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Rabobank Field Crop Margin Outlook

2020: Some Margin Relief but Continued Uncertainty

Field crop farmer margins are facing sustained pressure globally. The exception is Brazil, where a weaker currency has contributed to rising local farmgate prices. US farmer margins held stable in 2019, due to higher corn prices and market facilitation program payments, but the future depends on auspicious weather and trade events. While China had decided to accept some US soybeans as a trade war peace offering, Brazilian farmers continue to be the winners as the preferred exporter to China. In Europe, yields recovered after the 2018 drought and improved field crop farmer margins. In particular, the Netherlands, Poland, and the UK recovered after the 2018 drought, but lower grain prices negatively affected grain margins. The prolonged drought continues to heavily impact farmgate margins in eastern Australia. The 2020 outlook depends on stable yields holding up margins, as crop prices are expected to stay relatively flat due to significant global stocks and (still) weak demand.

Diverging developments in margins

US: Temporary margin recovery in 2019, but tough 2020 ahead

- Midwest (Iowa) farmer margins improved in 2019 with trade war payments. Lower 2019 harvest, due to weather, helped keep prices up.
- Strong winter wheat yields in the Great Plains (Kansas) resulted in better 2019 margins, but farmers are facing degrading long-term profits.

Brazil: Record margins in 2019, may reduce in 2020

- Brazilian farmers had a record harvest and margins in 2019, due to high yields, high demand, and strong local prices.
- 2020 margins and prices will heavily depend on China (trade war and ASF recovery).

Europe: Split in margin developments

- Following the 2018 northwestern European drought, Dutch and Polish farmer margins improved in 2019.
- French farmers will see stable margins in 2019 and 2020, while UK farmers may face lower local prices and margins under continued Brexit uncertainty.

Australia: Margins under significant pressure

- In the second year of drought in eastern Australia, there were record low yields, despite higher prices, and margins hit a record low.
- Meanwhile, Western Australia had record margins, due to high yields and prices, which might change with much lower crop production this season.

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Stable Outlook for Global Agri Commodity and Inputs Markets in a World of Increased Uncertainty

This year we saw the recovery of corn prices to a five-year high, although, with significant global stocks, further improvement will be modest. One noticeable change is the US-China trade truce, which (along with US supply issues) has led to some soybean price recovery. The 2020 outlook for agri commodity prices is relatively flat, while major inputs, like fertilizers, are trending downward. Exchange rates are not expected to change much either. This stability means that yield developments are responsible for most of the variation in field crop farmer margins in 2019 and 2020. But despite this stable outlook, trade discussions remain heated between major trading partners, having a large impact on global trade flows and winners and losers. A further escalation of the trade conflict between the US and its trading partners is shifting trade flows, which favor South America and other cheaper exporters.

Rabobank expects all crop prices could go up a bit in 2020 vs. 2H 2019 levels, but they are not expected to react strongly, due to significant global stocks (*see Figure 1*).

Figure 1: Quarterly agricultural commodity prices, Q2 2019- Q4 2020f

Commodity	Unit	Q2 2019	Q3 2019	Q4 2019f	Q1 2020f	Q2 2020f	Q3 2020f	Q4 2020f
Wheat (CBOT)	USc/bu	477	488	508	511	515	520	515
Wheat (Matif)	EUR/mt	182	171	175	179	180	175	177
Corn	USc/bu	390	390	380	390	395	400	398
Soybeans	USc/bu	866	873	935	950	960	970	965
Sugar	USc/lb	12.5	12..6	12.8	13.3	13.6	13.7	14..0
Cotton	USc/lb	71	61	63	65	67	70	72

Source: Bloomberg, USDA, Rabobank November 2019

Local farmgate prices have strayed further from global price benchmarks, in many cases due to exchange rate fluctuations between local currencies. In the past year and a half, the US dollar strengthened against all currencies amid US Federal Reserve interest rate cuts. Brazilian farmers have benefited as a result because the weaker real translates to higher farmgate prices. Currencies are not expected to change much in the coming year (*see Figure 2*), except for the pound, which has been bouncing in response to a pending Brexit deal. If it indeed strengthens against the US dollar next year, this will be reflected in local prices for farmers.

Figure 2: Historical and expected FX rate developments					
Exchange rate	**Q1 2018**	**Oct 2019**	**+3M**	**+6M**	**+12M**
USD/EUR	0,81	0,91	0,91	0,91	0,87
USD/GBP	0,88	0,90	0,89	0,87	0,83
USD/PLN	3,40	4,0	4,09	4,09	3,96
USD/AUD	1,27	1,47	1,50	1,52	1,54
USD/BRL	3,25	4,05	3,97	4,1	4,1
Index (Oct 2019 = 100)					
USD/EUR	103	100	99	100	104
USD/GBP	103	100	101	103	108
USD/PLN	105	100	98	98	101
USD/AUD	105	100	98	97	95
USD/BRL	107	100	102	99	99

Source: Rabobank, Bloomberg, Dutch Central Bank 2019

In 2019, fertilizer prices are expected to reach their lowest levels in quite some time (*see Figure 3*). The combination of higher production capacity and lower demand in some important regions, such as the US and India, have pressured prices down during the year – especially for phosphates, which reached the lowest prices in more than one decade. We expect a slight rise in fertilizer prices worldwide, if demand recovers in major regions in 2020, but there is still some price downside possible for the end of 2019 and Q1 2020.

Figure 3: Fertilizer price outlook, 2020f				
USD/mt	**Five-year price history**	**Five-year high**	**Five-year low**	**2020f**
Urea FOB (Prilled, Black Sea)		321	177	Stable/falling
DAP FOB (Bulk, Gulf/Tampa)		485	284	Stable/falling
Potash FOB (Bulk, Vancouver)		307	214	Stable

