THE YEAR THAT WAS 2021

No two years of farming are ever the same, 2021 is testament to this.

It was a year that was impossible to predict. Off the back of good yields in 2020 and a lack of summer rain in some regions, many did not have the luxury of stored soil water to boost the season and were relying heavily on in-season rainfall.

In autumn, all the influential climate drivers for north-west Victoria were in neutral, with all possible rainfall outcomes an option. The season however started dry, very dry, and for the most part the break just didn't come. Fallow became a hot topic, as did changing from canola to barley due to the ongoing dry and the passing of canola's optimum sowing window.

Export issues with China continued, with many growers cutting back their hay plans due to this uncertainty and advice from key hay buyers.

AUTUMN

With such dry conditions it was no surprise that plant establishment was an issue, germination was patchy, particularly in canola. Apart from some areas that received storms in early May, most waited until late May or early June for crop establishment to occur. Mice were also a risk to establishment with some growers in the Wimmera needing to bait more than once. Pre-sowing knockdowns weren't possible in the dry conditions and the newer pre-emergent options were implemented into the program across broad areas, resulting in some crops showing substantial evidence of their use. This created concerns around their fit and how to best incorporate them in the system moving forward. It also highlighted the need for growers and advisors to be on the front foot regarding where products coming to market are best positioned and how to get the best outcomes. The number one rule remains: read the label first.

Some farmers who capitalised on early March rain to sow feed crops reported their crops were at a knife's edge by May. Those with livestock were tasked with feeding stock into June with flock management being flagged should conditions continue.

Grain markets were favourable, with strong buyer demand from numerous destinations for all commodities.

WINTER

The Indian and Southern Oceans began to emerge as regions to pay attention to with hints of wetter conditions ahead. Sea surface temperatures in the eastern parts of the Indian Ocean were warming up, conditions which are typically conducive for moisture to be generated. Lack of wind and high pressure over central Australia however meant this moisture didn't travel to the Wimmera-Mallee.

All was not lost. In the Southern Ocean, the Southern Annular Mode also known as SAM, spent some time in the negative phase. The combination of the negative SAM, the sub-tropical ridge being located further north than its normal winter position and some rare pressure patterns, delivered some much-needed rain, keeping the season alive.

By mid-winter, action in the Indian Ocean began to heat up further with some encouraging signs of a negative Indian Ocean Dipole (-IOD) forming.

Small rain events in many regions meant establishment continued to be variable, with heavier soils struggling to get going on low rainfall. When rain did eventuate, weeds came up in a flurry with the crop, making it a juggle between managing nitrogen inputs, weed control and working around weather.

Some farmers resowed poorly established crops on erosion-prone soil, not for yield but to protect their soil.

Sheep feed continued to be slow through much of winter and supplementary feeding continued late into winter.

July finally turned a corner, delivering above average rainfall. Some crops then showed that nitrogen needs were limited. Fertiliser availability, combined with high prices, saw a mixed bag of strategies to meet crop needs. Some growers went as hard as usual, while others were more conservative, knowing stored moisture was still a limitation and having a lack of faith in forecasts, leading to an uncertain season outlook.

SPRING

During late winter a -IOD was officially declared. In following weeks however, the strength of the -IOD wobbled with instability in the westerly trade winds and the sea surface temperatures near the Horn of Africa warming instead of cooling. It was all but written off until it showed its true colours in the last week of September. A significant front developed bringing rain from across the Southern and Indian Oceans to eastern Australia. This saw some significant rainfall totals across the region and buoyed a rapidly deteriorating season, particularly in the Mallee.

As is typical for such an event the -IOD event began to weaken as we approached summer but hung on enough to combine with the favourable conditions in the tropical Pacific Ocean, due to the developing La Niña. It delivered rains well into November—predominantly through isolated thunderstorms. The late rains meant baling hay was a test of wills and crops stayed greener longer or re-tillered, creating management headaches and leading to harvest starting later. Crop topping and desiccation became hot topics with the potential for green weeds and re-tillering to slow headers which were already dodging rain events. The rain caused quality downgrades in some areas putting more pressure on growers to get the crop off. Some areas received excessive rain events in early November, causing a lot more damage than good in affected areas.

