

Coonabarabran winter cropping meeting

On the 7th of April Pursehouse Rural Coonabarabran conducted a winter cropping pre-season meeting. Local farmers, Pursehouse Rural staff and a number of presenters from supplying companies attended the meeting.

Trevor Klein, Syngenta, conducted the first presentation on Seed treatment for disease control. Trevor spoke about the benefits of using Emerge seed treatment to protect crops against aphids and viruses carried by aphids. Emerge also optimises early vigour which give plants the strength to defend themselves against difficult environmental conditions. Trevor also discussed Dividend seed treatment which helps prevent Rhizoctonia and pythium root rot, smuts and bunts and seed borne net blotch. Dividend helps to build stronger healthier root systems which leads to an increase in yield.



Jim Laycock, Incitec Pivot, spoke about the potential fit of some of IPL's nitrogen based products in the cropping system. Jim spoke about Entec, which is a chemical that can be added to nitrogen based fertilisers to stabilise ammonium. This means nitrogen is taken up slowly in the plant limiting the flush of growth often associated with nitrogen application. It also reduces leaching of nitrate. Jim also spoke about green urea, which has an inhibitor that minimises volatilisation for up to 14 days. Jim's discussion on liquid fertilisers, in particular Easy N, was a highlight of his presentation due to the apparent increase in efficiency and ease of handling. Pursehouse Rural Coonabarabran will have a liquid fertiliser tank installed for topdressing of this seasons winter crop.

Tony Stewart, Heritage Seeds, spoke about the difference between trade marking a variety and getting plant breeders rights (PBI) in relation to Lucerne. To gain PBI on a variety a plant breeder must show that the new variety has a new trait or out preforms the industry standard. They must also show data from trials to substantiate any claims that they have on the variety. Seed companies who only get a trademark on the name of a variety do not have to show improvements in the said variety and are able to sell seed that may not meet their claims.

Chris Farlow, ABB Seeds, spoke about ABB's new lupin and triticale varieties. Chris discussed Luxor albus lupins, which will be a replacement for ultras. They should have a good fit for the light to medium soils in the district. Chris also discussed the management issues relating to lupins, as some growers had not grown the crop before.

Chris also described the benefits of ABB's new triticale varieties. Bogong is a grain only variety being a replacement for Kosciuszko. Canobolas triticale has superior acid and aluminium tolerance to all other varieties. Both varieties are resistant to all common rusts.

A pre-emergent simazine spray is important for broadleaf weed control in lupins. The right hand side was not sprayed.

The day was a great success with all attendants taking away information that will be beneficial to their upcoming cropping season. For more information on the topics above please contact your local Pursehouse Rural Agronomist.

PHR Trial Program 2009

The agronomists at Pursehouse Rural are forever inundated with new products and improvements to farming practices from suppliers, researchers and developers. It is important that these new ideas are independently trialed to determine if they have a fit for increasing production in our regions and are in fact as good as the suppliers tell us they are. Pursehouse Rural agronomists will once again be establishing trials across the north west. An outline of some of the trials Pursehouse Rural will be investigating in the 2009 winter crop season are as follows;

- Wheat and Barley variety trials from Narrabri to Quirindi
- Durum wheat plant population trials
- Seed dressing trials
- Aerial Imagery and Variable Rate Nitrogen application
- Progibb and Liquid nitrogen for top dressing pastures
- Micro-nutrients and enhancing uptake
- Manures
- Annual Ryegrass resistance- Double-knock techniques
- Effectiveness of weed-seekers in various situations.
- Pre-emergent grass and broadleaf weed control in various crops
- Inoculants on winter legumes

Towards the end of the season, field days will be held at many of the sites, allowing farmers to take a look for themselves. For further information on these trials please contact your Pursehouse Rural agronomist.

Seed Returns

Pursehouse Rural is unfortunately not able to return seed to our suppliers.

Therefore if unwanted or excessive seed is returned it will be stored on behalf of the customer unless sold prior to next season.

Canola- the information breakdown

Matt Roseby recently attended a canola workshop organized by Pioneer Seeds. Following are some key points Matt took away from the day.

Paddock Selection:

- Canola is well suited to neutral through to alkaline soils
- Good tolerance to Boron and is nearly as salt tolerant as barley
- Lime may be used on acidic soils
- Canola, like wheat is very sensitive to hard-pan layers which can restrict root penetration.
- Disc or knife points will minimize soil disturbance. Press wheels should be used to maximize seed to soil contact, although pushing down too hard on heavy black soils can compact seed to much.
- DO NOT plant canola within 500m of previous years crop.

Stubble management

- On average, stubble from a 5t wheat crop will cause a 25% reduction in canola yield.
- Too much stubble will reduce emergence. Stubble needs to be pushed away from the row, i.e. Trash whippers
- Standing stubble and inter-row sowing is ideal
- Canola has a small seed with low energy and cannot have too much stubble over the row. Stubble will block sunlight and seedlings will struggle from emergence and not recover.
- Shading will also lower soil temperature and contribute to low seedling vigour.