Source: CRU, Rabobank 2019

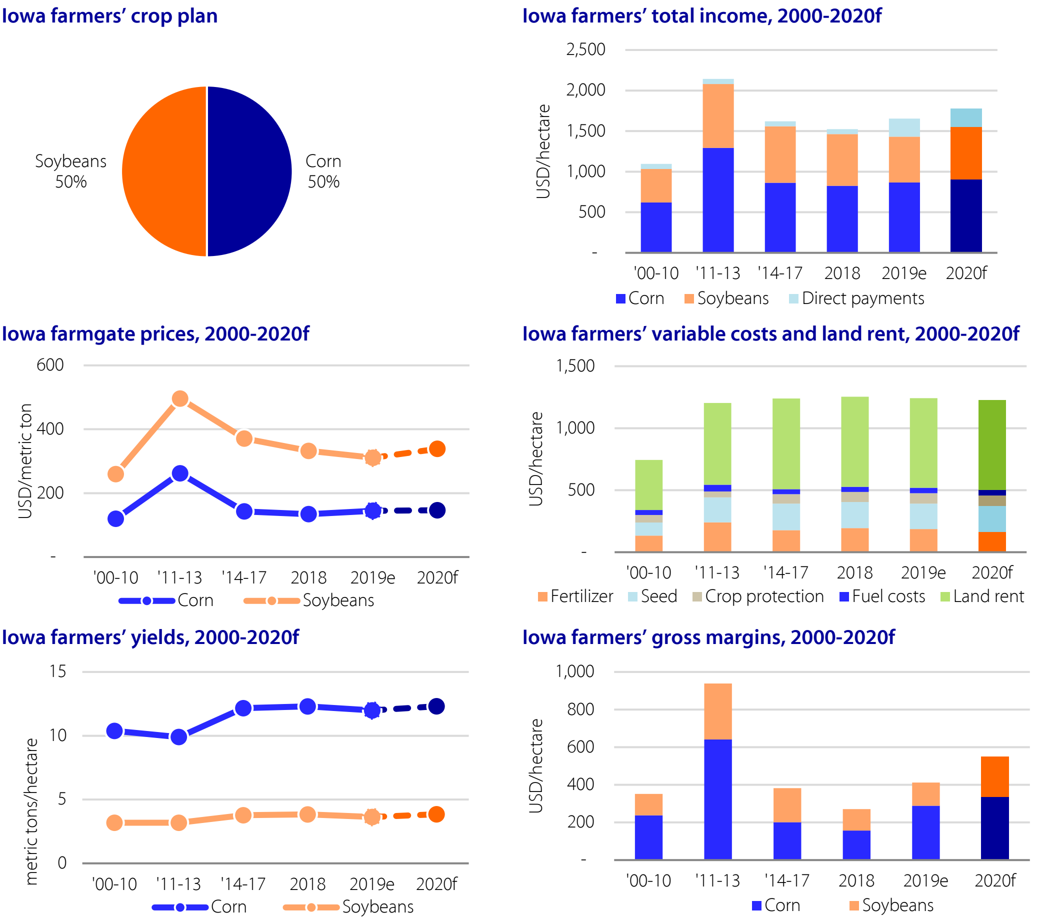
Regional Outlooks

US Midwest (Iowa): Margins Improve Due to Government Payments

Midwest farmers' margins moved up in 2019, after dipping in 2018, but uncertainty looms

2018 marked the lowest margins in over a decade, approximately USD 271/ha (43 percent below the five-year average). This year, gross margins recovered by 52 percent YOY, averaging approximately USD 412/ha in Iowa, due to improved corn prices and the Market Facilitation Program, MFP (direct payments to offset losses due to the trade war).[1] Historic flooding in the Midwest dented yields and also resulted in a record amount of prevent plant acres. The MFP payments varied greatly across the US, but they helped significantly in Iowa, averaging USD 161/ha for planted corn and soybean acres (see US Ag Policy Is Back on the Menu…For Now for more details). In 2020, we forecast that Iowa farmer margins will improve YOY to USD 551/ha (assuming a third MFP-like payment in 2020, although not yet announced). Corn prices look flat next year (1 percent growth), but soy prices are forecasted to increase by 9 percent. US farmers' solvency has declined for the past eight years and is expected to continue to deteriorate next season without a significant shift in crop prices or production costs. 2020 is expected to be another challenging year for Iowa farmers.

Figure 4: Iowa farmer margins stable despite big uncertainty



Source: USDA, Thomson Reuters Eikon, Bloomberg, Rabobank 2019

* The MFP payments are included in the 'direct payments' category above, along with net crop insurance. They are a separate payment and not related to crop insurance or prevent plant acre payments, which compensate for losses due to weather and flooding (this year).

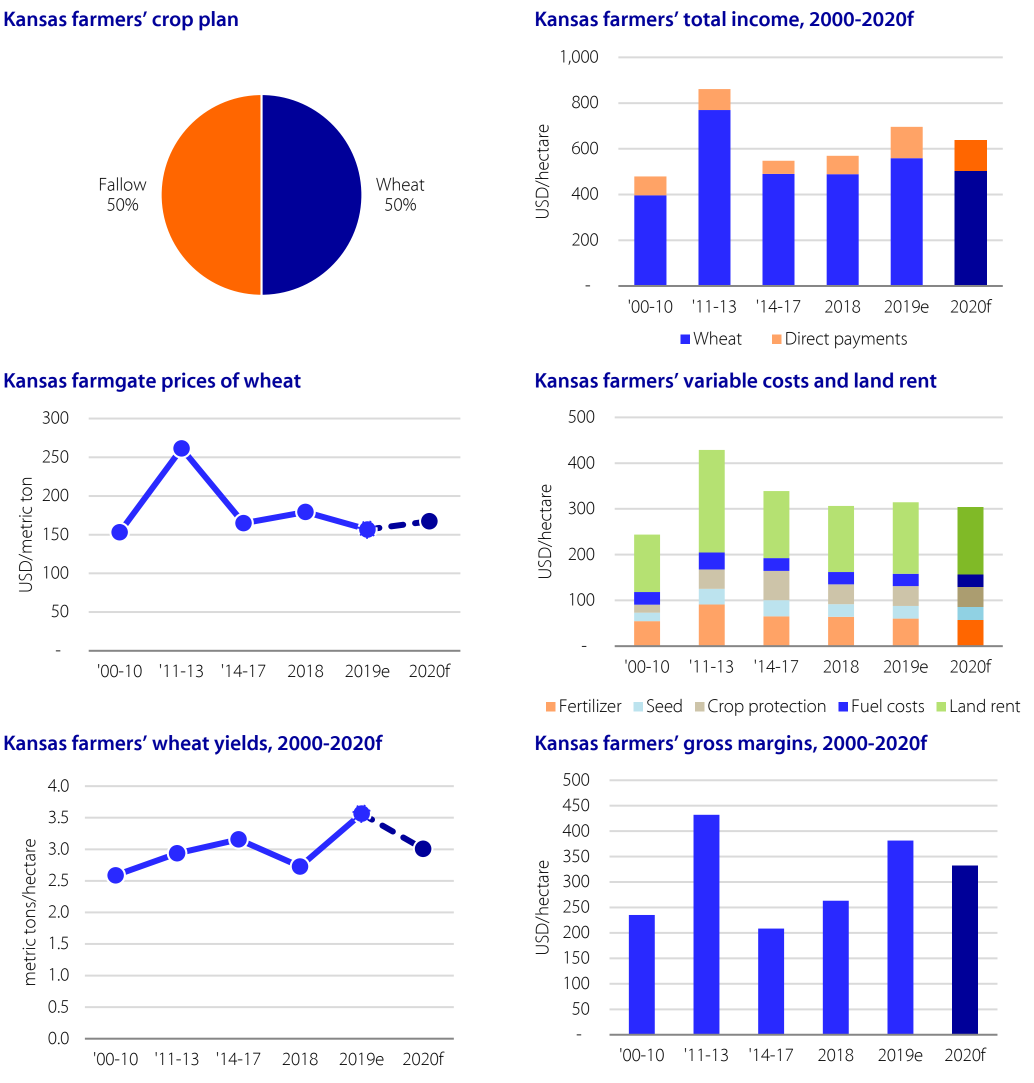
US Great Plains (Kansas): Higher Wheat Yields and Government Payments Offer Short-Term Relief

