

International Farm Management Association Country Reports June 2023



IFMA Council Members 2022 - 2024

Executive Committee Members:

Role	Name	Country
Patron (ex-officio)	Rob Napier	Australia
President	Trevor Atkinson	UK
Vice President	Damona Doye	USA
Vice President	David Hughes	Argentina
Secretary/Treasurer	Richard Cooksley	UK

Council

Journal Representative:	Eric Micheels	Canada
Next Gen Programme	Robin Thompson	Australia
Africa – West & Central:	Grace Evbuomwan	Nigeria
Africa – Southern:	Frikkie Maré	South Africa
Africa – East:	Philip Nyangweso	Kenya
Australasia:	Robert Patterson	Australia
Europe – Central:	Agata Malak-Rawlikowska	Poland
Europe – West & Mid:	Abele Kuipers	The Netherlands
Europe – South:	Jaka Zgajnar	Slovenia
New Zealand:	Julian Gaffaney	New Zealand
North America - Canada:	Heather Watson	Canada
North America – USA:	Guido van der Hoeven	USA
Scandinavia and 23 rd Congress:	Brian Jacobsen	Denmark
South America:	Mariana de Aragão Pereira	Brazil
UK and Ireland:	Tim Brigstocke	UK
22 nd Congress 2019:	David Armstrong	Tasmania

IFMA 2023 Country Reports

Well, that year went very quickly!

We are very grateful to Brian and his team for a very well organised IFMA23 in Copenhagen - listened to high profile speakers and farmers putting forward their views, looking at farming businesses, witnessing how they operate and being open about their successes and failures. The next generations were challenged with a case study that moved them outside of their local and into international comfort zones. We all came away refreshed, rejuvenated and with a little bit more knowledgeable and understanding from around the world. What a privilege to be a part of the IFMA network!

We all struggle from information overload these days. The ever-increasing bombardment of information seems to just take us from one crisis to the next. To get through the day, we have to separate out what is important. Being hard wired for survival, we prioritise information attached to emotions such as rage, hate or fear. In short, we give preference to pessimism and bad news, because tagged with fear, they get through the bombardment filter.

In the 1960s we had the pessimism of population explosion and global famine, in the 1970s it moved on to the exhaustion of resources, in the 1980s acid rain, in the 1990s pandemics, in the 2000s we have global warming and having just gone through COVID, we currently have Inflation. One by one, these have all had their time dominating the headlines. Consequences thus far are considerably less than feared. With the memorable image of the man who, having fallen off the skyscraper, thinks 'So far so good!' as he passes the first-floor at speed. We therefore have to ask, "Have we just been lucky so far, or was the original pessimism perhaps unrealistic?"

To a dwindling population who are accustomed to well-stocked supermarket shelves, reigning in agricultural production is a relatively inconsequential and easy solution to Global Warming. To those of us who are fortunate to live in agriculturally productive areas that we are proud of, it is hard to believe that our production practices are a major cause of Global Warming. But, like it or not, we now face new food production parameters to which our agricultural industries must adapt.

The following country reports provide a unique IFMA insight into how these challenges are starting to influence our agricultural industries at a country level. Inflation, Environment, Diets, Carbon markets are increasingly writing new tunes to which food production must now learn to dance.

Challenges are best confronted from positions of knowledge and experience. With the bar set high in Scandinavia, IFMA 24 in Canada is now taking shape as Eric Micheels and his team pull together their program for Saskatoon. Within IFMA we believe those with knowledge and understanding will adapt, change, and survive. Those without, will resist and keep going until either their money, or their energy, run out.

Good luck and enjoy your challenges!

Trevor Atkinson – IFMA President

The International Farm Management Association (IFMA)

IFMA is a society for people who are involved directly or indirectly in the agricultural process and who have an interest in the agriculture of parts of the world other than their own, exchange of knowledge and best practice.

This includes the whole spectrum of individual and corporate producers, farmers, managers, advisors, researchers, teachers, policy-makers, suppliers, farming and marketing organizations and agribusiness companies associated with agriculture, horticulture and rural enterprise.

IFMA has members in over 50 countries is organised and co-ordinated by a Council, with members drawn from around the world.

The objective of the Association is to further the knowledge and understanding of farming and farm business management and to exchange ideas and information about farm management theory and practice throughout the world.

- **IFMA International Congresses:**

These are organised every other year in countries around the world. They are organised locally, usually last for 6 days, which together with additional pre- and post-congress tours, provide not only an occasion to discuss farm management and agriculture in a global context, but also to learn a great deal about the host country's farming structure and its people. They are a totally unique experience.

The 2024 IFMA Congress which is the 24th International Farm Management Conference will be hosted by The University of Saskatchewan.

- **7th July 2024 to the 13th July 2024 – Congress** <https://www.ifma2024.org>

This will be the 24th IFMA Congress whilst it follows a well proven format allowing delegates and speakers to exchange best practice its also allows the organisers to bring a flavour of the host country Agriculture management style and culture.

- **Venue for the Congress**

- <https://www.usask.ca>

- **Hotels**

- Delta Hotels Bessborough
- Delta Marriott
- Park Town Hotel

- **Social Event Locations**

- Wanuskewin Heritage Park <https://wanuskewin.com/>
- Remai Modern <https://remaimodern.org/>

- **Country Reports:**

Each year members of Council who represent different countries produce a report covering agriculture which provides a good snapshot of agriculture around the world.

Note:

All the authors of the Country reports are resident within the relevant Country and involved with Agricultural Management.



Saskatoon and Agriculture

Saskatoon is located in the centre of the province of Saskatchewan which is a major producer of Canada's wheat, oats, flaxseed, and barley. Meat processing is the largest industry, followed by dairy production, breweries, and the production of agricultural implements.

‘An Ideal Location for an IFMA Congress’

Page	Country	Author
7	Argentina	David Hughes
9	Australia	Robert Patterson Australia and David Armstrong and Robin Thompson with an update from Tasmania
19	Brazil	Mariana de Aragão Pereira
26	Canada	Eric Micheels and Heather Watson
35	Denmark	Brian Jacobsen
37	Japan	Yukio Kinoshita
42	Kenya	Philip Nyangweso
45	Netherlands	Abele Kuipers
48	New Zealand	Julian Gaffaney
54	Nigeria	Grace Evbuomwan
56	Poland	Agata Malak-Rawlikowska
64	Slovenia	Jaka Zgajnar
69	South Africa	Frikkie Maré
71	UK	Trevor Atkinson
82	USA	Damona Doye and Guido van der Hoeven

Argentina

Weather:

What looked like a good season for winter crops turned out to be very bad year climate wise. Winter crops had no rain, and a couple of late frosts, so yield was down. Soil moisture was very low at corn planting season, followed by a very dry spring and summer. February (late summer in southern hemisphere) was both the hottest and coldest February since 1961. The early frost in February, followed by another frost in March made the 2022/2023 growing season a season to forget.

Economic Climate:

We are suffering from government officials who do not understand how the world works...inflation has been on the rise, April was at 8.4% per month which works out at 108.8% for the past 12 months, and if we annualize this, it will give us an inflation of 163%.

There are many exchange rates in Argentina, the official rate is close to 225 \$Ar/USD, if you purchase dollar bills legally it is about 465 \$Ar/USD. We sell and purchase inputs at the official rate and save at the higher rate. There are also exchange rates for tourism, and other activities.

During December 2022, February 2023, and now May 2023, the government has devalued the currency for 30 days each time, for soybean only, at a 30% approximately devaluation. This was set up to entice farmer selling of soybean and through this selling put some dollars in the Treasury. This worked out quite well in December 2022, but much less on the following two occasions. On the other hand, purchasing dollars at a higher rate, and selling them at the official rate implied the government has had the need to print more money, and so this went straight to inflation...

We have our primaries in August, presidential and Congress elections in October, and the new President will be in office on December 10th....it seems the governing party will probably end up second or third, as we have Mr. Milei, an outsider, liberal economist, running for president.

Livestock:

The beef industry is suffering the governments export quotas. Due to the drought process have fallen hard, as farmers have been selling off cattle due to shortage of grass and high prices of grain. With these grain prices, fattening cattle with grain is not for the fainthearted.

Crops:

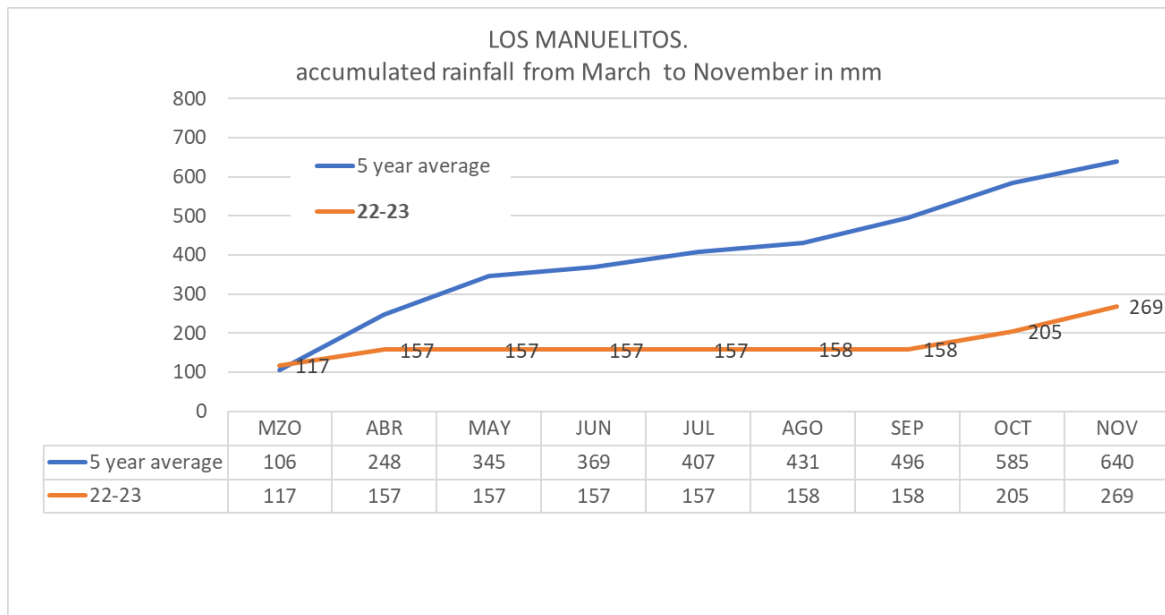
What started off as a promising winter crop, we got hit by drought, and a few late frosts, hitting us hard and harvesting a poor crop. Country wise we harvested about half of last year's wheat crop.

This drought carried on during the summer, having the hottest and driest February since 1961, as well as the coldest February since 1961. The dry spring pushed us to skip corn planting in September, and search for moisture in the fields for planting in December, which we did on a smaller acreage than originally planned. Soybean planted in November survived and we were able to harvest, soybean on wheat hardly survived.

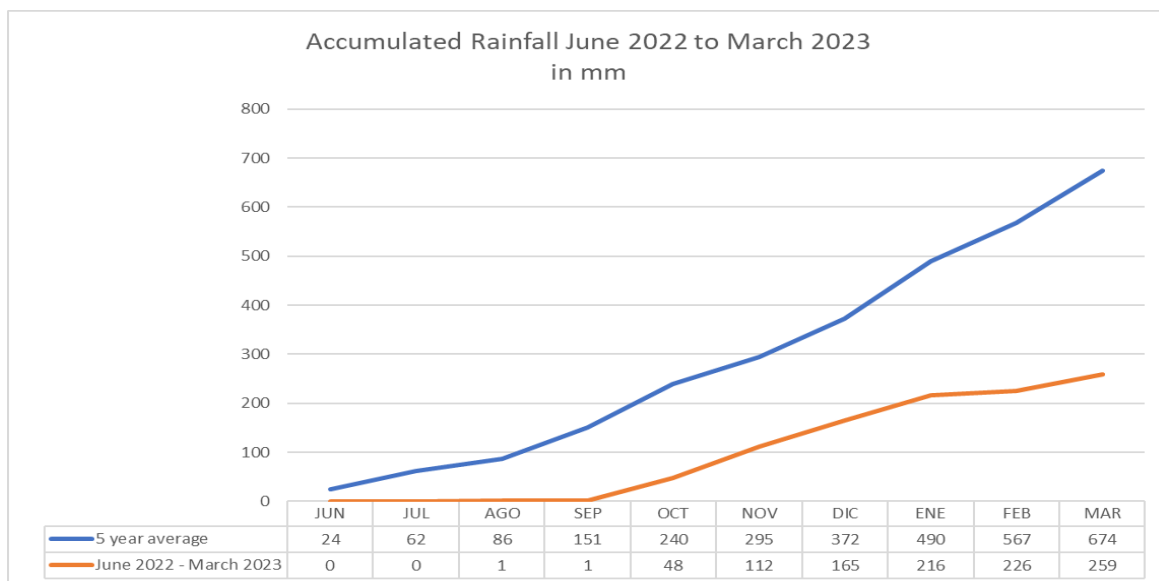
Country wise we have had bad wheat, barley, soybean, and corn harvests. Unfortunately, Brazil made up for our production loss, so not much change in grain prices.

May 2023 has started with some rain, slowly making up for the lack of soil moisture.

Following are historical yields on our farm as well as rainfall.



Blue line historical accumulated rainfall (in mm) since March 2022 to November 2022, in October we need rainfall for the wheat which is flowering, we had very little rainfall, and two harmful frosts.



I am sharing our planned planting acreage and the actual acreage planted, together with historical yields and actual yields on our farm. Location: Coronel Segui, Alberti, province of Buenos Aires, Argentina.

	Original Plan	Executed	5 year average Yield		Actual yield	
Wheat	445 hectares	548 hectares	4.884 kgs./ha.	72,60 bu./acre	1.219 kgs./ha.	18,10 bu./acre
Barley	274 hectares	173 hectares	4.551 kgs./ha.	67,70 bu./acre	2.702 kgs./ha.	40,20 bu./acre
Double crop soybean (**)	719 hectares	721 hectares	2.358 kgs./ha.	35,10 bu./acre	390 kgs./ha.	5,80 bu./acre
Spring Corn	510 hectares	0 hectares	9.536 kgs./ha.	151,90 bu./acre	no crop	
Summer Corn (*)	0 hectares	356 hectares	8.815 kgs./ha.	140,40 bu./acre	5.000 kgs./ha.	79,70 bu./acre
Early soybean	33 hectares	187 hectares	4.070 kgs./ha.	60,50 bu./acre	1.350 kgs./ha.	20,10 bu./acre

(*) expected yield, not harvested yet

(**) yield on total planted acreage, only 30% was harvested, no yield on the rest of acres

Farmer selling has been restrained due to the low yields, as well as the economic and political uncertainty. Overall, we have a very challenging year ahead, both domestically as well as what is happening in the rest of the world

David Hughes – May 2023

Australia

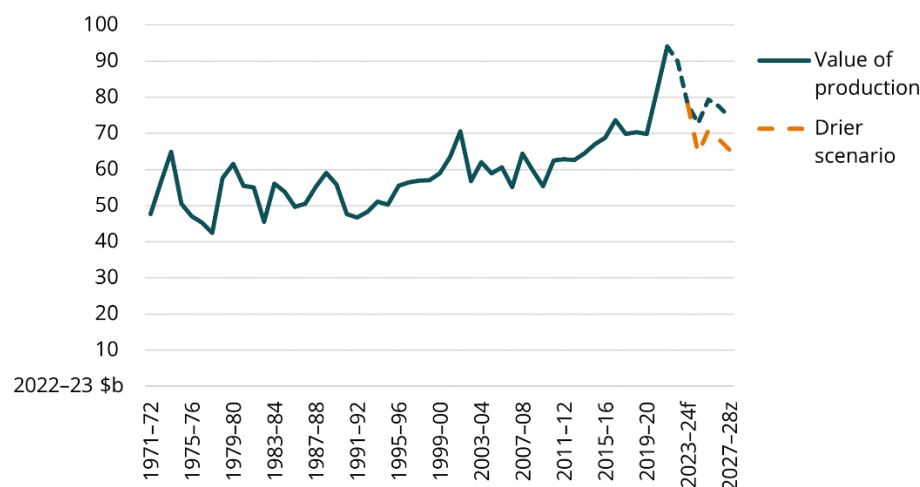
Overview:

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

The gross value of agricultural production is forecast to reach a record of A\$90 billion in 2022–23. This has been on the strength of another record year for crop production following a third consecutive La Niña event and continued high prices. Prices are expected to ease somewhat from the highs of 2021–22, their highest levels in over 30 years. Flooding and waterlogging along parts of the east coast in late 2022, saw localised losses of crops and caused disruption to the harvest of winter crops and movement of livestock in the region. However, exceptional conditions across the majority of cropping regions nationally, are expected to yield the highest production levels of winter crops on record. This includes record yields for wheat and canola, and near record production of barley. Value of exports to reach a record of A\$75 billion in 2022–23. *(It is noteworthy that this represents 83% of the total value of production.)*

Production and export values to fall in 2023–24, to reach A\$81 billion and A\$64 billion, respectively. A forecast return to drier seasonal conditions will lower crop production, particularly of wheat, barley and canola, although high soil moisture from the previous year will somewhat mitigate the drier conditions. This is expected to be partially offset by a near A\$2 billion increase in horticultural production, mainly driven by fruit and nut production and high export prices. In contrast, livestock production is forecast to remain relatively steady at A\$35 billion. International prices are also expected to weigh down on the value of production, despite remaining above long-term averages. If global economic growth declines further than expected, lower demand would likely put further downward pressure on agricultural commodity prices and further reduce the value of agricultural production.

Real gross value of agricultural production, Australia, 1971–72 to 2027–28 (ABARES forecast)



Weather:

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

Following a wet late winter and early spring across much of Australia, rainfall continued to be average to extremely high between November 2022 and January 2023 in the key production regions in southern New South Wales, Victoria and South Australia. In contrast, the southern Queensland, northern New South Wales and most of Western Australian cropping regions, received below average rainfall.

For the 3 months to January 2023, above average rainfall totals and mild temperatures resulted in well above average pasture production for this time of year across most grazing regions, primarily in northern and central Australia. Modelled pasture growth was above average to extremely high across western New South Wales, southern Victoria, northern Queensland, South Australia and northern Western Australia. This growth will likely enable farmers to continue rebuilding stock numbers and provide opportunities to replenish fodder supplies during late spring or early summer, if conditions, such as dry warm weather suitable for fodder conservation, were experienced during this period. In contrast, modelled pasture growth was extremely low to below average across scattered areas in the wheat/sheep zone, central and eastern New South Wales, south-eastern Queensland, north-eastern Victoria, and southern parts of Western Australia. In some regions, this low pasture growth likely reflects a decline in plant growth due to excess moisture.

Well above average rainfall between November 2022 and January 2023 has been largely beneficial to broad-acre summer crop production prospects, however, it was not favourable for winter crop across parts of eastern Australia. However, given that a phase of three wet climate driver years have just been experienced, it is reasonable to expect at least two years in years 2 to 5 of the medium-term projections reverts to drought conditions, with production outcomes consistent with decile 1 or 2 rainfall (where they follow a neutral or dry climate driver year).

Current predictions indicate a 50% chance of El Nino conditions, with the likelihood of lower than average rainfall, plus hotter than average temperatures, for the eastern and northern parts of Australia over the coming winter and spring (May-November). All but one of Australia's Bureau of Meteorology's surveyed international models, point to an El Nino developing by August 2023.

Agriculture Economic Climate:

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

The global economy is assumed to slow in 2023, due to higher interest rates across the world lowering investment and consumption. The global economy is estimated to have grown by 3.4% in 2022, on par with the average global economic growth rate since 1980. Global inflation is assumed to continue to ease over 2023, allowing central banks to lower interest rates in 2024. This will support economic growth returning to trend. Australia is expected to benefit from higher growth in China in 2023 and 2024.

There is some easing of trade restrictions imposed on Australian agricultural exports to China, notably barley as at May 2023, but easing of restrictions on other commodities is looking possible in the near term.

In 2023–24, inflation is assumed to average 4.5% in Australia, a decline from 7.3% in 2022–23. Inflation is assumed to decline due to the impact of higher interest rates on consumer demand and further easing of supply-side pressures. High inflation, particularly for energy, has increased the cost of farming for Australian businesses since mid-2021.

Natural gas is a key ingredient to fertiliser production, which in turn is a critical input for Australian agricultural production. World Bank data indicates that global fertiliser prices (in US dollars) increased by 117% in real terms from January 2020 to January 2022. Australian import unit values of fertiliser have declined from their peak in mid-2022 in line with lower natural gas prices and greater global fertiliser exports, but they are still well above the long-term average. A sustained period of high fertiliser prices will likely lead to some farmers rationing usage, which could impact crop yields and production.

Spot prices for container freight on major shipping routes were around 40% lower in December 2022 compared to January 2022. This decline reflects falling demand for shipping following a period of inventory restocking by importing businesses and lockdowns in China which reduced exports.

Labour is another key input to Australian agriculture that has been impacted by the COVID-19 pandemic. Initially, measures put in place to control the spread of COVID-19 resulted in a reduction in the availability of agricultural workers from overseas and placed restrictions on the movement of people within Australia, leading to higher wage costs for agricultural employers. Recruitment difficulties still persist in some industries and regions, but labour supply is set to rise further in 2023–24.

Australian farmers are facing a significant cost-price squeeze at present, due to elevated costs of agrochemicals, fertiliser, fuel, labour, machinery, plus interest costs. To date, favourable climatic conditions plus relatively high commodity prices, have insulated them to some extent from these elevated input costs. However, future lower commodity prices are a worry. National Australia Bank's (Australia's largest rural lender) NAB Rural Commodity Index, fell 3.6% during March 2023 and is now 19.7% below the value at the same time in 2022.

On the positive side, fertiliser prices continue their downward trend, having now erased well over half their COVID/Ukraine War price spike. However, fertiliser prices are still high in historic terms.

Rabobank report that agricultural land prices across Australia rose by 29% (median price per hectare) in 2022, with cropping land increasing by 29%, livestock grazing land by 26% and country suitable for dairying by 29%. While no commentators are predicting a reduction in agricultural land prices, most expect the rate of increase of the past two years (~30% increases) to decline in 2023, due to high property prices, increasing interest rates, plus the expected onset of an El Nino weather pattern leading to reduced farm output, all of which will reduce farmers' appetite for buying more land.

However, Rabobank’s research shows that 7% of Australian farmers intend to buy land during the next 12 months, against a backdrop of 11% of cropping and 13% of Australian grazing land sales in 2022 exceeding A\$10 million.

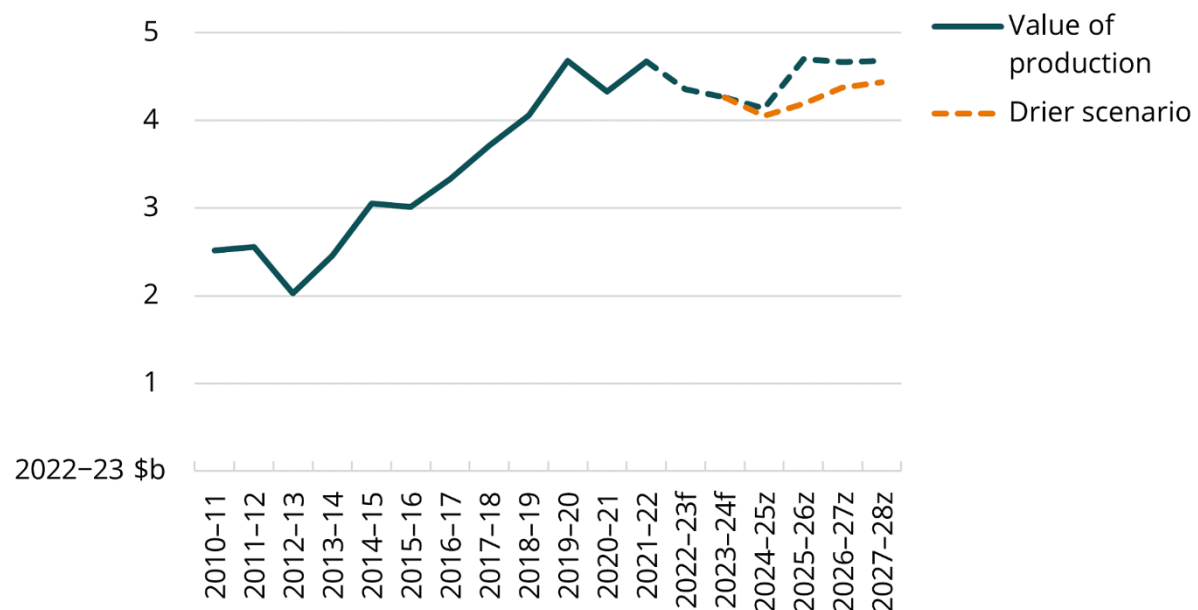
Livestock:

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

Gross value of production of beef and veal is forecast to fall 10% to A\$14 billion in 2022–23 due to lower prices resulting from pasture growth conditions changing from favourable to average. This is expected to lead to increased turn off and increased beef production, which will offset some of the impact of price falls. Biosecurity remains a key risk for the beef industry with foot-and-mouth disease and lumpy skin disease both reported in Indonesia and other countries to Australia's north. Both diseases and their implications for market access would be extremely disruptive to Australia's cattle industry.

