BCG TECHNICAL BULLETIN

No. 7
29 July 2021

What's happening:

- Growers are considering the possible impacts of a negative IOD on yields given the late start.
- Spraying has been challenging due to rain and wind. Some areas further south are starting to get too wet to traffic
- Fungicide planning is underway with some wary supply may get tight if we get a wet spring. There are however not many disease issues yet.
- Lucerne flea are causing issues in slow growing crops and some crops still have mites present.
- N inputs are being considered with price and supply causing some headaches.
- Sheep feed is still slow with supplementary feeding in some regions still occurring.

Table 1. Rainfall (mm) across the Wimmera and Mallee, number in brackets denotes decile for the period.

Duration (mm)	Ouyen	Swan Hill	Sea Lake	Birchip	H'toun	St. Arnaud	Kerang	W'beal	Longy	Nhill	Kaniva	Boort	M'ville
Nov – Mar	46 (1)	64 (2)	62(2)	62 (1)	52 (1)	164 (5)	136 (5)	112 (5)	84 (2)	113 (5)	81 (1)	86 (2)	48 (1)
April – June	44(1)	48(2)	56(2)	47(1)	31(1)	110(3)	50(2)	76(3)	87(3)	40(1)	111(4)	58(1)	39(1)
July (to 27th)	36	31	39	39	36	64	33	39	49	44	77	36	42

Climate: The BoM last week declared a -IOD is now underway and likely to persist until at least mid-spring. What this means for NW Victoria: since 1960 there have been 10 -IOD years and the table below highlights how many of these past -IOD events have resulted in wetter, average or drier conditions during August to September across different locations in the Wimmera and Mallee. As you can see, the odds are in our favour for wetter conditions over the next couple of months. A -IOD event also has an influence over temperatures with daytime temperatures typically cooler and nights warmer than average. With forecast skill higher at this time of year, start considering both the likely wetter outlook and milder conditions when making management decisions. In the shorter term, finding suitable spray days will continue to be challenging with showery and windy conditions likely to persist for at least the next week.

Table 2. August-September rainfall (mm) totals in previous -IOD seasons.

	Birchip		**Ouyen**		**Kaniva**		**St Arnaud**	
	No. Yrs	Aug – Sept Rainfall	No. Yrs	Aug – Sept Rainfall	No. Yrs	Aug – Sept Rainfall	No. Yrs	Aug – Sept Rainfall
Wetter	8/10	> 88mm	7/10	> 78mm	8/10	>113mm	8/10	> 96mm
Average	1/10	55 – 88mm	2/10	51 – 78mm	1/10	84 – 113mm	1/10	68 – 96mm
Drier	1/10	< 55mm	1/10	< 51mm	1/10	< 84 mm	1/10	< 68mm
	Warracknabeal		**Swan Hill**		**Longerenong**		**Boort**	
	No. Yrs	Aug – Sept Rainfall	No. Yrs	Aug -Sept Rainfall	No. Yrs	Aug – Sept Rainfall	No. Yrs	Aug – Sept Rainfall
Wetter	8/10	> 98mm	6/10	>80mm	8/10	> 110mm	6/10	> 98mm
Average	1/10	68 – 98mm	3/10	50 – 80mm	1/10	69 – 110mm	2/10	60 – 98mm
Drier	1/10	< 68mm	1/10	< 50mm	1/10	< 69mm	2/10	< 60mm

Yield potentials: With a -IOD forecast many are reassessing yield targets with the chance of higher spring rainfall. In most cases, a healthy spring outlook is offset by a late start therefore many growers would still be advised to target average to just-below-average yields where crops have established later than ideal. See below a couple of Yield Prophet predictions for Watchupga (vetch in 2020) and Wallup (chickpeas 2020).