After a disappointing wheat yield in 2018, 2019 brings improvement in farmer margins

In 2019, 30 percent wheat yield gains (reaching 53 bu/acre or 3.6 mt/ha) and MFP payments pushed margins up by 45 percent, to approximately USD 382/ha. The average MFP payment (direct payments to offset losses due to the trade war) paid out in Kansas was approximately USD 151/ha for planted wheat acres.[1] Seed and crop protection costs stayed flat in 2019, and lower fertilizer prices gave some relief to farmers. However, looking at total production costs for Kansas wheat, they continue to bounce around break-even.

In 2020, gross margins are forecast to decrease by 13 percent YOY, to USD 333/ha, driven by a return to average yield levels (and despite assumptions of a third MFP-like payment and +7 percent wheat price forecasted). The short-term relief afforded by MFP payments slows but does not reverse more than eight years of steadily declining farmers' solvency and record-high farm debt, due to years of low commodity prices. US Great Plains farmers are expected to see another challenging year in 2020.

Figure 5: Kansas margins strongly influenced by fluctuating yields



Source: USDA, Kansas Farm Management Association, Thomson Reuters Eikon, Bloomberg, Rabobank 2019

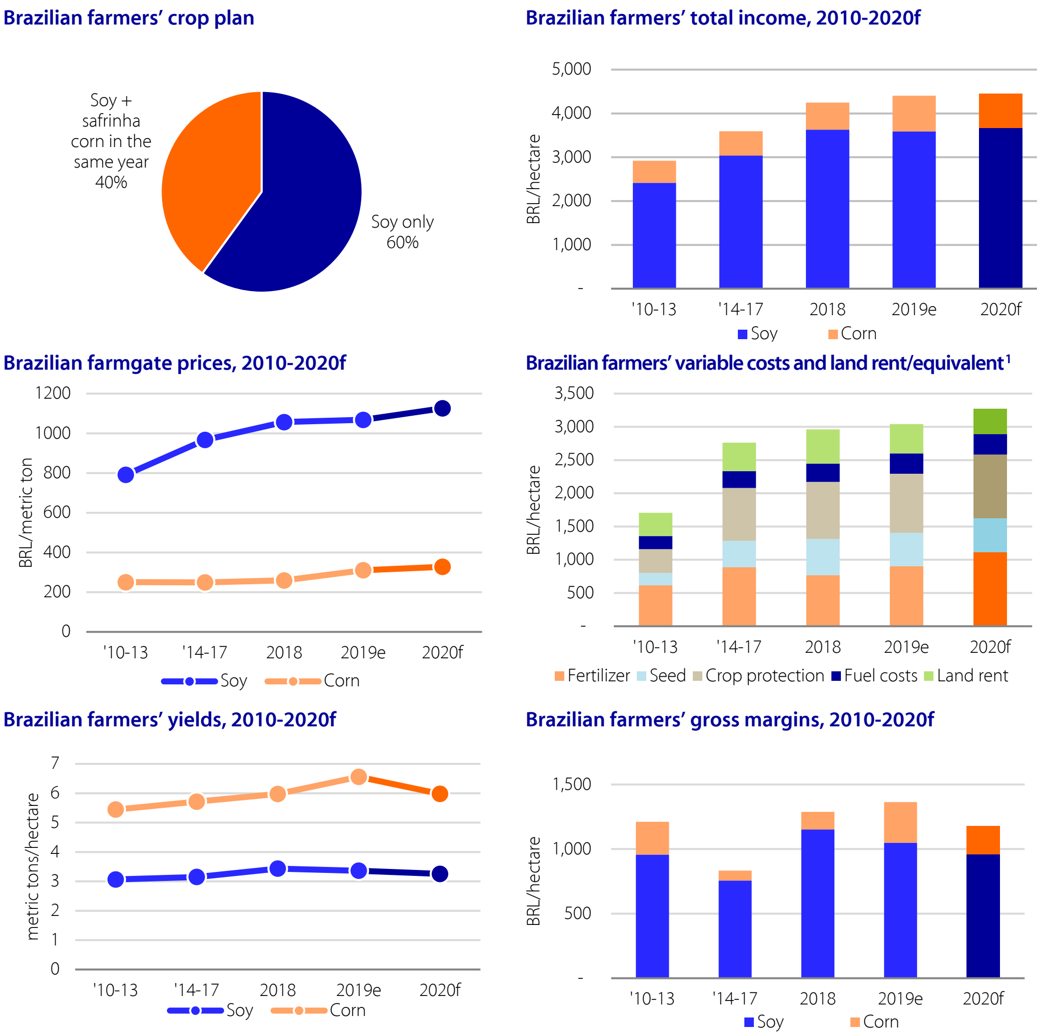
[1] See previous section for explanation of the MFP payments.

Brazil, Mato Grosso: Farmer Margins Peak at Record Levels in 2019 Before Slightly Receding in 2020

Brazilian farmers are benefiting from US-China trade tensions, finding solid demand following a big 2019 crop. Farmer margins reached record levels in 2019 and will fall only slightly in 2020.

