Crop Action

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Editor's note

Autumn has arrived, harvest is drawing to a close for some and planning for the next season is underway. This issue of Crop Action has some timely advice, looking at post-harvest activities that will be relevant to many. This is a focus of the latest issue of FAR's quarterly newsletter, *From the Ground Up*, which contains insights on irrigation management, multi-year grass seed crops, biological products and more. There is also an article on combine set-up, which will still be relevant for many.

NIWA forecasts that El Niño will continue through autumn and likely into winter, which means dry conditions, particularly at the top of the South Island, but also in the northern and lower North Island, as well as the central South Island. This is likely to impact on things like pre-emergent herbicides and seedling emergence, along with winter crop growth. From mid-March to early April we will showcase the results of our trials as well as a number of other important findings at our annual Autumn Round-ups, so keep an eye on the FAR events page for information.

Regional Updates

Southland

Harvest is progressing slowly due to the weather but most people are up to date, or drying grain to keep harvest progressing. Autumn barley yields are average or slightly below, due a dry December; while autumn wheat is so far yielding slightly above average.

Autumn barley paddocks have been turned over quickly and planted into brassica for winter feed. These are doing well thanks to good rainfall. All ryegrass is off and the garden pea harvest is 3/4 way through. Garden pea yields are better than last year, thanks to the timing of rain events.

Canterbury

Continuing dry conditions are good for harvest, and some growers are reporting excellent yields, even on dryland paddocks, but the dry is causing other headaches, such as difficulty cultivating. In the dryland columns at Chertsey, FAR is looking at trying to get some more robust equipment to do the job; if that fails we will simply have to wait for rain.

A few very late-sown spring cereals that are still standing, but other than that most crops have been harvested. Vegetable seed crops are netted and progressing nicely towards harvest, and red clover won't be far away either.

Waikato

Maize silage harvest is progressing fairly smoothly in Waikato. Crops had been drying down well, but recent rain have slowed things a bit. This season's weather has contributed to good growth of many crops, including grass, which has reduced demand for maize silage. There have been a few reports of growers experiencing difficulty selling their silage crops.

Crop management tips

General

Setting up for autumn weed management

Many autumn-sown crops rely on pre-emergent herbicides to give the crop a competitive advantage and get it set up to yield well later. With the long-term weather outlook predicting low and/or inconsistent rainfall for many areas, including Canterbury, the choice of herbicide may be affected. Sakura® (a.i. pyroxasulfone, Group 15) is commonly used for pre-emergent grass weed control in cereals and other crops, but needs to be washed in by at least 10mm (but preferably 15-25mm) of rainfall or irrigation to be most effective. (Read more here.) Anecdotal evidence suggests that including Avadex™ (a.i. tri-allate, Group 15) as an incorporated, pre-planting herbicide, can "buy time" for the Sakura® and improve efficacy on some grass weeds in dry seasons. Post-emergent sprays also take on added importance, so scout paddocks in the weeks following crop emergence and select a herbicide that is the most effective on the weeds present, as well as ensuring that it is being applied at the correct growth stage of the weed. Growers may also wish to incorporate aspects of Integrated Weed Management (IWM) into their systems. Further information on weed management can be found in the following resources.

- Integrated Weed Management
- Herbicide Screening Trial Results
- Management of ryegrass weeds

Thanks to Bayer's Jonathon Shields for advice in the preparation of this article.

Autumn irrigation management

Autumn can be a tricky time to get your irrigation right. Setting up moisture sensors as soon as possible after a crop is sown is a good idea and can give insights into how your irrigation is impacting soil moisture and crop development. Irrigation is important for the developing crop, but be aware of the following issues:

- Irrigation can lower soil temperatures, possibly slowing growth rates.
- Over-watering a crop early can disincentivise a crop from developing deep roots, which can cause problems later in the season, especially if there is water stress.
- Never fill the profile, as this can lead to nutrient loss and is a waste of resources; always leave space for any rain event to fill any gaps.
- More information on this topic can be found on p32 of the latest issue of FAR's *From the Ground Up* publication.

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Cereals

Pest control in stored grain

Look after stored grain to make sure it maintains its value. Integrated Pest Management (IPM) storage hygiene techniques can go a long way to controlling grain storage pests without the use of chemicals.

- Keep stored grain cool and dry. If grain is harvested at high temperature, it can quickly increase by 10-15° once inside storage, so cooling grain down will be a priority. Likewise, if grain is harvested at high seed moisture content, it may need to be dried to prevent the risk of insect infestation and fungal development.
- Monitor temperature and moisture in the silo regularly once filled with grain – an increase in temperature and/or moisture can indicate a pest infestation.
- More information can be found in Arable Update 210 and in Arable Update 211.
- An updated list of stored grain insecticide treatments can be found here.

