Crop Action

Issue 20 Sunday 26 October 2025

In this issue of Crop Action:

Editor's note

Extreme weather events remain the dominant topic of conversation across much of the country. Culverden and the Amuri Basin in North Canterbury took the brunt of the winds this time, but we are also aware of damage from Southland to Wairarapa. FAR staff are involved in regional and national response groups. If you are uncertain about how to access recovery services, your District or Regional Council website is the best place to start.
For those who have not been affected, it is business as usual. Essential pest and disease...

Essential pest and disease management is happening across the country, as both autumn- and spring-sown crops rapidly progress through growth stages. For those making decisions around cereal fungicide programmes, FAR's Cropping Strategy is a valuable resource. You can find this week's information on this topic here. Other crops are also maturing quickly, with many oilseed rape crops going through peak flowering over the last week or so. This is always a popular time for the general public to stop for a photo opportunity, which can create safety issues, but does result in some nice pictures (see below).

Remember that if you have other agronomy questions that you think FAR might be able to assist with, FAR AI is there to help, and you can now access the same knowledge in an app on your phone! The FAR AI searches FAR research documents to answer your arable questions. Here are the steps to access it:

1. **Download** WhatsApp from the App Store.
2. **Add** the Ask FAR AI to your phone contact list: **+64 27 277 2536**
3. **Open** WhatsApp and search for Ask FAR AI.
4. **Type** in your arable question and wait a few seconds for the answer.
5. **Done** (only you can see the question and answer).

NCRS update

Despite lots of rain and wind, however we have managed to maintain the planting schedule. By 19 October, NCRS (FAR's Northern Crop Research Site near Hamilton) had been planted with pre-emergence herbicides applied where required. Planting started 1 October on re-set plots with some long 109 CRM hybrids (P0900 & PAC430), moving onto a shorter 106 CRM hybrid (P0640) the following week. Trials were planted in the week starting 13 October including the long-term establishment, nitrogen use efficiency and nitrogen placement trials and the herbicide screening demonstration. All maize was planted at 100,000 seeds/ha with most having 200 kg Yara Mila complex added as starter. Axcela® slug bait (metaldehyde) was banded by the planter at a rate of 5-10 kg/ha. Pre-emergent herbicide used was 3 L Roustabout® (acetochlor, Group 15) and 150 g Sharpen® (saflufenacil, Group 14).

We are now moving onto planting our on-farm trials around the Waikato. These trials are looking at the three different tillage methods (conventional, strip-till and no-till) and winter/cover cropping options on different soils and in silage and grain systems.

Crop management

Cereals

Spring disease management

Autumn-sown cereals are now at, or approaching, T1 fungicide timing, with some will already past this point. The extent to which disease develops in a crop is a balance between disease pressure and field resistance. Disease pressure for *Septoria tritici* blotch (STB) varies between seasons and is determined by the amount of inoculum present, weather conditions and region. The key weather indicators for disease pressure are wet weather and high relative humidity (>85% for 20 hours or more) between the start of stem extension (GS 30) and the end of ear emergence (GS 59), especially during October and November. By monitoring weather conditions during this period, growers can determine disease pressure and an appropriate disease management programme. Field resistance is determined by cultivar and crop management (sowing date, stubble management, etc).

The tables below can be used to estimate the length of time between a risk period and the first STB symptoms appearing. Use Table 1 to look for risk periods in your region, then add the latent period from Table 2 to find the optimum time to spray for STB.

Additional resources:

- Latest arable updates on fungicide resistance and management:
  - Cereal Update 232
  - Cereal Update 233
  - Cereal Update 234
  - Cereal Update 235
- 2024 Cereal disease management strategy
- Cut the Crop

Table 1: Risk periods (relative humidity periods (RH>85%)) for the past four weeks (September 22nd to October 19th 2025) for key cereal-growing regions of New Zealand. Risk periods are represented by red boxes.

Date	September									October																	
Site	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Methven																												
Wakanui																												
Timaru																												
Fairlie																												
Gore																												
Levin																												

Table 2: Latent period (days) of STB from September 22nd to October 19th 2025.

	2025	2024
Methven	24	24
Wakanui	21	23
Timaru	24	24
Fairlie	25	24
Gore	26	27
Levin	19	20

Table 3: Total precipitation in mm from September 22nd to October 19th 2025.

