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Editor's note

We are now in the final month of winter. Although we have had a few bouts of cold weather (Canterbury had its coldest night in five years last weekend) it has been a mild winter in many parts of New Zealand. Crops have been putting on some extra growth, and the warmer temperatures/ lower rainfall may result in higher levels of soil nitrogen coming into spring. When winter temperatures are mild, microbes continue breaking down organic matter instead of going dormant, releasing ammonium and nitrate through mineralisation. At the same time, reduced leaching and fewer saturation events mean less nitrogen is washed out of the root zone. This highlights the importance of soil testing before making spring nitrogen decisions.

Spring will be on us before we know it. FAR has released the latest issue of the Spring Sown Cereal Cultivar Evaluation Booklet, which can be found [here](#), and the usual round of FAR spring workshops will be on the website soon. In the meantime, FAR's series of sprayer workshops are about to get underway. See FAR's events page for further information.

Crop management

General

Cost of Production data

As planning for spring sowing ramps up, growers may be interested in accessing FAR's updated [Cost of Production Spreadsheets](#). New crops have been added for the 2026-27 season.

Soil testing

Soil quality is an important component of growing profitable crops. A test that is useful to carry out at this time of year is the **MiniVSA** (Mini Visual Soil Assessment), developed by FAR specifically for arable farmers. This 30-minute DIY soil quality test can be carried out by anyone and requires only a few pieces of equipment that all farmers will have on hand. A short video on the method can be found [here](#).

Preparing for a dry summer

The impacts of El Niño have been evident across the Northern Hemisphere, and below-average rainfall and dry conditions are forecast for eastern regions of New Zealand. Now is the time to ensure irrigation systems are operating effectively and to install or reinstate soil moisture probes to support informed irrigation scheduling. Installing probes while there is still good soil moisture helps them settle properly, providing solid baseline data before soils start drying out. It's much harder to establish useful probe data

once moisture levels begin to drop. Some of the biggest irrigation efficiency gains are achieved at the start and end of the irrigation season.

It's also worth having irrigation pumps and irrigators serviced to avoid breakdowns and delays early in the season. A conversation with your service provider now could save a lot of headaches later.

Further reading:

- [MPI resource: preparing for El Niño](#)
- [Technology Update 001: A guide to moisture monitoring systems](#)

Wild oat management

Wild oat herbicide resistance is increasingly problematic, particularly in Canterbury. While ryegrass species remain the number one concern in terms of frequency of cases across New Zealand, wild oats (*Avena fatua*) are not far behind, and can become a big headache if they get out of control due to the loss of herbicide effectiveness. In herbage seed crops (tetraploid ryegrass and brome species) wild oats are not allowed in the field at crop inspection or in seed samples at seed testing.

Wild oats were the most common species collected for testing in FAR's random herbicide resistance survey in January. Testing will be completed sometime in the next couple of months.

Management of wild oats starts in early spring, but planning should begin now. Cool, moist conditions promote maximum emergence. The key to managing wild oats is an integrated approach; start by walking your crops in early spring. If plants are identified, rogueing is an effective way of reducing wild oat pressure.

Wild oat control is often managed using herbicides, with the most effective options generally being those containing Group 1 Mode of Action active ingredients such as pinoxaden (Twinax® XTRA) and fenoxaprop (Puma® S and others). While these products remain effective if used correctly in most cases, herbicide resistance to Group 1 chemistry in wild oats has been detected at multiple locations across many regions of New Zealand in random surveys. Anecdotal evidence suggests it is widespread, particularly in Canterbury, and growers need to have a plan for how to deal with escapes.

Post-emergence options for wild oat control in ryegrass seed crops are particularly limited. Fenoxaprop (Mode of Action Group 1) has been the main go-to for growers, but if resistance is known or suspected, few alternatives exist. Products containing the Group 0 active flamprop (Crusader™, Stratos®) are registered for wild oat control in ryegrass, but there are reports of reduced effectiveness in this situation, which may or may not be due to evolved resistance, as this has never been tested.

Your best weapon against herbicide resistance is a robust rotation that allows the use of other herbicide modes of action. In the case of wild oats, trifluralin and propyzamide are effective, so crops like oilseed rape or peas can help control a wild oat resistance issue.

[Click here to see a list of herbicides registered for use on wild oats in cereals, pulses and ryegrass.](#)

Information about submitting weed seed samples for resistance testing can be found [here](#).