Autumn cultivar selection

Now is a good time to start thinking about cultivar selection for autumn sown cereal crops. Many new cultivars have high yield potential and robust disease resistance ratings. Selecting the right cultivar sets up a good yield and provides the foundation for an integrated approach to disease management. This approach allows for greater flexibility in fungicide programme choice, which allows you to:

1. Exploit the "sweet spot" between disease control and resistance management without compromising yield or economic return.
2. Steward at-risk chemistries such as SDHIs (Group 7 fungicides) and new active ingredients such as the quinone inside inhibitors (QiIs – Group 21 fungicide).

2024 Harvest Snippets outline the latest results from Cultivar Performance Trials. See the following:

- Cereal Disease Management Strategy
- Autumn Cultivar Evaluation Booklet (2022-23)

Herbage

Tall fescue and cocksfoot autumn management

Grass crops that are taken through for another season of seed production require good management to ensure a good yield the following summer. This affects all grass species, but is particularly critical in tall fescue and, to a lesser extent, cocksfoot and ryegrass. Yield is driven by head numbers which in turn are driven by how much light is able to reach the base of the plant where new tillers form. The removal of crop residue, followed by at least one hard grazing (or topping), exposes the crown to light, ensuring new tillers are formed. Read more on p30 of the latest issue of FAR's *From the Ground Up* publication.

White clover seed crop desiccation

FAR has been conducting trials to identify alternative pre-harvest pre-desiccation and desiccation strategies for white clover seed crops. Products such as Buster® (a.i. glufosinate), Granstar® (a.i. tribenuron-methyl), glyphosate or Versatill® (a.i. clopyralid) give comparable seed yields to Reglone®, and are often more effective in wetter than average conditions. However, these products negatively affect post-harvest grazing, and may not be suitable when the crop is to be maintained into the following year. An organic product, GreenMan™ (a.i. fatty acids), provides effective desiccation and increased post-harvest regrowth, although it tends to be more expensive. For an information on recent FAR research on this topic, click here.

Maize

Cover or catch crops for maize silage systems

Growers who have finished maize silage harvest are considering catch/cover crop options. Annual ryegrass is the common choice, but there are other options that could improve profitability and/or help meet environmental requirements. FAR's *From the Ground Up* magazine from this time last year contains an in-depth article on these choices (see p26), from which the table below is reproduced. If you are considering your cover crop options, the article is well worth a read.

At FAR's NCRS site this season, we elected to plant 'Nui' perennial ryegrass which will make management easier on our smaller site as this won't need to be topped or grazed before being taken off in September. Our other cover crop trials continue as usual, some of which will contain mixes with faba beans. We were able to obtain the small amount that we needed for our trials with no issues, although we have heard a report that seed of this species may be difficult to come by for some.

Table 1: Indicative example of cover and catch crop species comparisons.

Type	Species	Seed size	Seed price/kg	Seeding rate (kg/ha)	Planting depth (mm)	Dry matter yield (t/ha)	Suitability for grazing	Suitability for silage
Grasses	Annual ryegrass	●	$	20 - 30	10	3.0 – 6.0	Excellent	Excellent
	Cereals	●	$	80 - 150	20 - 40	4.0 – 9.0	Good	Excellent
Legumes	Faba bean	●	$	200 - 300	50 - 70	3.0 – 7.0		Good
	Vetch	●	$ $ $	25 - 40	20 - 40	2.0 – 5.0	Adequate	Good
	Lupins	●	$ $	100 - 150	40 - 60	3.0 – 6.0		
	Annual clover	●	$ $ $	4 - 10	5 - 10	2.5 – 5.0	Good	Excellent
	Perennial clover	●	$ $ $	4 - 10	5 - 10	0.5 – 1.5	Good	Excellent
Brassicas	Radish	●	$ $	6 - 8	20 - 30	3.0 – 7.0		
	Mustard	●	$ $	6 - 8	10 - 20	3.0 – 6.0		
	Turnips	●	$ $ $	1 - 3	5 - 10	3.0 – 7.0	Good	

Fall armyworm (FAW) update

Confirmed FAW specimens have now been reported in Northland, Westland, Tasman, Bay of Plenty, Auckland and Waikato, along with one find in the Marlborough region. As the season progresses, later generations will have greater numbers of larvae and will present a higher risk of significant damage to crops. Later planted crops are especially susceptible. **Please scout crops**, as the earlier FAW is identified, the more effective control measures are likely to be. Further information on FAW and its management can be found here.

Brown marmorated stink bug (BMSB)

This pest (see picture, right) has been detected on numerous occasions at the New Zealand border, and would pose a significant threat to a number of crop and ornamental species should it become established here (particularly maize and sweetcorn). A Government Industry Agreement (GIA) exists to prepare for such an eventuality, details of which can be found here. Any BMSB finds or suspected finds should be reported immediately to MPI. Further information on identification and preventing incursion can be found on the MPI website.

