

# Lablab

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## INTRODUCTION

Lablab (*Lablab purpureus*), also known as lablab bean, dolichos or hyacinth bean, is primarily used as an annual fodder or forage crop in the Top End of the Northern Territory (NT). It is generally higher-yielding than cowpeas.

In Asia and Africa, it is used as a pulse crop and the beans of selected varieties are eaten as a vegetable. A variety grown as “Old Man’s Beans” is used in Australia as a vegetable.

## DESCRIPTION

Lablab is a late-maturing, vigorous, herbaceous annual or short-lived perennial legume. It has a twining growth habit.

Leaves consist of three leaflets (trifoliolate). The leaflets are large, ovate and 7 cm to 15 cm long. Stems can be 1 cm to 3 cm thick and 3 m to 6 m long. Flowering heads are loose and contain many white to purple flowers. Pods are 4 cm to 6 cm long, broad and flat with a distinct beak. They contain two to six large seeds, which range in colour from white through speckled brown to black. There are approximately 4000 seeds/kg.

Three cultivars are commercially available in Australia.

Rongai is vigorous and leafy, with white flowers and two to four seeds per pod. Seeds are buff to pale brown (light brown) in colour, have a linear, white hilum, and number 3600 to 4300/kg. Rongai flowers in June in the Top End. Seed generally mature from July to August.

Highworth is similar in appearance to Rongai in vegetative growth, but has purple flowers, smaller seed, black when mature, or with some dark brown when ripened rapidly. There are 4000 to 6000 seeds/kg. Highworth flowers three to four weeks earlier than Rongai (May) and matures earlier (June to July). Forage yields of Highworth are lower, but seed yields are higher than in Rongai.

Endurance is a perennial cultivar, which can grow for two to three years in Queensland. Endurance has white flowers and brown seed, which are smaller than those of Rongai. This cultivar has not been tested extensively in the NT.

## CLIMATE AND SOILS

Lablab is probably of Asian origin. It now occurs widely throughout the tropics. It is suited for areas in the NT receiving 900 mm to 1300 mm of average annual rainfall.



Well-drained soils are essential for good growth. It grows well in deep soils, levee soils, Tippera clay loam and Blain sand. Once established, lablab has good tolerance to drought.

It is highly susceptible to poor drainage and waterlogging or flooding.

## **SOWING**

For best results, seed should be sown at 15 kg to 30 kg/ha into a well-prepared seedbed. Some crops have been sown at 40 kg/ha to get quick cover. Seed can be broadcast or planted with a combine in 20 cm or 40 cm rows.

Lablab seed can be successfully planted into a fairly rough seedbed, but results may vary. Sowing at 1 cm to 5 cm depth gives best results.

Seed can be inoculated with cowpea inoculum CB756 to ensure effective nodulation for nitrogen fixation, but this is not necessary if lablab or other legumes (cowpeas, mung beans, peanuts and stylos) have been previously grown in the area to be used.

Lablab is not hard-seeded. Seed purity is normally over 90% and germination is over 80%.

## **FERTILISERS**

Superphosphate at 100 to 300 kg/ha and muriate of potash at 50 kg to 100 kg/ha should be applied at, or immediately prior to, sowing. It may not be necessary to apply potash when sowing on Tippera soils.

## **WEED CONTROL**

Pre-planting cultivation is an adequate control measure for hay and green manure crops, as lablab is a vigorous twining legume which smothers and chokes out weeds in well-established crops. When growing lablab as a seed crop, it is advisable to apply herbicides to control grasses and some broad-leaf weeds.

## **YIELD**

In pure swards under good growing conditions, lablab generally produces 6 t to 10 t/ha of herbage. Seed yields of 500 kg/ha have been recorded for Highworth in the Top End. Other lablab seed yields have been estimated at 750 kg to 1000 kg/ha.

## **GRAZING**

Lablab is palatable and can be utilised by strip-grazing controlled by an electric fence, or grazed as standover feed late in the wet season or early in the dry season.

## **MIXTURES**

Lablab can be sown in mixtures with forage sorghums, bulrush millet or silk sorghum. Sowing rates can be halved when sown in a mixture.

## **HAY**

Lablab makes good quality hay. The use of a conditioner is required to ensure that the thick stems dry at the same rate as the leaves.

Hay should be cut in May to June. The intertwining of the stems and dense growth can make cutting difficult. There is often significant regrowth following haymaking.

## GREEN MANURE/COVER CROPS

Lablab can be used as a green manure crop in horticultural areas. This type of crop can be incorporated at any time when sufficient green material is available, but it is best done at peak flowering when the material is of high quality and will break down quickly in the soil.

## PESTS AND DISEASES

During vegetative growth, lablab generally has good insect and disease resistance. It is particularly superior to cowpeas in resistance to stem and root rots.

Bean flies (*Ophiomyia phaseoli*) can occasionally be a problem in young seedlings, north of Adelaide River.

Bean pod-borers (*Maruca testulalis*) can reduce seed yield by damaging flowers and developing pods. Lablab crops grown for seed should be sprayed once or twice during the early flowering period. Typical symptoms of maruca damage include webbing of flowers, pods and leaves, and stalks that are devoid of flowers or pods.

Other bean pod-borers, which may be present, include euchrysops (*Euchrysops njeus nidas*) and eublemma (*Eublemmadimidialis*). By itself, neither is likely to be of economic significance.

## WARNING

Pasture plants have the potential to become weeds in certain situations. To prevent that, ensure that pasture seeds and/or vegetative materials are not inadvertently transferred to adjacent properties or road sides.

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