

## **Beans**

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*They are easy to grow, very productive, you can save your own seed and there are hundreds of varieties to choose from. In this tell all article, Annette McFarlane 'spills the beans' on beans.*

### **FACT FILE:**

**Botanical Names:** *Green beans (Phaseolus vulgaris), runner beans (Phaseolus coccineus), lima or Madagascar beans (Phaseolus lunatus) or snake beans (Vigna unguiculata var. sesquipedalis)*

**Family:** *Fabaceae*

**Climatic Range:** *Fresh beans are available for most of the year and can be grown across a wide range of climates. In cool and temperate areas beans are grown during spring, summer and autumn. Avoid growing beans during winter in cold climates as warm soil temperatures are required for germination and crops are intolerant of frost. In warmer climates beans are grown during autumn, winter and spring because excessive heat during flowering prevents pod formation and pests such as bean fly are much more prevalent during the summer months.*

### **Bean Basics**

Beans are one of the easiest vegetables to grow. While adding compost to beds is recommended in all growing situations, beans do not require the same degree of soil fertility as many other crops. In fact, excessively rich soil encourages leaf growth at the expense of flowering and can make plants more susceptible to pests and diseases. Good drainage is essential and a pH of 6.5-7.0 is preferred.

Beans benefit from good supplies of potassium and trace elements. Compost made from banana trash, lucerne mulch, rock dust and/or sulphate of potash (as permitted under organic standards) can be used to boost potassium and trace element levels in the soil. Liquid seaweed, compost or comfrey tea and Epsom salts (*magnesium sulphate*) watered over plants during the growing season provide a useful source of nutrients.

### **Versatility in a Pod**

*We eat beans in three main ways depending on the variety of the bean and the stage at which it is harvested.*

*Fresh young bean pods are at there best harvested straight from the garden and eaten whole while still tender and crisp (see green beans).*

*If the beans are left to grow, the individual seeds within the pods increase in size. These immature bean seeds can be shelled from the pod like peas and eaten while sweet and juicy (see borlotti beans).*

*The seeds of bean pods left to grow to full maturity develop hard and often colourful seed coats. These mature seeds can be stored for later use as dried beans (see lima beans).*

### **Getting Started**

Bean seeds are large and easy to sow directly into garden beds where they germinate within a few days. Resist the temptation to plant a whole packet of bean seeds at one time. Planting seeds at 3–4 week intervals will provide a succession of crops and continuity of harvest.

If seeds fail to germinate ensure that you are not overwatering. Dig up a few seeds to see if they are actually still there and have not rotted in cold, wet soil. Rodents also find bean seeds an easy meal.

### **Why are beans so unique?**

*All beans are legumes. This means that they belong to a unique group of plants that have a symbiotic relationship with certain types of bacteria. This enables them to fix atmospheric nitrogen. In other words, beans do not need to access sources of nitrogen from the soil in the same way as other plants. The species of bacteria that beans need to effectively fix nitrogen are generally found in non-heat treated compost and organic mulches – just another reason to emphasise use of these materials in the garden.*

### The Highs and Lows of Bean Growing

Some beans are referred to as dwarf or bush beans. These beans grow to around 60cm in height. Plant them 15-20cm apart with 60cm between rows. Be sure to plant in such a way that you can access both sides of the row. This is essential for ease of harvesting.

Climbing or pole beans need a structure to climb up. These beans are preferable in warm climates, as it is possible to provide greater air circulation. This is an important strategy in preventing fungal disease. By taking advantage of vertical space you can actually grow a lot of beans in a very small area – great for those with limited room. You can also grow climbing beans in large containers if you provide something for them to climb up.

#### Making a Bean Tepee

*Bundle up six or eight trimmed branches of equal length together and tie them at one end. Prepare a mound of compost enriched soil and stand the branches with the tied end uppermost over the mound. Spread the base of the branches in a circle over the mound to form your tepee. Plant your bean seeds into the enriched mound of soil so that they will happily grow up the tepee. Use large branches and seeds of perennial beans in the same manner to create a great living cubby house for young children.*

#### Flower Power

Beans flower 6-8 weeks after planting. Flowers may be white, pink, red, mauve, or yellow. Pods may be flat or rounded, long or short and the seeds inside the pod come in a great variety of sizes, colours and patterns.