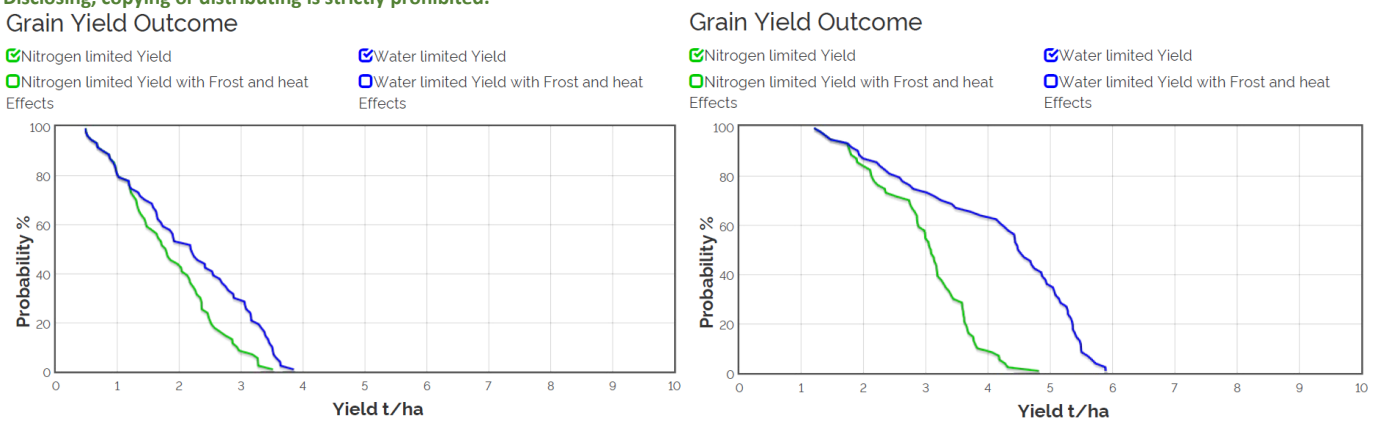

Figure 1. Yield Prophet predictions and the current status for Scepter wheat sown at Watchupga 7th May (left) and Wallup 18th May (right).

Prioritising N applications: With urea in limited supply and expensive where available, growers are still advised to target N applications to those situations where most bang for buck can be achieved such as cereal-on-cereal or cereal-on-canola rotations where crop removal has been high. For many, benefits in canola will be reaching the end as crops start to elongate, barley yield is best managed by N application prior to GS30 while wheat has a broader window so if supply timing is the problem, there may be the ability to hold off on wheat unless it has low soil N. In addition to crop requirements, consider other risks that may help prioritise application—more advanced crops in frost prone locations may be areas you can consider reallocating resources to get the best value for money rather than put it into a risky situation.

Significance of GS30/31 in cereals: With limited spraying opportunities lately, it is important to ensure herbicide plans are still appropriate given crops are likely more advanced than when the plans were made. Some herbicides, such as Intervix, Precept, Velocity and Talinor have cut-offs for application near to this growth stage due to crop impacts and grain residues. In barley nitrogen benefits start to shift from yield boosting to yield maintenance and protein increases, while yield improvements in wheat are still achievable after this growth stage. Fungicides applications start to have increased importance as the plant starts to push out leaves that directly contribute to yield. Assessing crops for these critical growth stages can be done by cutting open the main stem of a plant and looking at the position of the developing ear. Compare your crop to those shown in Figure 2.

Figure 2. Assessing cereals for GS30 – 31 stage of development.

Lucerne flea: Damage will typically look like transparent patches in the leaf where severe infestation occurs. Monitor your crops and act accordingly. Damage will generally be worse when there is slow growth and cold weather. Population growth will also be greatest under these moist conditions. They are often concentrated in localised patches, so it is important to monitor for these at a number of locations within paddocks. Damage levels can be used to determine whether spraying is necessary. As a guide, an average of 20 small holes per trifoliate leaf in pastures may warrant chemical control. Lucerne fleas have a high tolerance to synthetic pyrethroids which is why this chemical group is not recommended for control.

Figure 3. Lucerne flea damage

Grass control inspections: With many suggesting that grass sprays are all but complete on farm it will be important to check how well results have turned out. There is still a large window in pulses to go back if needed. If you are having difficulty telling if the grasses are affected, try the tug test. Provided around 7 – 10 days have passed since application, the herbicide should have started to act on the growing point of the grass. By pulling out the youngest leaf you should be able to tell if the product is doing its job. Leaves that pull out easily and are pinched and discolored at the base have been controlled, if they are difficult to remove and not discolored consider why that may be the case: second germination, missed by the spray, or is there a need for a resistance test? If the latter, there is likely time in pulse crops to undertake a quick test to find out what products do/don't work and adjust management.

Figure 4. Assessing grass herbicide activity with the tug test of youngest leaf

Disease or herbicide damage: At times the products we apply can cause damage that looks like disease. One example is grass sprays in faba beans which can result in visual spotting of leaves. Key identifiers of herbicide spotting damage: spots occur on one side of the plant or leaf where the product lands, it doesn't get worse with time, new growth is unaffected, and it also does not come with visual concentric rings or formation of spores. Comparison between herbicide damage and chocolate spot shown below.

Figure 5. Left: chocolate spot in faba beans. Right: Herbicide spotting in faba beans.

Upper Canopy Infection (UCI) Blackleg is unlikely to be an issue this season in the Mallee and many areas of the Wimmera as crops have established late this season. For greatest risk, flowering would need to commence in July to early August and the flowering to harvest period needs to be long. If your crop flowers later into August, fungicides

should not be targeted at UCI as you are unlikely to get an economic response. While infection may be seen late, it generally doesn't have time to develop to a point where it affects yield. Where other diseases present a risk, management should focus on timing and products that suit those concerns i.e. sclerotinia. Further information on UCI and the drivers can be found here.