Cereals

Aphid monitoring

Winter weather, including some heavy frosts in Canterbury means [aphid numbers](#) recorded on sticky traps are at, or close to, zero. However, we had a warm autumn, and the warmth extended into the start of winter, leading to a significant risk period for most growers, many of whom chose to apply a foliar insecticide. There is also collective wariness after last season.

What does this mean for you?

Those with autumn-sown cereals should keep a sharp eye on the weather in late September/early October, especially if no foliar insecticide has been applied yet this season. Those who did spray in autumn should see a lot less secondary spread through the crop from over-wintering colonies. This can be hard to spot, especially early in spring. The presence of beneficial insects will further slow aphid activity.

Keep an eye on [Aphid Chat](#) to see when aphid flights start to increase. Flights occurring before the crop reaches GS 32, present a significant risk period. We are still some weeks away from these issues, but, as one grower reminded us last year; “if you find yourself wearing shorts when you usually wouldn’t, then it might be a good time to scout for aphids and consider an insecticide”.

Planning for spring sowing

The spring edition of FAR’s Cultivar Performance Trial (CPT) booklet is out now – containing results for spring-sown cultivars. You can read it [here](#), if you haven’t already. When it comes time to plant, it is important to get the best out of establishment. Some common establishment issues and management tips are listed below.

- **Seed bed:** A trashy seedbed may reduce seed/soil contact, thus reducing germination, while a compacted seedbed may restrict emergence. A seedbed with large clods may cause seedlings to become deformed (and therefore weakened) as they attempt to emerge.
- **Sowing depth:** Sown too shallow, seed may be subject to bird damage and susceptible to drying out. If seed is sown too deep, young plants will struggle to emerge and may be weak and prone to disease or deformity. Check that your drill is placing seed at optimum depth.
- **Nutrition and moisture:** Plant roots follow the easiest path for growth, so nutrition should be placed near the roots. Some fertilisers, however, will “burn” seedlings, so they must be placed out of direct contact with the seed. Moisture is essential for seed germination. Once germinated, the young seedling is also very fragile and may dry out rapidly if there is insufficient moisture in the root zone. Too much moisture (waterlogging) will mean oxygen starvation, which will lead to germination failure or seedling death.
- **Weeds, diseases and pests:** Weeds will compete with the crop for light, moisture and nutrients. Weeds can be more of a problem in thinly sown (or poorly established) crops. The main disease problem for emerging seedlings is fungi affecting the new roots; this is more likely to occur in a cool, damp environment when seedlings are less vigorous and therefore more prone to attack. Seed treatment with fungicides may be beneficial if seed-borne diseases are a concern, but these treatments can also delay crop emergence. If slugs, weevils, grass grubs, etc are present, control options should be evaluated.

- **Time of sowing:** Sowing in early autumn or late spring, when soils are warm and moisture is (hopefully) ideal, should speed up germination and increase seedling emergence rates.

Cereal grazing

FAR has received a few comments and inquiries about grazing of wheat crops being grown for grain. While this is not common practice in New Zealand, anecdotal evidence suggests more growers are deciding to give it a try. Wheat can provide a valuable source of high-quality forage during winter when other options are limited. FAR has conducted little research on this topic, but if you'd like to give it a go, there are some things to keep in mind:

- Grazing should be before GS 31 (stem extension). When this guideline is followed, some overseas research has shown that grain yields may even be improved.
- Other possible benefits include improved weed control and a reduction in the incidence of some diseases. Soil quality may be improved in some situations.
- Some cultivars may be more suited to grazing than others. Talk to your agronomist or seed company representative if you are unsure.

Further resources that may interest you:

- [Grazing of the wheat grain crop](#)
- [British article on grazing wheat to keep down brassica volunteers](#)

Herbage

Nitrogen on grass seed crops

Soil testing is a key activity that should be happening now in ryegrass seed crops. A ryegrass seed crop needs a total of about 172 kg N/ha (applied N plus soil mineral N), but this can be reduced by 20-30 kg/ha if there is adequate potentially mineralisable N in the soil. Avoid applying large amounts of N fertiliser to ryegrass seed crops too early, as this can lead to lodging.

- [Nitrogen: The confidence to cut back, FAR Focus 14](#)
- [Nitrogen use on ryegrass seed crops](#)
- [Video – getting your nitrogen right](#)
- [Arable Extra 143](#)

Sow thistle management

Start thinking about sow thistle management in white clover crops. The key timings for chemical control utilising 2,4-D ester (Group 4 Mode of Action) are during July and August before temperatures warm up. The sub-species of sow thistle present in your crop may influence levels of control.

