



# BROAD BEAN SEEDS SUCCESSFUL SOWING & GROWING

Your Support Materials



Christine Wood for  
THE YORKSHIRE GARDENS TRUST



**YORKSHIRE  
GARDENS TRUST**

## **What's in here to help me?**

- 1. A letter to the staff**
- 2. A letter for the pupils**
- 3. Amazing Bean Facts**
- 4. Growing Information**
- 5. The Life Cycle of a Broad Bean**
- 6. Bean Traditions and Tales from around the World**
- 7. Some Classroom Activities**
- 8. Super Bean Books**
- 9. Bean References and Resources**
- 10. National Curriculum Cross-referencing**



October 2020

Dear Members of Staff,

This booklet aims to support you in making the most of the complimentary broad bean seeds you have received from us and to ensure that you have a successful crop of broad beans next summer!

We hope you find this pack of information useful, either to support you in planning lessons and activities, or for your pupils to use themselves, to learn more about broad beans and to hopefully generate an interest in gardening and the growing of vegetables.

Within the pack of information there are suggestions of activities and a list of websites and resources where additional information can be found, including a list of 'bean' books.

In the meantime, we hope this additional resource pack adds value to planting and gardening in your school. Your feedback is invaluable to us so that we can develop our future resources wisely in supporting schools within Yorkshire.

If you would like to send us photographs of your bean plants, we would love to receive them and share them with other schools on our website.

Enjoy your bean planting and growing!

The Yorkshire Gardens Trust

\*\*Please email us anytime at [education1@yorkshiregardenstrust.org.uk](mailto:education1@yorkshiregardenstrust.org.uk) \*\*



October 2020

Dear Children,

Have you ever played the bean game in PE? Have you ever been asked to be a 'jumping bean', a 'runner bean' or a 'broad bean'?

Well, your school have received a pack of broad beans and you can now find out a bit more about broad beans; how good they are for you and their life cycle.

After planting the seeds and caring for them over the next few months, you will be able to pick the beans early next summer and find out how tasty they can be too!

Enjoy your bean planting and growing!

The Yorkshire Gardens Trust



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

## Did you know that?

1. Broad beans are believed to have been grown and eaten in eastern Mediterranean regions since around 6,000 BC!



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

2. Broad beans are sometimes grown as a cover crop to prevent erosion.  
*Erosion is when the soil is worn away by winds and rain.*



3. Broad beans are very hardy plants and can grow in cold climates. They can also grow in very clay based soils and soil, which has high salinity.



[This Photo](#) by Unknown Author is licensed under [CC BY](#)

4. In Ancient Greece and Rome, beans were used in voting. A white bean was used to cast a 'yes' vote and a black bean for a 'no' vote!



[This Photo](#) by Unknown Author is licensed under [CC BY-SA-NC](#)

## Suggestion!

**Why not cut out the facts and share them in your classroom?**



Broad beans are part of the legume ( French word for vegetable) family and are a great source of protein and carbohydrates, as well as vitamins A, B1 and B2

- Vitamin A helps the body's natural defences against diseases (immune system) and also helps our vision in dim light.
- Vitamin B1 is a nutrient that all tissues of the body need to function properly.
- Vitamin B2 is needed for growth.

All B vitamins help the body to break down carbohydrates, proteins and fats to produce energy. They also allow oxygen to be used by the blood.

Your broad bean seeds are a variety that originate in Spain, called Aquadulce Claudia Vicia Faba! This is a variety, which can withstand temperatures as low as -11C and can be sown in the autumn and harvested in early July.

This bean seed produces strong and sturdy plants growing to a height of approximately 1 metre and the bean pods can be as long as 40centimetres!

### Your essential growing information from Chiltern Seeds:

- **Germination Instructions**

*Germination is the process in which the seed begins to develop into a new young plant. Germinating seeds use their own in-built food stores until the seedlings can produce their own food by photosynthesis.*

There are two sowing methods below. The first is for planting in vegetable beds and the second one for sowing the seeds in pots.