Average annual farmgate soybean prices are estimated at BRL 64/bag (BRL 1,068/mt) and will increase even further in 2020, to BRL 67.60/bag (BRL 1,126/mt), with the continued trade war. Further BRL currency devaluation is expected in 2020 (moving to BRL 4.1/USD), while crop prices in local currency benefit farmers. 2019 and 2020 corn prices are estimated at BRL 18.6/bag (+20% YOY) and BRL 19.9/bag, respectively (or BRL 310/mt, and BRL 327/mt). 2019 represents the highest price level since 2016. Actually, 2019 soy prices only gained 1% YOY, while corn gained 20%. In 2020, local prices are expected to increase ~5% for both crops YOY. Despite strong prices in 2020, we expect margins to fall, due to a return to more normal yield levels (five-year average) and increasing variable costs, as crop protection costs rise with a lower BRL and retailers take advantage of a strong 2019 harvest and prices. While 2018 had record soy yields, 2019 saw record corn yields of 6.6 mt/ha. These continued strong margins should have a positive impact on the farm inputs market.

Figure 6: Brazilian (Mato Grosso) farmer margins to reach record levels in 2019 and 2020



Source: Bloomberg, IMEA, Rabobank 2019

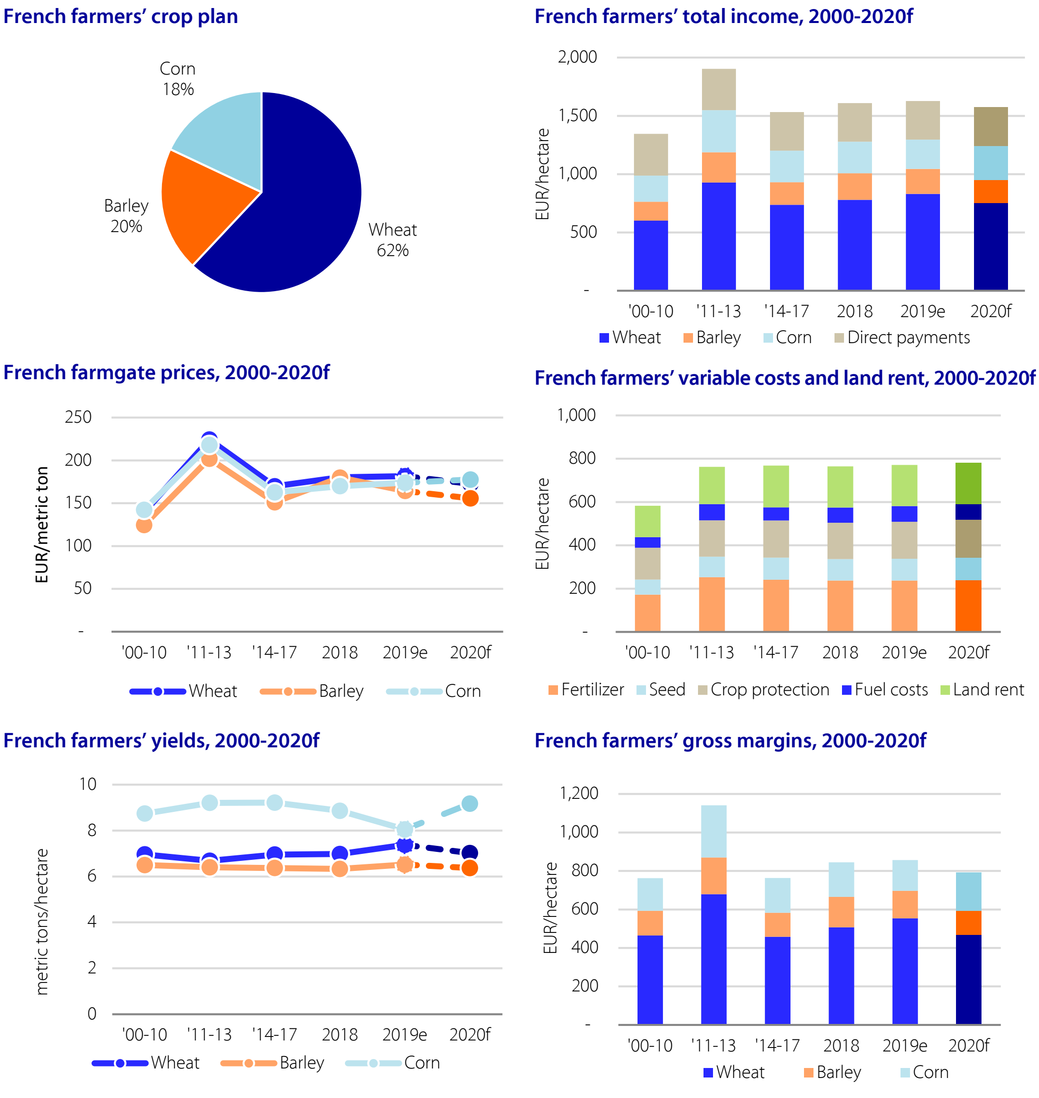
[1] Most land in Brazil is farmer-owned. Land rent is therefore not an important cash out in Brazil.

France: Stable Outlook for French Field Crop Margins

French field crop margins are expected to stabilize in 2019 at slightly higher levels than last season.

Margins remain strong in 2019, supported by wheat's strong yield performance of 7.4 mt/ha (highest since 2015) and stable prices (EUR 182/mt) since 2018. The second-most important crop in the rotation, barley, saw improved yields of 6.5 mt/ha, but prices fell in 2019 by 10%, due to strong harvest in many EU countries. Corn yields are expected to hit a ten-year low of 8 mt/ha (even lower than 2016), due to a heatwave at the end of the maturation period, forcing early harvesting (especially in the central-western regions), while corn prices stayed flat. Overall, though, farmers' margins remain solid in 2019. In 2020, margins are expected to decrease, as yields move back to their five-year average and prices are pushed down. Variable input cost hardly moved in 2019 or 2020.