The value of production of sheep meats is expected to fall to A\$4.4 billion in 2022-23, and further to A\$4.3 billion in 2023-24 due to lower prices offsetting increased turnoff. Years of rebuilding the flock have increased the availability of livestock for slaughter. This increased availability is expected to put downward pressure on historically high prices. Drier seasonal conditions are expected to encourage turnoff of livestock. Carcase weights are also expected to decrease year-on-year due to less pasture growth.

Real gross value of sheep meat production, 2010–11 to 2027–28 (ABARES)



The gross value of milk production is forecast to rise by 20% to A\$5.8 billion in 2022–23. A sharp increase in the farmgate milk price is expected to more than offset a decrease in milk production.

The expectation of low domestic milk production and relatively high export prices has led to intense competition between processors trying to secure their milk supply for 2022–23, driving up the farmgate milk price. The value of production is expected to subsequently fall to \$5 billion in 2023–24, due to a fall in the farmgate milk price as production stabilises.

Global dairy prices are expected to fall in 2022–23 and domestic production is forecast to decline due to falling cow numbers, but stabilise over the outlook period.

Arable:

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

The gross value of value of wheat, barley and sorghum forecast to reach record levels due to record production and high world prices. Above average spring rainfall and flooding in many regions of eastern Australia caused significant damage and crop losses for growers in affected areas. However, strong production in areas not flooded have offset these losses.

High prices for wheat are expected to persist in 2023–24, but remain below the record highs reached in 2022–23, while world production and consumption increase over the medium term.

In 2023–24, the values of barley and sorghum production is forecast to decrease.

The value of canola production in 2022–23 was a record, but production in 2023-24 is forecast to fall due to drier conditions, rising global supply and lower prices in real terms.

Australia has harvested its second 7+ million tonne canola crop in a row, resulting in local prices retreating back to 2021 levels. With limited Australian local crushing capacity (around 1 million tonnes annually), growers are heavily dependent on international markets. Global supply of canola at present is much greater than this time last year, due to larger crops in Europe and Canada, plus the opening up of the Black Sea grain shipping corridor to Ukraine, the world's third largest canola exporter.

There is increasing interest in grain legume or pulse crops in broadacre cropping regions, driven primarily by high fertiliser prices, especially that of urea, plus its availability due to supply chain issues. The introduction of pulse crops, either harvested for grain or brown manured, into crop rotations, is assisting subsequent crops through better control of cereal root diseases, plus grass weed control.

The legacy effect of biological nitrogen from previous pulse crops, is also being shown to result in higher yield responses than from comparable rates of synthetic nitrogen. This is especially the case with canola, which appears to respond better to slow-release biological nitrogen, that it does to large applications of synthetic nitrogen.

Horticulture:

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

In 2022–23, the gross value of horticultural production is forecast to reach a record A\$16.3 billion in nominal terms. [High water storage levels and low water allocation prices](#) have aided in boosting production volumes by easing some of the cost pressures faced by producers. However, fuel, freight and fertiliser prices have remained a burden for producers despite falling back from their peak in recent months. Higher than average rainfall in many areas disrupted production volumes of fruit and vegetables resulting in acute supply shocks. These shocks have resulted in higher prices as supply chains struggled to keep up with just-in-time delivery systems. Prices are expected to ease somewhat in the second half of 2022–23 as the bumper summer harvest comes online and fuel, freight and fertiliser costs are expected to continue to fall.

Over the medium term to 2027–28, the value of horticultural production is expected to grow moderately, reaching A\$17.7 billion in real terms. These rises are largely expected to come from the fruit and nuts categories, as plantings from previous years become productive, allowing for volumes to increase. Boosted by growth in export markets, Australia is expected to take advantage of its position as a countercyclical supplier to northern hemisphere producers and geographical proximity to Southeast Asia.

Input costs such as fuel and fertiliser remain high, however, are expected to fall throughout the year, easing cost pressures for growers. Labour shortages are also expected to continue to ease which will allow growers to process more produce, increasing supply to markets and easing prices.

Environmental

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Agricultural Outlook March 2023.

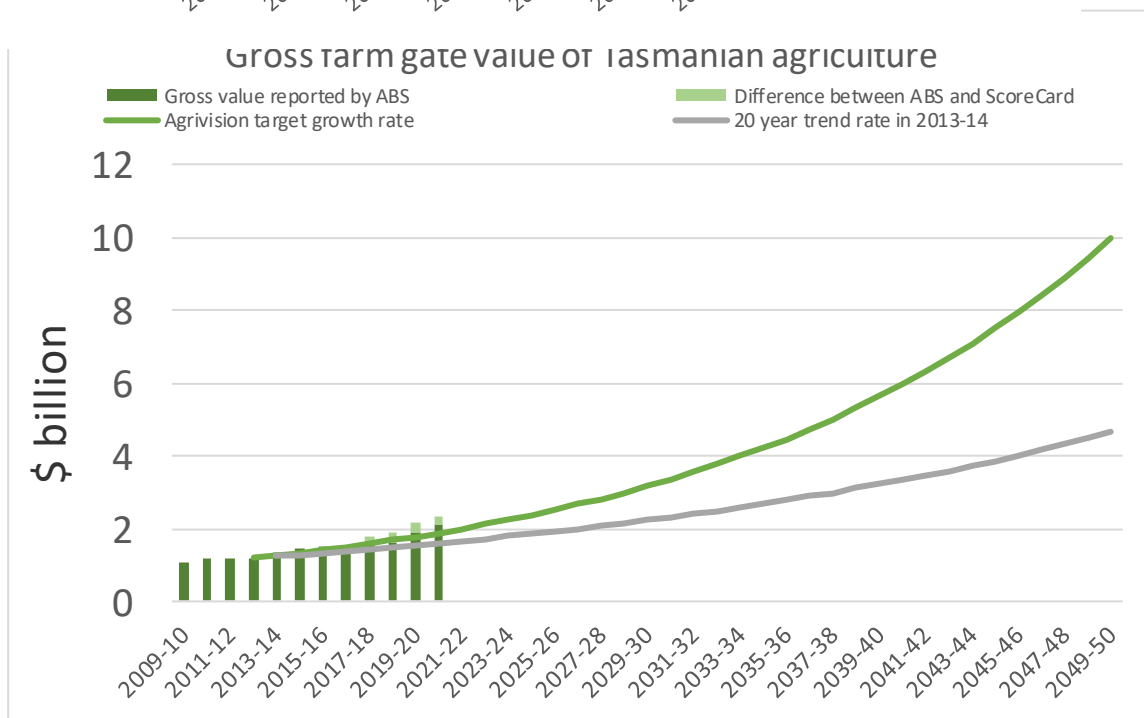
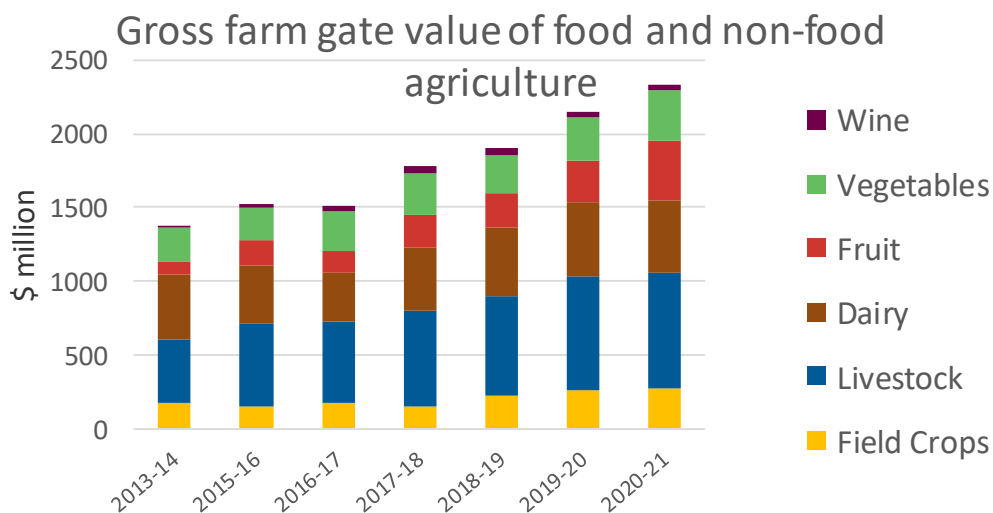
The increasing global focus on sustainability (including reducing greenhouse gas emissions), will likely impact on the livestock sectors of many developed economies beyond the outlook period. The EU, New Zealand and the United States account for a significant proportion of global dairy exports. These countries are also implementing several sustainability and emissions targets. Agricultural exporters, including Australia, will be under increasing pressure to improve sustainability credentials and reduce the emissions intensity of their products in a global market, where governments, along with consumers and investors value sustainability. Changes to sustainability and emissions policies, will likely impact how the Australian livestock sector trades and competes with other countries in the global market.

Robert A Patterson – June 2023

Since IFMA22 in Tasmania:

Around 10 years ago the Tasmanian Government committed to growing the farm gate values of Tasmanian agriculture from \$A1b to \$10b by 2050 (in current dollars), and each year the current values are published in the Tasmanian AGRI-Industry Scorecard. The growth required to meet the objective is around 6% on a compounding basis.

The following graphs show the farm gate values to 2020-21, and indicate a growth rate exceeding the target of 6% (graphs provided by the AgriGrowth Tasmania, Department of Natural Resources and Environment, May 2023). Indications are for continued growth in 2021-22.



It is worthwhile reviewing the drivers of this growth, and future prospects.

In recent years rainfall in the agricultural areas of Tasmania have been relatively high (La Nina conditions), a significant change from the drier conditions of the of period 2017-2019. This has resulted in generally good pasture production and sufficient water supplies for irrigation. Interest rates were low, though now increasing.

Prices for livestock and livestock products primarily milk have been high, though now decreasing, particularly for beef cattle and coarser (greater than 23 micron) wools.

The value of fruit and vegetables (destined mainly for the national market) has increased, particularly of berries (strawberries, raspberries and blackberries) mainly through increased production as the Tasmanian climate is seen as more favourable for production during the summer and autumn (compared with mainland Australia). Higher prices for potatoes, carrots, and salads (e.g. lettuce, rocket, and baby spinach have contributed to the increased farm gate value). Increased potato price has been driven by too much rain particularly during planting in early spring and harvest in autumn. High autumn rainfall on fully irrigated potato growing sites through autumn and early winter 2021-22 resulted in yield losses due to rotting and inability to operate machinery. This does however confirm potatoes are a high-risk crop and questions its sustainability in marginal areas, particularly with climate change.

Record milk production in 2020-21 was offset by lower milk price resulting in a lower farm gate value for milk. Dairy remained the highest value agricultural category. Government regulation now requires dairy companies to fully disclose the price they offer for milk. This together with increased milk processing capacity in Tasmania is having positive impacts on the dairy industry.

The poppy sector is not reflected in the above graph as it is a non-food crop. Unfortunately, this industry has seen a massive downturn relative to five years ago largely because of reduced demand for opiate based analgesics in the United States where regulations have reduced over the counter access to such pharmaceuticals. Production of poppy derivatives in low cost of production countries such as Pakistan and Turkey has also reduced demand for Tasmanian products. Research and investment is continuing in medicinal hemp production in fully controlled environments. Such a crop will never be broad acre thus remaining within the grips of pharmaceutical companies such as Extractas Bioscience.

Cereal production has been steadily increasing in Tasmania driven by new high yielding dual purpose red wheat and canola varieties which in some instances have replaced poppies in cropping rotations.

Generally, market demand, economic and seasonal conditions in recent years have been major contributors to improved outcomes for agriculture in the State, although production in some sectors has been adversely affected by wetter conditions (e.g. frost and higher rainfall reduced the yield of cherries and floods affected crop yields in some areas).

It seems unlikely these more favourable conditions will not continue. Longer term weather forecasts are predicting drier conditions in southern and eastern Australia, including Tasmania, adversely affecting pasture growth and water resources for irrigation. Interest rates have risen and inflation is increasing the cost of many other inputs, including labour. Land prices have increased markedly with irrigated cropping land now fetching around \$30K per hectare and grazing land with some low risk crop potential at about \$8K per hectare. The demand for higher value produce and perhaps discretionary produce, for example berries, is likely to be reduced as the higher "cost of living pressures" we so often hear about in the media take effect.

Our conclusion is that the high rates of growth in the farm gate value of agriculture in Tasmania are likely to be reduced.

Irrigation is essential for further growth in agricultural production, and Government investment (State and Federal) in district and regional irrigation schemes is continuing.

Labour supply remains a critical issue for many farming sectors, particularly those relying on seasonal workers (often European back packers and Pacific Islanders) for harvesting fruit and vegetables. The very low unemployment rate in Australia means that farmers rely very heavily on overseas workers. This is particularly evident in Tasmania in the stone and berry fruit industries.

On a different matter, the Tasmanian Government remains opposed to the use of genetically modified organisms in agriculture. A recent news report indicated that Australian research has developed a GM Cavendish banana variety that is resistant to a fungal disease that eventually kills the plants and survives in the soils for many years. Regulatory approval is being sought for its' use in Australia though rapid uptake seems unlikely as other measures will be implemented in an integrated manner to combat the disease. This banana variety was developed by incorporating a resistance gene from another banana variety - like most plant breeding developments, rather than another species. It will be interesting to watch the development, noting consumer resistance to GM foods is widespread. To our knowledge there has not been a peer reviewed study that examines the economic benefit of excluding modern gene technology developments from Tasmanian agriculture, so the current policy is driven by politics rather than science.

Our conclusion that the farm gate value of agriculture in Tasmania is increasing in line with the Government's target of 6% annual compounding growth. However, our view is that growth, particularly in the last 3 years, is mostly due to season and market conditions, rather than actions of the Government or producers adopting new technologies.

David Armstrong & Robin Thompson

Brazil

Weather:

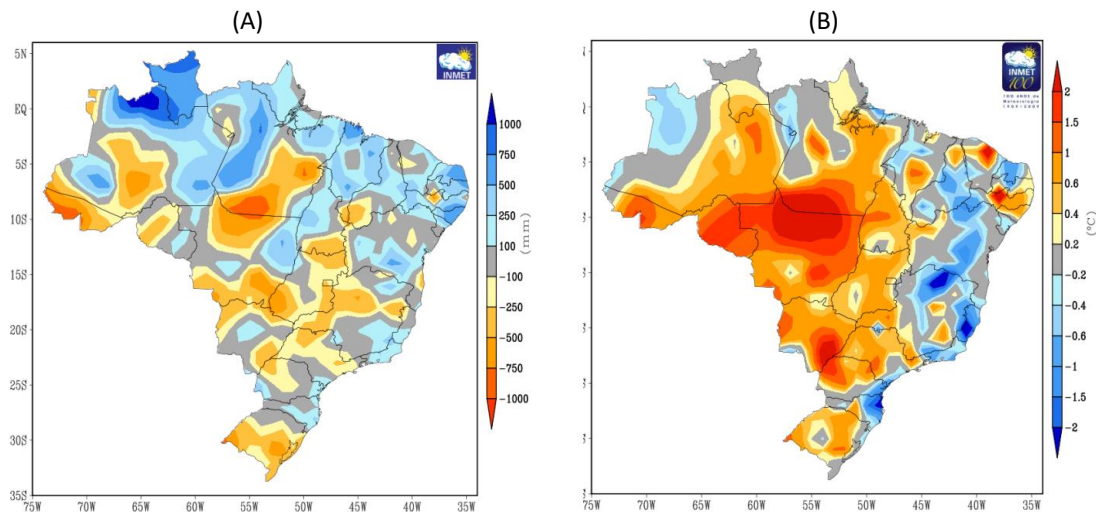


Fig. 1 – Anomalies in 2022: (A) Precipitation (mm) levels above or below the average; (B) Temperature (°C) levels above or below the average.

Brazil’s climate spans from Equatorial (North) to Subtropical (South). In 2022, the persistence of *La Niña* resulted in concentrated rain in the North and Northeast regions, and droughts in the South of the country. Given this was the third year under the influence of *La Niña*, there were losses on grain production, particularly, in *Rio Grande do Sul* state, where 40 to 50% were lost (INMET, 2023). The dry season advanced in October, which is unusual, reducing the crops sowing window, in special soybeans. Also unusual was the cold weather observed in most Brazilian regions in November 2022. Both months are key for Brazilian agriculture since these are the periods where farmers prepare and fertilize the soil, and sow the crops. As a consequence, the agricultural gross domestic product (A-GDP) reduced 1.7% in 2022 (Feed&Food, 2023).

Agriculture Economic Climate:

1. Annually, the government launches the Harvest Plan, which consists of a set of agricultural policies to support and guide farmers, including animal producers, towards sustained and sustainable production. These policies comprise rural credit, insurance, minimum prices (some products only), marketing and organization of

family farms¹. The 2022/2023 Harvest Plan released 68 billion dollars (36% higher than the previous year), part of which to finance sustainable practices, such as pasture recovery, integrated crop-livestock-forestry systems, soil conservation and protection of management of natural resources.

2. Brazil's GDP in 2022 grew 2.9% in comparison to 2021. However, the added value of agriculture dropped 1.7% due to decreasing output and productivity as a result of climatic conditions. With the progress of vaccination against Covid-19, the service and the industrial sectors experienced more significant increases.

3. A new left-wing government won the presidential election in December 2022, with President Lula starting his third term. Governors, senators, federal and state deputies were also elected, with a clear growth of right-wing and conservationists representatives amongst the new elected. This scenario will be more challenging for Lula's government than his first two terms. All attention is now on his new fiscal proposal that replaces the expenditure roof that set a fixed proportion of expenditure for education, health and so on, for an overarching rule of having the expenditure being limited to 70% of the increase in revenue.

4. From the supply side, input prices started to decrease in August 2022, but remained high in comparison to previous years. This means pressure on farmers' margins and the need for adjusted use of technology to ensure efficiency and profitability. Nonetheless, the 2022/2023 harvest is estimated above 313 million ton; a new record.

5. From the demand side, domestically, the new government (Labour party) ensured the maintenance of the direct payment at US 121 for poor families, which impacts more significantly the families' consumption levels, particularly food. Almost 10 million families are getting this social benefit.

6. Internationally, Brazil agribusiness exports grew 32% over the previous year, totalling US\$ 159 billion. This performance was explained mostly by prices increases (22%), followed by volume increase (8.1%). In sales, agribusiness exports represented almost 50% of all exports in Brazil in 2022.

Livestock:

1. Beef

a. In 2022, beef prices reduced in general. Finishing farms that bought feeders at high prices, in 2021, faced challenges to pay off their investment. Lower beef prices

¹ In Brazil, the definition of "family farm" for public policy purposes is small landowners (from 20 ha to 440 ha, depending on the location) with predominantly family labour and income from farming.

pushed feeder prices down, which means that cow-calf operations also had to make good decisions to remain profitable. Many farmers started to sell cows to slaughter, reducing beef prices even further and marking the beginning of the low stage of the beef cycle (herd reduction). Low domestic consumption and the temporary China ban for Brazilian meat helped to lower prices in 2022.

The process of land conversion from low productivity beef farming to cash crops and/or sugarcane or forestry continues, with a reduction on pastureland. Given the increased adoption of integrated farming systems, beef production has not reduced. In fact, it has been increasing alongside crops production, benefiting from the synergies created by the combination between beef and trees and/or beef after crops.

2. Pigs

a. The pig sector suffered, in 2022, with high production costs. Feedstuff, like corn and soymeal, maintained high prices, resulting in peaking prices for pig meat (BRL 8.07/ kg of Liveweight). This was particularly challenging for independent farmers (non-vertically integrated), who were already in debt. Nonetheless, pig production increased from 4.9 to 5.2 million metric tons (5.2%), in response to increased domestic demand. Per capita consumption reached almost 20 kg/inhabitant.

b. Exports decreased slightly, by 1.6%, with the retraction of China and the Philippines markets being one of the explanations. Other explanations were the increase in domestic consumption and the appreciation of the Brazilian currency, in 2022; the latter would reduce the competitiveness of Brazilian pig meat exports on global markets. USDA forecasts a 4% growth in exports volume in 2023, however.

3. Poultry

Like the pork sector, the poultry sector, in general, faced challenges regarding production costs. Nonetheless, as chicken prices increased throughout the year, farmers' purchase power against corn also increased.

a. Layers

Due to tight purchase power, many Brazilians replaced meat for eggs, which resulted in an increase of the per capita consumption from 120 to 257/inhabitant between 2007 and 2021. The country produces now 55 billion eggs a year.

The challenge of producing so many eggs and managing numerous hens in cages is to control the temperature down, as heat waves are becoming more often. While cage-free is ideal, it's not a reality for most farmers. Some are opting to use totally

acclimated sheds to control the whole environment, but costs are high and not accessible to many. Moreover, handling and care of cage-free animals would require a complete different farming system and an intensive learning process.

b. Boilers

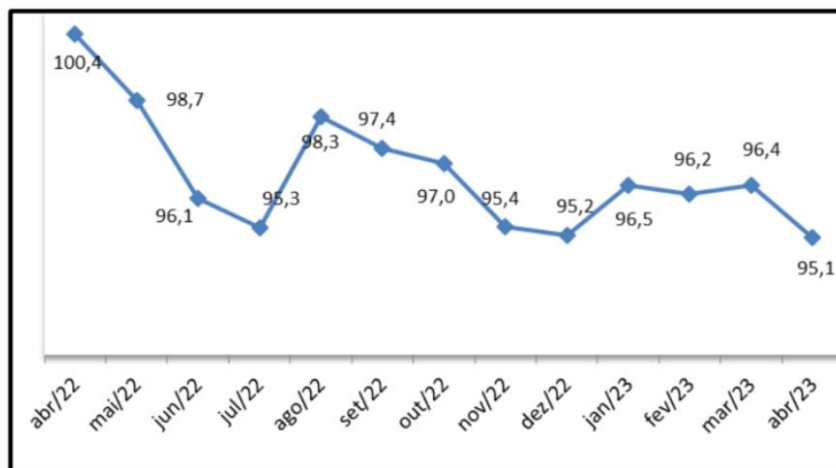
During 2022, chicken production decreased slightly, but exports reached a new record: 4.7 million tons (high 2.4% compared to 2021). The Ukraine-Russia war and the bird flu in many countries favoured Brazilian exports.

4. Dairy sector

a. Low productivity remains the main challenge of Brazilian dairy farmers. With an estimated 4.4 litre/cow/day, on average, problems include the use of non-specific dairy breeds, low quality pasture, poor pasture management and deficient infrastructure, such as refrigerators, milking parlour etc. However, technology uptake has increased significantly, especially amongst corporate farms, with 48% using free-stall and 29% using compost barn. A poll with the top 100 largest milk farms in Brazil, shows they produce 25,5 litres a day, on average, and have a yield of 30 litres/cow/day.

b. Despite the low average yield, Brazil is the 6th largest milk producer in the world (5% share of global market) and also a large consumer of dairy products, given the population size (over 200 million people). It also imports milk powder, cheese and butter.

c. In 2022, production costs were quite volatile, as suggested by the milk price index from April/22 to April/23, calculated by Embrapa Dairy (below). March/22 = 100. The overall trend is a decrease in production costs, mainly due to reductions in feedstuff and fuel prices.



Fonte: Embrapa (2023).

Arable:

a. Conab, the National Food Supply Company, estimates the total crop production of season 2022/23 will be 313 million tonnes, 15.2% higher than the previous season. The results are a combination of record yield, of 4,000 kg per hectare, and 4% increase in agricultural area, reaching 77.5 million hectares. Corn must achieve a production of 125.5 million ton, with the second planting cycle already completed. Production costs remained high, due to fertilizers and fuel mainly, but are in a descending trend.

b. Annually, Brazil produces 3 million ton of beans, one of the main staple food for Brazilians, along with rice. The increasing demand, estimated in 44% higher in 2050, is threatened by rising temperatures, as climatic specialists alert. New varieties, resilient to abiotic conditions, combined with better crop management, must occur to ensure we can meet the market expectations. As for rice, the challenge is to reduce its dependence to water, increase its adaptation to droughts and reduce the carbon footprint, given the emission of greenhouse gases (GEE). A lot of this relies on sound agricultural research.

Horticulture:

Brazil is a major horticulture producer and relies mostly on small family farmers for doing so. The level of technology uptake is extremely variable as are the yields and the availability of cash for investments. In general, the domestic market is predominant. However, since the pandemic of Covid-19, Brazilian per capita consumption remained low, due to the population's economic conditions and the higher levels of inflation.

a. Soft Fruit

The orange production supplies not only the fresh fruit markets in Brazil, but also, and more significantly, the crushing and pulping industry for exports. Over the last years, producers have been dealing with the occurrence of greening, a disease caused by a vector that reduces productivity and the fruit quality, impacting the profitability. The higher demand for disease control increases the production costs. In 2022, almost 25% of the orange trees in the main production area (São Paulo state) presented the disease. The production reduced by 22 million boxes that year.

Regarding fresh fruits, including banana, apple, pawpaw, melon, watermelon, grape, mangoes, lime and lemon, total exports amounted 1 million ton, with revenues of US\$ 1 billion, a reduction of 16% and 9%, respectively, compared to 2021.

b. Vegetables

The planted area with vegetables increased 3.4% in 2022, recovering from previous years under the pandemic effect. Potato and tomato were the main crops explaining the expansion, followed by the partial recovery of lettuce and carrots. Exports, however, reduced due to climatic problems, high production costs and logistic bottlenecks (freight costs and lack of containers).

