

# Find out about wheat

Wheat is the most widely cultivated crop in the world. It is an adaptable plant and can be harvested from the borders of the arctic to the equator.

Winter wheat varieties are planted in the autumn while spring varieties are sown in the spring. Both are harvested during late summer.

Soft wheat is produced in areas with mild climates such as the United Kingdom where soft and biscuit varieties are best suited to the growing conditions. Hard wheat is produced in regions of climatic variance, such as the USA, Canada, Eastern Europe, Australia, Argentina and China.

Doves Farm Foods produce a wide range of flours from wheat and other cereal grains.

Find out more about wheat in this leaflet, including how to grow your own miniature crop.

Campaign partners;  
[www.missionnutrition.org.uk](http://www.missionnutrition.org.uk)  
[www.farmgarden.org.uk/bluepeter](http://www.farmgarden.org.uk/bluepeter)



Organic wheat growing at Doves Farm



Bread made in the shape of a sheaf of wheat is often baked to celebrate the end of the harvest.

[www.savethechildren.org.uk](http://www.savethechildren.org.uk)  
[www.continyou.org.uk](http://www.continyou.org.uk)



## How to Grow & Harvest Your Plot of Wheat

Seed supplied by



# Growing Your Miniature Crop of Paragon Wheat

## Preparing the plot

(Now – March 2009)

A 4m<sup>2</sup> plot of land should use all the 100g of seed and produce 2kg of wheat grain when harvested.

Alternative methods and a range of educational activities can be found in the Grains Pack

([www.farmgarden.org.uk/growinggrains](http://www.farmgarden.org.uk/growinggrains))

1. Measure out and fence off a 2m x 2m plot of soil.
2. Dig the soil over in winter, removing any large stones.
3. Leave quite rough, let the frost break up the lumps of soil.
4. In March dig over the soil to remove all of the weeds.
5. Break the soil up into small lumps and rake flat. (There should be no lumps bigger than a golf ball)

## Planting & looking after the crop

(15<sup>th</sup> March – 15<sup>th</sup> April 2009)

1. Make a series of rows 10cm apart and 2-4cm deep.
2. Sow a wheat grain every 2cm in the rows.
3. Lightly rake over the rows to cover the seeds.
4. This should give a planting rate of 20-25g/m<sup>2</sup>.
5. Tie netting or string threaded with pieces of flappy plastic across the plot to deter birds.
6. As the plants emerge and grow, hoe between rows or pull out weeds by hand.
7. If the plot becomes very dry due to lack of rain, water using a spray. (There is no need to water after July)

## Milling wheat

A combine harvester discharges the wheat it has harvested into a tractor and trailer which takes it to a purpose built store for cleaning and storage.

Each crop of wheat will have unique qualities depending on variety, the soil it was grown in and the weather during the growing season. A sample of the grain is now analysed in a laboratory to determine its final suitability for bread making, biscuit manufacture or animal feed etc.

In choosing grain for bread flour, the miller is looking for high protein and good gluten content. So he will blend, or grist, different wheats to ensure consistent protein and gluten quality.

Because UK wheats are naturally low in protein and gluten at Doves Farm Foods we blend in some imported hard wheat, from our organic farmers in Australia and Canada, to ensure consistent breadmaking quality for the consumer.



When the corn was cut by hand it was dried in the field in stooks. Today combine harvester cut and thrash the corn and it is transported to the store.



Today's industrial mills can make many tonnes of flour in a day

## Harvesting wheat

Organic farmers cannot use weed killer, preferring tall varieties that can smother low growing weeds. Depending on the variety, the crop may grow up to 1 metre in height.

It is said that Egyptian Pharaohs cut the first sheaf of wheat, with a golden sickle, as a sign to their people that harvesting should commence.

Today the farmer will inspect his crop regularly to determine when it is ready to send in the combine harvester. He will be looking to see that the grains are fully ripe and dry. In the UK we usually harvest during August.

A combine harvester cuts the ripe ear from the stalk and thrashes it to release individual grains of wheat. On some farms the straw is used for animal feed (called forage) or animal bedding, or chopped and incorporated back into the ground, enriching soil structure for future crops.



The farmer visits the fields regularly to inspect the growing crop which changes from green to a golden colour as it ripens.



Eventually the crop is fully ripe and the farmer decides it is ready to be harvested.

## Harvesting Your Miniature Crop of Paragon Wheat

### Harvesting

(August – September 2009)

1. By late August or early September the plant will be dry and the grain will be hard.
2. Hold the plant and use a large serrated bread knife, scissors or hedging shears cut the stalks 5cm from the ground.
3. Gather the harvested wheat into bundles and tie with string.
4. Stand the bundles of wheat leaning against each other with the wheat heads at the top. (If dry or under cover the wheat can remain like this for some weeks) Alternatively take indoors to complete the drying and reduce the risk of birds eating some of the seeds.

### Thrashing & Winnowing The Grain

(September – November 2009)

1. Cover an area of ground with a large 3m<sup>2</sup> plastic sheet.
2. Hold a bundle of wheat by the base and hit the heads onto the plastic sheet. Grain will be thrashed out with each stroke.
3. Rub any un-thrashed ears of wheat in your hand to release the grain.
4. Gather up the grain and chaff into a container.
5. On a breezy day spread your large plastic sheet on the ground outside.
6. Slowly pour the grain and chaff from head height into another container standing on the sheet.
7. The grain should go into the container while the breeze should blow away the chaff.

## Early man harvested wheat

The history and origins of wheat as a food lie in the wild grass seeds which early man collected to feed himself and his animals.

Wheat plants, developed from these grass seeds, have been purposefully cultivated by man starting in the Middle East some 8,500 years ago.

Evidence of ancient wheat has been unearthed at most of the world's major archeological sites. This tells us that man has cultivated, harvested and eaten wheat over many centuries.

Numerous archeological sites and ancient writings reveal the existence of circular underground storage pits which were used for conserving the harvested grains. These would enable communities to keep their food supply safe from animals, the weather and spoilage, from one harvest until the next.



A field of wheat ready for harvesting at the end of Summer.

## Growing wheat

Different wheat varieties are grown as food for man or animals in most parts of the world. The latin plant name for wheat is *Triticum Aestivum*.

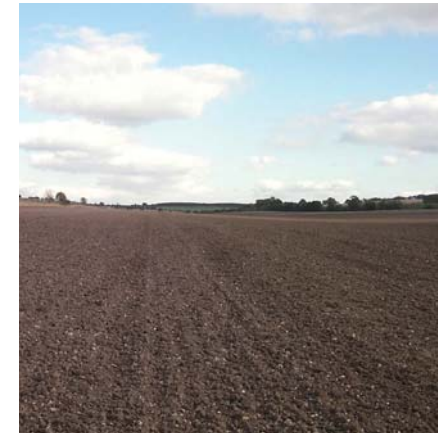
A farmer will select specific wheat varieties to grow depending on the climate, location and intended end use of the grain which could be for bread, cakes, pasta, beer or animal feed.

Organic farming standards detail a method of food production, which is sympathetic to the environment rather than dominating it. Crop rotations are planned to develop soil fertility naturally while controlling pests and diseases.

On a day to day basis the organic cereal farmer will spend considerable time in his tractor carrying out field work operations such as ploughing, cultivating, rolling or harrowing the soil. Artificial fertiliser, agro chemicals and GM material are not permitted in organic systems.



As part of an organic rotation clover is planted as it will enrich the soil with natural nitrogen.



The fields have been ploughed in March in readiness for planting spring wheat.