Figure 7: French field crop margins continue to stabilize, 2000-2020f



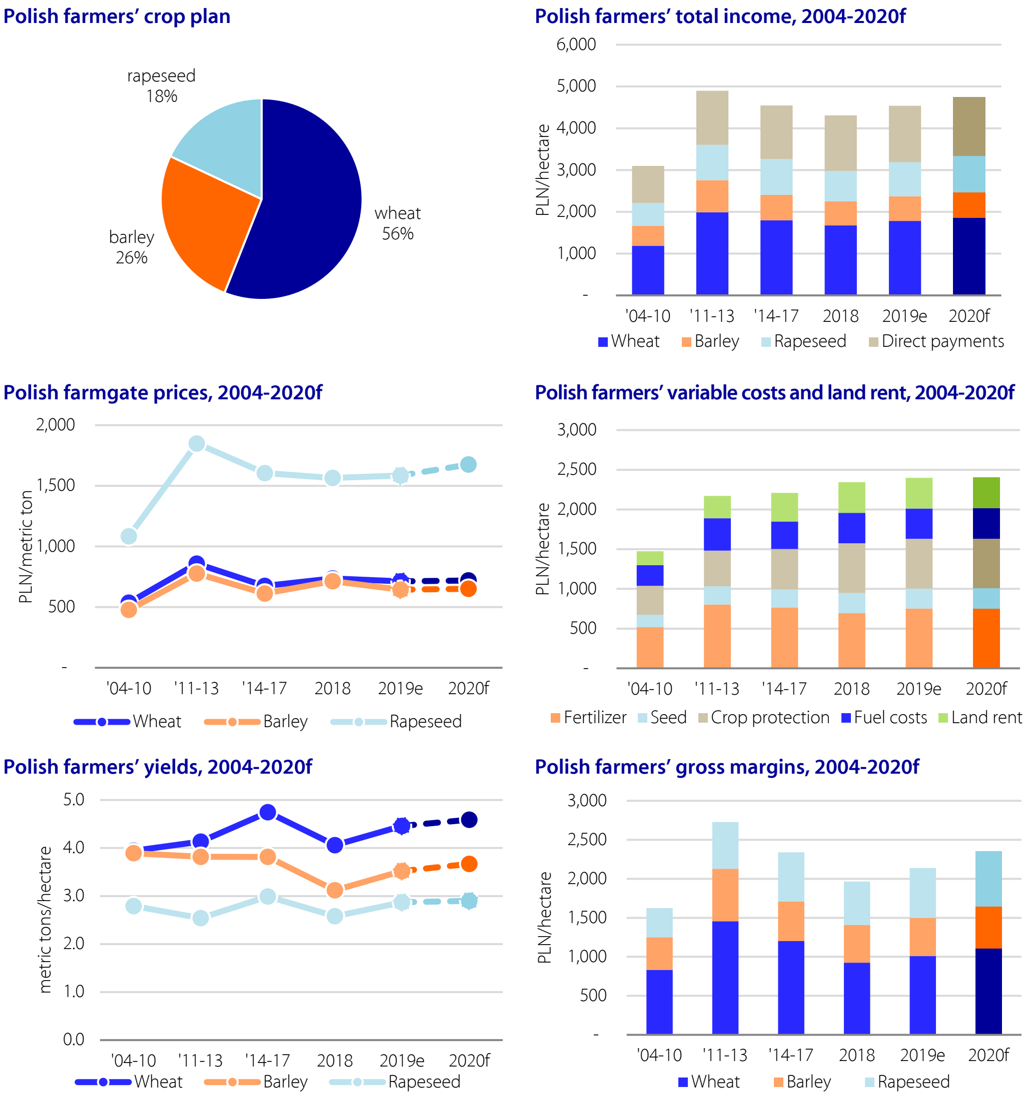
Source: Bloomberg, Eurostat, FADN, Fertilisers Europe, Rabobank 2019

Poland: Consistent Recovery in 2019 and 2020 After the Drought Last Year

After the 2018 drought affected yields and margins, 2019 and 2020 see improvements, due to higher yields and stable farmgate prices.

In 2019, margins improved by 10%, back to their 2015-16 levels, boosted by stronger yields of +10% in all three crops. Wheat, barley, and rapeseed yields reached 4.5 mt, 3.5 mt, and 2.9 mt per hectare, respectively. Wheat and barley crop prices concurrently dropped by 3 percent and 10 percent, respectively, while rapeseed prices stayed flat. Variable inputs (fertilizer, seed, and crop protection) also increased by approximately 4 percent this year. Poland grows more spring barley and wheat than other countries. In 2020, margins are estimated to increase by 10 percent YOY, as yields of wheat and barley are assumed to improve and prices are stable, due to further devaluation of the PLN against the EUR/USD, improving relative competitiveness. Polish farmers continue to be an important market for farm inputs companies going forward.

Figure 8: Polish farmer margins recovering, 2004-2020f



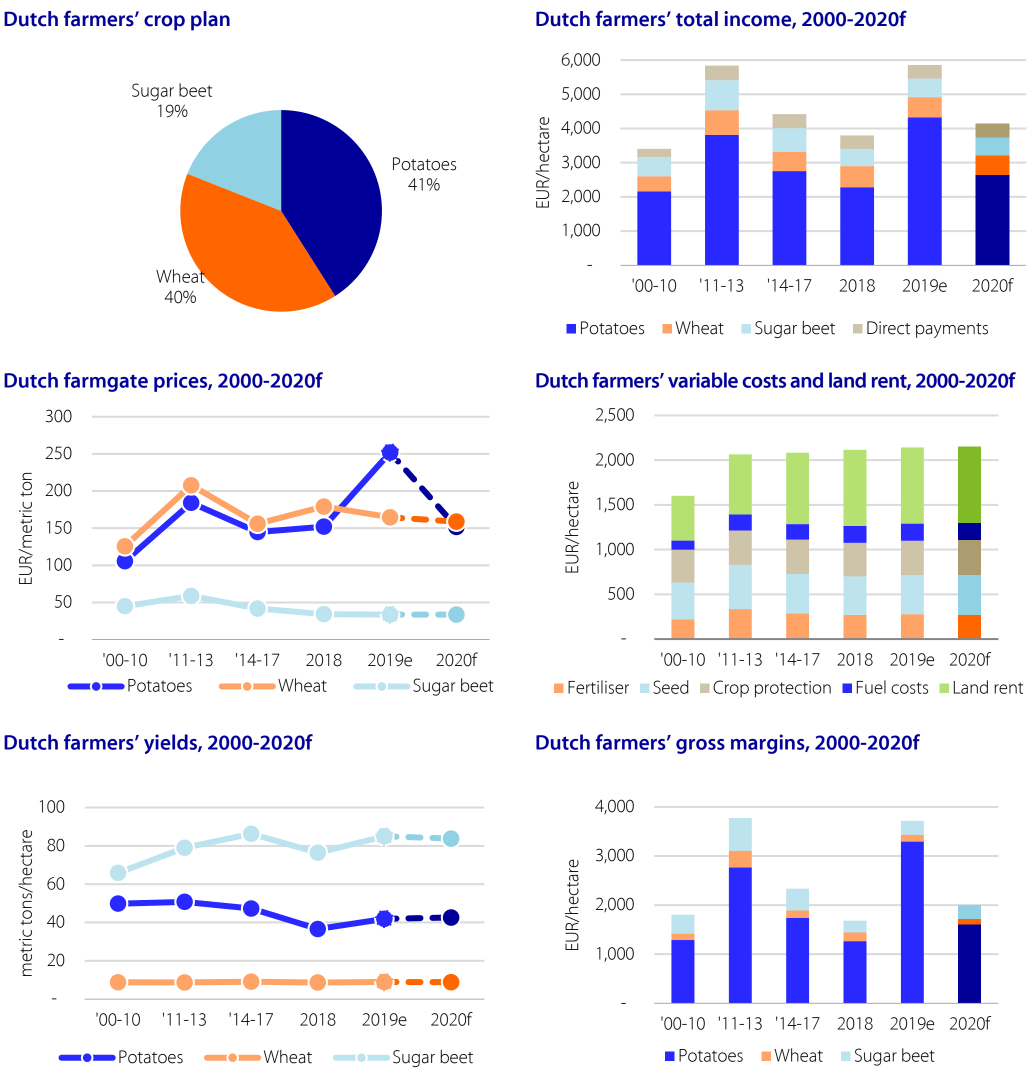
Source: Bloomberg, Eurostat, Fertilisers Europe, BGZ, Rabobank 2019