	2025	2024
Methven	41	56
Wakanui	22	26
Timaru	27	45
Fairlie	30	66
Gore	84	96
Levin	106	45

Aphid monitoring

Since the last issue of Crop Action, there has been a significant increase in the number of aphids found on autumn-sown crops in Canterbury. Most autumn-sown cereals are at (or past) GS 32 and therefore beyond the point where yield will be significantly reduced by aphid-vectored viruses spreading through the crop now; however, later-planted or spring-sown cereals could be at risk and an insecticide may be warranted. In general, spring-sown cereals should be considered to be at risk from aphid-vectored viruses between GS 21 and GS 32, and growers may consider applying a foliar insecticide in this window. For advice on insecticide products, as well as the latest information on aphid monitoring and more, please visit Aphid Chat.

Herbage

Disease management in turf ryegrass seed crops

The principal disease limiting seed yield in turf ryegrass seed crops is stem rust (*Puccinia graminis* subsp. *graminicola*). The first application of fungicide in these crops typically goes on at GS 32, coinciding with the emergence of final leaf three. Follow-up sprays are required at ear emergence and flowering, with a fourth spray included two weeks later if disease pressure is high. FAR is currently preparing a comprehensive update on this topic to be published soon (watch this space), but in the meantime, some key considerations are listed below.

- The GS 32 spray is often thought of as a preventative measure, since the severity of how the disease will present is not known at that stage. In some seasons and under some market conditions, the GS 32 fungicide application may not be economically beneficial.
- Fungicides from multiple modes of action (triazoles, QoIs, SDHIs) should be included in the programme; but, be aware that some products are limited in the number of times they can be used in a season. Consult with your agronomist and always read the label of any agrichemical product before use.
- Fungicide resistance is a continual threat. Maintaining diversity of modes of action and avoiding unnecessary complexity in spray programmes can help steward the chemistry we have now so that it is available in the future for as long as possible.
- Proline (prothioconazole, Group 3) is the backbone of stem rust programmes but FAR data shows the benefits of including strobilurins and SDHIs to the programme, which will also help prevent fungicide resistance.
- A tool to predict when weather conditions are favourable for stem rust spore germination is available in the “Weather” section of the FAR website. Click on the “Pest & Disease” section at the top of the page.

Irrigation management in perennial ryegrass seed crop

Many Canterbury ryegrass seed crops will have already started receiving irrigation. FAR trials have investigated the irrigation requirements of perennial ryegrass seed crops, with data across three seasons showing that 220-320mm of irrigation was required to increase seed yield by 520-1300 kg/ha. It is important to keep soil moisture above about 75mm of deficit, while also making use of any rainfall. Applying 50-66% of evapotranspiration (ET) kept the crops in these trials above this deficit level without affecting seed yield. This also avoided losing excess water (rainfall) through drainage. Read the full Arable Update here.

Head smut management in prairie grass seed crops

Head smut (*Ustilago bromivora*) has been controlled in prairie grass seed crops by propiconazole for around forty years in New Zealand. Recently, a decline in the effectiveness of this active ingredient has been observed for this pathogen. While the product is no longer available in New Zealand, it is a good reminder that fungicide resistance is something that needs to be top of mind while designing a spray programme. We are currently seeing a reduction in DMI effectiveness in cereals, for instance. Remember that best practice for profitability and stewardship requires a mixing partner – scrimping on this can cost yield and threatens long-term availability of the chemistry.

Small broomrape management in clover

The parasitic weed small broomrape (*Orobanche minor*, see photo) can be a significant issue in clover seed crops, particularly where that seed will be exported to markets that require the crop to be free of this weed at inspection. Seed yield may not be affected by the weed, except in stressed (e.g. dryland) crops. Control options are limited, but herbicides such as Equate® (imazethapyr, Group 2) have been shown in year 1 of a FAR trial to be effective if applied before the weed emerges. October and early November were shown to be effective in one trial. Read the full Arable Update here.

