CEREALS

- OATS
- RICE
- WHEAT
- **BARLEY**
- QUINOA

NUTRITIONAL CONTENT

PROTFIN

B VITAMINS

VITAMIN E

FIBRE

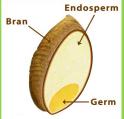
FAT

STARCHY CARBOHYDRATE

MAIZE

WHAT ARE CEREALS?

CEREALS ARE GRASSES THAT HAVE BEEN CULTIVATED FOR THEIR GRAIN



Endosperm ANATOMY OF A GRAIN

- ENDOSPERM—CONTAINS STARCH AND PROTEIN
- BRAN—CONTAINS THE FIBRE AND B VITAMINS
- GERM- CONTAINS VITAMINS B AND E AND ALSO FAT

PASTA TYPES

Penne Ravioli

Tagliatelle

Rigatoni

Fusilli

Orzo

Farfalle

Tortellini .

Linguine



EFFECTS OF HEAT ON WHEAT FLOUR

COAGULATION: heat causes the protein in the grain to coagulate and set

GELATINISATION: when mixed with water and heat added the starch swells and will help a sauce thicken

DEXTRINISATION: when dry heat is added the starch will brown and crisp.



PASTA

Available in fresh or dried varieties. Fresh pasta is made with Egg and has a short shelf life. Dried pasta is made with water and has a long shelf life

RICE

Rice is a popular staple food. It grows in warm and humid climates.

It comes in either short grain or long grain varieties.

SHORT GRAIN:

- Arborio: used for risotto
- Sushi: used to make sushi in Japan

LONG GRAIN:

- Basmati: used to accompany curry
- Long grain: used as an accompaniment to dishes such as Chilli
- Brown: Used as an alternative to the above due to its higher nutritional value

RICE & FOOD POISONING

Rice contains a bacteria that called BACILLUS CEREUS. It produces a toxin that cannot be killed with heat. Especially dangerous in rice that has not been cooled properly and then re-heated.

PRIMARY AND SECONDARY PROCESSING OF CEREALS

- **PRIMARY** The processing of the grain in to flour (E.G. Plain flour)
- SECONDARY-The processing of the flour in to a product (E.G. Using the flour to make pastry)





TYPES OF FLOUR

- Plain
- Strong bread
- Self raising
- '00' pasta flour
- Brown
- Wholegrain

BREAD: ingredients

- Strong bread flour—high in protein (Gluten) which traps the C02 produced by the yeast. Kneading the bread dough will strengthen the gluten to help produce a good structure
- Yeast—activates and produces C02 which makes the bread rise
- Warm Water—activates the yeast and binds the ingredients together.



OATS

Grown in cold climates. Very popular in the UK especially Scotland.

Used to produce items such as: Flapjacks, Porridge, breakfast cereals.



OATS & CHOLESTEROL

Oats contain a protein called **BETA-GLUTAN** and it is know to help lower blood cholesterol

MAIZE/CORN

Popular in American and south American cuisine.

It is used to produce many products such as:

- Popcorn
- **Tortillas**
- Cornflour
- Cornflakes



RYE

Popular in Northern Europe. Used to make Pumpernickel, Rve bread and Rvvita

BARLEY

Used to produce pearl barley, barley flour, barley drinks and in alcohol production