The Netherlands: Drop in Potato Prices Pulls Farmers' Margins Down by Half in 2020

Potato prices jumped in August 2018, in response to the drought, and remained high in 2019. These high prices and solid yields lead to strong field crop margins in 2019.

After a detrimental 2018 drought season, farm margins have rebounded back to 2011-13 levels in 2019, estimated at EUR 3,700/ha. Most potatoes are priced through contracts (less volatility than the spot market), thus these results may vary from actual farm prices. Wheat had lower 2019 margins, because the slight YOY yield increase did not compensate for the crop price decline. Sugar beet margins stabilized at a lower level than pre-EU sugar quota regime period. In 2020, farm margins are forecast to fall by nearly half, well below the five-year average, due to flat annual yield growth across crops and lower potato spot prices (large share in rotation). Although 2020 farmer margins will decrease, the Dutch agricultural model does not allow for big changes in farm inputs spending.

Figure 9: Potatoes dominate Dutch field crop margins



Source: LEI, KWIN, CRU, Bloomberg, Cosun, European Commission, Eurostat, Rabobank 2019

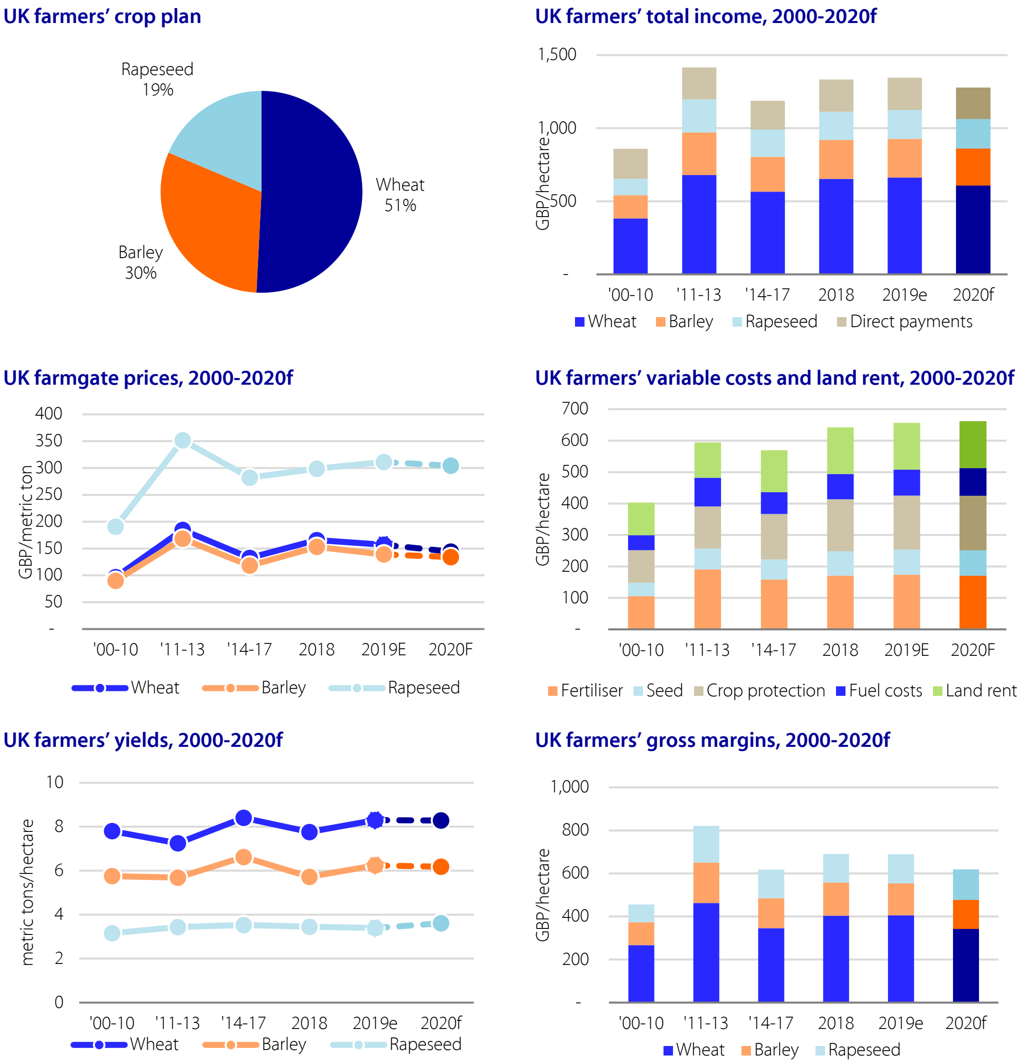
United Kingdom: Field Crop Margins Move Back to Five-Year Average in Continued Brexit Uncertainty

Favorable crop yields and elevated farmgate prices are expected to boost UK field crop margins in 2019 and 2020.

2019 margins are nearly the same as 2018 despite better grain yields this year, as the bumper crop harvest and uncertainty about grain export tariffs under Brexit contributed to lower 2019 grain prices. With a hard Brexit, UK wheat and barley exported to the EU will fall under the most-favored-nation (MNF) regime and be subject to a tariff of EUR 12/mt and EUR 16/mt, respectively. This year's strong yield has depressed domestic prices and created an export surplus. Meanwhile, crop protection chemicals jumped by 3 percent this year.

The pound went up slightly against the euro in 2019, while in 2020 it's expected to weaken by 3 percent. Under much uncertainty, 2020 margins are forecast to decrease by 9 percent, with continued low prices and lower yields. Still, farmers' pockets for farm inputs are relatively strong.