Sow thistle management in white clover seed crops

FAR has received some reports of sow thistle (*Sonchus* spp.) becoming a problem in white clover seed crops. We are also seeing this in the long-term establishment trial at FAR's Chertsey site, which is in white clover this season. The photo on the right was taken at the start of October and shows the weed emerging on bare ground between clover plants. Note the appearance of a seedling and a mature plant. The main herbicide treatments for sow thistle such as Agritone (MCPA, Group 4) usually go on in winter (see FAR Annual Research Report 2020/21 p57), but follow-up sprays are often required around now. At Chertsey, we applied Tropotox™ (mixture of MCPA and MCPB, both Group 4) two weeks ago week at 4L/ha, and will follow up later in the month with paraquat (Group 22), which will also assist in managing some of the other weeds such as speedwell (*Veronica persica*).

Recently-emerged sow thistle (left) and a more mature specimen (right). Photo: Owen Gibson.

Maize

Getting your planter set up right

Some maize crops are already in the ground, but for many that process is yet to begin. There are many factors that to consider to set your crop up for the best yield possible.

Plant spacing

Uniformity in plant spacing has been shown to be a significant factor in increasing maize yield. For instance, a FAR study in 2001 showed that New Zealand maize grain growers at the time were averaging 0.2 t/ha of lost yield due to inconsistent plant spacing. This can sometimes be caused by insect damage, but other times there are things in the growers' control that can help achieve uniform plant spacing. These include keeping planter speed constant, as well as having an even seed bed. Rolling before sowing can break up larger clods and help in this regard, which also improves seed-soil contact.

Planting depth

Ideal planting depth for maize is 50mm. However, this depends on soil conditions and a key point is always to plant to moisture. Therefore, when conditions are warm and dry maize seed will emerge from depths of 75mm or more, quite comfortably. When conditions are cold and wet, 50mm should be considered a maximum depth. A key consideration when the pressure is on to plant and poor weather causes delays and operator stress is that trying to 'beat the weather' when approaching rain is going to be heavy often ends badly. The time between planting and emergence is the most vulnerable time for any seed. Whilst light rain can be welcome heavy rain events often result in poor emergence so keep this in mind.

Emergence uniformity

The best yield potential is achieved when all plants emerge at, or close to, the same time. While some of the factors that affect emergence are out of the grower's control, there are some steps you can take to ensure emergence uniformity. Maize germination and, therefore, emergence, depends on soil moisture, soil temperature and soil-to-seed contact, so getting the above two factors right will be a good start. Achieving a uniform level of soil moisture in the seed zone is also important. Lastly, have your planter set up so that it is sowing the seed at the correct depth and closing the soil back over the top of the seed with adequate down force to achieve good soil-to-seed contact. Ensure any surface residue is not interfering with this process.

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) 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.
- Weather forecast. Most pre-emergence herbicides need moisture to activate the active ingredient, or else they need to be incorporated into the soil.
- Soil type, crop residue and soil 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

Fall armyworm

With maize planting happening this month, growers are gearing up for another season of fall armyworm (FAW) management. It's important to stay ahead of this troublesome pest, and FAR has developed a new tool in the fight. The website www.fallarmyworm.nz is your hub for the latest updates, practical information, and resources to support crop management this season.

We are proud to host a new video, *How to Find and Identify Fall Armyworm*, created by Better Border Biosecurity (B3) summer student Jordan Pickering. You'll find this on the FAW website under **Additional resources**, alongside the FAW webinar recording – available for those who missed the live session or wish to revisit it.

Check in regularly for timely insights to help guide your decisions through the season.

Oilseed Rape

Disease management

In surveys carried out as part of the monitor farm study (a joint study between FAR and PureOil NZ) the most common disease observed was *Alternaria*. This develops later in the season than other diseases such as *Sclerotinia* and has the biggest impact on yield when it infects developing pods. The most effective time for treatment is late flowering to early pod-fill, which, for most growers, will be coming up over the next couple of weeks. The standard treatment is a strobilurin fungicide (such as azoxystrobin) mixed with a triazole such as prothioconazole to maintain canopy greenness and support yield. Consult with your agronomist for further advice and always read the label before applying any agrichemical product.