FAR trials in the 2020-21 season identified some additional herbicide options for sow thistle control. Products containing MCPA (Group 4) such as Agritone® and Tropotox® were effective but suppressed yield when applied in July. Better results were obtained when application was made in August and September. For more information see:

- [Identifying sow thistle](#)
- [Annual Research Results 2020/21](#) (pages 57-59)
- [Annual Research Results 2019/20](#) (pages 48-52)

Oilseed rape

Crops may be nearing early spring fertiliser applications. Oilseed rape has a higher requirement for sulphur than most other crops, so sulphate of ammonia (SoA) is usually the product of choice. Sulphate is available to the plant more quickly than elemental sulphur, which needs to be converted to sulphate by soil bacteria, which can take 6-12 months. Another advantage over urea is that ammonium is less prone to volatilisation and leaching. SoA rate and timing will depend on canopy size, soil N and soil moisture. Your agronomist can assist with this, but some good points to note are:

- If soil N is high and the crop is healthy, consider delaying and/or splitting the application.
- If the crop is looking poor, boost the fertiliser rate up to 250 kg/ha, or mix urea with the SoA. An earlier application may also be appropriate. Aim for a Green Area Index of 3.5-4
- Potassium (K) will also be needed by the crop in early spring – know your soil levels and add extra K as needed. Consult your agronomist for further information.

Maize

Fall armyworm in volunteer maize

Whether fall armyworm (FAW) can survive the winter and contribute to spring infestations is an important question for maize and sweetcorn growers.

Unlike many temperate insect pests, FAW does not enter a true diapause, or hibernation stage. Survival depends on access to suitable host plants and environmental conditions that allow continued development. This means green host plants present through winter may help support local populations.

During the 2025–26 season, high numbers of adult moths were detected in pheromone traps after maize harvest. While trap catches do not confirm overwintering, they indicate substantial late-season activity and highlight the need to better understand where FAW may persist during winter.

Volunteer maize as a green bridge

Volunteer maize is one of the most likely (and preferred) FAW hosts between cropping seasons. It can remain green for extended periods following harvest, particularly where grain losses occur or winter conditions are mild.

FAW infestations are not always obvious. Small volunteer plants can appear healthy despite harbouring larvae within the whorl. For this reason, destructive sampling is important. Pulling plants apart and inspecting the growing point and leaf whorl is often the best way to detect FAW activity.

Volunteer maize is unlikely to support the entire overwintering population. Other hosts, including kikuyu, ryegrass and other grasses, may also contribute. However, volunteer maize is easy to identify and provides a useful indicator of local FAW activity.

Reducing risk

Reducing grain losses at harvest an effective way to minimise volunteer maize populations. Early control of volunteer plants can reduce the availability of suitable hosts through autumn and winter.

Where cultivation is used, soil disturbance may also reduce the survival of FAW pupae by exposing them to weather and natural enemies.

Scouting is key

Regular scouting is the most important management tool. Monitoring volunteer maize throughout winter, particularly in warmer regions, can provide an early indication of local FAW survival.

This is especially relevant for early planted sweetcorn crops. FAW has previously been detected under sweetcorn cloches during late August and early September.

As research continues, volunteer maize should be viewed as an important indicator host. Winter scouting may provide valuable insight into the level of FAW pressure growers might expect in the coming season.

Further information:

- [FAW website](#)
- [2026 Maize winter workshops presentation](#) (FAW section begins at 1:24:47)
- [Maize winter workshops 2026 booklet](#)

Weather Updates

Long-term climate outlook

According to [Earth Sciences New Zealand](#), El Niño conditions have now been met in the Pacific, and while this is not having a direct impact on New Zealand yet, it will be a dominant feature of our weather systems in summer and beyond. This means over the next three months, the characteristic westerly flows typical of El Niño will become more common, leading to near or above average temperatures for the whole country. Rainfall on the South Island's West Coast will be higher than usual, but everywhere else is either likely to have lower rainfall than average, or equally likely to be near normal or below normal. Water availability could become an issue in some areas this summer. In the shorter term, the remainder of this winter is expected to be unusually windy, with considerable temperature variability.

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. There are also a number of tools available to help with predicting disease and pest pressure. 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.

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