



Faba bean production

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Benefits

Faba bean, being a legume is a nitrogen-fixing plant.

It is a "break" crop which enhances cereal yield because it decreases the occurrence of take-all and cereal cyst nematode.

It tolerates waterlogging better than other legumes.

All operations can be undertaken by using cereal equipment.

Stubble residue is valuable stockfeed.

Plant requirements

Soil type

The crop is suited to red-brown earths, black earths, grey clays and alluvial loams.

It prefers types of soil with pH ranging from neutral to alkaline (pH of 6.5 to 8.0).

Deep loams are the first choice because Faba bean tends to have shallow roots. The crop may suffer moisture stress in soils that dry quickly.

Faba bean is tolerant of waterlogging.

Temperature

The optimal temperature for growth is 15-20°C. Faba bean tolerates frost.

Rainfall

The crop requires an average annual rainfall of 400 mm. Prolonged cool weather in the spring is ideal for development of pods.

Seedbed preparation

The previous crop stubble needs to be heavily grazed, slashed or burnt.

A fine tilth over a firm seedbed is required.

Rolling after seeding should be considered on stony or extremely cloddy soil, because pods set low on the plant.

Variety

The recommended variety is Fiord. It is an early maturing variety.

Icarus is a new disease resistant variety.

Time of seeding

The best time to seed is from May to June. Later sowing markedly reduces yield potential. Flowers and pods abort if flowering is during a period of high temperatures.

Plant density

It is best to grow 30 plants per m². This is equivalent to 7 seeds per metre, at a row spacing of 180 mm (7 inches), for example.

Seeding rate

When a seed size of 35 g/100 seeds with a germination of 80% is used, sow 130 kg of seed per hectare. This is an example. Seed should be weighed and germination tested before sowing.

Seeding depth

Sow the seed 20-50 mm deep.

Seed treatment

A newly released inoculum, called Faba bean inoculum, has replaced the group E strain of inoculum. If sowing on areas that have not grown beans, inoculate before sowing.

It is recommended to use seed from a healthy crop in preference to a seed dressing.

Fertiliser requirement

Add 65 kg/ha of single superphosphate, or its phosphorus equivalent, for every tonne per hectare of grain expected to be harvested.

Weed control

Contact your chemical reseller for current registrations and recommendations.

Pests

Red-legged earthmite (*Halotydeus destructor*) is a black-bodied mite with red legs; it damages seedlings as they emerge. Symptoms include leaves that turn silvery, then brown and shrivelled.

Lucerne flea (*Sminthurus viridis*) is a small (2.5 mm), wingless, light green hopping insect. It chews through leaves in layers resulting in "window-pane" like holes. The crop shrivels and becomes stunted.

Native budworm (*Heliothis punctiger*). The caterpillar damages the maturing seed in the pods. The newly hatched caterpillars are small (1-2 mm) and therefore are easily missed when crops are being inspected. When mature (40-50 mm long) they have a yellow-white stripe down each side of the body and a dark stripe down the centre of the back.

Diseases

Leaf, stem and pod spot is a major problem. It is caused by the fungus *Ascochyta fabae*. Grey-brown spots form on leaves. Small fruiting bodies may appear on leaves after rain. On stems and pods, dark-coloured spots appear, which may spread to the seed. Stems may collapse.

Chocolate spot is another major problem. It is caused by *Botrytis fabae*. The symptoms are reddish or chocolate brown spots on leaves and reddening of stems. The spots may enlarge and merge, forming a black mass on the leaves (blighting), which is followed by defoliation and lodging. Chocolate spot and *Ascochyta* usually require a minimum of two sprays for control.

Dense crops, waterlogging and wet weather favour outbreaks of these diseases.

Rust (*Uromyces viciae-fabae*) appears as orange-brown pustules with a light green halo on leaves, which can spread to stems.

Harvesting

Faba beans turn black when they are ripe.

No windrowing is required.

Harvesting should begin while stems are still slightly green.

Conventional open front headers can be used.

Seed pods are set on stems near the soil surface, therefore the harvester comb needs to be set close to the ground.

Avoid leaving harvesting until beans are too dry because this will result in pod shattering.

Generally, 12% moisture in the seed at harvest is enough to overcome a tendency to shatter.

Initial Harvester settings

Reel speed: slow

Spiral clearance: high

Thresher speed: 400-600 rpm

Concave clearance: 15-35mm

Fan speed: high

Top sieve: 32-38mm

Bottom sieve: 16-19mm

Rotor speed: 700-900 rpm (rotary machine)

Yield

The average yield is 1.6 t/ha.

Yields may range from 1 to 3 t/ha.

Markets

Italy, Japan and the Middle East countries use Faba (broad) beans for food. However, the future expansion of Australian Faba bean production depends on the acceptance of Faba beans as a source of stockfeed protein in feed rations, especially in Europe.

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