



DRAFT PROTOCOL FOR HIGH YIELD AND HIGH PROFIT BARLEY

This draft agronomic program has been developed from the results of the GRDC funded project “Improving Winter Cropping Systems in the Riverine Plains” which commenced in July 2005.

The draft protocol for high yield and high profit barley is as follows:

- Select a paddock
 - That is in the typical place in the rotation where barley is normally grown and
 - Is not acid (pH_{CaCl} above 4.8 and aluminium below 2%) and
 - Moderate to high levels of Phosphate (P), Sulphur (S), Potassium (K), Zinc (Zn) and other nutrients.

A recent soil test (1-3 years old) should be used to determine the soil factors.

If the soil requires amelioration or has major deficiencies other than P and N, apply lime, gypsum and other ameliorants as recommended in the soil test.

- Use a high sowing rate of seed of a suitable malting variety barley (70-90 kg/ha of Gairdner, Sloop or Schooner).
- Use a disease controlling seed dressing.
- Sow with high levels of P (20-25 kg/ha) and a small amount of N (20-30 kg/ha). The most popular choices are either to use 110-140 kg/ha of DAP or 90-110 kg/ha of MAP with 20-50 kg/ha of urea. This will encourage early tiller growth.
- The aim is to grow a thick crop.
- Conduct a Deep Soil Nitrogen (DSN) test at 3 leaf stage to determine the level of soil N.
- Check that the seasonal forecast is for, at least, average spring rainfall in July prior to applying additional N.
 - Apply up to 80 kg/ha of N (assuming a normal DSN of about 60 kg/ha) at 5 leaf stage in a normal season to achieve yields of 4-6 t/ha or.
 - Adjust the yield target and N rate, in consultation with your agronomist if the forecast is for below average rainfall.
- Count tillers at full tillering (Z30) in mid August. Aim to produce at least 700 tiller/m².
- Apply 500-1000 ml/ha of Triademefon (Bayleton or other similar product) at Z31-32 (mid August) for early leaf disease control. Other registered fungicides can also be successfully used.
- Apply a further 500 ml/ha of Bayleton as the barley comes to head (Z39) if the season is good.