Crop Action

Issue 17 Sunday 14 September 2025

In this issue of Crop Action:

Editor's note

Things are moving quickly now that spring is here. Some autumn-sown cereals in the South Island are now up to GS30 (stem extension) and I have seen a few ladybirds around, indicating that an increase in aphid activity could be imminent, although other indications are that this could be a lower pressure year for aphid-vectored viruses. "Wait and see" is the best advice for now. The wetter winter is the biggest factor determining how a lot of management decisions, such as how to deal with the possibility of increased disease incidence or when to start irrigation, will be made over the coming weeks.

NCRS update

It has been decided not to harvest the ryegrass catch/cover crop at NCRS but to retain it unless it is required for specific trials. Headlands have been mown and all plots were sprayed out with 2.4L Crucial® (glyphosate) + 200mL Pulse® (organomodified polydimethyl siloxane penetrant) @200L/ha in the first week of September, with the aim of having at least four weeks' termination prior to planting. Biomass sampling is happening this week for the NUE (nitrogen use efficiency) and LTE (long term establishment) trials; these trials will have the terminated crop removed by forage wagon prior to cultivation. Daytime temperatures are increasing and we are aiming to start planting non-trial plots with longer season hybrids on 1 October prior to moving on to planting trials around 10 October.

Regional Updates

Southland

Growers appear fairly happy with the establishment and over-wintering of crops. Most crops have had their first application of spring fertiliser. It's worth undertaking soil tests if you haven't already; deep N soil monitoring is showing higher than usual N in some paddocks. Soil conditions have allowed growers to begin spring cultivation while lambing has also kicked off. Some rain would be welcome in Central Otago. *(Nicole Foote, FAR Regional Facilitator)*

South Canterbury/North Otago

Many growers are still reflecting on what was described as the wettest winter in memory, although spring conditions have been reasonably dry and early, which is helping crops to get going. While the region has avoided some of the heavy rainfalls seen elsewhere in recent weeks, there's already talk of the risk of a dry summer ahead. Growers are beginning to factor this into their planning as they look to the months ahead. *(Jo Fearn, FAR Regional Facilitator)*

Mid Canterbury

After a wet winter, conditions in Mid Canterbury are beginning to shift. Paddocks are drying out quickly, and in some cases heavier soils have become too dry, making seed establishment a challenge. Store lambs are hitting the market and returning good prices. At the same time, many growers are now starting to make decisions on closing dates for ryegrass paddocks.

Stored grain is a concern for some, with slightly higher seed moisture leading to quality issues. In the paddock, the legacy of the wet winter is reflected in higher-than-normal levels of disease pressure in cereal crops. With growth now picking up, herbicide applications are getting underway across most of the region. However, growers near the foothills continue to battle frequent frosts, which are holding back soil temperatures and slowing crop growth. *(Cindy Lowe, FAR Regional Facilitator)*

Northern South Island

Wet ground is drying out nicely and soil temperatures are starting to rise so spring plantings are up to date and will continue as paddocks become ready. Spring wheat has replaced autumn wheat in many paddocks where drilling was abandoned in the wet autumn/early winter. For those still looking at autumn crops in wet soils and wondering what they might be able to do, check out the recent FAR Arable Extra on Nutrient Management for Autumn sown crops after a wet winter.

Spray programmes are looking at trace elements and growth regulators on autumn sown wheats, pre-emerge on spring sown barley, and spraying out of old ryegrass paddocks for upcoming spring crop planting.

Those growers who are sending lambs away are pleased with their growth (despite the wet early winter) and good prices are adding positivity. *(Donna Lill, FAR Regional Facilitator)*

Southwest North Island

It's been a dry season so far and most areas have received more frosts than usual. Soil temperatures are on the rise, with some areas reaching 12°C this week (still slightly lower than this time last year) and growers are focusing on seedbed preparation. Uncertainty over barley prices has made it difficult for growers to make informed plans for the season. A lack of commitment from dairy farmers for maize contracts has been frustrating for some. Local silage maize stocks are reportedly low due to the due to this year's drought in Horowhenua and Southern Taranaki, so growers are trying to understand forward demand. *(Megan Cushnahan, FAR Regional Facilitator)*

Eastern North Island

Growers in the ENI regions are sticking to their planting plans at this stage. The outlook is more negative than they were hoping in terms of pricing of grains/contracts. We have seen very dry conditions for planting winter crops of barley and wheat. Growers in Central Hawkes Bay were hoping for some more rain soon. Many Wairarapa and Gisborne growers received some rain this week, but report that there have been good opportunities to prepare seedbeds. Soil temperatures in many areas remain below 10°C, two degrees lower than last year. Winter wheat crops have been doing well and maize grain harvests were good this year. *(Megan Cushnahan, FAR Regional Facilitator)*