1. Prepare the soil by mixing with compost, or well-rotted manure!
2. Sow the seeds under cloches, which will protect them through the winter.  
*You will find instructions of how to make your own cloches on another page in this booklet.*
3. Sow the seeds in single rows about 45cm apart.
4. The bean seeds will need to be planted 5cm deep and 25cm apart.

5. Place a garden cane next to each seed. This will support the young plant as it grows.
6. Water the seeds well.

Germination will take approximately 10-14 days.

If you don't have vegetable beds, you could plant your seeds in pots and place them on a window sill. Just follow 1, 4, 5 and 6 of the germination instructions, but just put 1 bean seed in each pot.

Even if you do have vegetable beds, it may be a good idea to start your beans off in pots – we understand that mice love beans, so this would also protect them from any mice looking for a tasty meal!



- **Growing Instructions**

Your broad bean plants will need to be supported with canes and string, especially in windy gardens.

You must keep your plants well-watered, particularly as flowers begin to appear.

Hoe and weed between the rows regularly.

After the first flowers have appeared, pinch out the growing tips. This will deter blackfly and encourage more pods to grow.



- **Harvesting Instructions**

Pick the pods, when you can see that the beans have begun to swell inside.

Harvest the plant in stages, starting with the lowest pods first.

Small beans are sweeter and more tender than large ones.

Pods can be picked when they are not fully mature to be cooked and eaten whole. Delicious!

- **When to Sow**

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



- Direct Sow/Plant Outdoors
  - Flowers/Harvest

- **What are the perfect conditions for your bean seeds?**

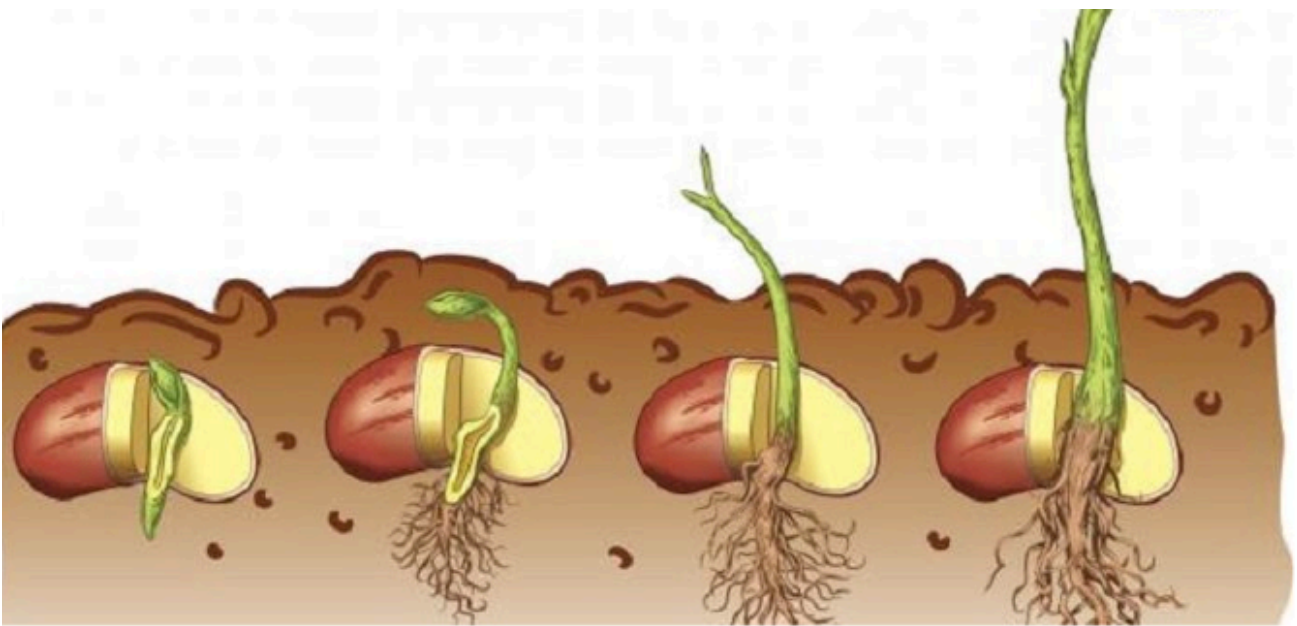
Your bean plants will enjoy:

- full sun
- clay, chalk, sand or loamy soils
- alkaline, neutral or acidic soils
- a well-drained soil





## The Life Cycle of a Broad Bean



The broad bean seed has its own store of food, which it uses while it starts to germinate and grow.