Figure 10: Elevated field crop margins in 2018 and 2019, 2000-2020f



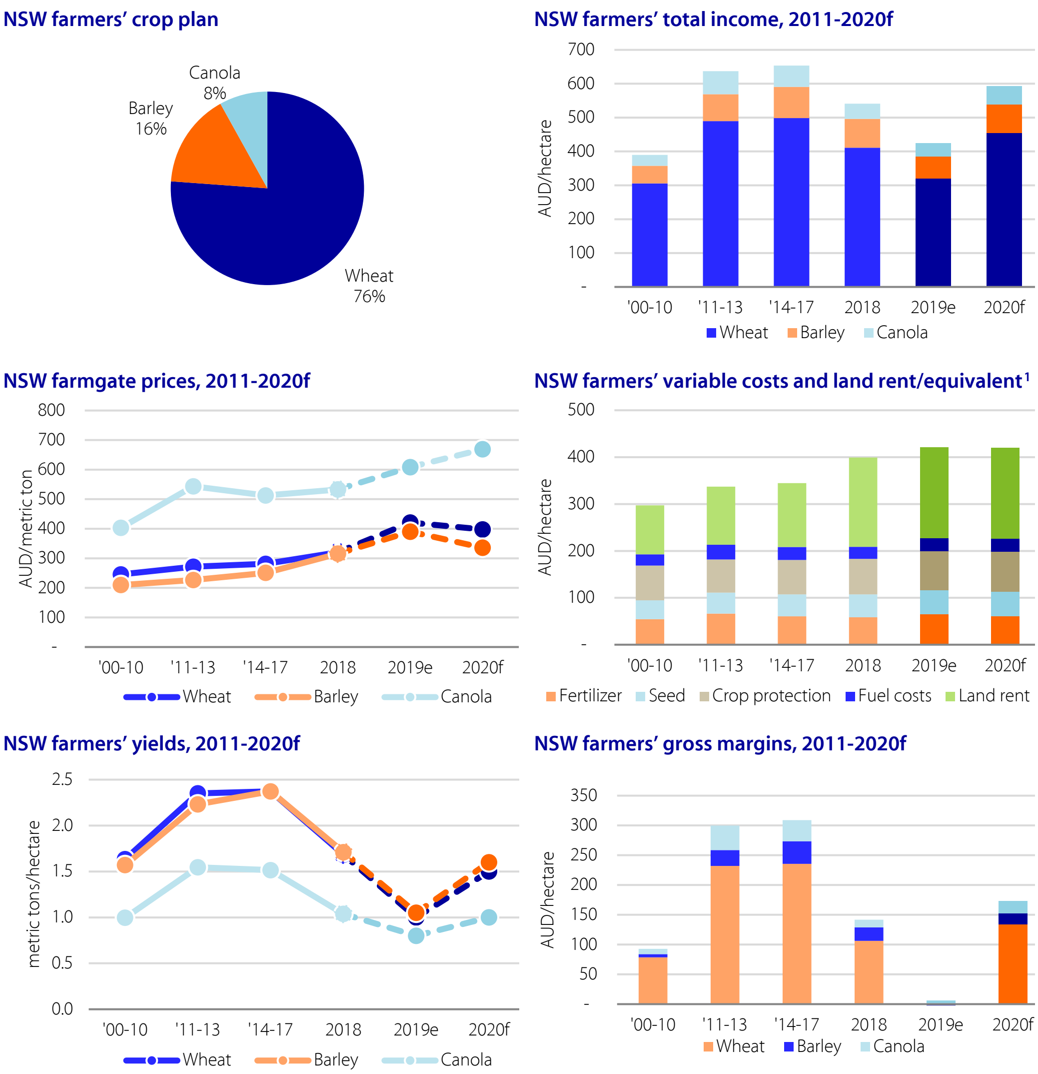
Source: FADN, AHDB, CRU, Bloomberg, European Commission, Eurostat, Rabobank 2019

Australia (New South Wales): Record Dry Weather Will Deliver the Smallest Winter Crop in 17 Years

In the midst of one of the most severe droughts on record, 2019 margins shrunk.

A second year of drought has severely impacted 2019 (2018/19 crop) margins, representing the lowest in more than 20 years at approximately AUD 3/ha. State-wide, the three most important crops – wheat, barley, and canola – each averaged a mere 1mt/ha, 1.1 mt/ha, and 0.8 mt/ha, respectively. Due to the ongoing supply shortfall, wheat, barley, and canola prices increased by 31 percent, 24 percent, and 14 percent YOY (or to 157 percent, 164 percent, and 123 percent above their five-year average), but that could not offset the decline in production. Many farmers elected to cut poor grain crops for hay, which delivered higher-than-anticipated hay supply and lower grain supply. State-wide, we forecast higher production year on year for the 2019/20 crop, albeit remaining 61 percent below the five-year average. If favorable rains arrive ahead of the 2020 winter crop planting, farmers will be more conservative than usual with inputs as they recover from the drought. Meanwhile, we expect grain crop prices to fall from the highs achieved in 2018 and 2019 but to remain above average as stocks rebuild.