Waikato

Preparations are well underway for spring sowing. Last week saw the final spraying of cover crops in preparation for strip tillage. Lime and base fertiliser have been spread. Some growers are planning to start strip tillage next week, depending on the weather, although soil conditions are still quite wet in most places. Deep N tests have been carried out – an activity that seems to be becoming more popular around the region. *(Rachel Mudge, FAR Regional Facilitator)*

Crop management

General

Beginning irrigation

Soil moisture levels remain high across almost the whole country after a wet winter, and it's likely that the irrigation season might start a bit later than in previous years. Knowing your soil type and water holding capacity (WHC) helps with decision making around when to start irrigating. Also feeding into this decision is knowing how long your irrigator takes to get around to where it started.

Another important consideration is how much to irrigate. If there is rain in the forecast, it is good practice to leave 10-20 mm of soil capacity unfilled by the irrigator so that any rainfall is not "wasted". This also reduces the risk of nutrient leaching.
Useful resources:

- Bucket testing your irrigator.
- FAR Focus 4-Irrigation Management for cropping

Cereals

Scald in barley

The incidence of scald can increase in waterlogged crops, and as such there could be a rise in cases in Canterbury barley crops at the moment. Scald in barley is caused by the pathogen *Rynchosporium commune* which spreads through rain-splash from infected crop residues, stubble, and volunteer plants. It is a wet-weather disease that forms particularly at the junction of the leaf and the leaf sheath.

While FAR inquiries so far have not turned up a huge number of cases, it is probably worth checking barley crops which experienced waterlogging over winter. FAR staff have noted that our barley trials at the Kowhai site (Lincoln) are displaying a fair amount of the disease (see photo, right), as there has been standing water on the site quite often over the past three months. These trials will be receiving 1L/ha of Sportak® (active ingredient prochloraz, a Group 3 fungicide) this week.

Further reading:

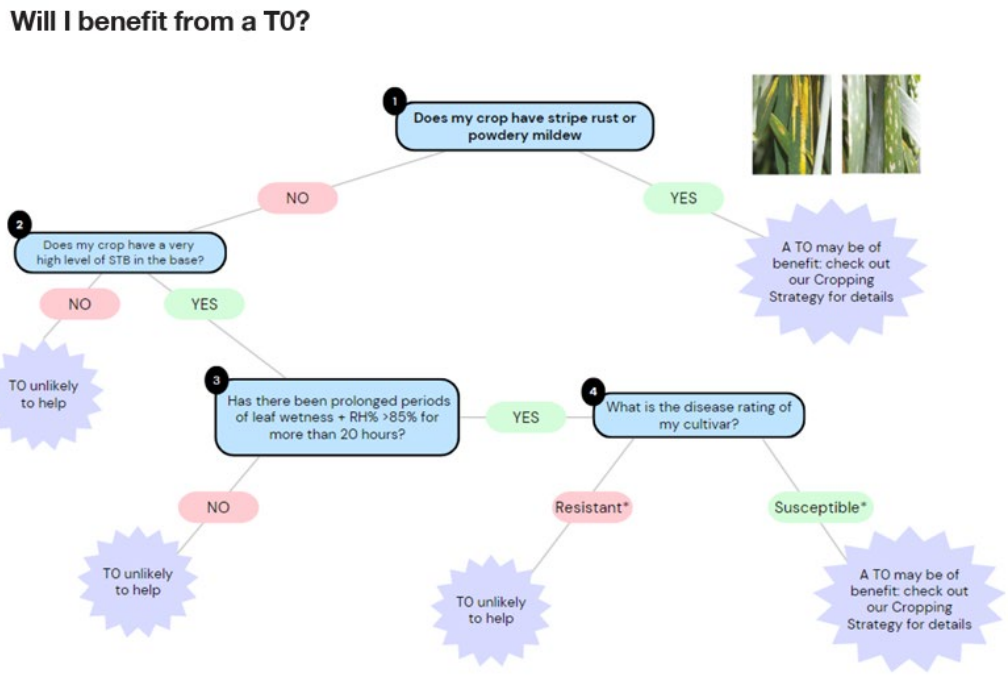
- Cereals 221: Important diseases of barley in New Zealand

Phosphorus deficiency update

In the last edition of Crop Action, growers were alerted to check their crops for signs of phosphorus deficiency, caused by wet, cold temperatures coming out of winter. It was noted at the time that this is usually temporary and the problem goes away by itself as soil temperatures rise. This has indeed been the case in the crops in which FAR has been observing this phenomenon, with crops this week looking much recovered. We had not added any extra P fertiliser to these crops – the phosphorus simply became available from the soil once conditions improved.

