

Soil fertility
Winter crops

Sow

Brassicas need the right nutrients for high yields. Every crop demands different fertiliser depending on initial soil fertility and yield potential. Soil test 2-3 months before sowing to allow time to correct soil fertility if needed.

pH

Brassica crops prefer pH levels above 5.8. The ideal range is between 5.8 and 6.2. Lime takes time to work, so should be applied 6-12 months before sowing. Fine limes change pH levels faster. Correct soil pH reduces club root and increases the availability of molybdenum. Generally, 1 t/ha of lime gives a 0.1 lift in soil pH.

Phosphorus

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

Nitrogen

Crops generally respond well to nitrogen. Requirements depend on soil type, fertiliser and crop history, and expected yield. Nitrogen is usually applied at, or after, sowing and again during the growing season for high yields typically at 50-70 kg N/ha. Excessive nitrogen and applications close to grazing can increase the risk of nitrate toxicity in animals (see Brassicas and animal health for more).

Potassium

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

Sulphur

Sulphur is not usually needed for brassicas unless levels are very low (soil sulphate test 2-3). Take care applying sulphur on kales; this may increase SMCO levels which can cause kale anaemia or red water in stock. Soil sulphate test levels above 10 in kale crops are potentially SMCO toxic (see Brassicas and animal health for more).

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. Do not mix boron with the seed – because it is highly soluble, it can burn seedlings.

Magnesium

Recommended magnesium levels in the soil are 8+. If magnesium is required, apply at sowing.



To the right, rape missed a fertiliser and urea application, and nutrient deficiency is clearly seen.

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