mt) dominate the world's sunflower production (around 41.5Mt). The EU28, with less than 8Mt, is ranked third, ahead of Argentina and China.



Most of the oilseed rape and sunflower seed, which contain around 44 and 46% of oil respectively, are pressed.

95% pressing

Over 95% of oilseed rape and sunflower seed is pressed. In the case of oilseed rape, 56% of it is used to produce oil-cake and 42% for oil, whereas for sunflowers the split is 54% for oil-cake and 44% for oil. Since 2010, France has been pressing between 3.5 and 4.8Mt of oilseed rape, and between 1.2Mt and 1.4Mt of sunflower seed each year. The situation is very different in Germany. In 2014, it harvested 6.2Mt of seeds and pressed over 9Mt. In 2015-2016, France exchanged 1.3Mt of oilseed rape (imported and exported) and 250,000t of sunflower seed.

With an average of 62%, industrial uses dominate the crude and refined oilseed rape oil (1.75Mt) and sunflower (0.45Mt) consumption in France. However, there are differences from one oil to another, as that sector uses 85% of the oilseed rape oil and only 13% of the sunflower oil (Agreste 2009-2010).

Oil-cake, which is a bulk by-product of the pressing process, is rich in protein and used almost exclusively as animal feed. In France, in 2014-2015 the animal feed sector used over 2.5Mt of oilseed rape cake and 1.4Mt of sunflower cake, either to make feed on farms, or as part of compound feed produced by animal feed manufacturers. They therefore help reduce France's protein deficit, even if it should be noted that over 900,000t of sunflower cake were imported, mainly from the Black Sea region. Finally, oilseed rape and sunflower cakes are still far behind imported soybean cake, over 3.5Mt of which are still currently incorporated into feed in France, even though this represents a downward trend.

« France has the largest oilseed rape area in Europe. »

« 97% of the wheat used by the French milling industry comes from France. »

(1): including 52% wheat (5M ha), 19% barley (1.8M ha), 19% maize (1.8M ha), 4% triticale, 3% durum wheat and less than 3% of oats, sorghum and rye combined (source SSP 2014).

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A recovery plan for durum wheat

Since 2015, all the sector's players have been engaged in developing durum wheat, after several years of reduced areas and difficult weather conditions at harvest time that affected grain quality. There are several types of objectives, and they are all recorded in FranceAgriMer's Cereal Strategic Plan. The first measures are being implemented, including research programmes, agronomic action levers, and technical support for producers that takes regional characteristics into account, marketing choices, communication, and industrial innovations.