Does my wheat need a T0 fungicide?

T0 fungicides (applied around Growth Stage GS30-31) are rarely economically justifiable, with FAR trials repeatedly giving Margin-over-Cost (MoC) results that favour skipping the T0 spray (see Arable Update 231). There can be some situations where a T0 is justified, namely if stripe rust or powdery mildew is present, but in most situations the natural resistance of the cultivar should be what gets you through to the T1 timing (GS32). FAR has produced a decision tree to assist with planning, which is reproduced below. For a more detailed breakdown of your options, refer to Arable Update 219. The Cropping Strategy publication can be found here.



Fungicide resistance

Remember also that there is another compelling reason not to use a fungicide unless you need to: fungicide resistance. The more times a disease population is exposed to a given active ingredient, the more chances it has for resistance to develop further. Many fungicides limit the number of times it can be used per season (including seed coatings), so being mindful of this is an important aspect of preserving our valuable fungicide chemistry for future efficacy.

Aphid monitoring

Despite the increasing temperatures, monitoring at FAR's South Island sites shows that we are still too early for aphid numbers to have ramped up in autumn-sown cereals. There are other indications, though, such as a slight increase in the incidence of beneficial insects, so it will be important to keep an eye on Aphid Chat to stay abreast of the latest data from your region.

Disease implications are linked to the results of a "race" between the crop growth and the aphid population. Once the crop grows past GS32, it is generally considered past the point where insecticides are economically beneficial. If the crop reaches this stage before aphid numbers build up, then foliar insecticides can, as a rule, be kept in the shed. The presence of beneficial insects (especially parasitic wasps in the early stages of infestation) can be the edge that helps you win the race, which is why insecticide choice and use should be carefully considered for aphid control in cereals.

Herbage

Spring nitrogen on ryegrass seed crops

Spring nitrogen requirements for ryegrass seed crops are generally set at about 175 kg N/ha, minus however much may be supplied by the soil throughout the season (often estimated at about 20-30 kg N/ha). Some growers have asked whether this holds true for newer cultivars, many of which produce significantly more vegetative tillers. The assumption could be that this would mean an extra requirement for nitrogen and certainly, these crops can look hungrier in spring and it can be tempting to add more N. However, at this stage, we just don't know.

Information to date suggests that N timing may be more important than N rate. This makes sense given FAR research suggests that earlier closing dates can raise seed yield (see below); but it's a balancing act: encouraging good growth for later partitioning into the seed without pushing an increase in late vegetative growth that will reduce seed yield. Our recommendation is to contact your seed company to discuss a strategy.

FAR research

In the meantime, FAR is in the second year of a three-year study on improving seed yield of the so-called "low aftermath heading" varieties, which produce more vegetative tillers, especially after the usual harvest window has concluded.

The first year of the study (yet to be published) showed that keeping the crop grazed (or topped) through late winter and up until closing was important. Early closing dates yielded much better than late ones, as long as lodging wasn't an issue. The risk with adding extra nitrogen to compensate for extra tillering is that it could increase lodging, which decreases seed yield. There could be scope for countering this with extra plant growth regulator (PGR, e.g. Moddus®). This is one of the focal points of this year's FAR trial at Chertsey. Watch this space as we continue to investigate the many aspects involved in optimising seed yield in these new cultivars.

Nitrogen on cocksfoot seed crops

It's also time to consider nitrogen for cocksfoot seed crops. Spring nitrogen applications should match crop demand; with the first application as crop growth resumes after winter, followed by one or two additional applications so not to induce rapid growth and promote lodging.

The optimum amount of N for a cocksfoot crop is around 165 kg/ha, including soil mineral N (measured to a depth of 60cm).

Thus, the optimum spring N rates can be estimated as:

N application rate (kg/ha) = 165 – soil mineral N (0 - 60 cm)

Further reading:

- FAR Focus 16: Cocksfoot Seed Production

Maize

Pre-emergence herbicides in maize

Getting the most out of your pre-emergence herbicides requires an understanding of the factors that can affect how successful they are. The first step is to have an idea of what weeds are likely to come up based on paddock history, and whether there has been any history of herbicide resistance, either in the paddock or in the area. As always, it is important to use a range of herbicide Modes of Action (MoAs – see Table 1 over page) across the whole rotation to lower the chances of herbicide resistant weeds developing.