Despite these challenges, further south, the late rains improved yields and coupled with good grain prices (due to poor Canadian crop conditions, Indian demand (India reduced its lentil import tariff from 30% down to 10%), solid Turkish buying and a lack of container freight options), the late rains boosted moods. It was a more-than-welcome boost for growers who, on top of an unpredictable season, had also been navigating the new Covid-19 worker permits and essential worker proof of vaccination requirements.

The season continued to keep everyone guessing however with wheat and canola prices dropping without warning in December.

Glyphosate and fertiliser prices continued to soar, putting pressure on decision making and growers' bottom lines moving into 2022.

Pastures finally started to thrive in spring however the risk of flystrike created by the late rains and warmer weather had producers on high alert, particularly with the shearer shortage creating delays.

DISEASE

Spot form of net blotch (SFNB) presented itself in barley not treated with Systiva, particularly in RGT Planet.

Severe infections of **Net form of net blotch (NFNB)** were reported in crops of Spartacus CL which was previously resistant.

Scald in barley was found in some high pressure, early established, crops.

Septoria was cause for concern in wheat in the Wimmera and **Ascochyta** in chickpeas throughout the region.

Rust management decisions were difficult in the Wimmera during spring. Wimmera growers needed to continue to monitor, particularly if growing susceptible varieties.

PESTS

Some growers reported **mice** numbers to be worse in late winter/early spring than at sowing. There were growers in the north-west Mallee who baited due to mice chewing into tillers/nodes of cereal crops.

Low numbers of **Green Peach Aphid** were found in traps, some carrying TuYV. The upside was the cool damp conditions meant aphid activity and breeding were very slow. The cold conditions also reduced the effectiveness of virus transmission so action wasn't required.

Lucerne flea caused issues in slow growing crops.

Armyworm caused rapid damage in cereal crops in spring due to high pest numbers and/or large grub size.