Environmental:

a. Since the beginning of the new Labour Government, in January 2023, there has been a shift in public policies and government initiatives with regards to illegal deforestation and mining, particularly in the Amazon region. There have been several incursions from the Federal Police and IBAMA (the Environmental Institute) in the region to stop gold mining in indigenous and protected areas. In addition, attention has been given to indigenous people, with the creation of the Ministry of the Original People, whose minister is an indigenous woman.

b. Two main environmental funds that were suspended in 2019 were reactivated in 2023. The National Environmental Fund (FNMA) is a federal program to allocate financial resources in socio-environmental projects for the conservation and management of natural resources. The Amazon Fund aims to raise donations for conservation actions, monitoring, fire and deforestation prevention, among others, in the Legal Amazon. Main international contributors to this fund are Germany and Norway. Likewise, the Action Plan for the Prevention and Control of Deforestation in the Amazon (PPCDAm), cancelled in 2019, became active again in 2023. PPCDAm aims to reduce deforestation in the Amazon and propose the sustainable use of natural resources.

c. The regulation of carbon markets is still under discussion. The increase in businesses interest on the theme and in the number of projects trading carbon is evident. However, it is estimated that carbon trading projects need at least 20,000 ha to be economically viable in farming. If this figure is correct, it means there is a great barrier for new entrants in this market.

Current Research Issues:

a. The Brazilian Agricultural Research Corporation, the coordinator of the National System for Agricultural Research in the country, celebrated 50 years of Ag research with an invaluable role, along with several Agricultural Universities and Institutes, in the development of technologies that shifted Brazil from a major food importer into one of the most important agricultural supplier of the world. Brazil is a leading country in tropical agriculture. To maintain its leadership in the next 50 years, it is crucial for the country to devote enough funds for Agricultural research, technology

transfer and innovation. From 2015 to 2021, the national research budget lost about BRL 83 billion (USD 16.6 billion). The 2022 budget represented only 38% of the investment levels of 2014.

b. Sustainable intensification is a major line of research underway in Brazil, particularly concerning livestock production. The low average productivity of the herds and low uptake of technologies make room for significant improvements without any extra pressure on land use. In fact, intensifying sustainably means releasing land for other agricultural use, such as crops and timber production. Coupled with the sustainable intensification is the decarbonizing of farming systems. Agricultural research play a key role in these processes, working side by side with farmers, who ultimately, make the innovation happen.

c. Resilience is another transversal theme deeply investigated by agricultural researchers in Brazil, particularly those in the genetic improvement field. Research has been carried out to identify plants that can cope better with droughts, floods, bugs and other sources of stress, without losing their quality or productivity, and possibly, reducing the need of chemicals. Systems research has also dedicated a great deal of time, developing and promoting more resilient production systems to unstable climatic conditions as faced more often by farmers.

Sources of information

<https://portal.inmet.gov.br/uploads/notastecnicas/Estado-do-clima-no-Brasil-em-2022-OFICIAL.pdf>
<https://santandernegociosempresas.com.br/conhecimento/agronegocios/plano-safra-2022-2023/>
<https://agenciadenoticias.ibge.gov.br/en/agencia-press-room/2185-news-agency/releases-en/36377-gdp-grows-2-9-in-2022-closes-the-year-at-r-9-9-trillion>
<https://feedfood.com.br/ibge-pib-do-agronegocio-encerra-2022-com-recuo-de-17/>
<https://datamarnews.com/noticias/brazils-agribusiness-move-usd-159-billion-in-2022-export-sales/>
<https://worldcrunch.com/business-finance/food-production-brazil>
<https://www.dairyglobal.net/world-of-dairy/country-focus/a-glance-at-brazils-dairy-sector/>
<https://www.sna.agr.br/custo-de-producao-de-leite-tem-queda-de-14-em-abril/>
<https://news.agrofy.com.br/noticia/200627/area-hortalicas-cresce-34-em-2022-apos-dois-anos-queda>
<https://matanativa.com.br/pauta-ambiental-para-2023/>

Mariana de Aragão Pereira – June 2023

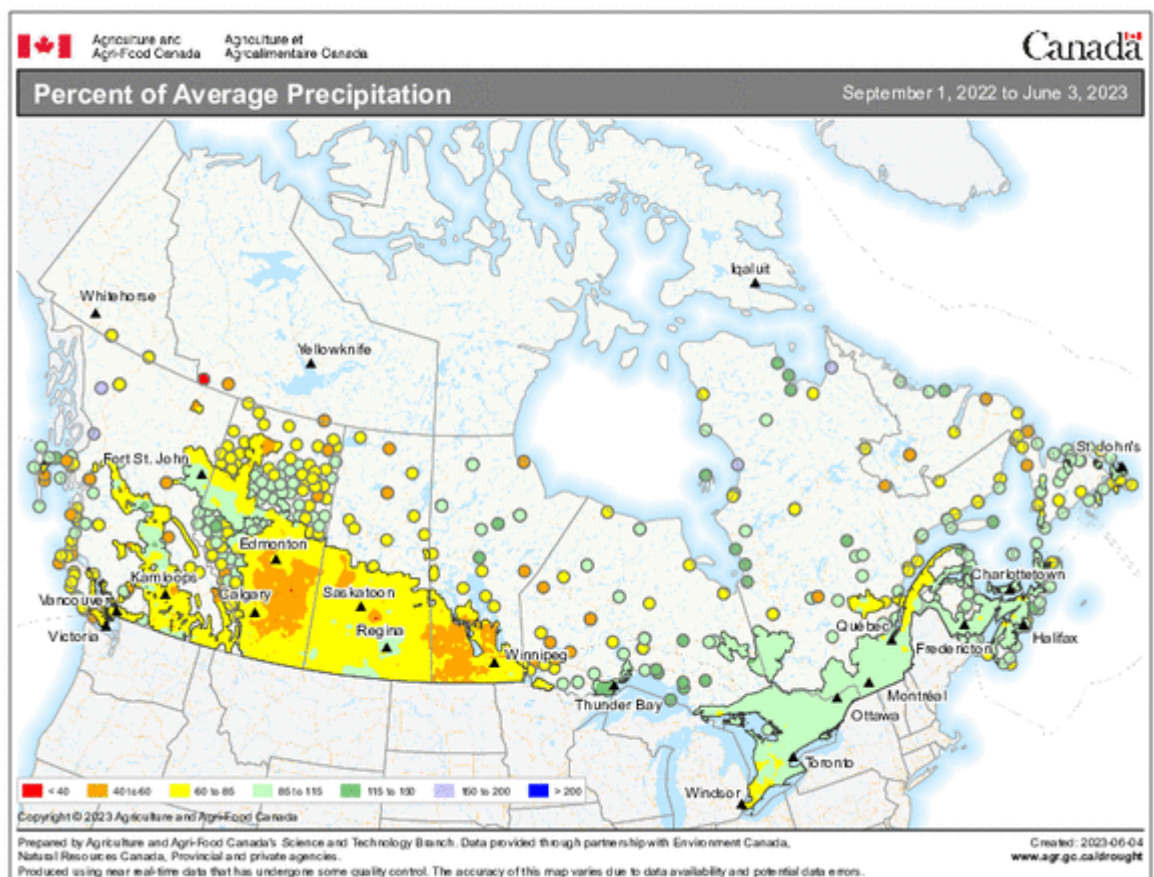
Canada

Weather

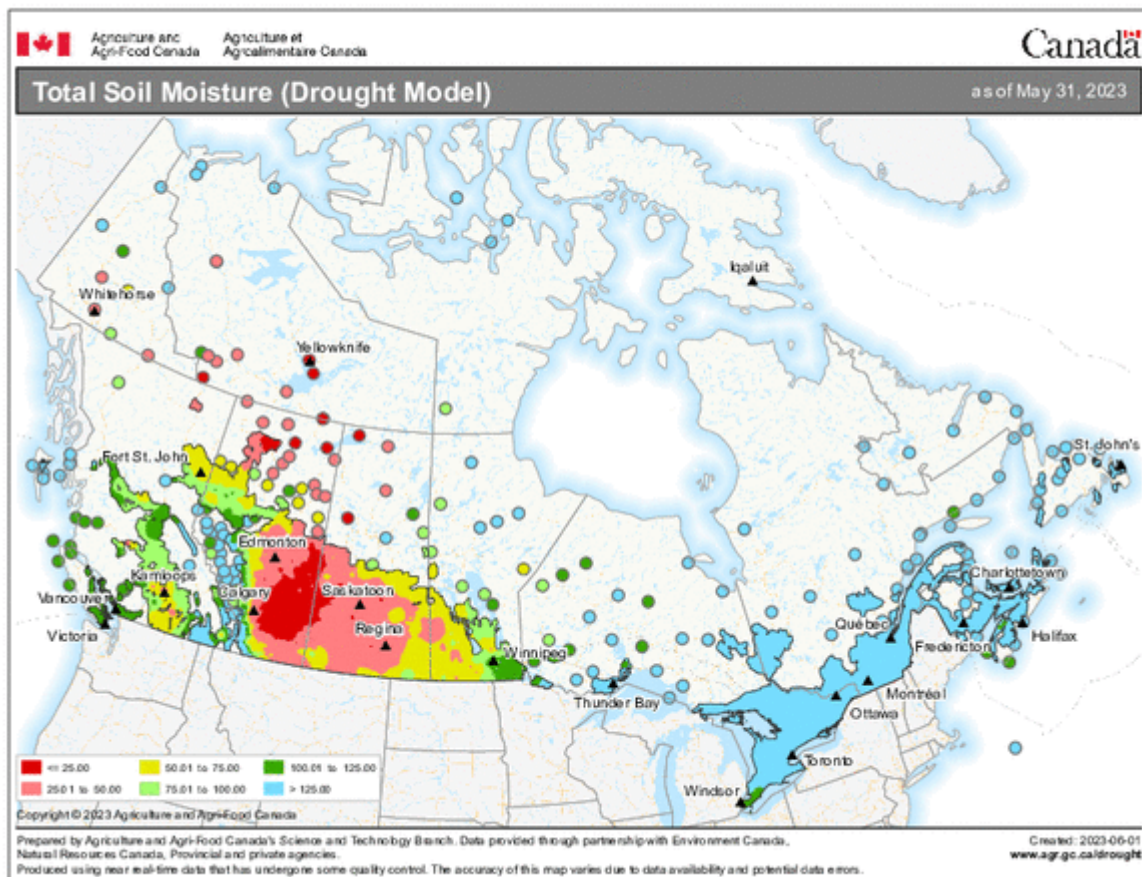
- **Precipitation**

Dry conditions persist across much of western Canada, even with much needed rainfall across the prairies during the end of May. However, there is still fair bit of moisture needed to improve soil moisture conditions across much of the Prairie Provinces.

Precipitation in eastern Canada has been sufficient and there were enough breaks to allow for timely seeding of corn and soybeans in Ontario and Quebec.



Source: Agriculture and Agri-Food Canada

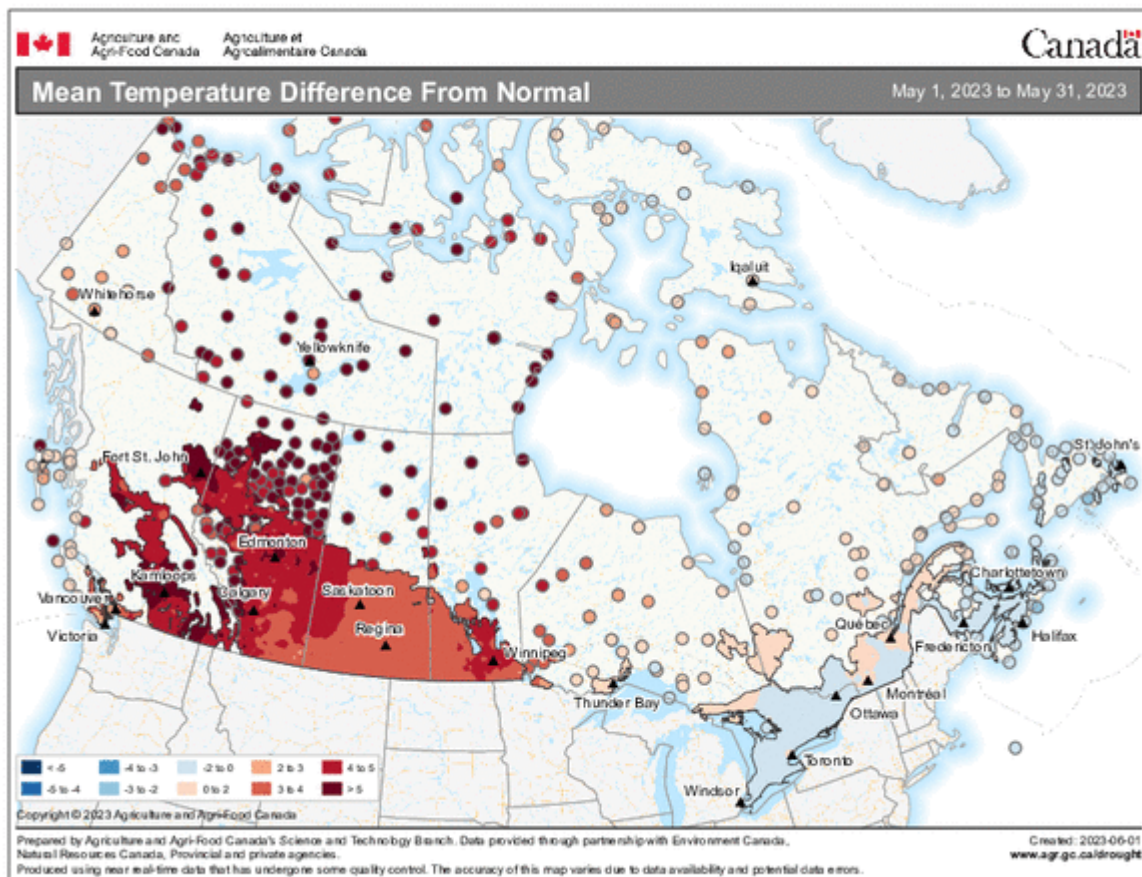


Source: Agriculture and Agri-Food Canada

- **Temperature**

In terms of temperatures, it has been a bit warmer than normal across much of western Canada. Prolonged dry conditions and excessive temperatures has likely contributed to the significant number of wildfires in western Canada.

On the plus side, warmer and drier conditions do make for favourable seeding conditions, and as of May 29, 89 percent of fields are seeded in Saskatchewan, which is close to the 10-year average of 90 percent for this week of the growing season.



Source: Agriculture and Agri-Food Canada

Agriculture Economic Climate:

Two recent news stories suggest that the current economic climate poses some challenges for the industry. Recently, Farm Credit Canada announced that they would provide agricultural firms with access to up to \$500,000 in an unsecured line of credit to help manage cash flow constraints caused by higher input costs and rising interest rates.

<https://www.fcc-fac.ca/en/about-fcc/media-centre/news-releases/2023/supporting-canadian-producers-economic-challenges.html>

Olymel, one of the largest pork processors in Canada, recently announced that they would be reducing the size of their sow herds in western Canada due to challenging economic conditions. The move will reduce their sow herd by approximately 30% (from 57,000 to 40,000) and will also lead to the loss of 80 jobs across six locations.

<https://www.cbc.ca/news/canada/edmonton/olymel-to-close-6-hog-barns-in-western-canada-cutting-about-80-jobs-1.6856345>

Livestock:

- Dairy
 - The farm-gate milk prices received by dairy farmers have increased 2.2%. While this increase is welcome news for dairy producers, tight margins continue to be felt by many in the industry.
 - Dairy farmers received the fourth round of payments under the Direct Dairy Payment Program established to compensate Canadian dairy producers following increased access to the domestic market granted to foreign dairy firms after the signing of the Canada EU Trade Agreement (CETA) and the Comprehensive and Progressive agreement for Trans-Pacific Partnership (CPTPP). The Federal Government also announced up to \$1.2 Billion (CAD) in compensation to dairy producers following the signing of the Canada United States Mexico Agreement (CUSMA).
- Beef
 - China continues to ban the import of beef from Canada following the discovery of an atypical cow with BSE in 2021.
 - Japan has opened its borders to processed Canadian beef for the first time in 20 years.
 - Taiwan also announced they would resume full market access for Canadian beef in the coming weeks.
 - Canadian producers are worried that proposed legislation in the U.S. that would allow for voluntary labeling (i.e. "Product of USA.") would have a negative impact on Canadian beef producers given the nature of the U.S. Canada beef market.
 - Continued dry conditions has been one factor leading to a decline in the national cow inventory. Statistics Canada reported that total inventory of beef cattle declined 2.8% from 2021 to a total of 12.29 million head.
- Pigs
 - Canadian pork producers are closely watching the news surrounding Proposition 12, a ballot initiative in California relating to space requirements for pork production.
 - Olymel has closed a large processing and packing plant located in Vallée-Jonction (near Quebec City). This plant serves as the main processing plant for pork producers in much of Atlantic Canada, so the closure creates some economic worry for producers in the region.
 - Canadian pork producers are unhappy with the inclusion of continued barriers to trade asked for by UK in their proposal to join the CPTPP. The UK is refusing to allow Canadian access to their domestic pork market due to the belief that pork in Canada is produced using growth hormones (this is disputed by those in the Canadian pork industry).
- Sheep
 - While beef and pork inventories have shrunk from 2022, sheep inventories in 2023 are up 27,000 head across Canada.

- A new lamb cooperative was formed to help sheep producers in B.C., Alberta, Saskatchewan, and Manitoba access lamb processing markets located in eastern Canada.
- **Poultry**
 - A new \$13.5 million (CAD) poultry research centre was announced by the government of Ontario and industry partners including the University of Guelph. Construction is slated to begin in 2024 and be completed in 2026.
 - Canadian poultry firms continue to face the growing challenge posed by Avian Influenza (H5N1) that was first discovered in Canada in late 2021. There are currently over 1,800 confirmed cases across Canada according to the Canadian Food Inspection Agency.

Arable:

- Seeding is nearly complete across much of Canada. In Ontario, corn seeding is 97% complete with some early corn now at the 4-leaf stage. Seeding in western Canada continues to match or be slightly behind the 10-year average (Saskatchewan 89% compared to 90% 10-yr avg; Manitoba 87% compared to 91% 10-yr avg). Alberta is running ahead of their 5- and 10-year averages, but declining soil moisture conditions poses a continued threat for the crop year.
- Canola growers are worried that continued issues within Canadian and Chinese relations may lead to market access issues for Canadian canola.

Horticulture:

- Automation continues to increase in Canadian vegetable operations, partially due to the continued labour shortage faced by firms in this industry.
- Growers are asking for insurance options for market vegetable crops as most vegetable crops are ineligible for hail insurance in Canada.
- Canada's first fully automated vertical farm began operations in Pitt Meadows, B.C. in 2023.

Government and Policy:

1. A new 5-year agricultural policy framework was ushered in on April 1, 2023 – the **Sustainable Canadian Agricultural Partnership** (Sustainable CAP). The \$3.5 billion agreement includes \$1 billion in federal programs and \$2.5 billion in provincial and territorial government programs to meet regional needs.

Sustainable CAP focuses on 5 key priority areas:

- Building sector capacity, growth and competitiveness
- Climate change and environment
- Science, research and innovation
- Market development and trade
- Resiliency and public trust

At the Federal level, programs include the **Business Risk Management Suite**:

AgriStability – support for producers who experience over 30% margin decline from production loss, increased costs or market conditions.

AgriInsurance – provides affordable insurance protection for production loss.

AgriInvest – a government savings account matching 1% of allowable net sales.
AgriRecovery – support for producers to recover from natural disasters.
Advance Payments Program – a loan guarantee program up to \$1million with no interest on the first \$350,000.

And **Cost-Share Programs** industry organizations can apply to:

AgriMarketing – to expand exports and seize new markets.
AgriCompetitiveness – to transfer knowledge and develop capacity building skills.
AgriDiversity – to support underrepresented groups to build capacity and thrive.
AgriInnovate – to support commercialization and adoption of new technologies.
AgriAssurance – to foster public trust in Canada’s agriculture and agri-food system.
AgriScience – to accelerate innovation by funding commercial science and research.

2. Work continues within the **Sector Engagement Tables** created to maintain dialogue between agriculture and agri-food sector representatives and government officials to advance growth and competitiveness in Canada.

Farm Management Canada is a member of the Skills Development Table, which is working on 4 priority areas:

- Supporting career pathways
- Understanding the skills required
- Providing innovative and flexible training
- Inclusivity for youth, new entrants and underrepresented groups

3. The Canadian Agricultural Human Resource Council, Canadian Federation of Agriculture and Food and Beverage Canada also continue their work on the **National Workforce Strategy for Agriculture and Food and Beverage Manufacturing** focusing on 5 priority areas to help address the labour gap:

- Automation and Technology
- Immigration and Foreign Workers
- Skill Development
- Perception and Awareness of the Industry and Careers
- People and Workplace Culture

Farm Management Canada is a member of the Skills Development working group.

Climate Change and Environmental Stewardship:

- Canada has committed to **net-zero emissions by 2050**, and aims to reduce fertilizer nitrous oxide and methane emissions 30% below 2020 levels by 2030. The Government have made it clear that the fertilizer and methane emission reduction goals are voluntary and have committed to supporting farmers with cost-share and incentive programming including:
 - \$185 million from the Living Labs initiative to accelerate the co-development, testing and adoption of emission reduction activities tailored to specific growing regions in Canada

- \$670 million through the On-Farm Climate Action Fund to support uptake of emission reducing best practices
- \$495.7 million through the Agricultural Clean Technology Program for the development and adoption of technologies such as feed additives, manure storage innovation and anaerobic digestors

However, we are starting to see more and more agriretailers requiring farmers to meet their sustainability standards (moreso on the environmental side) in order to sell their products. Farmers continue to express frustration with the lack of recognition of farming's historical and ongoing contribution to ecological goods and services. And farmers worry about the effects of government and industry's environmental sustainability goals on food security and their bottom line.

Farmer Mental Health:

1. Mental health continues to be a priority in the agricultural space. Research shows **76% of Canadian farmers are stressed** and 25% of farmers have thought about taking their own life within the last year. Industry organizations are offering mental health support including 24/7 counselling services and first aid courses for farmers and other industry stakeholders with the support of private industry and government. Research also continues to understand the causes of stress, effective coping mechanisms and support requirements. Along with the Do More Agriculture Foundation, several other provincial/territorial organizations have surfaced as well as a new national organization has been established: The Canadian Centre for Agricultural Wellbeing (CCAW). CCAW held a national farmer mental health and wellbeing symposium in March for sector players to share their insights and foster collaboration.

Farm Management Canada continues to contribute to these endeavours. Our 2020 research found that the three highest contributors to farmer stress are the unpredictability of the agricultural sector and feeling a loss of control, workload pressures, and financial pressures. The research also found that business practices, especially planning, contributes to positive mental health and peace of mind.

More and more we're seeing farmers not just concerned about profitability but work/life balance and family and farm team harmony.

Our most recent research revealed **balancing work, life and family needs is the number one goal of Canada's farmers over the next three years**, especially those farmers under 40 years of age, followed by increasing profit and efficiency for their business. Monitoring their finances and working on work-life balance were identified as the most helpful practices in achieving their business goals.

Farm Business Management:

1. We continue to see a lack of attention to a proactive, comprehensive approach to managing risk through farm business management practices in favour of government support programs to deal with the fallout from adverse weather and commodity prices. **A National Agricultural Risk Management Forum** was held in March to help establish a path forward to support on-farm risk management. Recommendations included creating a National Risk Management Education and

Communication Strategy including financial literacy and risk management training within post-secondary educational institutions and direct to farmers. The Forum Report including a complete list of recommendations is available on Farm Management Canada's website at:

www.fmc-gac.com/programs-services/research-analysis/#risk-management

2. We worked with the folks at RealAgriStudies to understand the skills development practices of Canada's farmers. Results show 68% of Canada's farmers have participated in learning and skills development activities over the past year.

Here is a breakdown of the **learning and skills development activities** Canada's farmers have participated in over the past year:

- Strategic Planning – 36%
- Accounting and Finance – 41%
- Human Resources – 15%
- Operations – 35%
- Production/Agronomy – 76%
- Marketing – 57%
- Succession Planning – 40%

Hearing about the difficulty of managing or even recruiting and retaining employees, it was surprising how few farmers are participating in HR management development opportunities. However, this might also indicate the lack of training available.

Farmers were also asked to rank the skills they feel **young farmers would benefit from**:

- Strategic Planning – 86%
- Accounting and Finance – 86%
- Human Resources – 68%
- Operations – 87%
- Production/Agronomy – 90%
- Marketing – 86%
- Succession Planning – 70%

In January, we worked with Farm Credit Canada to better understand farmers' attitudes towards farm business management practices and their support needs.

83% of Canada's farmers would like to spend more time on their farm business management practices, as they recognize farm business practices in contrast to production skills will be necessary for their farm to be successful 10 years from now.

Practices included taking part in new knowledge, learning or skills development opportunities, updating financial data for making business decisions, working with business advisors, assessing risks or working on a plan to manage risk, monitoring the farm's financial position and options using a budget, monitoring cost of production and benchmarking, developing or referencing an up-to-date business plan, holding team meetings to review capacity, concerns and opportunities, and holding team meetings to review farm performance against business goals.

The largest discrepancy between time spent and time ideally spent on business practices was for business planning and holding team meetings to review capacity, concerns and opportunities, and review farm performance against business goals.

When asked what the industry could do to best support meeting these goals, **farmers asked for education, advice and tools** to support financial management, business planning, farm transition planning, on-farm communication and networking opportunities to meet with fellow farmers and exchange insights. Specifically, they are seeking self-serve tools such as online platforms and apps to help access benchmarking and other data to assess their business performance and opportunities for improvement.