Planting- Rates and Placement:

- Ideally canola seed should be planted between 12 and 25mm deep and into good moisture.
- Target plant populations range from about 50 plants/m² for TT's to about 40 plants/m² for hybrids.
- Between 30 and 40 plants is ideal for maximum yields with hybrids. With irrigation, could target 40 plants/m² although hybrids do not like being over planted.
- Hybrids ideally should not be planted over 3 kg/ha.
- High plant densities will increase your risk of Sclerotinia.
- Establishment difficulties which lower plant densities to 15 plants/m² can still result in profitable crops, provided the crop is sown early.

Calculating Seeding Rates

1. Target Plant Population
2. Number of seeds/kg
3. Germination % and Establishment %.

$$\text{Seeding Rate (kg/ha)} = \frac{40 \times 10,000}{200,000 \times 0.9 \times 0.8}$$

Sowing Time:

- For every week planting is delayed after the middle of April there is an 8% yield loss.
- It is also important to match your varieties with appropriate sowing times so that there are no frosts during pod-fill, as a good frost will typically reduce yields by between 20-30%.
- Reduce extreme temperatures during flowering. Above 28°C at this time will result in pod abortion.
- A frost during pod-fill will have a greater impact on yield than during flowering as canola will compensate by producing more flowers.
- Last sowing in areas such as the Liverpool plains is mid-May due to increased temperatures during flowering and shorter springs.
- Delay in sowing dates have greater effects on canola than on cereals as it has a lower ability to handle moisture stress and high temperatures during spring.

Water Use Efficiency:

- Canola's WUE is approximately 60% that of Wheat.
- WUE is 11 kg/ha/mm but can range from between 8 to 14 depending on range distribution.
- Potential Yield = SWS (mm) x WUE kg/ha/mm
- SWS = In crop rain + soil water at planting – soil water at harvest – 120
- Canola is very sensitive to dry sub-soils and high spring temperatures.

Irrigation Timing:

- If one water is allocated, ideal timing would be during stem elongation as this is when the yield and oil is set.
- A flush at early flowering could also be beneficial but too much water logging at flowering has the potential to reduce yield and increase the onset of disease.

Fertilizer Requirements:

- Meeting Nitrogen (N) requirements is important at bolting for maximum yield potential. This is when yield and oil are set. 80-100% ground cover also needs to be achieved at bolting for maximum yield potential.
- As a rule of thumb, 40 kg of N is needed per tonne of canola produced.
- Canola's response to fertilizer is about half that of wheat.
- Roughly 80-110kg of N for a 550mm rainfall area is needed for a successful canola crop.
- No more than 15kg of N can be planted with the seed on 10-inch rows.
- All N requirements need to be applied within 8 weeks of emergence.
- 25 kg of S will be needed for soils with low levels of sulphur.
- Canola has a high demand for Sulphur, as it is a sulphur rich oil seed, not a protein rich cereal.
- Oil is the last component developed in the seed and is determined by both nutrition and biomass.

Pests:

There are a number of pests that can impact on canola crops particularly during emergence and early seedling growth stages. Seed treatments and regular monitoring of crops after sowing is essential to ensure that potential problems are identified and treated early.

Earth Mites: can be detrimental to canola development particularly at seedling stage. Perimeter sprays may be necessary to prevent mites from marching in from nearby pastures.

Aphids: can fly in and infest crops particularly in the spring, with 2008 being one of the worst seasons for Aphids affecting a large area of the state. Products such as Pirimor or Dimethoate may be used for adequate control.

Helicoverpa: are a frequent pest of canola in central and northern NSW and will require spraying in most years. A synthetic pyrethroid may be used for sufficient control.

Growers should seek advice and check harvest withholding periods of chosen products before deciding to spray.

Major Diseases:

Blackleg: Do not plant within 500m of previous years crop. If planting canola within 500 metres of last years crop, avoid planting the same variety as fungal spores from stubble are more likely to infect the same variety more severely the following season. Also a variety may have its resistance erode over a number of years.

-Under normal seasonal conditions almost 99% of spores that attack new crops originate from the previous years stubble.

-Choose resistant varieties

-Treat seed with Jockey. Rates for Jockey are 2 litres per 100kg of seed.

Sclerotinia: Sow only good quality seed that is free of Sclerotinia

-Avoid sowing into a paddock that was affected by Sclerotinia in previous 3 years.

-The use of wider rows and lower seeding rates can increase ventilation within the crop canopy and reduce moisture within the canopy microclimate required for infection by Sclerotinia.

-Foliar fungicide is another option but is often uneconomical. Products range around \$25 /litre and treatment rates are 2 litres/ha. This equates to around \$50/ha + application costs.

Harvesting:

-Windrowing will allow for a more even harvest as long as the crop has a yield potential of greater than 1 tonne/ha.

-Windrowing is ready when 40-60% of seed has started to change colour from green to brown/black and remaining seeds are firm. Samples should be taken from consistent parts of plant. (Half way up the plant)

-Harvesting can begin approximately 8-15 days after windrowing and once seed moisture is below 8.5%.

Receival Standards:

-Maximum moisture of 8%

-Minimum test weight of 62 kg/hl

-Maximum 3% impurities

-Maximum 7% broken or split

-Defective maximum 10%= Max 3% damaged, Max 5% sprouted and Max 2% green seed.

-Oil premiums and discounts if applied are based on the AOF standard of 42%.

Marketing

-Crushers will apply oil bonifications for canola using 42% oil as the base for a premium or discount.

-There is a 1.5% increase or decrease on the base price (current \$/t) for every 1% of oil above or below 42%.