Oilseed rape

Paddock preparation

When preparing to plant oilseed rape, there are a number of considerations:

1. Get a soil test done or use a recent soil test to determine which nutrients might be lacking. Consult with your agronomist to identify key nutrients and develop a fertiliser plan.
2. Consider applying lime to adjust pH if soil tests justify it.
3. In the absence of a soil test, either apply a good rate of Potash Super (300-400kg/ha), or DAP (100-150kg/ha) at drilling. This will provide a good start for the crop with the aim to deliver enough N and P for good plant development.
4. Employ a stale seed bed to encourage any weeds and volunteers to germinate and be controlled before planting.
5. Prepare the seedbed. With a dry autumn predicted, be mindful of conserving moisture by limiting cultivation if appropriate. Turning damp crop residues on the soil surface can help to conserve soil moisture.
6. Get you pre-emergent herbicide programme right. Trifluralin (Group 3) is good on grass weeds, while products such as Ombré® Encaps® (active ingredients alachlor, Group 15 and clomazone, Group 13) are better on broadleaf weeds, while still having activity on grass weeds. Consult with your agronomist.
7. Ensure good establishment and reduce bird and slug damage by planting as early as possible.

Thanks to Pure Oil NZ Ltd for providing much of the information in this article.

Weather Updates

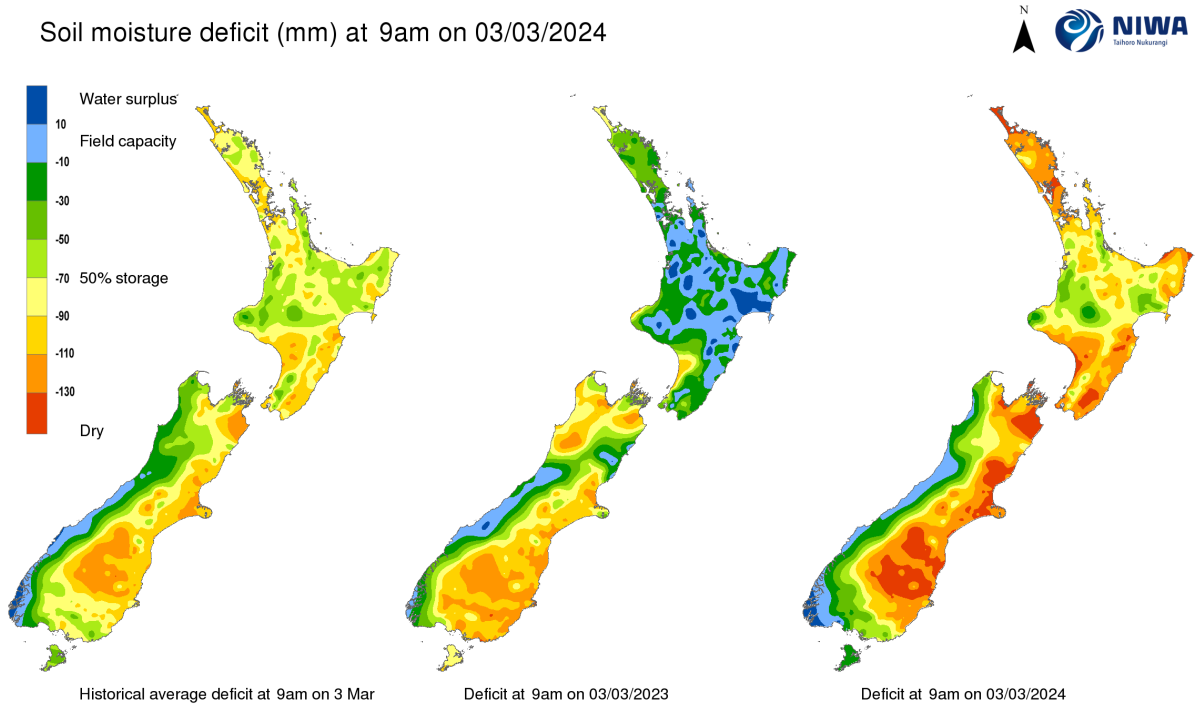
Long-term seasonal outlook

El Niño continues, and is expected to remain the dominant factor in New Zealand's climate until at least the end of April. The main outcomes of this weather system are gusty westerly and north-westerly winds, along with lower-than-average rainfall for northern and eastern areas of both islands. There is also expected to be variability in air temperatures, as air flows across the country switch between those coming from Australia or the Southern Ocean. Some areas are experiencing unusual dryness, and growers are encouraged to make use of NIWA's drought forecasting dashboard. Temperatures across arable regions are expected to be higher than average.

FAR weather tool

The FAR online weather tool is a great way to keep an eye on 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 region you're interested in 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 how to make it better.

Soil moisture data - see more from NIWA here



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