Scald in barley has been found in some high pressure early established crops and is characterised by an initial water-soaked appearance that develops into straw-coloured lesions with brown margins. Rotation is a key driver to infection with close barley rotations or presence of barley grass increasing risk to crops. For many the late start will help decrease scald risk as crops would have missed the early spore release. Early sown/established crops are at greatest risk. Scald is usually first observed in isolated patches of a crop when plants are tillering or at early stem elongation. Further spread is caused by splash dispersal of spores which is more rapid in the warmer months. The disease is most severe in seasons of above average rainfall, particularly during the winter and spring. Most currently grown varieties have poor resistance packages so where infection presents, management may be warranted.

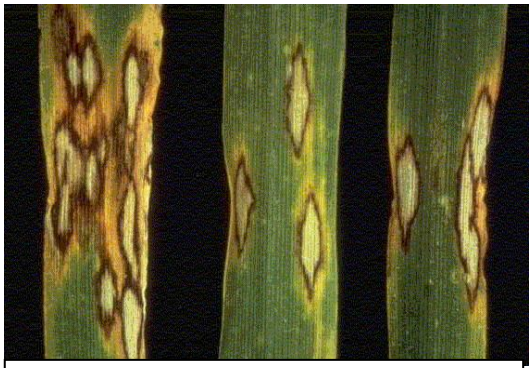

Figure 6. Scald lesions in barley

Septoria: the last three weeks have presented good conditions for Septoria development in wheat crops. Late July – August is when we expect to see Septoria and continued wet conditions will mean monitoring will be important, particularly where risk is high because of rotational choices. This disease is considered common in the high rainfall districts and a season dependent issue in the medium rainfall zone. Risk in the Mallee is lower again with the disease seldom taking hold. In 2017 however it was reported in the southern Mallee. The long latent period (21 – 28 days from infection to expression) can make management based on presence difficult as things can progress quickly. For these reasons where risk is higher based on location, rotation and rainfall forecast management is best considered as with many other diseases of cereals. Aim to protect the leaves contributing to yield. This is best done with fungicide sprays timed at GS31 and GS39.

Figure 7. Septoria lesion with black fruiting bodies in wheat.

Vehicle hygiene: Don't forget about vehicle/equipment hygiene, particularly in wet weather, when moving around. Good practice can limit the spread of weeds, pests and some diseases such as bacterial blight in peas.

Grain market snapshot: The world's biggest lentil importer, India, has reduced its lentil import tariff from 30% down to 10%. At an earlier stage this tariff had been as high as 80%. At the same time, the main supplier of lentils to this market—Canada—is going through a very hot, dry growing season. This combination of events means the lentil market is something to watch. The table below shows new crop grain prices, based on Geelong port equivalent as at July 27th 2021.

Livestock: The crop grazing window is later and will be shorter this year if wanting grain production (usually July cutoff), but you may decide it becomes a feed paddock and can manage grazing to optimise regrowth and feed instead. Wait 3 weeks after topdressing N, and make sure crops are outside of withholding periods for seed dressings and herbicides before grazing. Alternatively use spraygrazing (TB #5 2020) or hold off spraying until after grazing. Young cereals have high moisture, low fibre, high carbohydrate and mineral inbalances so its recommended to provide hay (slow down gut flow, help extract minerals) and a loose lick of salt, ag lime and causmag at the ratio 2:2:1 to prevent metabolic issues. Because causmag is bitter, you may need to increase the salt and decrease causmag to encourage them onto the lick initially, then adjust the ratio until it's 2:2:1. Some recommend putting self-feeders in, preferably oats, to provide energy that will help to process high protein in the diet. Vaccinate stock against pulpy kidney within 3 months to 2 weeks of entry. Young fast growing cereal crops can also have induced deficiency of vitamin B12, so a B12 injection can help, particularly on low cobalt sandy soils,. Introduce animals to the crop gradually for short periods over several days, later in the day with full bellies to prevent gorging, and observe animals closely. Grazing fencelines does not count towards adjustment, it needs to be the crop. These steps will all help manage health and maximise the benefits of grazing winter crops.

Table 3. Indicative wheat, barley and canola prices, Geelong port zone as at 27 July 2021.

Commodity	2021/22 season	Compared with last fortnight
APW wheat	$310	Up $10
CAN non-GM	$810	Up $45
BAR1 barley	$254	Up $4
Faba beans (del Wimmera)	$365	Up $5
Lentils (del Wimmera)	$835	Up $55

BCG research update: Established in 2018, the long-term N management trial at Curyo is continuing this year, with barley sown. Urea was applied last week, with rates determined through targeted yield potentials (Yield Prophet Lite, replacement or national average) or baseline levels of nutrition in the soil (N banks). Over the past 3 seasons the research has indicated the majority (~70%) of N not utilised by this season crop will be available for the following crop. So far, the research has indicated the most profitable strategies have had neutral or positive N balances. Funded by Mallee Catchment Management Authority and La Trobe University.

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