Figure 11: Yields (driven by moisture) important variable for farmer margins



Source: Bloomberg, ABARES, IFA, CRU, NSW government, Rabobank 2019

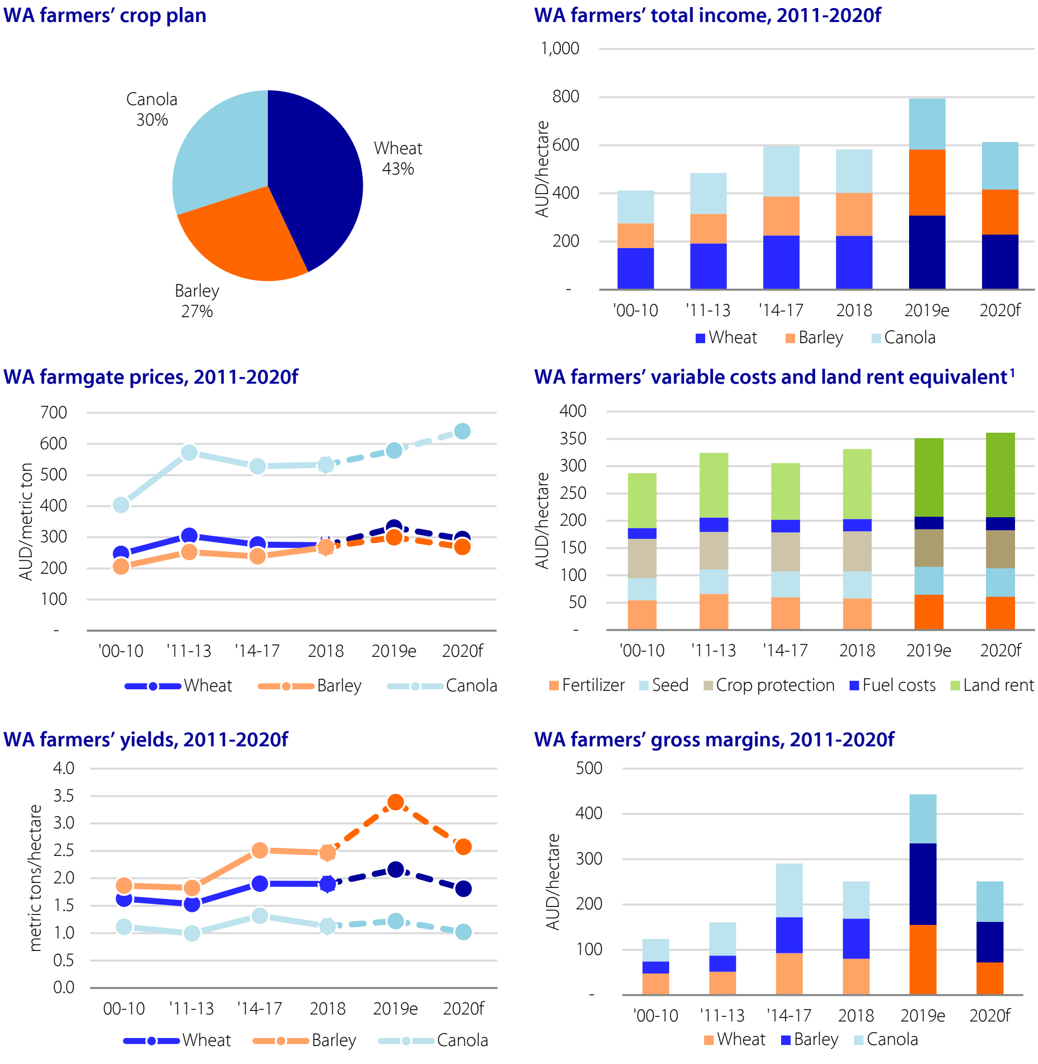
[1] Most land in Australia is farmer owned. Land rent is therefore not an important cash out in Australia.

Australia (Western Australia): Strong 2018 Harvest With Margins at 20-Year Highs Make For a Hard Act to Follow in 2019

Western Australian (WA) farmers achieved record margins in 2019, but a dry and late sowing period and September 2019 frost will negatively affect 2020 margins.

In contrast to NSW, in 2018/19, WA farmers had the strongest wheat and barley yields in more than a decade (2.2 mt/ha and 3.4 mt/ha), which were 114 percent and 135 percent of the five-year averages. WA farmers also benefited from improved prices (driven by eastern Australian demand and a weaker Australian dollar) to deliver a gross margin of AUD 443/ha and a record high. WA typically has the same crop rotation as NSW but much larger farm sizes than NSW. The combination of a dry start, bitter frost in early September that damaged crops, and low soil-moisture levels at the end of the current season will reduce this year's harvest. Looking ahead to 2020, crop prices are expected to move lower from the highs achieved in 2019. Therefore, gross margins, net of other costs, are expected to fall to AUD 251/ha in 2019/20. Overall, we expect WA farmers will maintain strong demand for farm inputs purchases next year (although the lower Australian dollar has delivered upward price pressure on inputs).

Figure 12: Yields (driven by moisture) important variable for farmer margins



Source: Bloomberg, ABARES, IFA, CRU, Rabobank 2019

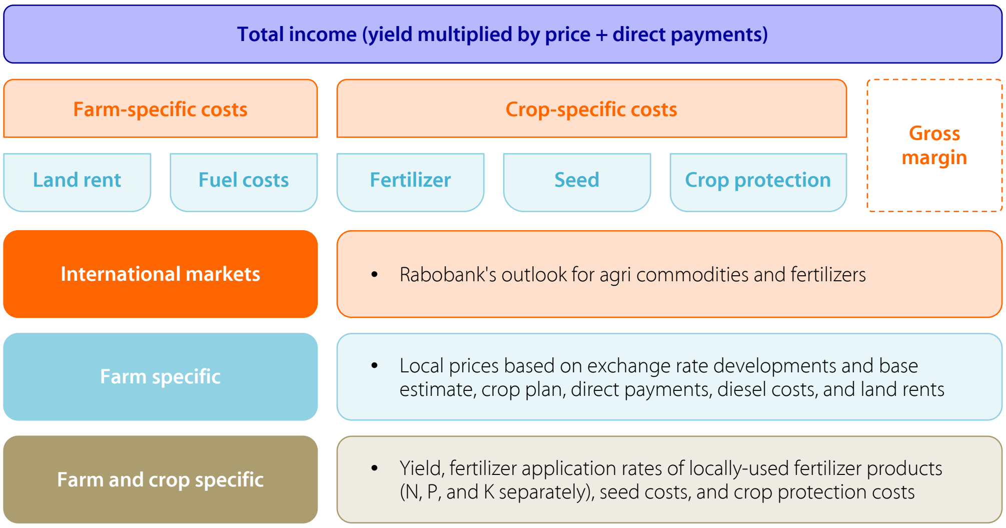
[1] Most land in Australia is farmer owned. Land rent is therefore not an important cash out in Australia.

The Rabobank Field Crop Margin Outlook Explained

Rabobank is proud to present our annual publication that highlights the latest developments in field crop margins around the world and provides an outlook for the coming year. These outlooks are developed using our insights into agri commodity and fertilizer prices, as well as our knowledge of local farming practices around the world.

Our analysis looks at the specific costs associated with a mix of representative field crops to estimate the gross margins in the following regions: the US (Iowa-Midwest and Kansas-Great Plains), Brazil (Mato Grosso), France, the UK, Poland, the Netherlands, and Australia (New South Wales and Western). To determine past and future gross margins, we use a variety of data, including farm- and crop-specific variables spanning international markets *(see Figure 13)*.

Figure 13: Variables used in the Field Crop Margin Outlook



The analysis of each region is based on a theoretical model farm that grows no more than three crops, with the share of each crop corresponding to its share in the region where the farm is located. The model assumes average farmgate prices and application rates for seeds, crop protection products, and fertilizers. As such, the model farm provides an indication of the financial performance of the average field crop farm in a particular region over time. Labor, machinery, and financing costs are not included. The model is not suitable for benchmarking individual farms.

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