

Stepping Forward: Agriculture

Field to Fork - Flour

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College



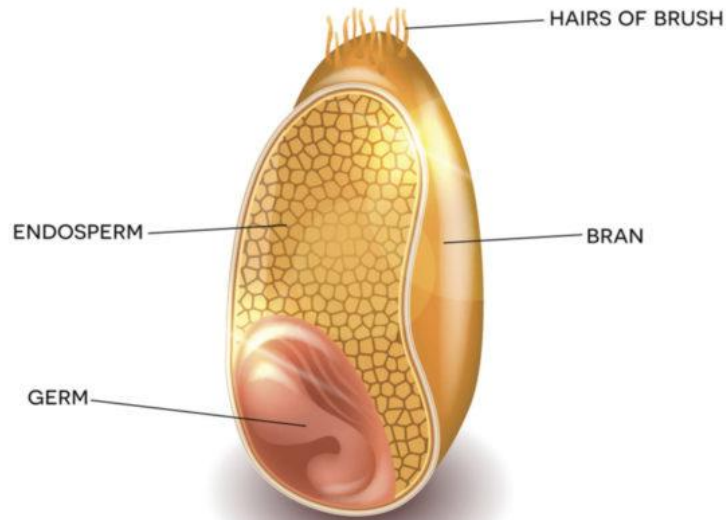
Supply Chain

- When the Covid 19 pandemic started there was massive panic buying.
 - Supermarkets had to react quickly to keep their shops stocked.
 - This meant ensuring their 'supply chain' was very efficient
 - The 'supply chain' means all the steps in getting something from the farm to the fork.
 - One product that has been in short supply is flour.
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- Why do you think that is?

Anatomy of the grain

- Like most natural plants and fruits, grains, including wheat grains, consist of three main components.
- Firstly there's the protective outer layer – the skin – which in wheat is called bran.
- Then there's the seed from which the new plant grows, in the wheat seed it is called wheat germ.
- Finally, there's the main food source – in the wheat seed it's the starchy endosperm.
- The endosperm is essentially just white flour sitting inside a wheat seed waiting to be removed.

ANATOMY OF A GRAIN



History of flour

- Grains have been ground to make flour since the Roman times – from 6000BC onwards.
- Grains were toasted to remove the chaff from the wheat and then smashed between two stones.
- The resultant flour was coarse and grainy.
- Evidence of sifting has been found so we know that even then, people were making fine, soft flour.

Modern flour milling

- It is this the millers' job to separate the wheat seed into its component parts: bran, wheat germ and pure white flour.
- In the UK and EU it is illegal to bleach flour, so the whiteness you see is totally natural.
- Flour is bleached in other parts of the world, so you might see recipes that call for “unbleached” flour.

Modern flour milling

- Modern millers do not just grind grain the way the Romans did.
- This doesn't allow for much of the white flour to be separated from the bran and germ.
- Instead a system of machines are used to open the individual grains, and then scrape and separate and grind each component.
- This continues until all the components are finely ground and completely separated.
- The wheat could go through the machines up to 16 times.

Composition of flour

- White flour is made using just the endosperm, which is about 75% of the grain.
- Wholemeal or wholegrain flour, as the name suggests, uses all of the grain.
- Brown flour uses around 85% of the grain.

How is flour made

- Take a look at this video to see how the wheat we grow on our farms turns into the flour used to make the bread everyone eats every day.
- Click <https://fabflour.co.uk/fab-flour/how-flour-is-milled/>

CHALLENGE!

- What is the main measure used to determine if wheat is suitable for flour milling?

- Can you find a variety of wheat that is specifically grown for flour?