Aphid management

FAR's cereal monitoring programme shows an elevated risk of aphid pressure, so it is likely that brassicas will also face increased risk this season. Heavy aphid infestations in late flowering to early pod set can reduce yield and lower oil content. It is important to walk crops at this time to identify any potential problems. If necessary, an insecticide can be tank-mixed with the fungicide that is typically applied around now (see article above). The choice of insecticide is also important:

- Pirimicarb (Pirimor® and generics, Group 1) can be used early in the season when pressure is low/moderate, and when beneficial insects such as ladybirds and parasitic wasps are active.
- Transform™ (sulfoxaflor, Group 4C) has longer residual activity than pirimicarb and will be soft on some beneficial insects. The label lists it as toxic to bees, so care should be taken to apply when they are not foraging.
- Mavrik® (tau-fluvalinate, Group 3) has faster knockdown but is more broad-spectrum, so it is more toxic to a wider range of insects, including beneficial insects, including bees. Apply outside of bee foraging times.
- Other synthetic pyrethroids (e.g Karate®) can be applied later in the season when aphid pressure is high and fast knockdown is needed.

Consult with your agronomist for further advice and always read the label before applying any agrichemical product.

Weather Updates

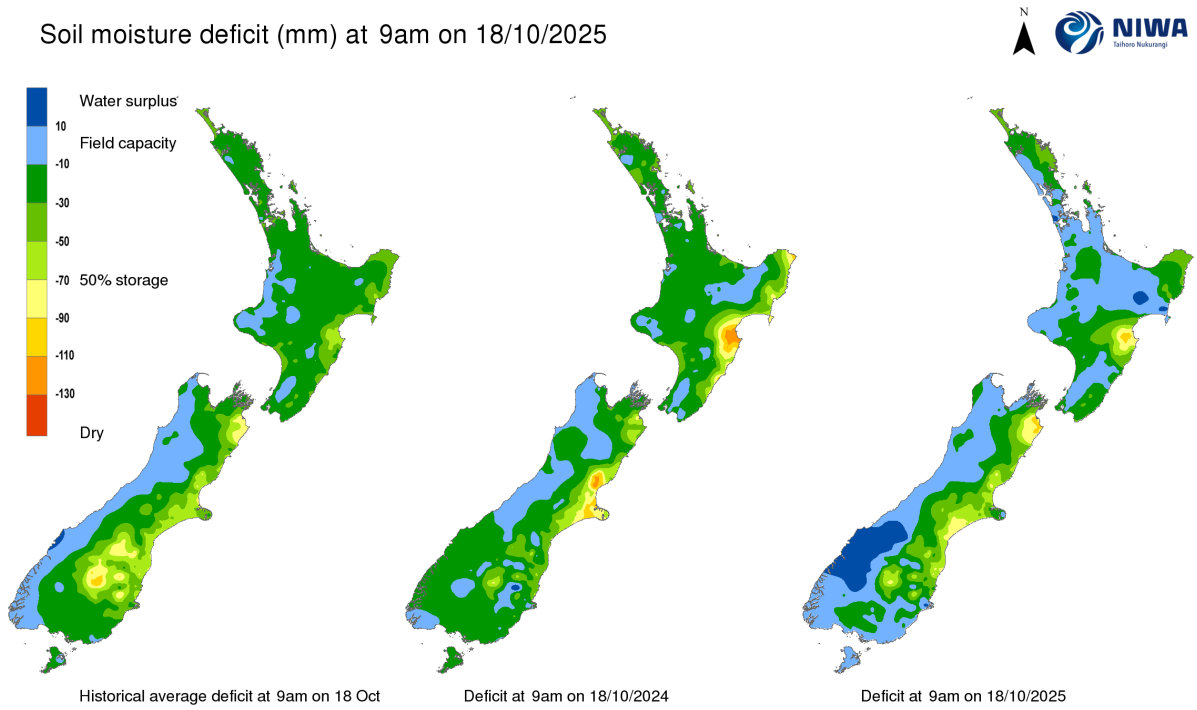
Long-term weather outlook

The climate outlook from ESNZ predicted a wetter, stormier October due to some activity over the South Pole affecting weather patterns. Whether we got this or not, things are predicted to become more settled as the season progresses, but the possibility of heavy rainfall events remains elevated, particularly for the North Island. Air temperatures in the far north are expected to be above average, while the remainder of the country will be either average or above average. Rainfall should be close to historical averages in most places, except for the east of the North Island and both coasts of the South Island, which are equally likely to experience either normal or below normal rainfall totals. The far north will either be wetter than normal, or average.

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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