#### Baby Beans

Harvest green and runner whenever they look large enough – but preferably while they are still babies 10-20cm long and certainly before the seeds within the pod have begun to swell. Snake beans can be left to grow a little longer. Beans pods are ready for harvest 14-21 days after flowering or just 8-10 weeks after planting. Regular picking encourages beans to continue flowering and producing pods.

#### Health Check

*Beans are a source of fibre, folate (vitamin B), beta carotene and Vitamin C*

#### Best Beans

**Green Beans** - The main commercial varieties of green beans are Larador, Branco and Matadore.

**Butter Beans** – Very similar in appearance to green beans, the pods of butter beans are more tender and pale yellow in colour.

**Italian Flat Beans** – With a distinctively flat, pale green pod, flat beans are around 2cm wide and 20cm long.

**Borlotti Beans** – Easily distinguished by their intriguing pink/maroon speckled pods, fresh borlotti beans are shelled and the immature seeds cooked for immediate consumption. They may also be left to ripen prior to shelling allowing the hard seeds to be stored for later use as a dried bean.

**Snake Beans** - Popular with gardeners in warm climates, snake beans are more rounded than green beans. They can reach more than 1m in length, but are best eaten when small and tender.

**Blue Lake** – A very popular home garden variety of green bean renowned for its prolific production across a range of climates and soil types.

**Purple King** – The amazing purple pods are the most striking feature of this productive climber. The beans turn green when cooked.

**Lazy Wife** – This hardy, heirloom variety of green bean bears heavily over a long period and is notable as one of the earliest stringless bean varieties.

**Scarlet Runner Beans** – A favourite in cool climates, this perennial runner bean has attractive red flowers that are followed by large green pods. More disease resistant than green bean types.

**Lima Beans** – Flat podded beans shelled for the white or maroon speckled seeds inside. Particularly popular in warm climates where it is perennial. Also known as Madagascar beans.



### Perfect Timing

Bean flies, spider mites and white flies attack the foliage of beans causing loss of leaf colour and the demise of crops. All these pests are particularly active during warm conditions. Select less susceptible varieties, try other bean types (snake beans are suitable for warm climates), or adjust planting to times of the year when pests are less problematic. Daily watering underneath the foliage can dislodge and drown some pests.

### Seed Saving

It is easy to save seeds of beans, as they are self-pollinating. Allow pods to mature on the vine. Collect the pods and shell them. Discard mis-shapen or damaged seeds and allow a further period of drying. When the seed has developed a hard seed coat, put it into a glass jar, seal the lid tightly and place in the freezer for 24 hours. Freezing the seed kills any weevil eggs and other pests that may be lurking beneath the seed coat of the beans. Once removed from the freezer, the seed can be packed for long-term storage.

### So Many Seeds

*The Seed Saver's Exchange in the United States estimates that it has more than 4,000 distinct varieties of beans in its collection. Dried beans come in such a variety of colours that they have become commonplace as a decorator item displayed in modern kitchens.*

### Full of Beans

The flatulence often experienced following a meal prepared with dried beans could be significantly reduced by blasting them with radioactive rays according to Indian scientists at the Bhabha Atomic Research Centre in Trombay, India. Fortunately, oligosaccharides in beans which are the major cause of flatulence can be significantly reduced by natural methods. Soak dried beans in water overnight, rinse thoroughly and place them in fresh water before cooking.

Adzuki beans (*Vigna angularis*) are a traditional Asian bean crop. The small maroon seed is made into a sweetened bean paste that is made into soups, desserts, cakes, buns, confectionery, ice blocks and drinks.

Winged beans (*Psophocarpus tetragonolobus*) are a tropical bean species that produce unusual square-looking winged seeds. They are eaten in the same way as green beans.

Lab Lab Bean or Poor Man's Bean (*Dolichos lablab*) is a popular green manure crop in warm climates.



### Did you know?

*Most beans are still picked by hand as bean plants are too fragile to be harvested by machine and only teams of pickers can differentiate between mature and immature pods.*