3. Under the guidance of Dick Wittman, and with the help of the Farm Financial Standards Council in the United States, we are working with Canada's financial institutions and accounting firms to establish a **National Standard for Farm Financial Statements in Canada** to help facilitate farm financial literacy and benchmarking financial performance. We are also working with Statistics Canada to harmonize Canada's farm tax forms to create the capacity for a **National Farm Financial Benchmarking Report** available to all Canadian farmers. The benchmark report would provide year-over-year comparables as well as benchmarking by farm size, region and production sector.

Heather Watson and Eric Micheels – June 2023

Denmark

Weather conditions:

The crop yields in 2022 were very good, but with lower share of winter crops the total Danish harvest was not as high than in some recent years. Spring Barley constitutes 20% of the total area. There was a further increase in the area with oil seed rape (now 8%). Around 70% of the harvest is used for feedstuff for animals domestically and 15-20% is exported. There is a push for lower import of soybeans from South America, so alternative could be protein based on grass.

Price:

The cereal prices increased dramatically in 2022 and the price of barley and wheat reached €270/ton at harvest in 2022, which was 30% higher than 2021. However, prices have been falling since winter. This price on inputs such as fertiliser increased 3 times to around €2.5 pr. kg N as oppose to €1.0 per kg in previous years. So the optimal nitrogen application was reduced in theory, but less so in practice. The prices on piglets increased to €60/piglet (7 kg.). The high energy prices mean that the production of finishers in Germany has been reduced which has lowered the price of piglets, which is exported from Denmark to Germany. Furthermore, the consumption of meat in Germany has been reduced and so this has also lowered the prices in 2023.

The production of potatoes have doubled over 7 years and there have been a shift towards potatoes for flour and not more potatoes for consumption. Surprisingly this has not led to lower prices so the value produced have also doubled over the last 7 years.

The pork prices increased to €1.7 in the Autumn 2022. The production of pigs for slaughter is declining and is expected to be 10% lower in 2023 compared to 2021. The feed costs have been very high compared to pork prices and so the income for this sector has been low compared to other years. The export of piglets to Germany has been reduced in 2021 and 2022 after many years of increase.

The milk price has increased to 65 cent per kg, and the organic milk is a little higher for the best quality. The milk production increased in 2022 a little compared to 2021. The value for exports increased by 40% and so ARLA experienced a high income as the demand only dropped by 10%. This would indicate that consumers stay with Arla and Lurpack even when the prices are high and because the plant based alternatives also increased dramatically (sun flower oil). The milk production is expected to be the same in 2020-2023 period, but the increase in yield per cow is no longer there. This might be linked to the use of non-GMO crops. The expected income in 2023 is relative high although milk prices are reduced significantly since the beginning of the year (down to 42 cent per kg in May 23). Consumers find it strange that prices at the world market have been reduced on a number of agricultural products but they do not see that reflected in the prices in the Danish Supermarkets. Other say this is due to a delayed effect which is often observed where supermarkets are quick to introduce price increases and slow to introduce price reductions. The energy prices on gas, oil and electricity are now down again.

The total farm income has been high in 2021 and 2022, but the income will be much lower in 2023 as the income from the agricultural production will be reduced significantly. The income from of farm income will increase.

The overall income and value of the export of agricultural products was higher in 2022 than ever before as it passed €13.5 billion (100 billion DKK). But as the use of imports was also higher than before and so the net value of €4.4 billion of exports was only a little better than the previous high year of 2012. The income in 2023 is expected to fall dramatically compared to 2022 due to lower crop prices.

The overall average farm income was good in 2022 and on level with the good 2020 year. Some of the new Eco schemes support by the EU CAP would mean that especially poor land areas can get a high income if they are taken area out of production. The income can be €620 per year per hectare for poor land. The environmental regulation require more catch crops and this in turn increases the area with spring barley. Due to change in weather (climate change) oil seed rape can now be sown after wheat where it before was only possible after winter barley.

The interest payment increased from the record low levels. Denmark have for a number of years had negative interest (variable interest loans) due to the strong financial situation (large surplus on both domestic budget and balance of trade). Even fixed interest loans where under 1%. The expected interest payment in 2023 is around 3 times as high as in 2022. The current interest levels is 3-4%, but it might fall again as other indicators are strong (falling inflation and many in jobs). Increased interest has not lowered the land prices as they have increased since 2020.

Environmental regulation:

The Danish farmers are still dealing with catch crop and other measures to reduce nitrogen losses. There has been a push to take more organogenic (peat) areas out of production to reduce CO₂ emissions from agriculture. It is an requirement of the new CAP that 4% of the area is taken out of production. The challenge is to find these area and area which could promote biodiversity, groundwater protection or areas used for solar panels. There is a need for a plan for what to use which area for. The Danish Government is considering a CO₂ tax also on farms but how it will be done is not decided yet.

Current Research Issues:

Following on from the aim of reducing the CO₂ emissions a lot of focus has been on research related to different technologies, which can help to reduce CO₂ emissions from agriculture (e.g. pyrolysis).

Brian H. Jacobsen – June 2023

Japan

Weather:

The national annual average temperature was high, especially in northern and western Japan, owing to continuously rising temperatures throughout 2021. The area close to the Sea of Japan experienced a snowy winter, with heavy snow in January, and some areas were hazardous to moving traffic. Long spells of rain occurred in many parts of the country in August. Notably, western Japan had the highest monthly precipitation since 1946, when official record-keeping started.

Current agricultural economic circumstances:

The livestock sector in Japan constitutes 39% of gross agricultural output, while vegetables and rice account for 24% and 16%, respectively. Gross agricultural output has increased since 2010 (see Figure 1); however, it remained at 8.8 trillion yen in 2021. While rice and vegetable prices dropped because of overproduction and reduced demand from the food industry, fruit prices (more specifically that of apples, mandarin oranges, and grapes) increased because of poor weather conditions. Beef prices also increased because of the recovery of demand from the food industry. Egg prices rose sharply nationwide due to underproduction caused by highly pathogenic avian influenza. The agricultural income remained at 3.3 trillion yen in 2021. Annual sales per farm business entity in 2021 increased by 9% owing to favourable poultry prices. The annual profit per farm business entity in 2021 also increased slightly to 1.25 million yen.

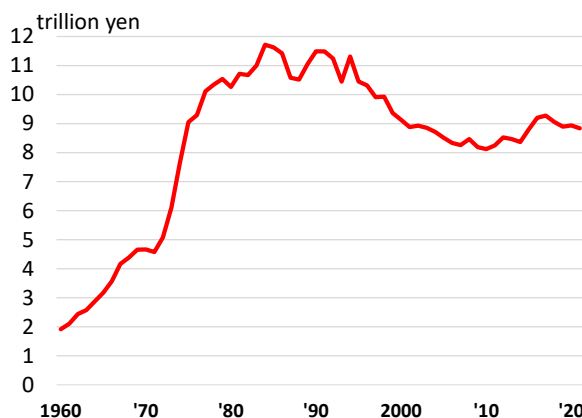


Figure 1. Gross agricultural output in Japan

Source: MAFF, Statistics of Agricultural Output Prices

Note: one yen is equal to 0.0071 USD and 0.0067 Euro.

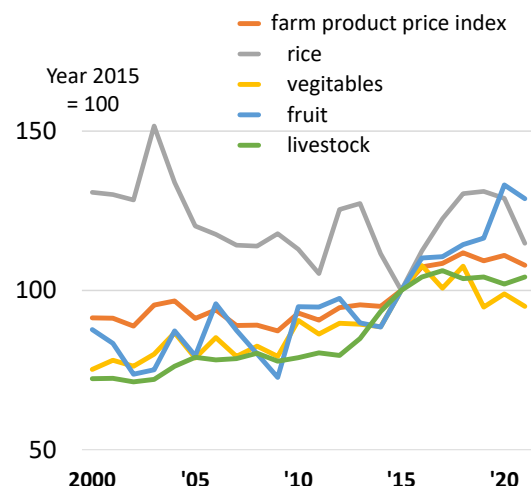


Figure 2. Producer price index in Japan

Source: MAFF, Statistics of Agricultural

Sectors:

This section primarily references the *Analysis Report on Farm Businesses* published by the Japan Finance Corporation in December 2022 to summarise the financial performance of the selected farms in 2021.

Livestock:

i. Dairy sector

1. The price of milk for table use dropped slightly owing to overproduction compared with the shrinking demand for school lunches in response to COVID-19.
2. Herd sizes and milk produced per cow have grown nationwide, mostly due to investments in larger facilities and good weather conditions.
3. Annual sales per dairy farm increased due to herd size.
4. Annual profit per dairy farm decreased due to the inflated costs of some materials.

ii. Beef

1. Market prices rose 9% owing to increased demand for domestic use due to both government intervention and recovery demand from the food service industry.
2. The number of non-Wagyu beef herds sold decreased, whereas the number of Wagyu beef herds sold remained almost constant.
3. The cost of calves purchased and feed costs increased.
4. Annual profit per beef farm increased sharply.

iii. Pigs

1. Market price rose by 10% due to increased demand for domestic use.
2. The number of pig herds sold remained almost consistent.
3. The amount of imported pork increased by 5%, although US pork prices were kept high, and supply chains were unstable because of floods in Canada.
4. Annual sales and profits per pig farm have decreased due to lower pork prices and increased feed costs.

iv. Poultry

1. Layer chickens
 - a. Market prices rose by 27% due to underproduction caused by extensive culling in response to highly pathogenic avian influenza since early 2022.
 - b. The number of fowl fed increased slightly after the extensive culling.
 - c. Annual sales and profit per egg farm recovered drastically.
2. Meat

- a. Due to the popularity of breast meat, both chicken production and chicken imports increased.
- b. Market price rose by 2% due to increased demand for domestic use.
- c. Annual sales grew because of favourable market prices, whereas the annual profit per chicken farm dropped because of increased material costs.

Crops:

v. Rice

1. Market price dropped by 12% in 2021, which was as low as in 2014.
2. Rice production has decreased due to the crop conversion policy from rice for human consumption to rice for livestock feeding.
3. Yield per area was slightly higher than normal, except for northern Japan.
4. The proportion of high-quality rice has been the highest in the last five years, especially in eastern Japan.
5. Annual sales and profits per rice farm decreased because of decreased prices and increased material costs.

vi. Wheat and soybeans in the northern island

1. The market prices of wheat and soybeans decreased by 14% and 13%, respectively.
2. Farmers had a good harvest of wheat and soybeans due to good growing conditions.
3. Annual profit per farm increased due to increased production.

vii. Fruit

1. The market price of fruits generally remained consistent.
2. The harvest of mandarin oranges decreased by 10% due to typhoon damage.
3. The market price of apples increased because of a decrease in harvest after heavy rain, low temperatures, and typhoons.
4. Annual profit per fruit farm generally increased due to increased sales.

viii. Vegetables

1. The market price of major vegetables fell in June due to a good harvest following favourable weather conditions. The market price for the year dropped by 5%.
2. Annual sales per vegetable farm have increased because of the good harvest of onions in Hokkaido and farm size expansion in other areas of the country.

Horticulture

ix. Vegetables

1. The market price of major vegetables fell in June due to a good harvest following favourable weather conditions. The market price for the whole year dropped by 5%.
2. Annual sales per vegetable farm increased due to farm size expansion, while annual profits per vegetable farm decreased due to rising labour and material costs.

x. Flowers

1. The demand for flowers increased owing to the popularity of gardening and other home uses during the COVID-19 pandemic.
2. The market price of chrysanthemums remained consistent, whereas that of roses increased due to the increase in the number of weddings and other ceremonies after COVID-19.
3. Annual sales and profit per flower farm increased.

Environmental:

- b. The Ministry of Agriculture, Forestry, and Fisheries (MAFF) developed the Strategy for Sustainable Food Systems 'MeaDRI' in 2021, targeting major environmental outcomes by 2050. This includes carbon-neutral agriculture, reductions in the use of chemical pesticides by 50% and chemical fertilisers by 30%, and expansion of organic farming to a million-hectare designation.
- c. Direct payments to support and advance multifunctional agriculture have been further developed to subsidise farmers' activities, including conserving site-specific values, adopting farming technologies using fewer chemicals, and mitigating natural disasters.
- d. The damage to crops by wild animals and birds has worsened over time. It was estimated at a loss of 15.5 billion yen in 2021 and is one of the major reasons why farmers will cease farming activities. In some cases, Gibier is used to control wild animal numbers.
- e. The use of renewable energy in the farming sector has gradually increased. Solar power generation on farmlands and small hydroelectric power generation systems built into irrigation systems are popular.

Topics that are increasing concerns for the industry:

- f. The Japanese government is developing an effective food security policy owing to increasing risks, such as a spike in the price of imported oil, chemical fertilisers, and grain for feed.
- g. Food security issues are particularly exposed among those who need food and have difficulty shopping. Food banks and soup kitchens have been promoted to address food insecurity at the family and individual levels.
- h. New strategies for exporting food and agricultural products were developed in 2020 to identify market opportunities in selected countries related to the Trans-Pacific Partnership Agreement (TPP) and the recent Economic Partnership Agreements (EPAs) with the EU, UK, and US. The targeting sales

of food and agricultural export products are estimated to reach 2 trillion yen by 2025 and 5 trillion yen by 2030. Annual sales of food and agricultural export products reached approximately 1.5 trillion yen in 2022.

- i. A new policy initiative for Smart Farming was developed in 2020 based on the results of pilot projects adopting robotics, artificial intelligence (AI) and Internet of Things (IoT) on farms. The Agri-food DX (i.e. digital transformation of the farming and food sectors) policy was developed in 2021 to build more efficient food value chains. Furthermore, the Digital Rural Society Initiative was developed to address various social issues in less-favoured areas.
- j. The Food, Agriculture, and Rural Areas Basic Act is under review to set up a new Basis Act in 2024 because it has been more than 20 years since the current act came into effect.

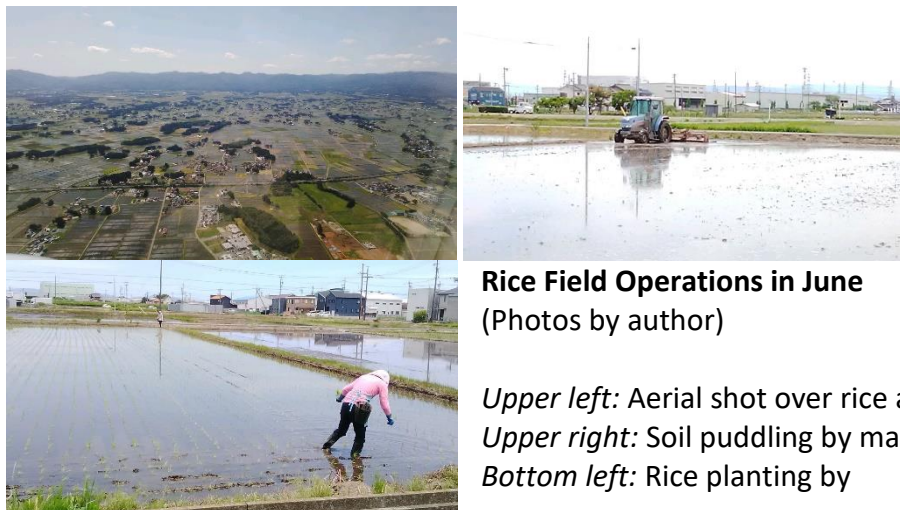
For further reading regarding agricultural policies in Japan, please see:

Ministry of Agriculture, Forestry and Fisheries (MAFF) (2022). FY2021 Summary of the Annual Report on Food, Agriculture and Rural Areas in Japan.

https://www.maff.go.jp/j/wpaper/w_maff/r3/attach/pdf/index-4.pdf

Sterly, S., Jongeneel, R., Pabst, H., Silvis, H., Connor, J., Freshwater, D., Shobayashi, M., Kinoshita, Y., Van Kooten, C., Zorn, A. (2018). A comparative analysis of global agricultural policies: Lessons for the future CAP, European Parliament.

<https://op.europa.eu/en/publication-detail/-/publication/f6f26587-9d3c-11e9-9d01-01aa75ed71a1/language-en>



Rice Field Operations in June

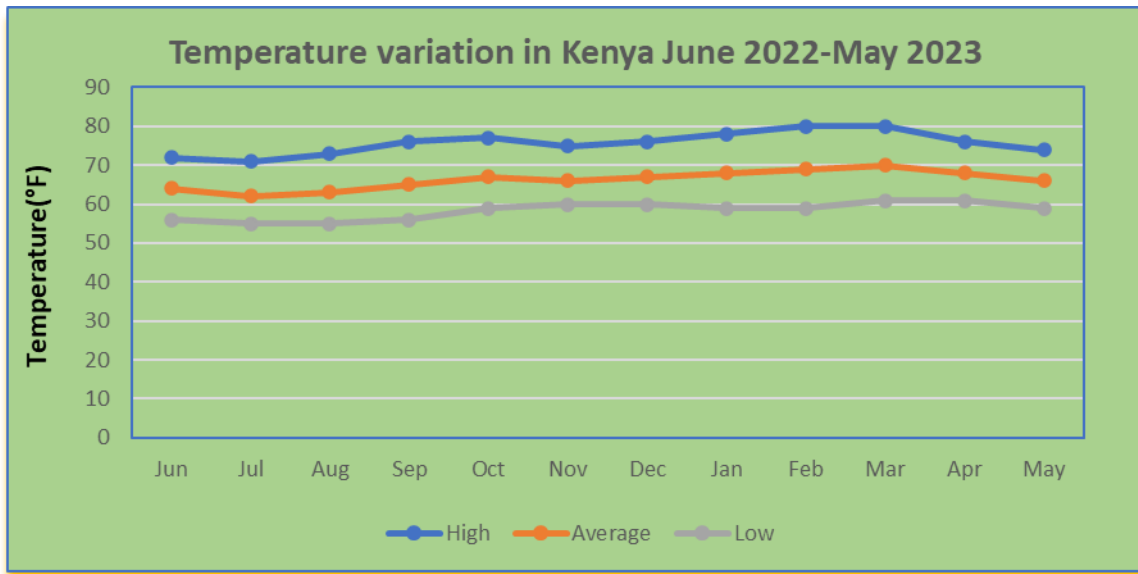
(Photos by author)

- Upper left:* Aerial shot over rice area
- Upper right:* Soil puddling by machinery
- Bottom left:* Rice planting by

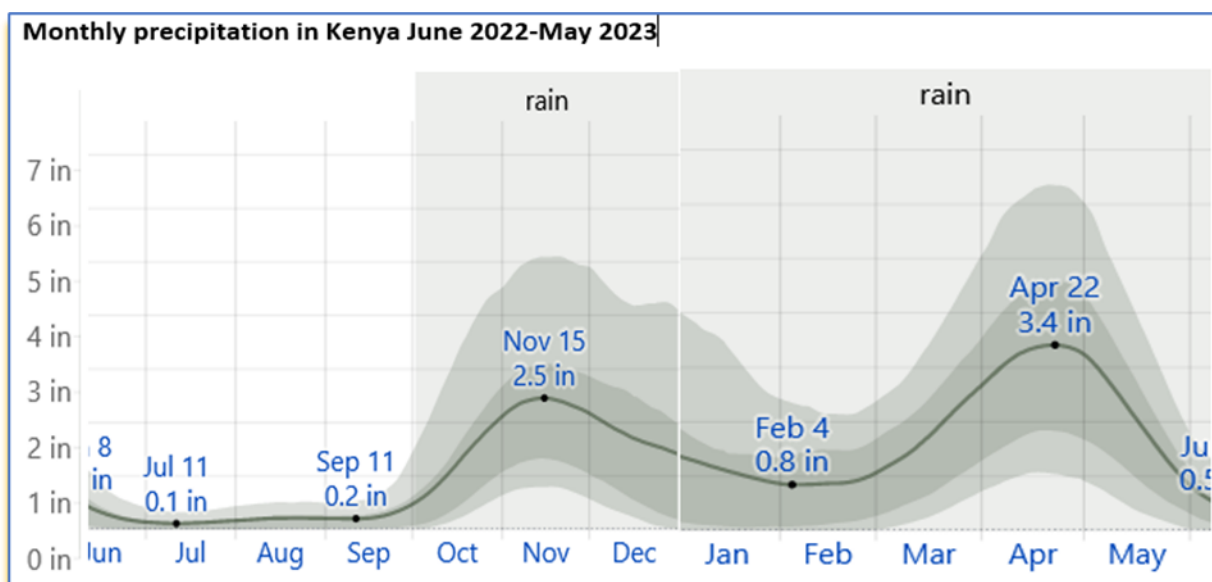
Yukio Kinoshita (Iwate University / University of South Australia) – June 2023

Kenya

Weather:



February and March were the warmest months of the period, with an average temperature of 70 °F, while July recorded the lowest average temperature of 62 °F. The lowest temperature reported was 55 °F in the month of July 2022 while the highest temperature reported was 80 °F in the month of February and March 2023. The general variation of temperature remained relatively stable.



The period June 2022-May 2023 witnessed a regular onset of rains in the short rain season (September- November 2022) and delayed and irregular onset of long rain season (February-May 2023). While most parts of the country have witnessed regular and sufficient amount of rainfall some parts of the country have recorded below expected amounts of rainfall.

Agriculture Economic Climate:

As the country bounced back from the devastating effects of Covid-19, the mood started to focus on the August 2022 elections that was held in August 2022. Extensive campaign expenditure triggered inflationary pressure, despite the elections being concluded peaceful thus escalating food prices. Onset of the long rains in early 2023 delayed, but once it started the general distribution was fair across the country with a few sections of the country experiencing prolonged drought. The high cost of living has locked a number of households from accessing food and triggered food protests in the capital city of Nairobi. Despite some farmers receiving fertilizer subsidy, majority of the farmers have had to deal with escalating cost of production hindering application of optimal agronomic recommendations.

Livestock:

Kenyans continued to rear various indigenous traditional and commercial livestock across the country. The major livestock raised in the country include dairy cattle, beef cattle, goats, sheep and poultry. Many small-scale farmers across the country practiced mixed farming with each one of them owning at least one category of livestock. Most large-scale farmers practiced commercial livestock farming and tended to own ranches for both domestic animals as well as wild animals. Pastoral communities in Kenya faced a multitude of challenges especially in the dry months that resulted not only in the loss of their livestock, but also human lives in Baringo, Turkana and sections of north eastern province. Competition for water and pasture continued to stir conflict and migration of pastorals to zones with greener pastures and water. Efforts were made by national government, county governments and relief agencies to cushion vulnerable communities in pastoral areas from vagaries of nature by providing them with emergency services during the report period.

Milk production and processing by the major players witnessed an upward trend which was triggered by the competitive prices reported across the country throughout the reporting period. Increasing demand for livestock products attributed to increasing population played a critical role in incentivizing farmers\processors to expand production of dairy products, meat, eggs, pork as well as hides and skins.

Arable:

Small-scale farmers who produce over 70% of farm produce in the country continued to dominate production of maize (staple food), rice, sorghum, finger millet, potatoes and various legumes. Despite unpredictable weather pattern in early 2022, the rains received in the later part of the year, resulted in good performance of most crops. However, the beginning of 2023 which was also worrying resulted in national prayers being held to pray for rains. It is hoped that if rains continue falling in many parts of the country regularly positive crop yields will be realized at the end of 2023. On issues of farm inputs, the cost experienced by majority of the farmers has continued to escalate due to the global energy crisis and the war in Ukraine. Despite the government giving fertilizer subsidy to farmers, a substantial size of the farming community did not access the subsidy, its administration did not align properly with the planting season, and cases of corruption were also reported. Consequently, fertilizer prices in formal markets remained relatively high with a 50-kg bag of both DAP/NPK and urea/CAN retailing at US\$50. With global food price squeeze, an after election inflationary pressure and weak local currency, farm gate price of maize has risen from US\$30 in June 2022 to US\$50 in May 2023.

Horticulture:

Cut flowers

Kenyan flower farms are now fully operational after recovering from the after effects of the Covid-19 pandemic. Kenya exported flowers worth US\$952 million in 2021, US\$ 1.1 billion in 2022 and is projected to increase by 10% to US\$ 1.23 billion. European Union, Britain, Japan, China, and the Middle East are some of the main export destinations of Kenyan cut flowers. The crisis in Ukraine continued to curtail export of cut flowers to the former USSR region. It is hoped that the crisis in Ukraine will be resolved soon to reopen business opportunities in that region.

Vegetables:

Only 4 percent of Kenya's fresh produce — fruits and vegetables, is exported, while 96 percent is locally consumed. Revenue in the Fresh Vegetables market amounts to US\$5.48bn in 2023.

Vegetable exports increased from US\$ 567 .4 in June 2021 to US\$604 in January 2022 due to opening up of the economy. Other vegetables grown on mixed farms by smallholder farmers for the local market which include kales, cabbages, carrots, tomatoes, cow peas, indigenous vegetables performed well and reported competitive prices throughout the year.

Environmental:

Despite clear policy guidelines and oversight by the environmental regulatory agency (NEMA) the country has struggled to keep the environment clean and encourage all the 47 counties to be proactive in ensuring measures are put in place to sustain the environment.

African Chapter of IFMA 'AFMA13'

After the opening up of global travel the African Chapter of IFMA will be holding its 13th edition (AFMA13) of its conferences in East London, Eastern Cape, South Africa on 19-23 November 2023. Arrangements for the conference are ongoing and I take this opportunity to invite our friends from IFMA who have regularly attended our conferences to make arrangements to participate.