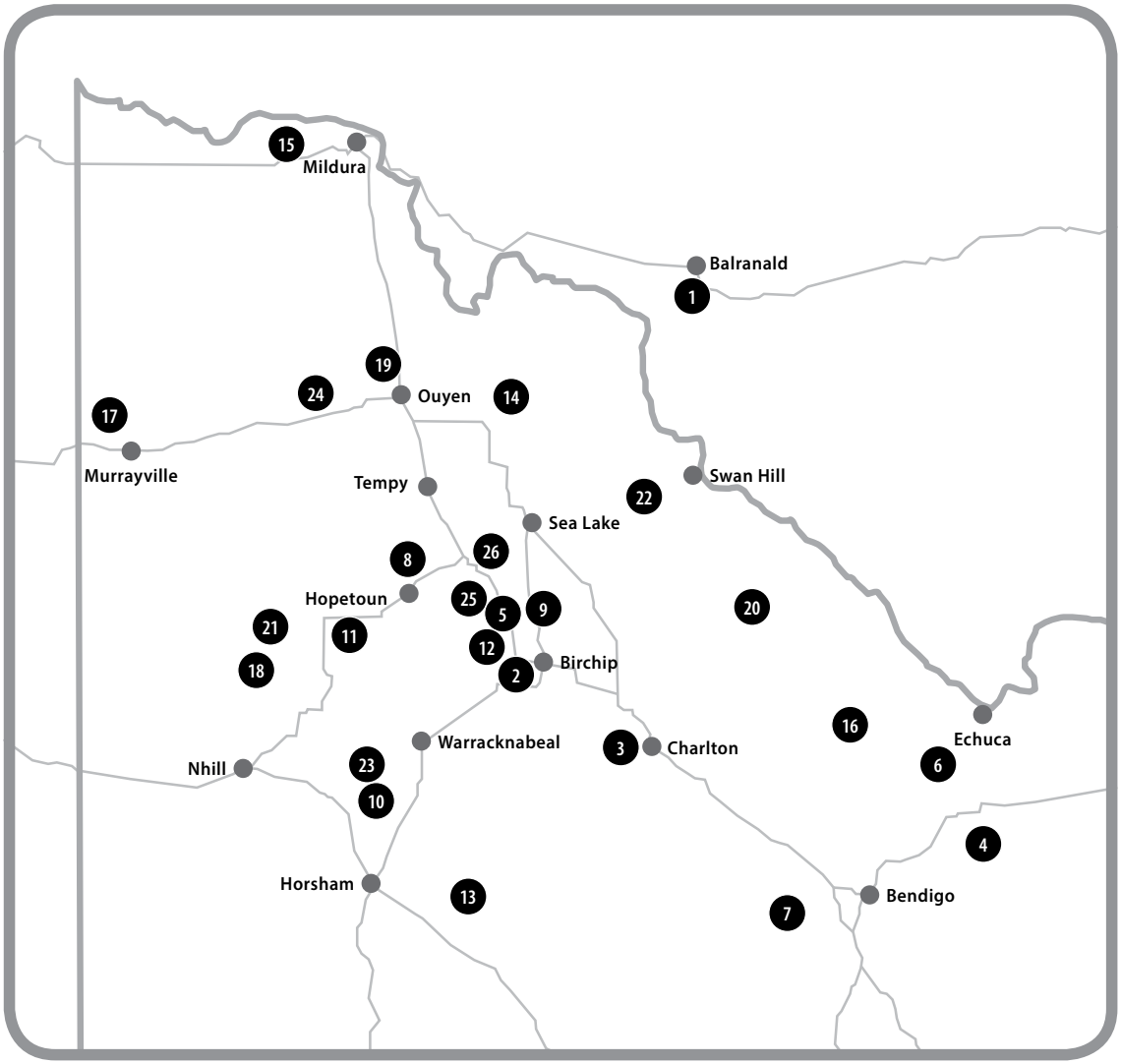
Heliothis were a problem in a range of crops. Pulses required management to ensure delivery grades were met.

Frost: Low temperatures caused concern and damage in crops despite the later than usual season. From the 26th of September, frost occurred on approximately a fortnightly basis into early November, with the west Wimmera and some areas of the Wimmera affected. The Mallee had bigger concerns around moisture at these key times. Pulses suffered some damage. Some cereals were wiped out in low frost-prone areas but in other regions good yields and quality compensated. Growers' ability to use time of sowing as a frost mitigation tool is flawed if events of this nature and frequency present and continue to create frustration about how best to manage this production risk.

Largely, grain yields were surprising and quality was generally okay where rain events were early enough to not impact grain quality. Prices were the icing on the cake for a year like 2021.

While it was certainly an unpredictable year, it was one that for most growers, would be remembered as the year where positivity, hope and perseverance were rewarded.

2021 RESEARCH SITES



Reference	Location	Project	Host
1	Balranald	GRDC NVT wheat	Jake & David Lockhart
2	Birchip West	GRDC crown rot management	Mick Foott
		DJPR Syngenta crown rot seed treatment	
		SADGA crown rot	
3	Charlton	GRDC NVT canola, wheat & barley	Jon Whykes
		Cargill canola evaluation	
		OptiAg MAP	
4	Colbinabbin	GRDC NVT barley	Darryl Rathjen
5	Curyo	MCMA soil nitrogen management (previously La Trobe University)	Paul Barclay
		Soil CRC herbicide residues	Linc Lehmann
		Go Resources safflower	Trevor Grogan
6	Diggora	GRDC NVT wheat, oat & canola	Anthony Lees