

Soil fertility

Summary

- Brassicas need good soil fertility levels for high yields.
- Every crop has different fertiliser requirements depending on soil fertility and expected yield.

pH

Brassica crops prefer pH levels above 5.8. Lime takes time to work, so should be applied 6-12 months before sowing. The correct pH reduces the incidence of club root and increases the availability of molybdenum. Fine limes have a faster affect on the pH level, and generally 1 t/ha of lime gives a 0.1 lift in soil pH.

Phosphorus

Phosphorus is important for establishment and crop yield. Olsen P levels of above 20 are recommended, and 25+ for higher yielding crops. Typically crops benefit from applications of 25-50 kg P/ha.

Nitrogen

Crops generally respond strongly to N. Requirements vary depending on soil type, fertiliser and crop history, and expected yield. Generally nitrogen is applied at, or after, sowing and again during the growing season for high yields, typically at 50-70 kg N/ha. Excessive N and applications too close to grazing can increase the risk of nitrate problems in stock, refer to page 131 for more details.

Potassium

Brassicas require potassium levels of 5+ on the quick test. Crop yields seldom respond to potash applications.

Sulphur

Sulphur is not usually required for brassica crops and generally yields do not respond to it, unless levels are very low (soil sulphate test 2-3). Care is required with sulphur in brassicas (mainly kales), as this may increase SMCO levels which can cause kale anaemia or red water in stock. Refer to page 131 for more details on SMCO.

Boron

Boron is important for bulb crops and should be applied at sowing. The most common symptom of boron deficiency is “brown heart” in bulbs, while other crops can show hollowing, browning and rotting of stems. Deficiencies are more common on light textured soils with low organic matter content. Boron can not be sown with seed, as it can cause seedling injury through burning due to its high solubility.

Magnesium

Recommended magnesium levels in the soil are 8+ . If magnesium is required it should be applied at sowing.