Philip Nyangweso – June 2023

The Netherlands



Which direction to take?

Climate:

We had high rainfall in the winter and first part of year 2023. Nevertheless, lack of water has become a major issue in recent years. During part of the year, water is very scarce, even in a lowland country as the Netherlands. This has led to a drastic change in the water management structures. Main goal was always to get rid of the water by a whole system of rivers, ditches, canals and water pump stations. Recently, water management is changing to maintaining a higher level of water in the network of waterways. Thus, store the water for use in the dry periods.

The global warming discussion also affects the water management in the large areas of peat soils in the country. These lands are usually used for dairy husbandry. The tendency is to raise the water level in those areas, to prevent the development and outflow of greenhouse gases. However, higher water levels are more difficult for farming.

Market position:

The Netherlands' export of agricultural goods (primary plus secondary goods) is estimated for 2022 at 122.3 milliard euro; this is 17.2% higher than in 2021. This increase is due to price increases of agricultural products. The part of agricultural goods in the total of export goods was in 2022 about 79%. This shows the importance of agriculture for the total of the Netherlands' marketing of goods. The agricultural export can be split up in 79.8 milliard euro for goods from own origin and 42.5 milliard euro for upgraded goods imported from other countries. The upgrading of goods is less profitable than marketing of goods from own origin.

The import of agricultural goods is estimated at 88.2 milliard euro, a growth of 23.5% compared to 2021.

The Netherlands is indeed a strong exporter of goods. Export takes place to many countries in the world, but most export is to European countries, with Germany as main partner.

The year 2022 was characterized by high prices and at the same time high costs, especially energy costs because of war in Eastern Europe. For example, the milk price paid to farmer was at the historic

high level of 60 eurocents per kg earlier this year. Prices of regular milk and organic milk approached each other for a while.

Environmental tensions:

Nitrogen crises

The nitrogen crises came to the foreground in the Netherlands when an environmental activist did win a string of court cases in 2019 ordering the government to limit emissions and preserve nature. In Europe, the so-called nature 2000 areas are protected by an EU agreement. In the Netherlands and Flanders, Belgium, arguments are exchanged that nitrogen emissions acidify the soil and favor N-loving plants. The idea is that this situation should be reversed in nature-oriented areas.

The government parties made an agreement that nitrogen emissions (ammonia and nitrogen oxide) will be halved by 2030. The limit for N-allowable precipitation of economic activities on nature areas was set at almost zero grams (0.14 gram) per ha. Besides animal husbandry (about 44%), also traffic and industry (about 24%) add to the emissions. The remaining part (about 1/3rd) is said to come with the airflow from outside the country. Construction work is a minor contributor, but because the almost zero tolerance level, new building permits have been stalled crippling construction.

The government plan is to buy-out 3000 top polluting farms. If not voluntary then, as next step, compulsory.

For many years, challenges were met by innovation. The Netherlands' agricultural sector was booming on innovative expertise. This perception of progress is changing in recent years. A more natural and ecological based farming is gaining ground in the public arena. Terms as circularity and biodiversity are increasingly promoted. This aligns with a more extensive form of agriculture, which is less known to our country.

The N-crisis became for an extensive period the main topic in news media and papers. Recent provincial elections resulted in a win of the completely new "Farmer-Citizen Movement". This party gained the majority in all 12 provinces. The provinces have to execute the nitrogen plans of the government. This new party opposes the compulsory farm buy-outs and the speed in which the reduction in N-emissions targets should be realized. Moreover, they ask a greater political attention for the rural population and areas.



Global warming:

The dairy sector is very much under pressure, because of the N-crisis, the claim on agricultural land and because the growing focus on global warming. Ruminating animals, like cows, produce methane, which as GHG gas contributes to the global warming. Nevertheless, the national statistics agency, CBS, showed that greenhouse gas emissions in the Netherlands fell by 9% last year as the industry, private homes and the farming sector cut back on their use of gas. This means that greenhouse gas emissions in 2022 were almost 32% down on those of 1990, and that is below the government target of a 25% reduction. However, the year 2022 may not be a representative year, due to external factors, such as the energy crisis.

Strategic outlook plan for agriculture:

The public and policy debate about the environmental plans for agriculture resulted in the wish and compromise to develop a future strategic outlook for the various agricultural sectors. An outlook that provides an economic perspective. In other words, what future can be seen for agriculture? Under lead of the Ministry of Agriculture, all stakeholders in agriculture come together to describe this outlook. The human food chain and financial banks are also part of the negotiations. The delivering of the strategic outlook report for agriculture has been postponed several times in recent months.

Research topics:

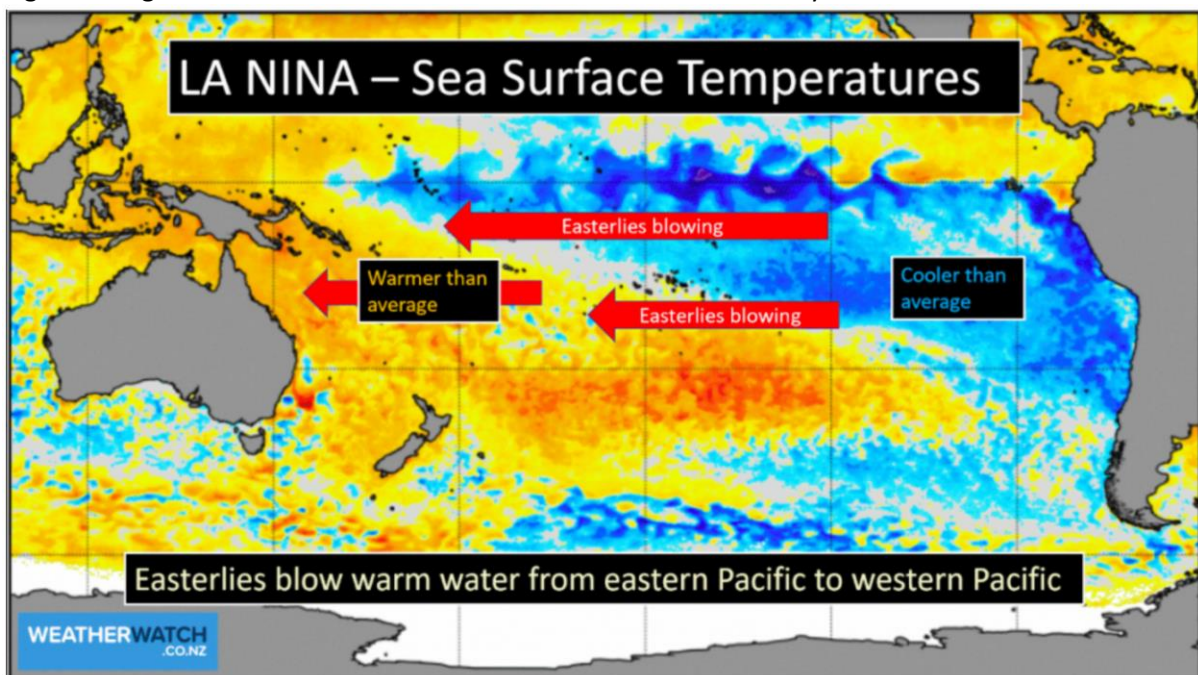
In accordance with above focus areas, agricultural research emphasis is on regenerative agriculture, low emission practices, biodiversity and soil quality. Modelling the effects of emissions and global warming is also a focus point. Biodiversity and soil quality are also big research topics in the EU these days.

Abel Kuipers – June 2023

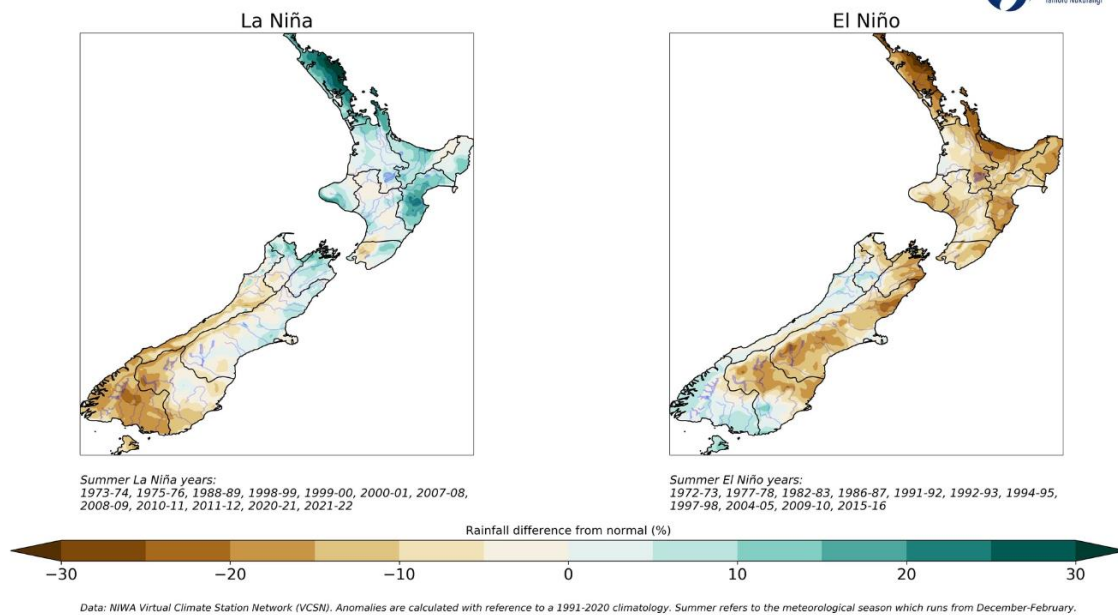
New Zealand

Weather:

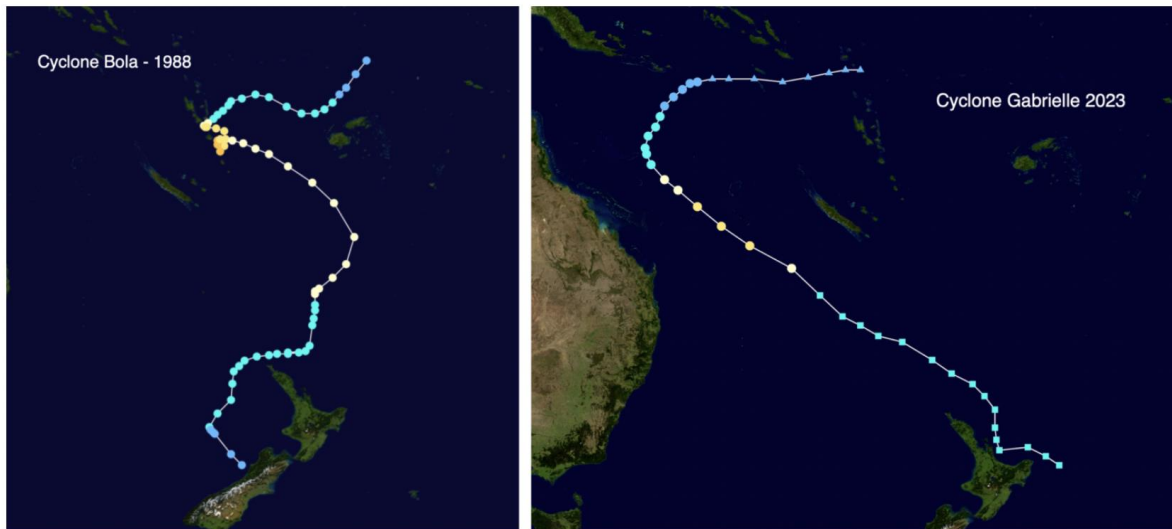
We are at the predicted end point of a long term 'La Niña' phase of the Southern oscillation index (SOI). The last extended La Niña period was 1998 through to 2001, and the current period has lasted around 3 years. For NZ, La Niña weather phases mean sea surface conditions north of New Zealand are warmer than average, which encourages more low pressure to our north and more easterly wind patterns. The outcomes weather wise are not always totally predictable, with the SOI being attributed to under 25% of year to year variance in seasonal rainfall and temperatures across most of the country. General patterns under La Niña include more rainfall to the far north and east coast's of the country, along with a corresponding reduction in rainfall to the far south and west of the South Island in particular. This situation is basically reversed under 'El Niño' conditions which favour Westerly wind patterns and which are forecast to build through our winter which would create higher drought risk to the far north and eastern coasts of the country.



Summer rainfall during La Niña & El Niño



One of the real downsides of the SOI being in its La Nina phase is it creates an increased risk of tropical cyclones or tropical low's bearing heavy rainfall potential heading south from the tropics and colliding with New Zealand. This risk was unfortunately realised both in late January with an 'atmospheric river' event from a tropical low causing extensive flooding and damage in the city of Auckland and farmland and communities in the far North of the North Island, and secondly at a more extreme level in mid February with cyclone Gabrielle which resulted in the loss of 11 lives as well as a total estimated damages bill from the two extreme weather events of NZ\$9-15 Billion. In the Hawkes Bay, an area very hard hit by cyclone Gabrielle where agriculture is the second largest regional GDP contributor the estimated cost to the horticultural sector alone is expected to be NZ\$1.5 Billion (70% of NZ's export apple production is in the Hawkes Bay). Climate scientists have cautioned against attributing individual weather events to climate change, but research by the New Zealand climate science institute NIWA has found the warming planet is leading to more extreme weather events in New Zealand.



Bola's centre was further from East Cape than Gabrielle but produced higher rainfall totals there – reinforcing the lesson that once storms leave the tropics and become extra-tropical cyclones, the severe weather spreads out far from the centre.

Agriculture Economic climate:

Covid 19 and its direct impacts are thankfully now in the rear-view mirror, with most government regulations and border restrictions being dropped as of October 2022. New Zealand including the primary sector has been particularly impacted by supply chain challenges given that we are a small nation which exports 96% of our food production and rely on ocean freight for the majority of our imports. Labour shortages in both the skilled and unskilled categories have had an impact on the primary sector, particularly in the horticultural, meat processing and dairying sectors. The meat processing sector for example has indicated a current shortfall of around 2000 workers, a chronic shortage which has been a 2-3 year pattern in line with a globally tight labour market. The flow on impacts on farm have been severe for some operations with delays in ability to cull dairy cows in the Autumn impacting feed budgets and cashflow balances, the same challenges have occurred for sheep & beef farmers trying to have prime livestock processed. Labour shortages have also majorly impacted the horticultural sector with harvest and quality control measures being challenging. The labour market for the primary sector has as such become very competitive with large increases in pay rates adding a significant component to inflation in farm costs, which are running at close to 15%, around double the national level of inflation of 6.7%. Additional pressure on labour comes from New Zealanders heading offshore with the border restrictions being dropped last year, this has a reverse positive with tourism and people on 'working holidays' now starting to increase casual labour supply.

The geopolitical impacts of Russia's invasion of Ukraine have been felt through general supply chain disruptions and cost inflation of fuel, fertiliser and foods in particular, these impacts built into the high farming cost inflation figures but are now easing back substantially across fertiliser and fuel which is good news for agricultural systems. The market impacts have been minor, with Russia only representing around 0.5% of total NZ good exports before the war, but the associated impacts of lower economic growth in some of our major export markets will take time to filter through and could impact future demand and pricing for our exports. Grain prices which globally spiked after the invasion were reflected in higher domestic prices and higher cost of imports which are both tapering back now.

Climate change impacts on agriculture and the primary sector are very firmly in the news spotlight currently after the extreme weather events already referred to in the weather section of this report have been linked to climate change, with the associated costs for recovery/rebuilding after cyclone Gabrielle and new 'climate resilient' infrastructure needing to be budgeted by regional and central governments. In addition to this, there is currently a categorisation by risk of flood prone properties including farming businesses of which the highest risk (category 3) may end up getting bought out by a central and local government scheme. Climate change impacts of agriculture and the primary sector are also very firmly in the news spotlight currently as the government/industry collaboration called 'He Waka Eke Noa' to manage agricultural greenhouse emissions has stalled at the pricing of emissions stage, and looks unlikely to be resolved before the next general election in October this year. The result of no agreement being reached before 1st January 2025 would currently place agriculture within the ETS, New Zealand's emissions trading scheme which is an outcome the broader agricultural sector is trying to avoid as it would basically tax emissions at the processor level for each unit of production and would not recognise or reward any on-farm reductions in emissions or offsets by carbon sequestration pathways.

• Dairy

The main production season from August to May has just finished and has tracked much better from December to May than the first part of the season (relative to the prior season). Figures from DCANZ show total NZ milk production through the Dec-April period was in positive territory compared to the 2021/22 season and depending on where May milk production finishes (data not available at time of writing) the total season could be the highest since 2020/21 season which was a record season. The slow Spring production data related to the second slower than average Spring pasture growing conditions in a row, followed by much stronger Autumn pasture production which fed into this part of the season. The impacts of the tropical low and cyclone in January and February respectively did not have a major impact on total NZ production as the main regions affected are not main dairying regions for NZ and damage was generally intense but isolated depending on the geography of the particular farms, with damaged roading infrastructure leading to inability to collect milk and livestock being more major impacts. Dairy cattle numbers from the recently released 5-yearly agricultural production census were at the lowest level (6.1 million) for 11 years, continuing a trend of lower stocking rates and productive efficiency gains.

• Meat & Wool

Sheep & Beef cost inflation figures just released show a 16.3% increase in input costs (the highest level since 1981/82), up on the high level of 10.2% the previous year. The biggest contributor was interest costs, followed by feed, grazing, fertiliser and seed costs. This is forecast to result in a greater than 30% drop in average profit. Sheep numbers fell again to be at 25.3 million in June 2022 from the recent census figures, this has put the 'sheep to human' ratio below 5 to 1 for the first time since the 1850's! despite this there were still 22 million lambs tailed that season. The impacts of the severe weather events in early 2023 on the central to upper North island have been assessed as affecting 1245 sheep & beef farms with an estimated cost of between NZ\$367 - \$422 million, with damage being primarily to on-farm infrastructure including roading, tracks, fencing and stockwater systems. Value and volume of red meat exports have dropped in the first few months of 2023 after reaching record levels from mid 2021 to mid 2022 with the drop being attributed to tight global economic conditions. Wool continues to have a split outcome for sheep producers depending on its fibre thickness, or micron. Fine wool has averaged around NZ\$18/kg for the season whereas coarse wool continues to be a byproduct of red meat production at an average value of between NZ\$2 -

\$3/kg, not high enough value to even cover the costs of shearing the sheep. A recent primary production select committee was briefed by ministry officials that coarse wool needs to be receiving between NZ\$5 - \$10/kg to be a viable industry.

- **Arable**

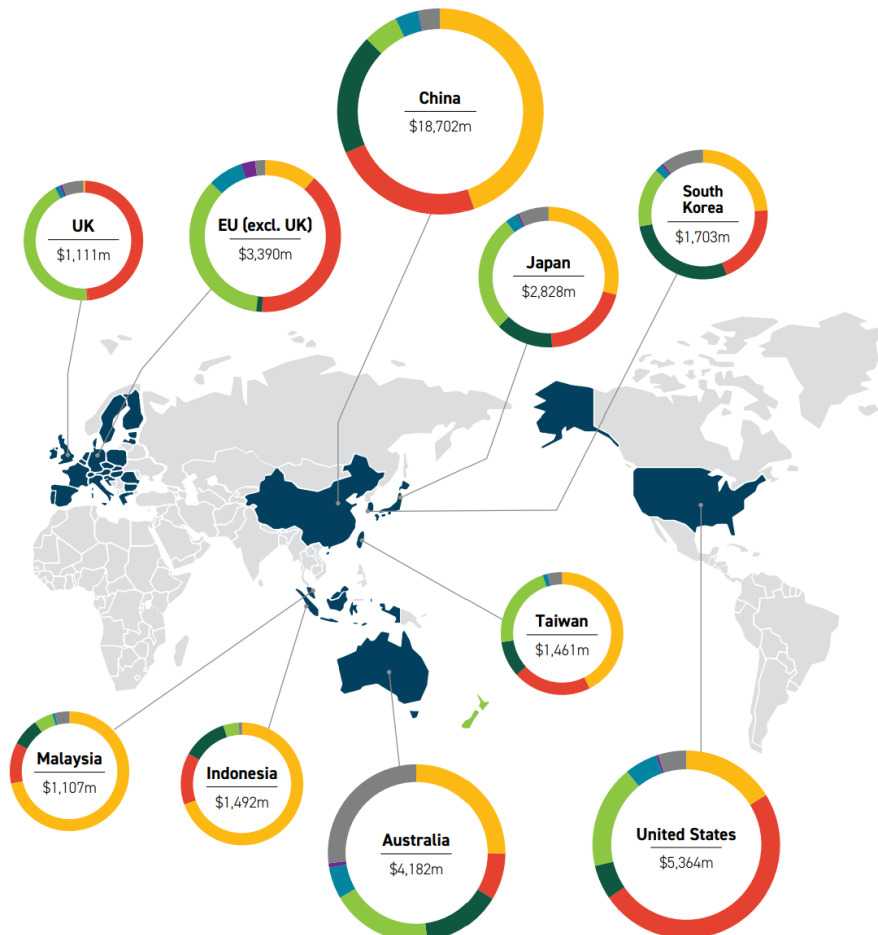
The 2023 cereal harvest was vastly improved over the 2022 harvest which was a very welcome development for arable farmers here. Overall harvest yields were up 7% on last season, with a slight increase in area harvested the overall tonnage harvested was 8% up on last season. The South Island experienced favourable harvest conditions across most regions, until March, when parts of Canterbury experienced rain which delayed harvest. This contrasted with the North Island cereal growing regions, which had frequent rain through the growing season. Some spring sown crops had a good harvest window, but a cyclone in February flooded ground, delaying harvest, reducing yield and quality and in some cases large portions of crops were lost. Autumn and winter sowings have been delayed in most regions due to wet weather or wet ground which has not had an opportunity to dry out.

- **Horticulture**

The Kiwifruit industry recently released results for the 2022/23 season which showed continued challenging conditions on multiple fronts, including weather / labour shortages / supply chain disruptions and rising costs. The net result was a drop in total volumes and value exported which resulted in a 34% reduction in net profit after tax (kiwifruit is NZ's highest valued horticultural crop at 40% of export income). Viticulture and wine production also had its share of challenges, with the Hawkes Bay & Gisborne regions amongst the worst hit by cyclone Gabrielle which delivered 460 mm of rainfall to Gisborne for February – more than 7 times the monthly average rainfall and one weather station recorded close to 200mm of rainfall in a 24 hour period. In other main winegrowing regions the season has been fairly good on the whole, with warm settled late summer conditions supporting good flavour development and good prospects for high quality vintages. Pipfruit production has been majorly impacted by cyclone Gabrielle as 70% of export apples are grown in the affected regions, with estimates that a drop of 20 – 30% of NZ's total pipfruit production is likely.

Top 10 export destinations

Year to 30 June 2022, NZ\$ million



Other Comments

- From a political perspective 2023 will be a watershed year with a general election coming in October which will either reinforce the current centre-left government’s sweeping programme of regulation for the agricultural sector, or bring about moderate change to some of the proposed regulatory settings if a centre-right government is elected.
- Regulation of farming and associated environmental outcomes is set to step up with the implementation of a national Freshwater Farm plan (FWFP) system which will be rolled out regionally in some of the higher risk (for water quality decline) catchment regions.
- The geopolitical tensions across the broader Pacific region will continue to create risk for NZ’s primary sector export spread, which is currently considered to be focused too strongly into the asia-pacific region.

Julian Gaffaney June 2023

Nigeria

Weather:

Tropical Climate. Temperature currently is between 27 degrees centigrade in the coastal states in the south and 36 degrees centigrade in the drier north.

Agriculture Economic Climate:

The agricultural sector in the first quarter of 2023 grew by -0.90% (year-on-year) in real terms, a decrease of 4.06% points from the corresponding period of 2022, and a decrease of 2.95% points from the preceding quarter which recorded a growth rate of 2.05%. It grew on a quarter-on-quarter basis at -30.95%. This development indicates a downturn in the Nigerian economy in 2023 unlike the steady recovery of the economy witnessed in 2022 from the unsavoury effects of the COVID-19 pandemic that begun in 2020. However, the agricultural sector contributed 21.66% to overall Gross Domestic Product (GDP) in Nigeria in real terms in the first quarter of 2023, lower than its contributions in the corresponding quarter of 2022 and fourth quarter of 2022 which stood at 22.36% and 26.45%, respectively. Four sub-activities make up the agricultural sector: Crop Production, Livestock, Forestry and Fishing. Crop Production remained the major driver of the sector. This is evident as it accounted for 86.85% of overall nominal value of the sector in the fourth quarter of 2023. The balance of 13.15% was contributed by the remaining three sub-sectors (Livestock, forestry and Fishing). Agriculture provides means of livelihood for over 50 per cent of the total Nigerian population of about 200million people. Peasant agriculture predominates and account for 90 percent of both output and employment in the agricultural sector. The downturn in the agricultural sector has been manifested in high food inflation.