Some other important considerations include:

- Time of planting: earlier sowing increases the likelihood of needing a follow-up post-emergence spray.
- Know the weather forecast. Most pre-emergence herbicides have a requirement for adequate moisture to activate the active ingredient, or else they need to be incorporated into the soil.
- Soil type, crop residue and amount of organic matter can influence herbicide effectiveness. Read the label and/or consult with your agronomist.

Further reading:

- Maize Update 90
- FAR Focus 17 – Maize Weed Management

Table 1. Selective pre-emergent herbicides registered for use in both maize silage and grain crops.

Mode of Action Group Number	Active ingredient	Type	Products	Primary weed target
3	pendimethalin	pre- and post-emergence	AGPRO pendimethalin, Stomp® Xtra, Strada®	Broadleaf + grasses
5	terbuthylazine	pre- and post-emergence	Assett™, AGPRO terbuthylazine, Magneto®, Terb 500™, Terbaflo, Timberwolf	Broadleaf
14	saflufenacil	pre-emergence	Sharpen®	Broadleaf.
15	acetochlor	pre-emergence	Ace™, Acetoken, Acierto®, Agcare® acetochlor, AGPRO acetochlor, Donaghys acetochlor, Joker®, Maize Guard®, Roustabout®, Smart acetochlor, Sylon®	Grasses + some broadleafs including: Amaranthus species, black nightshade, chickweed, redroot, Scotch thistle, seedling dock, shepherd's purse, stinking mayweed, rayless mayweed, twin cress
	alachlor	pre-emergence	Alaken, Corral®, Cyclone®, Encaps®, Merit®, Taipan®	Grasses + some broadleaf, including: black nightshade, fathen, redroot.
	dimethenamid	pre-emergence	Frontier®	Grasses + some broadleafs including: apple of Peru, black nightshade, fathen, redroot, seedling dock, spurrey, twin cress, willow weed
	metolachlor	pre-emergence	Guvnor™ Gold, Metoken Gold, Super Maestro	Annual grasses
	propachlor	pre-emergence	Ramrod®	Grasses + some broadleaf, including chickweed and groundsel. Only susceptible at higher rates: fathen and redroot
27	mesotrione	pre- and post-emergence	AGPRO Mesotrione, Dominator®, Donaghys Lektor, Mesoflex®, Primiera®	Broadleaf including: Bathurst bur, black nightshade, chickweed, dandelion, fathen, fennel, fishtail oxalis, Galinsoga, hairy nightshade, hemlock, mallow, redroot, seedling docks, spurrey, stagger weed, twin cress, willow weed and wire weed

Soil temperature monitoring

Maize germination and emergence are dependent on temperature, especially soil temperature. Soil temperatures need to be at or above 10°C and rising (at 9:00am at planting depth) for successful germination. In combination with soil temperature, germination is triggered by absorption of water through the seed coat. Maize kernels must absorb (imbibe) about 30 % of their weight in water before germination begins. Less than optimum absorption of water combined with cold soil temperature may slow or stop germination. Maize typically requires from 55 to 85 Growing Degree Units to emerge (using a 10°C base for GDU calculation).

Planting early in the season does have advantages; these include early flowering, which is particularly advantageous in years where the risk of drought stress is high. However, it should be noted that when planting early in the season, getting seed in the ground one day earlier does not mean one day earlier to flowering. Also, because of the slower earlier growth, planting early can result in the need for greater weed control because row cover is slower to be reached.

Tillage can also have an effect on soil temperature. Cultivation tends to increase soil temperatures compared to no-till, and seedlings tend to emerge faster following cultivation. Combine this slower emergence with the fact that slug numbers tend to be higher in no-till situations, and there is a potential risk in reduced tillage systems that growers should be aware of.

Table 1: Soil temperatures @ 10cm (as at 9:00am, 9/9/2025) for some key maize-growing regions in New Zealand. Also shown are the temperatures for the same time period last year.

Region	Station	Soil Temp (°C)	2024 Temp (°C)
Northland	Kaikohe	12.0	13.2
Waikato	Rukuhia	10.9	13.2
Bay of Plenty	Te Puke	9.2	10.8
East Coast	Gisborne	11.3	13.0
Hawke's Bay	Havelock North	11.2	13.2
Manawatu	Levin	7.8	11.8
Canterbury	Lincoln	8.1	9.2
	St Andrews	6.9	8.2

Oilseed rape

Plant growth regulators (PGRs) in oilseed rape

PGRs should be applied to oilseed rape crops to prevent excessive growth in the period before flowering. This reduces lodging and improves light interception by the plant, leading to higher yields. It can also help even up seed ripening.