1. In 2 or 3 days after planting, the seed will begin to germinate and a root will start to grow.
2. The root will extend further into the soil and then a shoot will start to grow.
3. The shoot will continue to grow and then push its way up through the soil.
4. The shoot now uses light, warmth and water to continue to grow. The shoot is now a stem and leaves start to emerge.
5. The leaves use the sunlight and the chlorophyll in the leaves to make food, which enables the plant to grow taller and to mature.

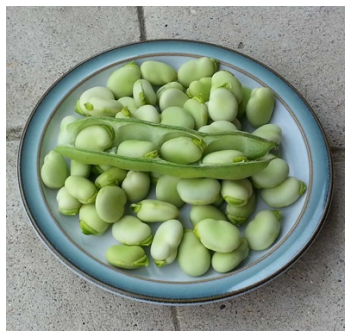
As the plant grows, it will develop flowers. These flowers will need to be pollinated before any pods develop.



# YORKSHIRE GARDENS TRUST

## Broad Bean Traditions and Tales from Around the World

1. In Italy, broad beans are traditionally sown on November 2, All Souls Day. Small cakes made in the shape of broad beans (though not out of them) are known as *fave dei morti* or "beans of the dead".
2. According to tradition, Sicily once experienced a failure of all crops other than the beans. The beans kept the population from starvation, and thanks were given to Saint Joseph. After that, it became the tradition to put broad beans on church altars on Saint Joseph's Day in many Italian communities.
3. In some parts of Italy, some people carry a broad bean for good luck!
4. In Rome, on the first of May, families traditionally eat fresh fava beans (another name for broad beans) with Pecorino cheese as part of their picnic during a visit to the countryside.
5. In Liguria, a region in northern Italy, fava beans are loved raw, and consumed fresh in early spring as the first product of the garden, alone or with fresh Pecorino cheese, or with local salami.
6. In Portugal and Spain a Christmas cake called *bolo Rei* in Portuguese and *roscón de reyes* in Spanish (King's cake) is baked with a fava bean inside. Whoever eats the slice containing it, is supposed to buy next year's cake!
7. A similar tradition exists in France, where the *fève* (originally a dried bean, but often now a small china or metal trinket) is placed in the *galette des rois*; the person who finds it in their slice becomes the king or queen of the meal, and is often expected to serve the other guests!
8. European folklore also claims that planting beans on Good Friday or during the night brings good luck.





## Some Classroom Activities:

### • **Make Your Own Cloches**

Cloches are recommended to give some protection to the young seedlings over Winter and a cane will support the stem of the plant.

You could make your own cloches!

1. You need an empty 2 litre clear plastic bottle.
2. Carefully cut off the base. (The base and screw top from the bottle can be recycled.)
3. Now place your cloche over the garden cane, (which you put next to the seed when you planted it) and push the cloche into the ground.



P.S. What does Une cloche mean in French?

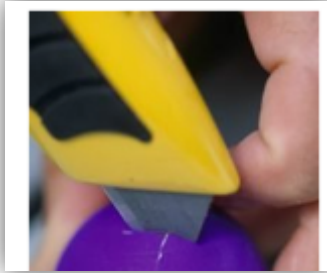
### • **Safety Tops for Canes**

Garden canes can be dangerous in a garden and a top on the cane can help protect a gardener's eyes!

You will need:

- Acrylic paint
- Table tennis or old rubber balls
- Waterproof permanent markers
- Kebab stick or piece of doweling

1. First of all, ask an adult to carefully cut a cross in the base of the ball.



*Image: CliveNichols.com*

2. Next place a kebab stick or something similar into the cross shape. This makes the ball easier to handle when being painted.
3. Paint the balls with a background colour using acrylic paint. Place the sticks with the balls in some playdough or a mug, so that all areas of the ball can dry.
4. When the paint is dry, use the waterproof markers to decorate the painted balls. You could add beads or other decorations that will stand up to being outside.
5. Now you can put the new cane protector on the cane supporting your bean plant!