- a) Core inflation (year-on-year) rose to 20.14% in April, 2023, above the 19.86% and 18.84% recorded in March and February, 2023 respectively. The rise in core inflation was attributed to the general downward trend the real sector of the Nigerian economy as well as continued challenges in supply chain delivery activities, insecurity and increased cost of transportation/logistics.
- b) Food inflation increased to 24.61% (year-on-year) in April 2023, from 24.45% and 24.35% in March and February 2023 respectively. The increase was largely on the ripple effect of shortage of premium motor spirit, high fertilizer prices, and lagged effects of flood on farm lands. Available data from the National Bureau of Statistics (NBS) showed that the prices of major domestic food commodities increased in April, 2023. The increases ranged from 26.34% for vegetable oil, to 23.13% for 1kg of beef and 13.73% for tomato, year-on-year. Other commodities that witnessed price increases were; yam tuber, 23.12%, beans brown, 16.03%, and onion bulb, 15.87%.
- c) Intervention schemes by the Central Bank of Nigeria (CBN) focused on enhanced credit delivery to critical sectors, in a bid to enhance productivity and stimulate the real sector of the economy to which agriculture belongs. This include the Anchor Borrowers Programme, the Commercial Agricultural Credit Scheme, the Agricultural Credit Guarantee Scheme Fund, etc.

Livestock:

Nigeria is endowed with various livestock which include; cattle, sheep, goats, pigs, poultry, rabbit, donkeys, camel, horses, etc. Nigeria also has many fishery resources, which include various species

of fishes like catfish, tilapia, croaker, shark, etc, as well as shrimps, crabs, etc. However, the full potential of these resources are yet to be tapped for lack of adequate investment capital and incentives.

Arable:

Nigeria has five ecological zones, which supports a variety of arable crops such as cereals, grains, legumes, vegetables, seeds, fruits and nuts.

Horticulture:

- a. *Soft Fruit: Bananas, Mangoes, Oranges, Pineapples, guavas, lemon, lime, grapefruit, watermelon, cucumbers, etc.*

- b. *Vegetables: okro, leafy vegetables (spinach, waterleaves, pumpkin leaves, etc.), tomatoes, peppers, onions, etc.*

Environmental:

Desertification and erosion problems.

Current Research Issues:

Focus of research is on development of improved varieties of crops and livestock as well as improved agricultural practices.

Any other comments:

Nigeria is open to foreign investors who are willing to help modernize the agricultural sector to enhance the value chain.

Grace Evbuomwan – June 2023

Poland

Weather in 2022

The year 2022 in Poland was very warm and rather dry. The average air temperature was 9.5°C and was 0.8°C higher than the annual long-term average. The averaged sum of precipitation in 2022 in Poland amounted to 534.4 mm, which was 87.4% of the norm for the years 1991-2020. It was a significant change after 2021 which was the coldest in 11 years history. The yields of most plants were higher than in previous year and weather conditions were generally favourable for agriculture.

[General climate characteristics in Poland: the climate in Poland is continental, with cold winters, often below 0 °C (32 °F), and warm summers. The climate is milder along the northern coast, overlooking the Baltic Sea, while it becomes progressively more continental going to the south, near Tatra Mountains.

Winter, from December to February, is cold throughout the country. The average temperatures in January is -1 °C (30 °F) in the north-western area to -4 °C (25 °F) in the easternmost area. Summer, from June to August, is pleasantly warm: the average daily temperatures are around 17/18 °C (63/64 °F). The Baltic see coast, is the coolest in summer, around 20/21 °C (68/70 °F), while the temperature gradually increases towards the south, reaching 23/24 °C (73/75 °F) in the center and south of the country. Precipitation in Poland amounts to about 600 mm per year; the driest seasons are winter and spring, while the rainiest is summer]

Agriculture Economic Climate in 2022/2023

Main economic factors affecting the situation of Polish farmers in 2022 and beginning of 2023 were **increased costs of production** due to post-pandemic economic recovery and **Russian war in Ukraine, which started in February 2022**. The average inflation in December 2022 amounted to 16.6% compared to December 2021. However, in the agricultural sector, prices rose much more. Farmers had to bear higher costs of inputs mainly due to increased prices of energy, fuel and gas, but also machinery and equipment affected by disturbance to supply chains. Fertilisers' prices increased even by several hundred percent after the outbreak of war in Ukraine. Fortunately a significant drop in gas prices was observed in the spring of 2023, which translated into an unprecedented decrease in fertilizer prices by approx. 50% just before the start of the new season. However, farmers who bought fertilizers before the autumn season (September) suffered heavy losses. Although in the period from December 2021 to December 2022 the prices of plant protection products also increased, the increases were incomparably lower than in the case of fertilisers. It can be assumed that, apart from a few active substances, e.g. glyphosate, the scale of the price increase basically corresponded to the growing inflation. The growth in input prices, was partially compensated by higher food process, however growth rate of prices was higher than incomes, weakening the purchasing power of consumers.

Russian aggression against Ukraine has significantly changed the outlook for the agricultural sector in Europe. The war in Ukraine caused a supply shock related primarily to the availability of agricultural products, which were exported through the Black Sea ports and were a source of supply mainly for a large part of the countries of Africa, the Middle East and the region of Southeast Asia.

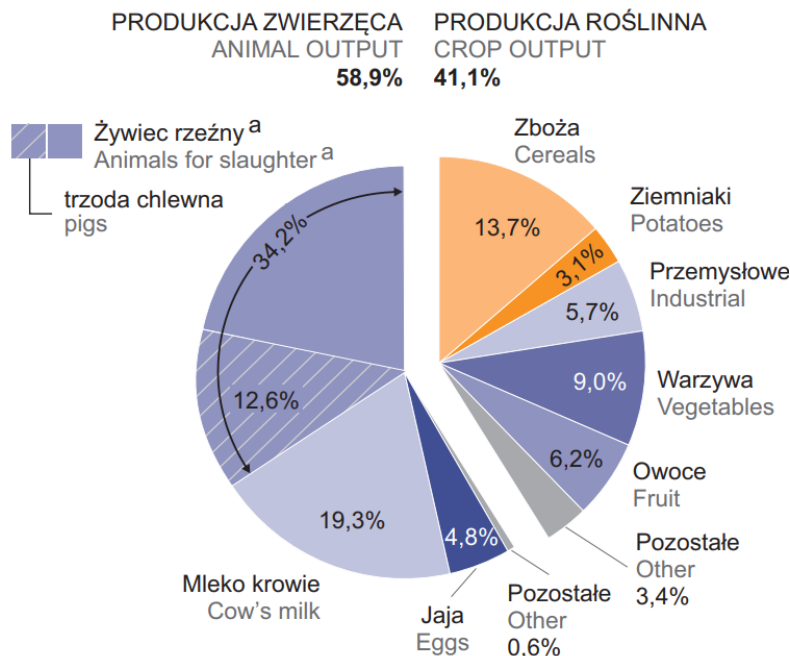
Demand for wheat in particular increased significantly on foreign markets, which contributed to a large export of grain from Poland. In the ten months of 2022, exports of cereals from Poland reached a record level of 7.3 million tons of grain. On the other hand, according to the data of the European Commission on EU grain imports from Ukraine (for the period March 24-December 8, 2022), 2,1 million tons of Ukrainian grain arrived in Poland at that time, while in the same period last year it was only 40 thousand tons. **The import of cereals to Poland from Ukraine has increased more than 54 times!** The import of Ukrainian grain on such a scale was possible thanks to the abolition, by the European Union, on May 30, 2022 of customs duties on imports of goods from Ukraine. The assumption was that Ukrainian grain was to go to third countries, i.e. outside the European Union - mainly to Africa and the Middle East. Tariffs on cereals from Ukraine have been removed, while no measure has been introduced to protect countries from excessive imports. The same problems as in Poland occurred in Slovakia, Romania, Bulgaria and Hungary. The uncontrolled import of cereals into Poland (and other CEE countries) without their re-export, as well as the general situation on the European cereal market and the drop in prices on world markets caused, **massive farmer protests in the spring of 2023**. Farmers who stored cereals until spring to sell them at usually favourable prices, faced the lack of such an opportunity due to fully filled warehouses and very unfavourable prices, which were much lower than after the 2022 harvest. As a result of this crisis and related negotiations with the European Commission, on May 2, 2023 (in Poland on April 15), regulations were introduced stating that wheat, corn, rapeseed and sunflower seeds from Ukraine may be released for free circulation only in Member States other than Bulgaria, Hungary, Poland, Romania or Slovakia, and only transit is possible through the above-mentioned countries.

One of the main tools of the EU policy towards Polish agriculture is the **Strategic Plan of the Common Agricultural Policy** for 2023-2027, with a total budget of EUR 25.1 billion. The plan was developed by the government and approved by the European Commission in August 2022. Support under this program will certainly be an opportunity for the development of the Polish agricultural sector, and will also enable agriculture to adapt to the requirements of the European Green Deal policy and its detailed strategies related to environmental and climate goals.

[General importance of agricultural sector in Poland. Rural areas in Poland cover 93% of the country's territory. The total area of agricultural land is about **14.68 mln hectares** (2020), which places Poland in the 5th place in the European Union. Polish agriculture absorbed around **7,8 % of the total employment** (2021) of the country (EU average 3,9% in 2019, EUROSTAT). The share of the agricultural sector in **Gross Value Added in 2021 amounted to 2.4%**. This was in line with the average share of the sector (2.5%) over the 2015-2020 period. (Statistical yearbooks, Polish Statistical Office).

The main agricultural products in Poland in 2021 were **cereals** (21,3% of Gross Agricultural Output in 2021, GAO), animals for slaughter 26,3% of GAO (mainly **pigs** 9,4% and **poultry** 11%), **cow's milk** (16,8%), **vegetables** (8,5%) and **fruits** (6,1%) and Industrial crops (6,4%) (Figure 1).

Figure a. Structure of Gross Agricultural Output in Poland in 2021



a Bydło, trzoda chlewna, owce, konie, drób, kozy i króliki; w wadze żywej.

a Cattle, pigs, sheep, horses, poultry, goats and rabbits; in live weight.

Source [Główny Urząd Statystyczny / Obszary tematyczne / Roczniki statystyczne / Roczniki Statystyczne / Rocznik Statystyczny Rolnictwa 2022](#) (Main Statistical Office of Poland, 2023)

Poland is the **net-exporter of agricultural produce** and the one of the largest in the EU producer of poultry, apples, black currants, raspberries, white cabbage, carrots and triticale. It is also on the 2nd or 3rd place with strawberries, onion, cauliflower, oats, rye, wheat, sugar beets and rapeseed (Statistical yearbooks for Agriculture, Polish Statistical Office, 2022).

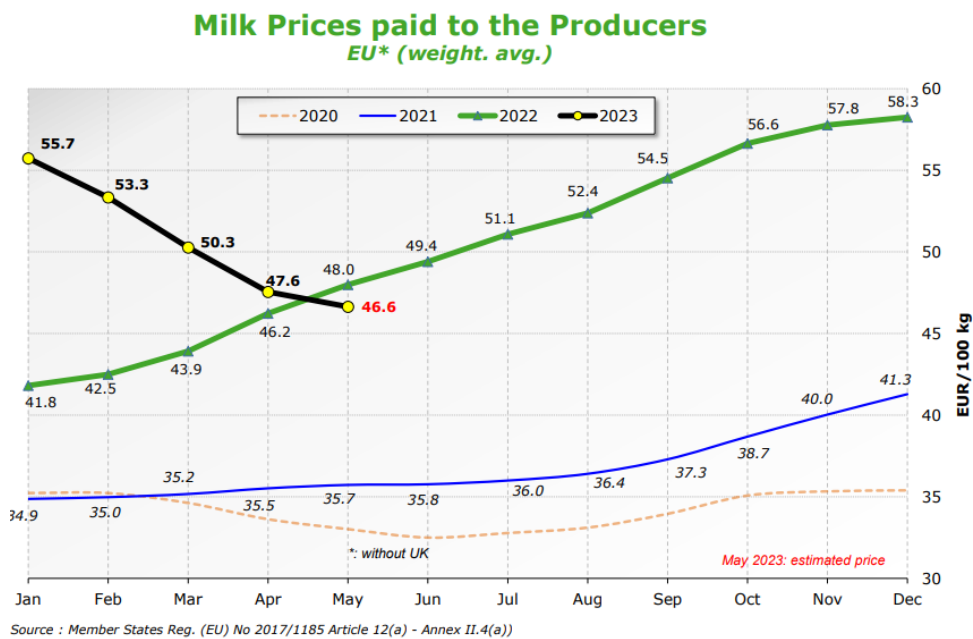
Polish agriculture is characterized by a large number of farms and strong fragmentation of the farming sector. In 2020 there were **342,8 thousand farms** with agricultural land over **10 ha (26% of all farms)**, which utilized ca. **72% of** agricultural land in Poland. The lion share of the remaining number of farms (around one million) with lower area than 10 ha have rather small contribution to the market production.]

Livestock

Dairy sector. In **2022** milk deliveries to dairy industry continued to grow by +1,7%, as is past (figure 3). In June 2022, as compared to the corresponding period of 2021, the total number of cows **decreased by 7.5% to 2,208** thousand heads, and the total number of dairy cows decreased by 1.9% to 2,072 thousand heads. The main reason for the decrease in the number of dairy cows are structural changes in agriculture, as purchase prices were relatively high. Progressive concentration and modernization of milk production in medium and large farms as well as large harvests and good quality of fodder resulted in an increase in the average yield of dairy cows **by 1.3% to 6,820 liters/head**. [Rynek mleka, IEIGŻ-PIB, 2022].

In 2022, the purchase prices of milk in Poland were at a high level, and in January–September the average price was by 43.3% higher than in the corresponding period of 2021. The significant drop in prices was recorded at the end of the year 2022 (figure 2).

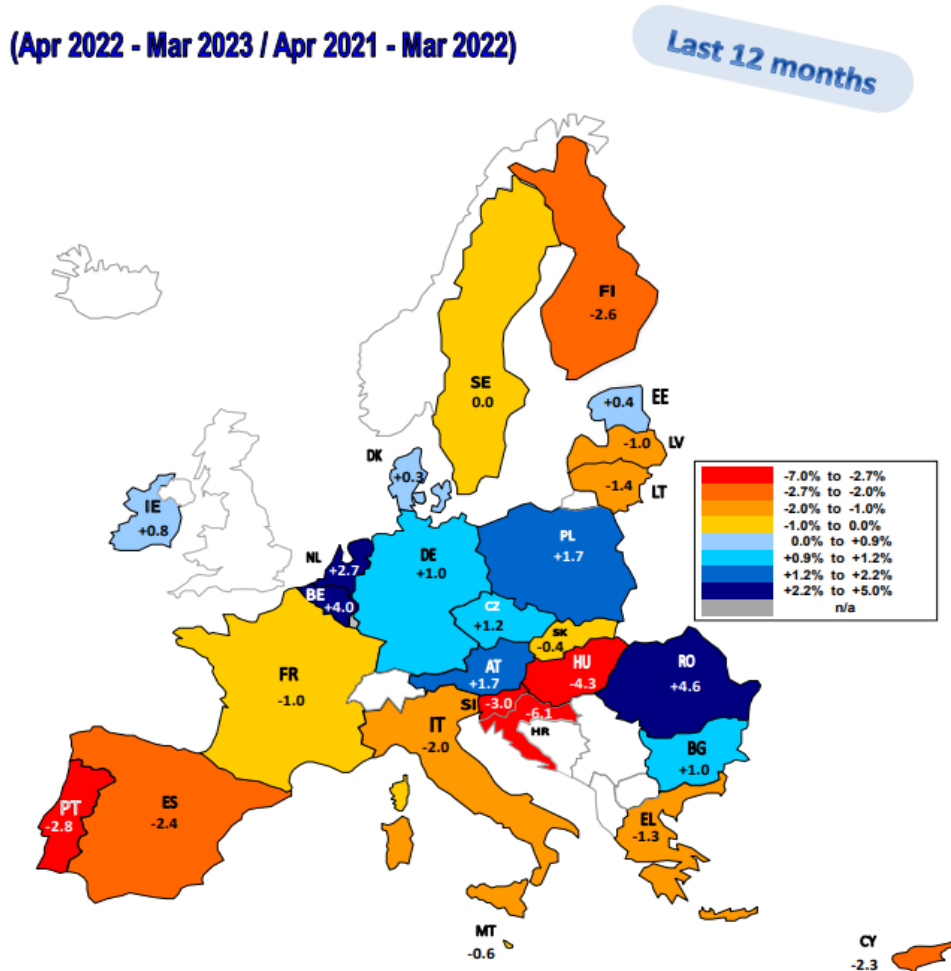
Figure 2. EU Milk prices paid to producers 2020-2023



Source: eu-raw-milk-prices.europa.eu

[Poland is 6th largest milk producer in Europe (after Germany, France, United Kingdom, Netherlands and Italy). Together with the CAP liberalization process, especially abolishment of the EU milk quota system in 2015 and reducing export subsidies, dairy market is more exposed to the world market dynamics. Taking an advantage of the cost competitiveness of dairy production in Poland, large investments done in the past years at the farm level, high demand for milk expressed by processing industry, resulting from investments in processing powers, and growing demand for dairy products, dairy farmers continued development towards increased specialization and production scale.]

Figure 3. EU Milk deliveries compared to last 12 months period (III2022-II2023 to III2021-II2022)

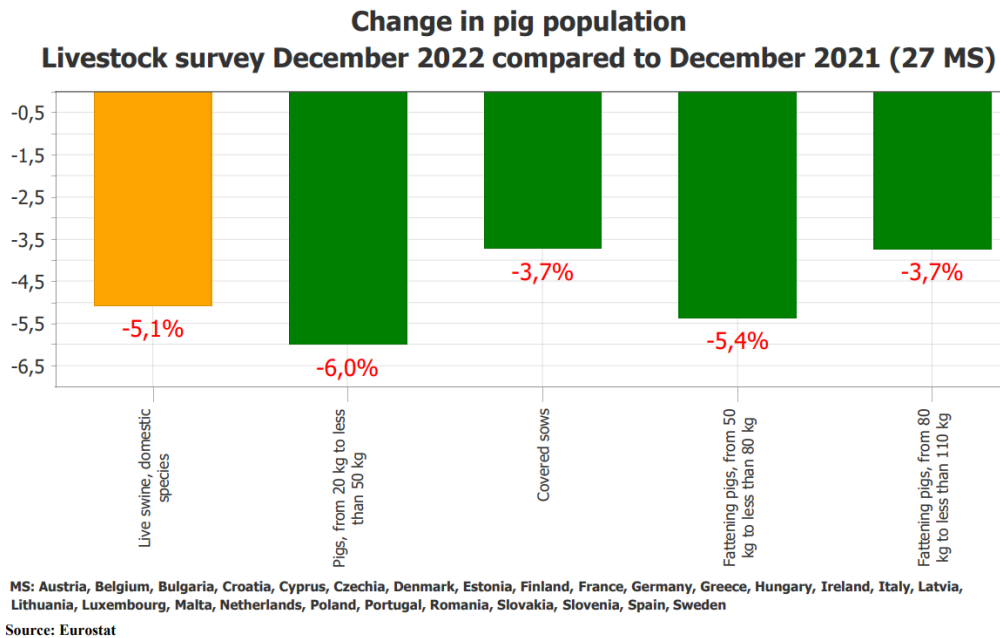


Source : MS' Communications to Eurostat, FEGA, AGEA, Reg.479/2010.1(a)1

Source: MS' Communications to Eurostat, FEGA, AGEA, Reg.479/2010.1(a)1 - accessed 05/2023 [eu-raw-milk-deliveries_en.pdf \(europa.eu\)](https://eu-raw-milk-deliveries-en.pdf)

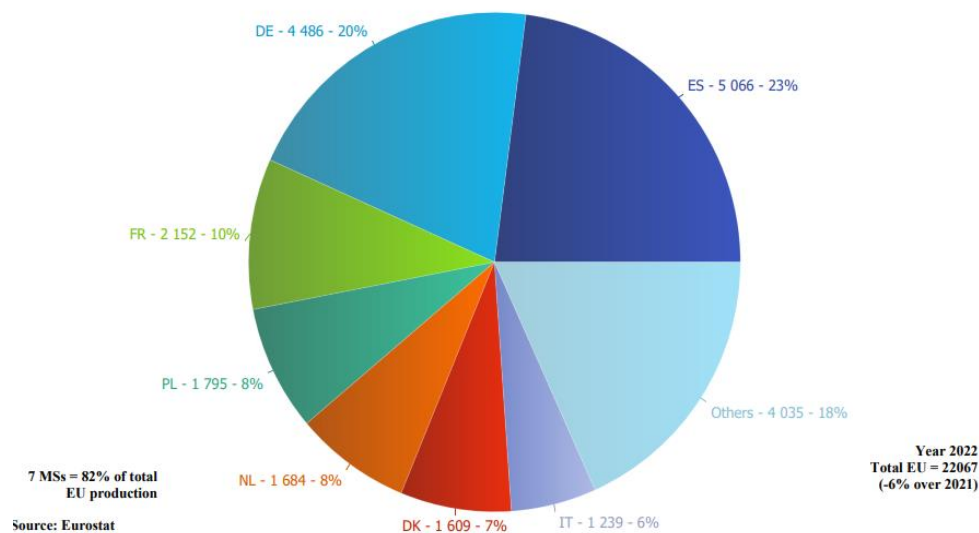
Pig and poultry sectors: The pig sector in CEE countries was in **2022**, and is still seriously **affected by African Swine Fever (ASF)** (which since 2014/15 continues to spread across areas of Europe) but also **growing prices of feeds** (related to overall inflation and increase of energy prices). According to IERiGŻ (Rynek Mięsa 2022) as result of the drastically low profitability of pig farming at the end of 2021 and at the beginning of 2022, pig population in June 2022 amounted to 9.6 million units and **was 12.9% lower** than the year before. Number of piglets decreased annually by 14.5% and by 12.2% for weaners. All parameters are expected to decrease also in 2023. These trends were observed also in other EU Member states (Figure 4)

Figure 4. Change in the EU pig production (XII 2022 to XII 2021)



Source: [Pigmeat Dashboard.pdf \(europa.eu\)](https://europe.eu/pigmeat-dashboard.pdf)

Figure 5. EU largest pig producers in 2022



Source: [Pigmeat Dashboard.pdf \(europa.eu\)](https://europe.eu/pigmeat-dashboard.pdf)

In the third quarter of 2022, the ratio of **pig prices to rye prices** was **1:5.7**, and to barley prices 1:5.0. There **have not been such narrow relations** in the third quarter, at least since Poland’s accession to the EU.

In August 2022, the Animal Disease Information System by the European Commission published a report informing of the number of **Highly Pathogenic Avian Influenza** outbreaks in the EU over

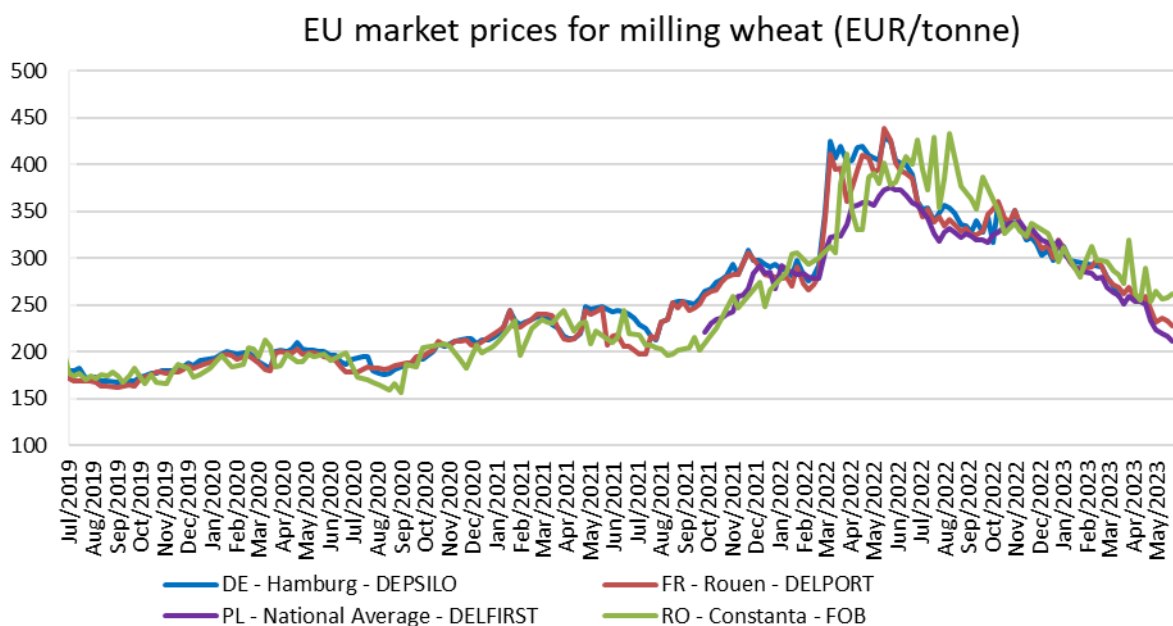
2022. France was the most affected country, followed by Hungary, the Netherlands, Germany, and Poland. However despite this fact, production of poultry meat in Poland increased by 1,7%. In general poultry meat production increased in the EU by 3,5%. France recorded the highest decline (by 11%). The highest increase of production was recoded in Italy (+26%).

Arable and horticulture

Year **2022** turned out to be good for the **harvest of cereals**, Poland obtained 35.7 million tonnes, i.e. 2,9% more than in the previous year. The increase reflected primarily higher than in 2021 yields (increase by 6,5% to 5 t/ha), which more than offset a reduction in the area harvested (decline by 3.4% to 7.2 million ha). Good crops were also obtained in the case of maize - 8.5 million tons, 14% more than in the previous year, and rapeseed 3,65 million tonnes, 14,3 % more than in 2021.

