

Agronomy after the drought - a guide to decision making in 2007

**Technical information provided by
Grains Industry
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Nutrition

The need for nutrient inputs will vary from paddock to paddock. The amount of late summer and autumn rainfall and stored moisture will also impact on fertiliser decisions.

The following guidelines address likely nutrient dynamics following a drought. Wherever possible growers should seek independent advice.

Nitrogen

Paddock N status is commonly under-estimated following a drought.

There is likely to be some carry-over of fertiliser N from 2006 crops into the 2007 growing season and increased mineralisation when the drought breaks.

How much mineralised N becomes available to the crop will depend on when the break occurs, soil type and paddock history.

N decisions for the 2007 crop should be based on deep soil N tests, particularly if aiming for malting barley.

Do an N budget as normal, taking into account soil N level, target yield and protein.

Consider spreading risk by minimising N input at sowing and topdressing in response to how the 2007 growing season develops.

Phosphorus

There is likely to be some extra carry-over of fertiliser P from 2006 crops into the 2007 growing season.

The need for fertiliser P in 2007 will vary from paddock to paddock, so it is vital to know the amount of soil P available in each paddock prior to making decisions about fertiliser rates.

Soil tests for P should be carried out in any paddock where there is no recent testing history. Doing nutrient audits using previous fertiliser rates and crop yields will also assist in making phosphorus fertiliser decisions.

Some P at sowing will be required in many situations but consider reducing rates provided there is a reasonable history of applied P over the past five years and a commercial soil test indicates soil reserves are in the adequate to high range.

Growers should seek specific advice but general rules-of-thumb suggest:

- apply half the normal P rate following failed crops (crops with little growth and yielding less than 0.5 t/ha).
- use two thirds the normal rate on non-calcareous soils following drought crops yielding more than 0.5 t/ha or which had healthy growth up until late tillering. For calcareous soils, rates should be near normal.
- normal rate on chemically or mechanically fallowed paddocks.

If the fertiliser budget will not cover the whole cropping program use the calculated rates on the best paddocks first, even if it means sowing the last paddocks without P fertiliser.

P fertiliser rates should be calculated to manage P supply for the 2007 crop only. Do not fertilise for the following pasture or for build up of soil reserves.

Drilling P fertiliser at sowing is the most efficient method of application.

These guidelines apply to cereals, canola and most pulse crops except faba beans, which tend to be more sensitive to P supply than other species.

Zinc and Sulphur

On paddocks with good Zn and S history these nutrients may not need to be applied in 2007.

Other nutrients

Apply as normal.

For trace elements, consider using a foliar spray to correct any deficiencies. This approach is the cheapest to protect the 2007 crop but will not provide any residual benefits for subsequent crops or pastures.

To capture the 'good year':

- Consider seeding rates. There is generally no penalty from high seeding rates and higher densities provide greater weed competition.
- Sow good seed that will produce high-vigour seedlings. Have a germination test done close to sowing, especially for pulses.
- Monitor foliar diseases. If winter and spring are wet, be ready with fungicides if needed.
- Monitor nitrogen levels and prepare to top dress to enable the crop to reach maximum yield.
- Control weeds early.

If 2007 is average or below average:

- Assess the season on the basis of the strength and timing of the break.
- Monitor moisture levels in the soil profile ahead of sowing and consider changing crop type depending on available moisture.
- Retain flexibility with sowing times and crop and variety selection and be prepared to change direction as the season unfolds, especially if the break is late.