The PGR of choice for oilseed rape is tebuconazole, which is most commonly sold as 430 g/L formulations (check your pack before applying at the rates described in this article). As long as the crop is healthy and not stressed, PGR is applied at the green bud stage at 600 mL/ha. Alternatively, for enhanced lodging control (for instance if the crop is very lush), a split application (both of 500 mL/ha) can be applied at early stem extension and at green bud.

Vegetable seeds

Consider alternative pollinators

While we are still some way off from the start of flowering, it might be a good time now to think about setting up for alternative pollinators. Drone flies (*Eristalis tenax*) can be more efficient than honeybees in some situations, and setting up environments where they can thrive within the crop is easy and relatively inexpensive. Check out the link above and see if this could work for you. There is also a podcast available on this topic here.

Weather Updates

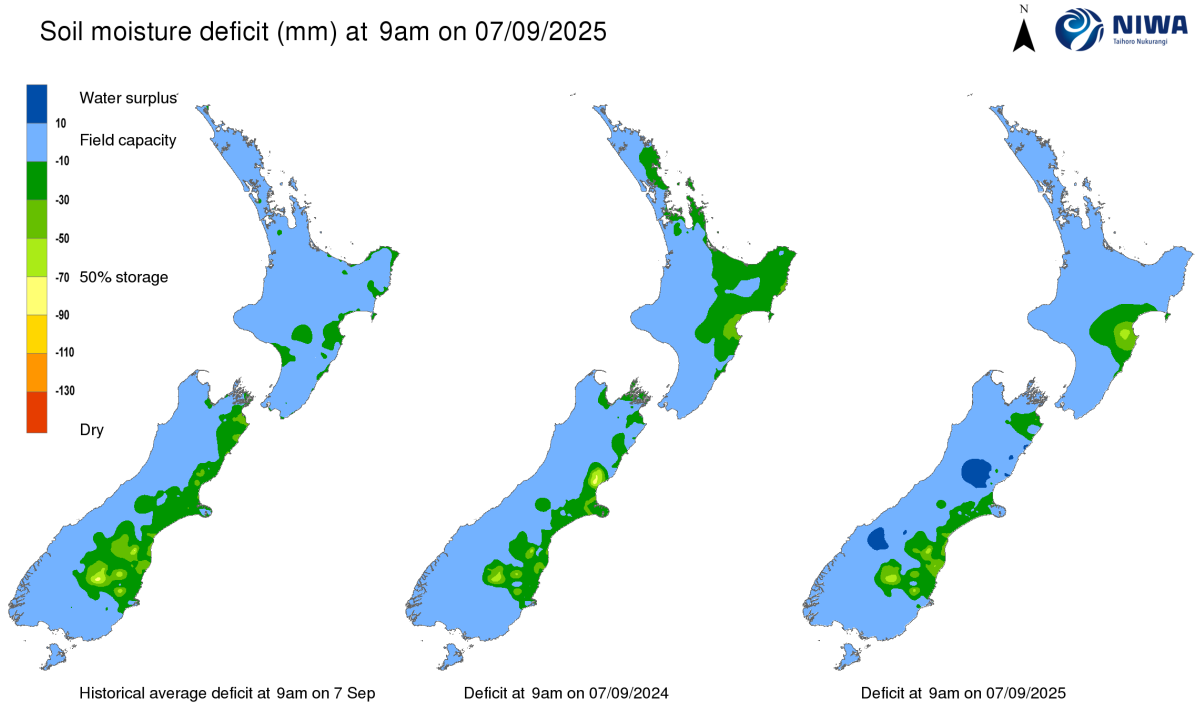
Long-term weather outlook

The long-term climate forecast from ESNZ (Earth Sciences New Zealand, formerly NIWA) has been released for the September to November period. They are predicting that New Zealand as a whoile will experience weather conditions coming out of the west more than usual, while transitioning into an October and November with higher-than-usual air pressure. There are expected to be alternating periods of settled weather and northeasterly flow anomalies during this time. Temperatures are equally likely to be either warmer than average or average. Rainfalls are predicted to vary across the country. The east of the South Island should prepare for lower-than-average rainfall levels, while the north and east of the North Island can expect average or above average rainfall. Other areas are expected to be about normal.

FAR weather tool

The FAR online weather tool is a great way to track weather patterns and to compare the current season's conditions with those of previous years. You can check it out here. Click on the link and select the weather station closest to you from the drop-down box at the top right of the screen. Please contact us if you have any queries about the tool, or suggestions on how to make it better.

Soil moisture data: see more from NIWA here.



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