As mentioned in more detail in the section “Agriculture Economic Climate” of this report, cereal and oilseeds markets in Poland, and in the whole EU, **were strongly affected by the Russian war in Ukraine**. For example the import of cereals to Poland from Ukraine has increased more than 54 times! The oversupply to Polish warehouses, together with decreased cereal prices in Europe (figure 6), caused **protests of farmers** in the early spring of 2023. As a result the EU commission posed a ban on imports as of May 2, 2023 (since April 15 in Poland) according to which wheat, corn, rapeseed and sunflower seeds from Ukraine may not be imported into Bulgaria, Hungary, Poland, Romania or Slovakia, and only transit is possible through the above-mentioned Countries.

Figure 6. EU prices of milling wheat 2019-2023



Source: Member States notifications - Commission Implementing Regulation (EU) 2017/1185

In **2022**, according to IERIGŻ 2023 (Rynek Owoców), the **fruit harvest** in Poland increased by 4.4% to 5.28 million tons, as compared to 2021. There was an increase in the production of almost all species. Only the harvest of black currants and chokeberries decreased. Production of **field vegetables** decreased from 3.90 to 3.86 million tons. The harvest of: cabbage, carrots decreased, and the harvest of: onions, cucumbers and tomatoes increased. The harvest of vegetables grown under cover increased from 1.38 to 1.53 million tons. Fruit and vegetable production in the EU is estimated at 40 and 63 million tons respectively, as compared to 40.3 and 65.7 million tons in 2021. Polish situation is quite positive comparing to the overall EU outlook. According to preliminary estimates, fruit production in the EU in 2022 amounted to 40 million tonnes, compared to 40.3 million tonnes in the previous year. Harvest decreased as a result of unfavourable weather conditions in most countries during the predominant fruit growing season (drought, heat, excessive rainfall). The largest drop in production was in Spain, which dominates the fruit harvest in the EU.

Agata Malak-Rawlikowska – June 2023

Slovenia (Europe)

Weather:

Changing weather conditions and their negative impact on agricultural production are a constant in Slovenian agriculture. In 2022, there were slightly fewer extreme events than in the previous year, but this year was marked by a drought that affected all parts of Slovenia. During the winter period, temperatures were above average, with intermediate cold periods, and below average precipitation. The dry conditions that prevented optimal soil preparation and sowing of early vegetables in March ended in April. April was the first month in the year 2022 with higher amounts of precipitation, which stimulated the phenological development of plants. Weather conditions and soil temperatures made it possible to sow corn on time as well as other field work needed in spring was also possible. However, changeable weather with frequent rainfall continued in early May, and the conditions were favourable for the growth of plant diseases and pests. During the summer months, temperatures were above average, with heat waves and below average rainfall. The drought and heat stress affected the crops of corn and other summer crops the most, the damage was also reflected in permanent plantations, as fruit trees developed small fruits, many of which also fell off. The dry conditions also had a strong impact on the yield on the grassland, where both the quantity and the quality of the forage produced fell significantly. The water balance was negative throughout the growing season, and only improved with above-average rainfall in September.

Agriculture Economic Climate in 2022:

c. Farms and Agriculture:

- The gross value added of agriculture in GDP is 0.8 %; GDP per capita 27,975 EUR.
- There are 68,331 agricultural holdings with an average of 7.0 ha of utilised agricultural area and 9.1 LLU; there are 58,529 farms with permanent grassland and pastures, which in total cultivate 271,421 hectares of grassland; 56,968 out of farms cultivate almost 175,531 hectares of fields and 34,436 of farms cultivate 27,681 hectares of permanent plantations. 44,976 farms are engaged in livestock production and a total of 408,684 heads of large livestock are kept on these farms.
- Data from the 2020 Census of Agriculture on the labour input show that the total labour input on agricultural holdings amounts to 66,326 full-time labour equivalents. Family labour still accounts for more than 95% of all available agricultural labour.
- 0.97 annual working unit per average agricultural holding, with 57 years of an average age of the manager of the agricultural holding;
- Factor income per employee in agriculture is 5,777 EUR;
- Factor income per employee in forestry industry is 26,630 EUR/AWU

d. Economic results of Agriculture in 2022

Economic conditions in 2022 were marked mainly by the war in Ukraine, the large-scale drought in Europe as well as in Slovenia and the Covid-19 pandemic. The war in Ukraine is having a major impact on the energy and food markets, the pandemic continues to cause disruptions in international supply chains, and the drought is further contributing to the rise in food prices.

The Office of Macroeconomic Analysis of the Republic of Slovenia predicts that the gross domestic product (GDP) will increase by 5.0% in real terms in 2022 (in 2021: 8.2%). In 2022, mainly private consumption will increase (especially in the first half of the year), which is expected to increase by 5.4% in real terms due to high savings. However, the real growth of private consumption will nevertheless be noticeably lower than in 2021 (9.5%).

Government consumption will contribute less to economic growth. According to forecasts, this will increase by 1.4% in real terms due to the reduction of expenditures for mitigating the covid-19 epidemic. A reduction in the activity of the export-oriented part of the economy will mainly contribute to the decrease in GDP growth. According to forecasts, real export growth will fall from 14.5% in 2021 to 5.0% in 2022. The reason is mainly the increase in the prices of crude oil, natural gas, electricity and other raw materials due to the inability or uncertain supply and also due to the EUR/USD exchange rate. As a result, economic activity in countries that are important trading partners of Slovenia will also decrease.

Above all, the high prices of crude oil and natural gas continue to put pressure on agri-food chains as well. According to the forecasts of the European Commission, the prices of North Sea oil and natural gas should remain at a relatively high level. High prices of energy products lead to an increase in the prices of inputs for agriculture, especially nitrogen mineral fertilizers, whose production volume is reduced at global level. The food processing industry also faces higher costs mainly due to high energy prices. On the other hand, prices of agricultural products are expected to remain at a high level, also due to the extensive drought in Slovenia and EU as well.

According to the first statistical estimates, the prices of agricultural crops and products will be noticeably higher at the overall level in 2022, nominally by 22.2%. Considering the inflation of 8.9% (Office of Macroeconomic Analysis of the Republic of Slovenia), prices at the aggregate level rise in real terms by 12.2% and are at a historically high level. This is influenced mainly by a marked price increase in livestock production as well as an increase in prices of plant products.

With a significant increase in the prices of agricultural products, in 2022 the prices of inputs for agriculture also rise significantly, at the average annual level by 26.6% (+16.2% in real terms). The increase in the prices of inputs for agriculture at the aggregate level in 2022 is mainly the result of a significant increase in the prices of mineral fertilizers, which have more than doubled compared to the previous year. The prices of energy products and feed costs also increased significantly. Due to a higher increase in the prices of inputs for agriculture than the prices of agricultural crops and products, the price-cost ratio deteriorated in 2022. The deterioration of price-cost ratios has been detected for the third year in a row, which indicates a further tightening of the situation in agriculture.

Compared to the previous year, in 2022, budgetary support remains a key stabilizing element of incomes in agriculture. There were again large share of payments from extraordinary measures (mitigation of higher production costs due to the energy crisis and the consequences of the war in Ukraine).

The first estimates of economic account indicators for agriculture (AIS assessment based on available statistical data and expert assessments based on model calculations) show that incomes in agriculture in 2022 will be higher compared to the previous year, but significantly lower than the average of the previous five years. According to the first estimates, the economic results will improve despite the decrease in the volume of plant production due to unfavorable weather

conditions, since according to the first forecasts, the prices of agricultural products at the aggregate level will increase significantly.

Livestock:

For livestock sector, the first estimates based on the available statistical data show that the total volume decreased slightly. Surely, this is largely due to the significant drought. A slight increase in the volume of meat production in 2022 is expected only in poultry farming, while a decrease of around two percent is expected in other types of meat production. The production of cow's milk is also smaller than in 2021, while the production of eggs increased according to currently available data. Honey production will be significantly better after the catastrophically bad 2021 harvest. As expected, the honey harvest in 2022 will be slightly above the long-term average.

Due to the lack of fodder, also the total production of milk decreased slightly at annual level. However, after falling in the first half of 2021, milk purchase prices began to rise slowly. Moderate growth in purchase prices was followed by intense growth almost throughout 2022. Despite the price moderation in the last months of the year, the average purchase milk price is about 38% higher compared to the price in 2021. Based on the available data, the purchase price reached a record level, namely at the end of the year it exceeded 0.50 EUR/l of purchased milk. As with other livestock sectors, the costs of milk processing will also increase significantly compared to 2021. According to estimates, costs will be higher by around 22% at the average annual level.

The cattle stock is also less stable due to difficult conditions for fodder production. After several consecutive years of average conditions, 2022 will be more favourable for cattle farmers despite higher input costs and problems with fodder production (both from grassland and arable land). Based on the data from the European Commission, the purchase prices of cattle and beef increased in 2022 in all EU member states. The average price in the EU for beef for the period January-October 2022 was higher by around 28% compared to the same period the year before.

At the overall level in 2022, according to the first estimates, the prices of animals and animal products are significantly higher, which is a historically high level. These will be nominally higher by 27.0% (+16.4% in real terms). According to the first estimates, the most significant increase is in the prices of cow's milk (+35.8%), and noticeably also the prices of beef (+27.0%), pork (+22.8%) and eggs (+22.4%). Higher prices are also predicted for poultry meat, which according to the first estimates will be higher by 16.9%. Sheep and goat meat prices are also expected to be higher by 6.1%.

Arable:

Given the rather difficult year 2022, hectare yields of most plant crops were again smaller. Which is the second year in a row. In the case of grain, they were lower than in the previous year, where, except for grain corn and oats, they were higher than the average in 2017-2021. The yield of wheat was in 2022 per hectare 5% lower than in 2021. At 6.3 t/ha, the corn harvest was one of the lowest in the last decade, the yield per hectare was one-third lower than in 2021 and as much below the average of the last five-year period. The key reason is, of course, unfavourable weather conditions, especially lack of rain.

It was somewhat different with oilseeds, which achieved a slightly higher yield. However, it was still below the multi-year average for most of oilseeds, the only exception being oilseed rape. Since Slovenia is an important producer of hops on a global scale, it is worth to mention that the yield of

the latter was also significantly below the average of the last few years. This also marks the end of the favourable conditions that we have witnessed in this sector in the past years.

Due to the drought and the negative impact of high summer temperatures, the forage yield from grassland in 2022 was also significantly lower than in 2021, when it was on an average level. Weather conditions with a lack of precipitation and high temperatures during the growing season also affected the production of vegetables. On average, their harvest will also be smaller than in 2021 due to the lack of water for irrigation and thus below average.

The prices of plant crops in 2022 are nominally 15.4% higher compared to 2021 (+5.9% in real terms). However, a very marked increase in the prices of plant products was already recorded in the previous year (2021). The considerable increase in prices in both years thus led to the highest prices of plants so far. The biggest price increase is recognised for grain (+52.3%). Noticeably higher prices can also be expected for potatoes (+36.0%), oilseeds (+20.7%) and vegetables (+16.2%). Based on the available data, a price decrease is expected only for fruit (-6.9%).

Horticulture:

e. Soft Fruit

In Slovenia, the fruit harvest in intensive and extensive plantations was better than last year's extremely poor harvest, but did not exceed the average of the last five-year period (2017-2021). In intensive plantations, according to the first estimates for 2022, larger hectare yields were achieved for all important fruit species. Even in the extensive orchards, the fruit harvest was better than in the previous year, as the yields of apple, pear and stone fruit trees were significantly higher.

Economic conditions in the fruit industry have been very volatile in recent years. Extremely good and extremely bad harvests follow each other. The purchase prices of different types of fruit fluctuate greatly between individual years and seasons. The situation of fruit production sector is mostly influenced by apple trees, which have the largest share in the structure of orchards in Slovenia. In the first eight months of 2022, the high purchase prices of the 2021 harvest were significantly reflected in apples, which has a key impact on the level of apple prices on an annual basis in 2022. Due to the greater supply of apples of the 2022 harvest, which even due to dry conditions and high temperatures (some varieties did not meet the prescribed quality standards), prices felt in the autumn months and will most likely be significantly lower compared to the same months in 2021 (by approximately 25%).

f. Grapes and wine

According to the first estimates, in 2022, mainly due to the 3% smaller area of vineyards, which is the smallest so far (14.4 thousand ha) and the dry and hot weather conditions, the fewest grapes were harvested so far. Compared to the year before, they harvested 9% less white grapes and 3% less red grapes. Approximately 78 thousand tons of excellent quality grapes are expected to be produced in the vineyards, which is approximately 93% of the 2021 harvest and 23% below the average of the last five years (2017-2021).

The more modest last harvests (2019-2022) and the extremely good quality of the grapes of the last two harvests seem to have a favourable effect on the growth of purchase prices for grapes, which, according to estimates based on the currently available purchase prices of statistics and information from the field in Slovenia, should be for the second year higher. The growth in the purchase price of grapes in 2022 is expected to be at least 10%, and 9% increase in wine prices.

However, the expected increase of approximately 10% in purchase prices for grapes is unlikely to be sufficient to cover the estimated increase in total production costs (+12%). This will affect the deterioration of the economic situation of the producers of grapes for sale, which has been very bad for years already. According to available data, approximately 70% of the cultivated grapes are processed on farms and sold as wine, which enables growers to achieve greater added value and also significantly better economic result.

Other:

In 2022 many activities focused on the new period of the Common Agricultural Policy (CAP). In particular, the activities included the preparation of the CAP Strategic Plan 2023-2027 and the preparation of the legal basis for the implementation of the CAP in the period 2023-2027. The strategic plan was approved in October 2022.

However, 2022 was a year of many extraordinary events in agriculture (e.g. natural disasters, unstable market conditions, etc.). Thus, the state implemented various measures aimed at mitigating the deterioration of economic indicators in agriculture. The total amount of disbursed funds was 66.6 million EUR, which is 64% of the disbursed funds from the rural development program by individual measures for the year 2022, or 50% of the amount of the envelope for direct payments (in 2022). It was about various measures and extraordinary payments. Aid to agriculture to limit the impact of high prices of energy and mineral fertilizers in agriculture (31.1 million EUR), Aid to beekeeping to curb the impact of high energy prices (1.0 million EUR), Aid to beekeeping due to high prices of reproductive material (1.9 million EUR), Exceptional compensatory aid for the milk and milk products sector (5.2 million EUR), Aid due to high prices of reproductive material (for primary agricultural production) (14.9 million EUR), Aid due to high prices of energy products (for agricultural machinery) (2.1 million EUR), Reimbursement of costs in fisheries due to high prices of energy products (for powering fishing vessels) (0.006 million EUR), Financial assistance due to loss of fodder on livestock farms (4.5 million EUR), Financial assistance to eliminate the consequences of frost damage in 2021 (5.7 million EUR), other (one-off solidarity allowance, interest rate subsidy, etc.) (0.2 million EUR).

References (in Slovene):

- *BEDRAČ M., BELE S., BREČKO J., HITI DVORŠAK A., KOŽAR M., LOŽAR L., MOLJK B., TRAVNIKAR T., ZAGORC B. Prva ocena stanja v kmetijstvu: 2022. Ljubljana: Kmetijski inštitut Slovenije, 2022. 54 p.*
- *SI- STAT 2022 - Statistical Office of the Republic of Slovenia www.stat.si*
- *IMAD 2023. The Institute of Macroeconomic Analysis and Development of the Republic of Slovenia https://www.umar.gov.si/en/?no_cache=1*

Jaka Zgajnar – May 2023

South Africa

- South Africa is a country on the most southern tip of the African continent.
- It has a population of approximately 60 million people.
- Total land size is 1 214 470 km², of which 79.4% are used for agricultural production.
- Only 9.9% of the total land is arable, while 0.3% is covered with permanent planted crops and 69.2% with permanent natural pasture.

Weather:

- The 2022/2023 summer rainfall area received good rains the past season. Although it was a bit drier than the previous year, a very good summer crop was released.
- Although large parts of the country received good rain the past number of years, some areas, like the Eastern Cape province, still have water challenges with dam levels that did not increase much.
- The winter rainfall areas to the west of the country had a number of drier years, but good rainfall is expected for the current winter.
- The bad news is that a *El Nino* (dry conditions in the Southern Hemisphere) is expected to dominate for the next three years and we will have to wait and see how strong the effect will be.

Agriculture Economic Climate:

- Most parts of the country received good rainfall, with associated good yields, in the recent past, and the commodity prices were very good on the back of high international prices.
- Debt levels in agriculture are, however, still at its highest ever as input costs increased faster than revenue with exceptionally high fertilizer, fuel and feed prices.
- The minimum wage in the country was increased by 9.6%, which is higher than the inflation rate and is putting more pressure on producers.
- South Africa is currently in a Catch-22 position regarding macroeconomic indicators. Our inflation rate started to increase rapidly, while the rand weakened against the major currencies, and economic growth slowed. The Monetary Policy Committee decided to try and curb the inflation rate and support the rand by increasing interest rates. The prime lending rate was hiked by 4.75% since November 2021, bringing the rate to 11.75%, the highest in the last 14 years.
- Another big problem currently is the ongoing load shedding (electricity cuts) to protect the national grid. Load shedding currently cause electricity cuts of between 2 and 10 hours in a 24 hour day. This impacts from primary production, especially irrigation, right through to processing and the final consumer who can no longer buy cheaper food products that requires long cooking times as there are a possible that you will not have enough hours with electricity during the evening to prepare the food.

Livestock:

- **Red Meat**
 - The economic slowdown and high inflation and interest rates reduced the demand for red meat (a luxury product) in South Africa as consumers struggle to afford it.
 - A2 beef and lamb carcass prices was respectively 10.7% and 9.6% lower in April 2023, compared to April 2022.

- **Poultry**
 - The poultry market are doing better with April prices being 11.1% higher than in 2022. Further price increase are also expected due to import tariffs being applied.
- **Pork**
 - The pork market is also doing well with the April price being almost 15% higher than the previous year. The better poultry and pork prices, compared to lower beef and lamb prices, show the higher demand for cheaper meat products.

Arable:

d) Summer crops

- e) Despite some challenges, the overall outlook for the 2022/23 summer crop season in South Africa is favourable. However, one concerning factor is the decline in grain prices from the highs reached in the 2021/22 season. Nevertheless, there is a positive aspect as lower input costs, such as fertilizers and other chemicals, provide some relief in this situation.
- f) Benefiting from favourable weather conditions during the 2022/23 seasons, South Africa's government Crop Estimates Committee (CEC) predicts a total maize harvest of 16 188 375 tons, representing a 4.64% increase compared to the final maize crop of the 2021/22 season. South African farmers have planted 2 586 100 hectares of maize in the 2022/23 season, which is 8.87% lower than the 2021/22 season. Despite the decline in maize hectares, the projected yields contribute positively to the overall harvest outlook for maize in South Africa.
- g) The international grain markets are anticipated to maintain volatility due to factors such as South American weather, China's potential grain purchases, a possible U.S. recession, and the Ukraine-Russia conflict. These influences are likely to continue affecting the markets.
- h) It is important to note that the 2023/24 season is expected to transition into an El Niño weather pattern. This introduces additional uncertainties that may further impact agricultural production and grain markets

- i) The following data were obtained from the latest crop estimates:

Crop	Final crop (Tons)		change
	2022	2023 (CEC 4 th forecast)	
White maize	7 850 000	8 539 925	8.79%
Yellow maize	7 620 000	7 648 450	0.37%
Sunflower	845 550	797 610	-5.67%
Soybeans	2 230 000	2 755 300	23.56%

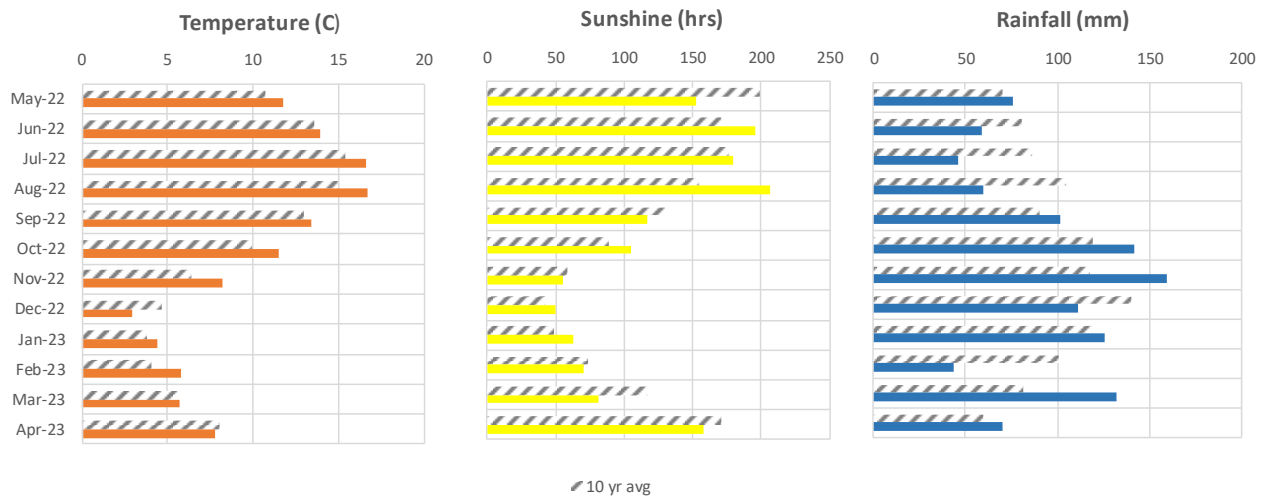
j) Winter crops

- a. According to the CEC, South Africa's farmers intend to plant 542 600 hectares of wheat, 4.27% lower than the 2021/22 production year. The decrease in wheat hectares is mainly expected in the Freestate and the Northern Cape.
- b. Canola hectares, on the contrary, are expected to increase by 3.23%, forecasted to reach 127 500 hectares.

Frikkie Maré – June 2023

United Kingdom

UK Weather:



Agriculture Economic Climate:

1. Farm Business Income (Forecast - England 2022/23)

- Exceptional price volatility, both in terms of input costs and output revenue, is expected to be one of the key factors influencing farm incomes in 2022/23. Compared to 2021, the average 2022 Basic Payment is expected to fall by around a quarter across all farm types, reflecting the second year of progressive reductions to the payment.
- Cereal Farms - Average Farm Business Income on cereal farms is expected to increase by 11% in 2022/23 to £134,000. The rise in income will be driven by a sizeable increase to output from crop enterprises, particularly wheat and oilseed rape. Overall, crop output is expected to rise by 31% reflecting a combination of higher prices, tight global supplies (both influenced by the war in Ukraine) and increased yields, with crops establishing well in generally favourable conditions and the long dry summer aiding an exceptionally early harvest. For oilseed rape, a larger crop area is also predicted to be a factor. The rise in output is forecast to more than offset higher input costs, which are expected to increase by nearly a quarter. In terms of price, virtually all inputs are predicted to increase with higher fertiliser costs (expected to more than double to £60,000) having the greatest impact for cereal farms. Income from agri-environment activities will see little change compared to 2020/21 while the average Basic Payment is predicted to fall by a quarter to around £29,000, which equates to 22% of the total average income on cereal farms.
- General Cropping Farms - At £125,000, average income for general cropping farms is forecast to be 14% lower than 2021/22 (when average income more than doubled), primarily as a result of higher input costs which are expected to increase by 16%. As with cereal farms, substantially higher (nearly double) fertiliser costs, reflecting uncertainties around gas supplies in Europe, will be a key driver followed by machinery related costs

(rental, repairs, depreciation, fuel, and oil) which will increase by 18%. Output is also expected to rise, although to a lesser extent than costs. Higher output from cereals and oilseed rape is forecast to be partially offset by a fall in output from potatoes, peas and beans. A reduction in potato area is expected and yields to suffer due to the drought conditions, particularly for unirrigated crops. While prices for peas and beans are forecast to be higher than 2021/22, the hot, dry summer is expected to take a toll on yields. Similarly, the weather (summer drought and winter frosts) will impact sugar beet yields along with the emergence of beet moth in some parts of the country, although it is anticipated that improved contract prices will more than offset a drop in production. The second year of progressive reductions to the Basic Payment is forecast to result in a 28% lower payment for general cropping farms.