**Alternatively, you can use a yoghurt pot.**

1. Decide on the theme for the topper – a bee, butterfly or face!
2. Colour the topper with permanent pens or paint mixed with PVA glue (1:1 ratio). The PVA will make the paint waterproof.
3. Add decorations! You may need to make holes to add things like pipe cleaners – please ask an adult to help.
4. Small pots may be blown away in the wind, so you could fill the pot with newspaper or foil to hold it onto the cane.





## • **Hydroponic Beans**

It is fun to watch bean seeds germinating!

You will need:

- A zip-lock plastic sandwich bag
- Kitchen roll
- Stapler
- Water
- Bean seed

1. Put a square of kitchen roll inside the bag.
2. Staple the kitchen roll through the bag, about half way up. Make sure the staples are in a horizontal line.
3. Add water until it is touching the kitchen roll.
4. Place a bean seed in the bag on top of the line of staples.
5. Leave the top of the bag open, so that more water can be added.
6. Carefully hang the bag in a window.

Now observe the seed germinating! You could keep a bean diary, measuring the length of the root and the stem.

## • **Seed Investigations**

**What depth do bean seeds grow best?**

You will need:

- 3 transparent cups or beakers
  - Soil or compost
  - Packet of seeds
1. Label the pots 1, 2 and 3
  2. Prepare the 3 pots with soil.
  3. In Pot 1, plant a seed at a depth of 1cm.

4. In Pot 2, plant a seed at a depth of 3cm.
5. In Pot 3, plant a seed at a depth of 5cm.

Now make your predictions!

At which depth will the seed grow best?

Which seed will grow quickest?

Which seed will grow tallest?

Which seed will be the sturdiest/strongest?



[This Photo](#) by Unknown Author is licensed under [CC BY](#)



## Some Super Bean Books

'Jack and the Beanstalk' – traditional tale

'Jack and the Baked Beanstalk' written and illustrated by Colin Stimpson

'Scarlet Beane' written by Karen Wallace; illustrated by Jon Berkeley

'Anansi and the Pot of Beans' written by Bobby Norfolk & Sherry Norfolk; illustrated by Baird Hoffmire

'Bean Thirteen' written by Matthew McElligott

'Caterpillar and Bean: A Science Storybook about Growing: 1' written by Martin Jenkins; illustrated by Hannah Tolson

'Jody's Beans' written by Malachy Doyle; illustrated by Judith Allibone

'A Bean's Life' written by Angela Royston

'A Bean's Life Cycle' written by Mary R Dunn

'The Life Cycle of a Bean' written by Ruth Thomson

'One Little Bean' written by Cecil Kim

'From Bean to Bean Plant' written by Anita Ganeri





## Bean References and Resources

The information in this broad bean pack has been taken from a range of sources. Please see below websites where additional information and images can be found;

[www.bbcgoodfood.com](http://www.bbcgoodfood.com)

[www.rhs.org.uk](http://www.rhs.org.uk)

[www.chilternseeds.co.uk](http://www.chilternseeds.co.uk)

Wikipedia

<https://getgardening.richardjacksonsgarden.co.uk/make-garden-cane-toppers>

There are lots of other resources on:

- [www.twinkl.org.uk](http://www.twinkl.org.uk) including photo packs
- [www.schoolgardening.rhs.org.uk](http://www.schoolgardening.rhs.org.uk)



National Curriculum Science Programme of Study objectives, which can be covered when learning about beans and their life cycle.

## EYFS

Knowledge and Understanding of the World

The world: children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.

## KS1

Y2 – Plants

Pupils should be taught to:

- observe and describe how seeds and bulbs grow into mature plants;
- find out and describe how plants need water, light and a suitable temperature to grow.

## KS2

Y3 – Plants

Pupils should be taught to:

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers;
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.