- d. Dairy Farms - On average, Farm Business Income is forecast to increase by 78% to £249,000 in 2022/23. A substantial rise in livestock output will be almost entirely driven by an increase in output from milk of around 43%. It is anticipated that the overall volume of milk and number of animals will be little changed compared to 2021/22, but that tight supplies during the year will support higher milk prices. Defra statistics indicate that, at a UK level, the average farmgate price rose from 37.45p per litre to 51.51p per litre between March and December 2022. It is important to note the wide variation in milk prices with some farmers receiving considerably more or less than the average. Crop output is expected to rise by around a quarter (especially from wheat which is predicted to rise by 39%, driven by higher yields and firm prices). These increases are forecast to more than offset a rise to input costs of 17%, most notably for feed (21%), fertilisers costs, which will more than double and machinery costs (19%). For this type of farm, the average Basic Payment is expected to be around £24,000 compared to £30,000 in 2021/22.
- e. Lowland Grazing Livestock Farms - Average income is predicted to halve in 2022/23 to £17,000. A rise in input costs of 15% will be primarily driven by increased fertiliser, feed and machinery costs. At the same time, total output is forecast to be very slightly lower (1%) compared to 2021/22, with a very small fall in output from livestock largely offset by an increase from cropping activities. Output from cattle enterprises, which typically account for the greater proportion of total livestock output on lowland farms, is forecast to rise by 3%, reflecting increases in both price and throughput for finished cattle, although output from store cattle is predicted to fall. Sheep output is also expected to be lower, impacted by a change in livestock valuation following a strong 2021/22; it is estimated that value of store and other sheep will be lower at closing, compared to opening, valuation. The average Basic Payment is predicted to fall by £3,800 (21%). The 2022/23 payment will equate to just over 80% of total Farm Business Income on this type of farm.
- f. LFA Grazing Livestock Farms - The average income on LFA grazing livestock farms is forecast to fall by around two thirds to £16,000. Overall output is expected to be 7% lower with a small increase in crop output insufficient to offset a 6% reduction in output from livestock, the result of decreases for both cattle and sheep enterprises. Sheep tend to make the biggest contribution to livestock output on upland farms and while breeding stock prices, an important source of revenue, are forecast to remain at similar levels to 2021, output from other sheep enterprises is predicted to fall. Despite remaining above the 5-year average, prices for finished and store lambs are expected to be slightly down on the year and, as with lowland farms, this will be reflected in lower closing values for

trading stock, compared to the opening values. It is predicted that input costs will rise by 15%. In common with other farm types, the major cost impact will come from fertiliser, machinery, and feed. The average Basic Payment is forecast to fall by around £7,000 to £23,000 and agri-environment payments by 3% to £14,600.

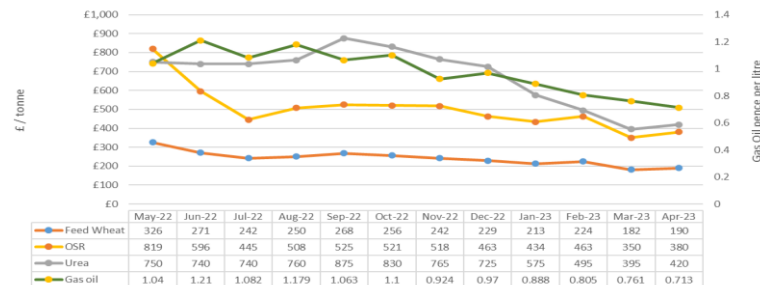
- a. Mixed Farms - Compared to 2021/22, incomes are expected to fall by 14% on mixed farms to £63,000. This type of farm reflects all the enterprises found in the more specialist farm types reported above. Overall output is forecast to increase by 12% with a rise in crop output of 24% the main driver, output from livestock is also expected to rise by 12%. In comparison, input costs are forecast to rise by around a fifth with crop costs and feed costs (which combined account for around 40% of total input costs) increasing by 48% and 20% respectively. The average Basic Payment for mixed farms is expected to fall by around £8,500 compared to 2021/22 to £27,100.

2. Farm Business Income (Forecast - Scotland 2021/22)

- a. Average farm income has risen to the highest level since 2012, after adjusting for inflation. Average farm income, a measure of farm profit after costs, is estimated to be £50,000 in 2021-22. This is an increase of over £11,000 on the previous year.
- b. The analysis indicates that the upturn in income is mostly due to increased total output. This upturn is against the backdrop of the COVID-19 pandemic and the UK leaving the European Union.
- c. Total output (including agricultural output, income from support payments and diversified activities) increased by 9% to £275,200. Agricultural output increased 10%, reflecting strong wholesale prices in 2021-22 across a number of agricultural products, including cereal, milk, and livestock.
- d. Total input costs increased 6% to £225,200 for the average farm. Increased input costs this year follow a dip in the previous year. This returns to the trend of steadily increasing input costs seen across recent years which have reflected industry wide cost pressures. However, the results presented here do not reflect more recent price volatility.
- e. In particular, commercial dairy farms had a good year, driven mainly by increased milk prices. Average income was estimated at £162,100, the highest value since 2012. Average cereal farm income also reached a record high, driven by high wheat and barley output.
- f. For the first time in at least ten years, the average farm would have been profitable without support. Without support payments the average farm business made a profit of £5,100 from agricultural, contracting, and diversified activities. This was mostly driven by increases in income in dairy and arable farms.

Arable:

1. Sale / Purchase prices (2022/2023)



2. Cereals

- Winter cereals were generally well-established last autumn and have come through a relatively warm and dry winter. Spring has been wet with some areas struggling to get through spring workloads. Sunshine and temperature will need to improve if crops are to reach their potential.
- To week ending 25 April, 88% of the GB winter wheat crop was in good/excellent condition, ahead of 84% at the same point last season. Crops are establishing well, though some crops in the Northwest particularly have been impacted by localised flooding. The management of Septoria will remain an important watchpoint, with high levels observed in most winter wheat crops.
- GB winter barley crops were rated 90% good/excellent condition, to week ending 25 April, up from 84% at the same point last year. The last few weeks have seen good crop growth, and in some advanced crops, the flag leaf has become visible. To note in Yorkshire, lodging is noted as a concern, considering PGR applications being delayed or missed. Higher levels of disease have been observed where T0 and T1 spray applications have been delayed or missed.
- Spring planting delays have been reported across all regions, considering unsettled weather conditions continued through April, as well as March. On average, plantings have been delayed about one month, with delays also noted to fertiliser and crop protection applications. With lower yield prospects in late-sown crops, reduced inputs on these crops have been reported.

3. Oilseeds

- For oilseed rape (OSR), conditions are very varied. 66% of winter OSR was rated good/excellent to week ending 25 April, down from 70% the same point last year. Cabbage stem flea beetle remains the biggest issue for winter OSR crops, with pigeon damage also reported in several regions. Where necessary, some OSR crops have been replaced with spring beans, spring oats or spring barley.
- Oilseed rape prices have fallen since the start of the year. However, concerns around dry weather in Argentina has continued to cut soyabean production forecasts supporting the wider oilseed complex. Oilseed rape prices have risen by nearly £30 per tonne, month-on-month, to £380 per tonne. That said, expectations remain for bigger

global rapeseed crops in 2023/24. Also, a bumper Brazilian soyabean harvest is expected which adds pressure vegetable oil markets.

- c. Oilseed rape prices may be supported in the longer term with the EU Parliament backing a ban on imports linked to deforestation, including palm oil and soya. Companies selling into the EU will now have to provide verifiable information that goods were not grown on land which has been deforested after 2020.

4. Sugar Beet

- a. Yields are at similar levels to 20/21 but the area grown is down which will give rise to 18% less production.
- b. British Sugar have offered £3,000/ha for beet delivered in early September to encourage growers to produce more.
- c. Neonicotinoids have been authorised by DEFRA for emergency use on the 2023/24 sugar beet crop. This is linked to a model prediction of a virus incident of 63% or above.

5. Potatoes

- a. With the disbanding of AHDB Potatoes last year, there is little planting information now being collated. Best estimates reckon the area was down 5% last year and are predicting a further 10% this year due to higher growing costs.
- b. Good quality Maris Pipers for packing are making between £255 per tonne, while the best bagged chipping potatoes can also fetch £300 per tonne.
- c. A relatively warm winter has caused high store temperatures and some associated deterioration.

6. Input Cost Inflation

- a. The latest Agricultural Price Index shows that the rate of inflation in prices paid for goods and services has eased since peaking in the Autumn. Although this will be welcome news to farmers, pressure on their margins still remains as price inflation continues to sit at historically high levels with the key inputs maintaining a higher rate of inflation than outputs. The extent to which inflationary pressure will impact individual farms will depend on their contracts and purchase requirements.
- b. Fertiliser price inflation has seen the largest decline, falling 22% in the first 2 months of the year (Dec22 vs Feb23) and down 27% compared to the inflationary peak in September. Despite this, price inflation is up 6% on February last year and sits at a substantial 116% above the level from 2 years ago. We anticipate fertiliser price inflation to continue to ease in the short term as it follows the downwards movements seen in the natural gas market. In March average spot prices for UK produced ammonium nitrate declined by £166/t compared to the previous month, sitting below £500/t for the first time since summer 2021.
- c. Energy price inflation has eased but at a much slower rate, down 4% from the start of the year (Dec22 vs Feb23) and a 9% drop compared to November where inflation peaked as winter energy demand picked up. However, year on year there has been a 35% increase in energy price inflation. We would expect to see inflation to continue to ease as we leave the winter demand period, however with a cooler and wetter spring this year it is likely that energy demand has remained higher for longer.

- d. Inflation for compound feeds has remained flat since peaking in the summer but sits 26% above the level from this time last year and is 47% higher than in 2021. Wheat futures markets are currently at a similar price point to February last year before the Russian invasion of Ukraine. While short term volatility in grain markets is likely with the Black Sea Initiative nearing renewal, longer term fundamentals point to a less pressured price outlook, with ample global grain supply expected for next season.

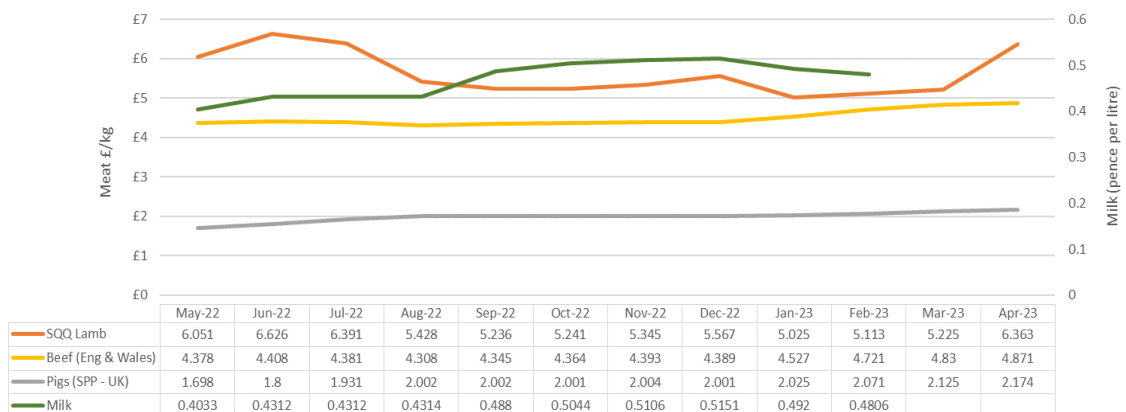
Horticulture:

1. Soft Fruit & Vegetables

- a. Rising energy costs have hit the glasshouse sector hard. Many glasshouses are now standing empty with the returns for many growers not covering the cost of production.
- b. The Government is working to boost automation in the food sector, with £12.5 million recently announced to boost the development of automation and robotic technologies on farms, part of the wider £270 million Farming Innovation Programme to support research and development in agriculture and horticulture.
- c. The Government has confirmed 45,000 visas for seasonal workers will be available for businesses next year providing a boost for the UK's horticulture industry. The allocation will allow businesses to recruit foreign workers to come to the UK for up to six months through the Seasonal Worker visa route – an uplift of 15,000 compared to what was available to businesses at the start of 2022.
- d. The first 4,000 visas will be made available to operators next week to ensure that daffodil growers have the labour available for their harvest at the start of the year.
- e. The changes will provide certainty for farmers in a boost to British food production and help to tackle the labour shortages and rising input costs which have been affecting countries all around the world.

Livestock:

1. Livestock Sale Prices (2020/21)



2. Dairy

- a. It is estimated that there were 7,500 dairy producers in GB as of April this year. Compared to the April 2022 survey, this represents a reduction of 380 dairy producers (-4.8%), and a fall of 350 (-4.5%) versus our last survey in October 2022.
- b. Compared to previous years, more producers have left the industry. Despite the fact that the latest Agricultural Price Index indicates input cost inflation has eased, input costs remain historically high. In combination with falling milk prices, this has squeezed profit margins for many dairy farmers. The current high level of cull cow prices, as well as ongoing uncertainties about changes to agricultural subsidy schemes has led to some producers changing their future direction.
- c. Good weather conditions last Autumn and higher prices at the end of last year has meant that average milk production by farm remained high over the autumn and winter months. Milk volumes per farm remain high with the latest figures suggesting that the average GB dairy farm produces 4,500 litres per day, equating to 1.65mn litres per year. GB milk deliveries continued to record year on year growth through March, with estimated volumes up 1.2% on the year at 1,088m litres. Seasonal growth is in line with typical patterns for the time of year.
- d. The growth in milk production has been driven by a favourable milk to feed price ratio over the autumn and winter, with favourable weather last Autumn. However, the reductions in milk prices since the beginning of 2023 could start to impact on yields in the latter part of the year, especially if input costs remain high.
- e. With yields expected to remain high through spring, predictions are for marginal growth in milk deliveries in the 2023/24 season (+0.5%). However, this heavily depends on the extent of milk price declines, as tightening farm margins could potentially lead us to see higher destocking rates.

3. Beef

- a. GB prime cattle prices continued to exceed historic levels in March. The all-prime deadweight average measure moved up to an average of 485.5p/kg for the four weeks in March. This was up 16% versus the same period last year. The week ending 1 April saw prices reach an average of 488p, a jump of 4.5p throughout the month. While still on an upward trajectory, the rate of price growth has slowed during March, when compared to February's gains.
- b. Steer prices remain elevated at an average of 486.9p/kg for March, with a high of 489.4p/kg in the week ending 1 April. On the month, prices were up 10.5p from February's average. From the same four-week period in 2022, steer prices increased 67.4p.
- c. Heifer prices showed less change in the first two weeks of March but had an uptick in the final two weeks. Prices jumped 3.5p in the third week and ended the month at 487.7p/kg. The average for the month was 485.1p, up 9.8p on February's average. On the year, prices have risen by 66.5p for the same time-period in 2022.
- d. Young bull prices climbed to a high of 472.7p/kg for the final week of March, following some fluctuations in the previous three weeks. Prices rose 7p throughout the month, with an average of 468.6p for four weeks. This is an uptick of 12.8p from February's average, and up 65.7p on March 2022.

- e. Cow prices plateaued for the first three weeks of March before easing by 0.7p in the final week, bringing the monthly average to 384.1p/kg. Comparing this to February's average, there has however been an increase of 8p. Versus March 2022, cow prices were up 55p.
- f. Cattle prices continue to break records rising through March and into April, although not at quite the pace seen in February. The All-Steer Deadweight price for the week ending 15th April was 490.8p per kg; this compares with 436.9p per kg for the same week in 2022. It is a similar picture for liveweight, with the overall steer price up 41.05 p per kg on the same week last year.

4. Sheep

- a. The finished lamb price had a 'slow' start to the year, but since March it has been climbing significantly and has now surpassed last year's value. The Old Season Lamb SQQ overall average price for the week ending 15th April reached 306.6p per kg liveweight, compared with 274.6p per kg for the same week in 2022 and to 250.4p per kg just four weeks earlier.
- b. Easter and Ramadan are two key consumption periods for lamb and with these now behind us, it will be important for the industry to capitalise on demand opportunities going forward. With 3 bank holidays in May, we may see demand supported over this period, but weather and promotional activity will likely be key influencers. Reports are that demand remains good, but supplies are now short, which should continue to support prices. Furthermore, lamb prices for the week ending 9th April, in the key export markets of France and Spain were up by 7.8% and 6% on the year respectively with the EU sheep population having declined by 1.8% in 2022.

5. Pigs

- a. Defra published the results of its consultation on reforms to the pig industry supply chain. The main outcome will be the development of regulations for pig contracts using the regulation-making power in Section 29 of the Agriculture Act 2020. These should ensure all agreements between producers and buyers are in writing removing any uncertainty and ambiguity.
- b. The consultation also revealed pig producers' concerns about market consolidation in the processing sector.
- c. The finished pig price has steadily increased since the turn of the year. The latest GB EU spec SPP for the week ending 18th March rose by 1.12p per kg on the week to 212.53p per kg, some 70p higher than year-earlier levels. Whilst prices are at record highs, producers are still not covering the costs of production.
- d. The AHDB quarterly full economic cost of production for Q4 2022 is estimated at 224p per kg deadweight. This means the average producer will still have negative margins.
- e. Whilst supply is constrained, demand looks weak too. The latest retail data from Kantar shows in the 12 weeks ending 19th February, the volume of pork purchased fell by 2.6% compared with the same period last year. The actual spend on pig meat rose by 8.8% year-on-year but that is because of an 11.7% price increase due to inflation.

6. Poultry

- a. Poultry will be able to return outdoors in England and Wales from 18th April 2023. The Animal Plant and Health Agency has announced that the housing requirement that has been in place since the start of November will be lifted. This is as a result of the falling incidence of Avian Influenza across the country. Bird keepers are being asked to remain vigilant however, as the virus is still circulating.

Other Issues:

7. 'We Eat Balanced'

- a. AHDB marketing campaign 'We Eat Balanced' continues to protect reputation of meat and dairy:
 - i. Health: Meat and dairy contain vitamin B12, an essential nutrient not naturally present in a vegan diet
 - ii. Sustainability: Red meat and dairy produced in Britain is one of the most sustainable in the world
 - iii. Welfare: Meat and dairy are produced in Britain to world class food and farming standards
- b. An impressive nine out of ten consumers who saw the most recent 'We Eat Balanced' TV advert agreed it successfully communicated that meat and dairy form part of a balanced diet.
- c. Reaching a staggering 43 million adults, AHDB's We Eat Balanced campaign ran in Autumn 2022 and January 2023, to drive awareness of the nutritional value that lean meat and dairy can add as part of a healthy, balanced diet.
- d. In January, We Eat Balanced featured on mainstream TV/on Demand, YouTube, Newspapers, social media and in eight major supermarkets, where eight million on-pack stickers linked shoppers to healthy meat recipes.
- e. "At a time when consumers are facing huge pressures on their budgets, the campaign has played an important role in helping shine a spotlight on the nutritional value red meat and dairy can bring – especially micronutrients such as iron, zinc, and calcium, that we know are found in a more bioavailable form in animal sourced foods."
- f. We Eat Balanced also had a positive impact on the perception of specific health benefits red meat and dairy can offer. Six per cent more people saw dairy as a good source of vitamin B12 after the campaign.
- g. The campaign enlisted further help from Dr Emily Andre during Iron Awareness Week. This played an important role in highlighting that nearly half of young women in Britain are iron deficient, and the positive role red meat can play as part of a balanced diet.

8. Red meat and dairy expected to steal the crown at Coronation.

- a. With royal celebrations taking place across the UK, an increase in food spend is predicted as street parties and BBQs are enjoyed by the nation.
- b. The Queen's Platinum Jubilee last year saw a 50 per cent increase in burgers, with an extra 853,000 kg bought across the UK during the Jubilee week (Kantar, w/e 5 June 22 vs average 51 w/e 29 May 22).

- c. Sausage rolls were also a firm favourite, with volumes up 30 per cent, followed by a 28 per cent rise in pork pie purchases and a nine per cent increase in sausages sold.
- d. The dairy sector was also delivered a boost, with an additional 724,000 litres of fresh cream sold, a rise of 33 per cent compared to an average week in 2022. Cheese also saw a lift, with an extra 228,000 kg bought – up two per cent.

9. Private Investment in Green Markets

- a. For the Government to achieve its ambitious target of net zero in 27 years and to reach its environmental targets set out in the Environmental Improvement Plan (EIP), it acknowledges it will require a step-change in investment. Recently two pieces of policy have been released addressing 'Green Investment' and how to 'mobilise' private investment in this area.
- b. The 2023 Strategy represents the latest policy blueprint developed jointly by HM Treasury, the new Department for Energy Security & Net Zero, and Defra. It aims to 'strengthen the UK's position at the forefront of the rapidly growing global green finance market, while driving private investment to deliver our energy security, net zero and environmental objectives'.
- c. Alongside the Green Finance Strategy, and perhaps of more interest to land managers, Defra has released a Policy Paper entitled Nature Markets: A Framework for Scaling up Private Investment in Nature Recovery and Sustainable Farming. The Framework sets out:
 - i. core principles to ensure markets operate with integrity and deliver positive outcomes.
 - ii. current rules for how farmers and other land and coastal managers can access markets and combine income streams and plans to further develop policy in this area.
 - iii. a new arrangement with the British Standards Institution (BSI) to develop a suite of high-integrity nature investment standards. These will enable new markets to develop and emerging markets to scale up and operate soundly.
 - iv. next steps to clarify and develop institutional and regulatory roles and market infrastructure needed to ensure good market governance.

10. Biodiversity Net Gain

- a. BNG is a way of boosting habitats for nature. It requires 10% more biodiversity after a development has taken place than was present beforehand. This means developers must try to avoid any loss of habitat on a piece of land, and they must also create further habitat either on-site or off-site. The latter could potentially open up a new income stream for land managers who may be able to increase the biodiversity on their land and sell the BNG 'credits'. BNG will apply from November 2023 for developments which fall within the Town and Country Planning Act. For sites that are classed as small (less than 9 houses or 0.5 Ha, or for non-residential less than 1,000 square metres or 1 Ha) they will have until April 2024 before BNG is introduced.
- b. The Government has also published some guidance for land managers who wish to sell to the BNG market. This outlines what actions land managers can do ahead of

the November to prepare for selling BNG units. It also gives brief details on combining environmental payments with BNG, including Nutrient Mitigation Credits, ELM and voluntary carbon markets, such as woodland or peatland. In summary, it will be possible to sell BNG units and Nutrient Credits from the same land by stacking them. For other schemes such as ELM or voluntary carbon markets, it will not be possible to sell an enhancement that has been funded by an agri-environment scheme as a BNG unit (or nutrient credit). However, it will be possible to use the same land to create further habitat enhancements on top of the existing agri-environment agreement or voluntary carbon codes which could be used to calculate BNG units and be sold.

- c. To calculate the number of biodiversity units available, the Biodiversity Metric 4.0 will need to be used. This will calculate the biodiversity available at the start (the baseline) and then after the habitat enhancement has taken place to produce a 'net' amount of BNG credits available to sell. The habitat must be managed for 30-years via a legal agreement such as a Planning obligation (Section 106) with the Local Planning Authority (LPA) or under a Conservation Covenant with a responsible body.

Trevor Atkinson – June 2023

United States

Overview:

It's always a challenge to develop a country report at a point in time when there always seem to be many moving parts... At the moment, commodity prices (corn, soybeans) are down, production expenses (particularly interest and labor) are up so farm incomes are projected to be down in 2023. The wheat crop is expected to be lower in much of the country. While farm sector equity is expected to be up a bit, debt levels continue to creep up. Much of Texas, Oklahoma, Kansas and Nebraska are in extreme or exceptional [drought](#) with many other parts of the US abnormally dry or in moderate drought.

Crops:

In Oklahoma, a small wheat crop is expected for the second year. We had weather issues at planting and have had a variety of problems during the growing season. More corn was planted in parts of the state where it isn't the norm.

Livestock:

Drought has led to lower cattle numbers for the second time in a decade. Sustained demand has led to rising cattle prices and falling beef cow slaughter. However, it isn't clear whether herd rebuilding will take off because of the continued drought in states with high levels of beef production. The supply of bred heifers on January 1 was at the lowest inventory since 2011 and the supply of replacement heifer calves was also very low, also contributing to slow herd rebuilding.

Mental Health:

More attention is being focused on mental health of agricultural producers. While ag has long been recognized as an industry with high accident rates, recent data has shown growing suicide rates, leading to growing attention by USDA and Extension.

Policy:

Farm Bill negotiations are underway but Congressional representatives are uncertain whether the larger budget issues (debt ceiling negotiations, differences in legislative and Cabinet priorities, etc.) will be resolved so that Farm Bill discussions can advance. The Congressional Budget Office projects that the federal budget deficit might double in a decade, causing the debt held by the public relative to GDP to increase from 98 percent to 119 percent by the end of 2033, which would be the highest on record for the U.S. Concerns about that mean that any proposed policy modifications would come from existing allocations. Supplemental Nutrition Assistance Programs (food stamps) account for a majority of the spending in the Farm Bill. Agriculture and nutrition programs normally authorized through the Farm Bill make up about 1.85% of total federal spending with farm income support and crop insurance accounting for less than one quarter of one percent; Medicare,

Medicaid, net interest on debt, defense spending and Social Security make up 76% of federal spending (and are unlikely to be cut).

The Inflation Reduction Act is being used to advance a variety of USDA initiatives, primarily voluntary conservation programs and climate-smart practices. The additional funding supports oversubscribed cost-share programs and provide financial and technical support for cover cropping, conservation tillage, wetland restoration, prescribed grazing, nutrient management, tree planting and more plus channel some funds to producers who have been discriminated against in the past.

This week the Supreme Court modified the interpretation of the Clean Water Act, resulting in different limits for the Environmental Protection Agency (EPA) authority over wetlands. In the future, the Clean Water Act applies only to wetlands with a 'continuous surface connection' to navigable waters as opposed to a 'significant nexus' to such bodies that applied under the 2006 interpretation.

Footnote from Guido's travels:

Currently on a drive to the east coast we have seen corn and soybeans in very good shape in the states of Missouri, Illinois and Indiana. The horse farms in Kentucky look always excellent and the grass from the interstate vantage point seem to be good as rain has been normal thus not "runny" .

Guido van der Hoeven and Damona Doye – June 2023

Come and join the IFMA Family in Saskatoon at the next International Farm Management Congress, share experiences, learn, make lifelong friends and contacts within International Farm Management

www.ifma24.org



Agriculture in Saskatoon

Saskatoon is located in the centre of the province of Saskatchewan which is a major producer of Canada's wheat, oats, flaxseed, and barley. Meat processing is the largest industry, followed by dairy production, breweries, and the production of agricultural implements.

‘An Ideal Location for an IFMA Congress’