

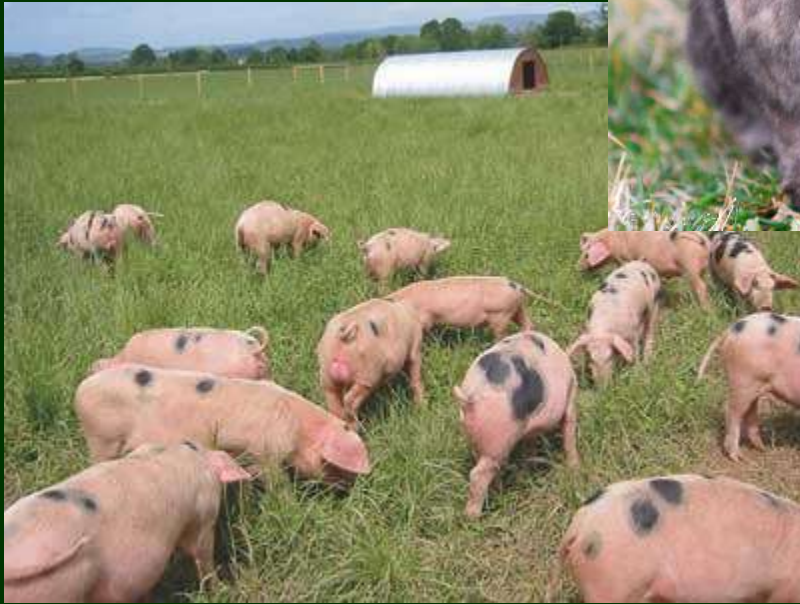
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# Meat

Flesh of animals, birds  
and their edible internal  
organs







# AVERAGE COMPOSITION

Protein	Fat	Carbs	Vitamin	Minerals	Water
12-20%	5-25%	0%	B	Iron Phos.	55-70%



# Nutritive Value of Meat

- ❑ Protein, HBV, growth and repair.
  - ❑ Fat, saturated, energy, amount varies with cut and animal
  - ❑ Carbs, none, serve with carbs like bread, rice, pasta
  - ❑ Vitamin B, for release of energy, healthy nervous system
  - ❑ Iron for the blood and phosphorus for bones/teeth.
  - ❑ Water varies the more fat the less water.
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# Meat lacks:

- ☐ Carbohydrates
- ☐ Calcium
- ☐ C vitamin

Serve with

- ☐ Pasta, rice, potato, bread
  - ☐ Dairy products
  - ☐ Salads or fruit
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# Value of meat in the diet

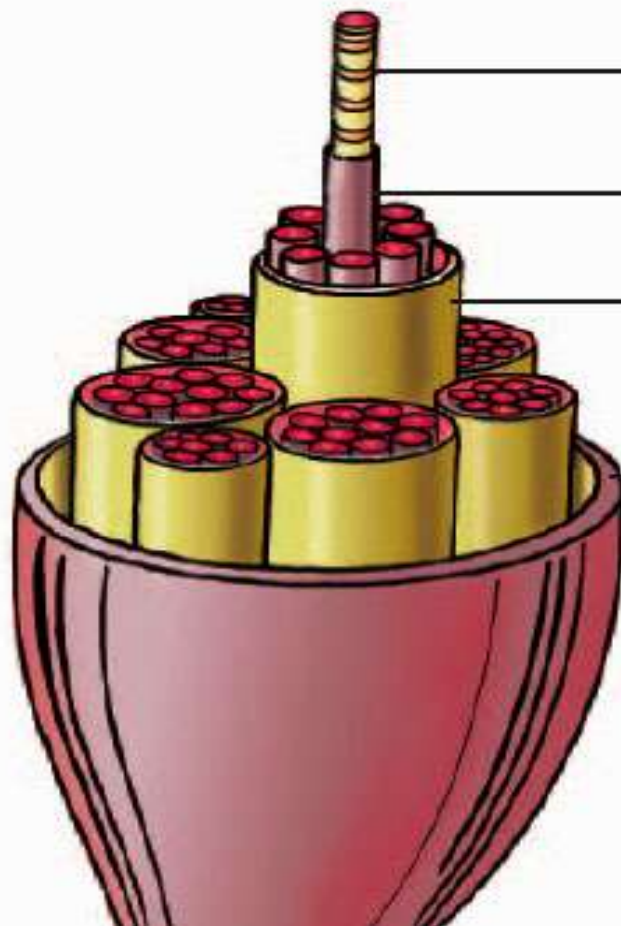
- ❑ Important for protein for growing people
  - ❑ Best possible source of iron
  - ❑ Many types and cuts for a variety of dishes
  - ❑ Some cuts are cheap but nutritious e.g mince, stewing beef, shin beef, lamb shanks.
  - ❑ Red meat is high cholesterol and saturated fat not suitable for people with heart disease.
  - ❑ Meat is not essential it can be replaced by fish, eggs, cheese, lentils and beans, nuts.
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# STRUCTURE OF MEAT

- ❑ Meat is the muscle of the animal
  - ❑ Muscle is made of bundles of fibres
  - ❑ The fibres are like hollow tubes and inside there is water with vitamins, minerals, protein and extractives dissolved in it.
  - ❑ The fibres are held together in bunches by tough stuff called connective tissue.
  - ❑ There are fat cell scattered through the connective tissue
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# Structure of Meat



## Connective tissue hierarchy

Muscle cell or muscle fibre

Endomysium: connective tissue around a muscle cell

Perimysium: connective tissue around a bundle of muscle fibres

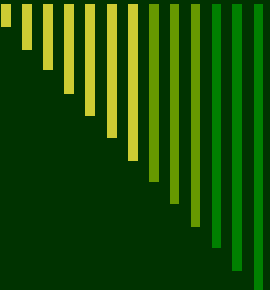
Epimysium: connective tissue around a muscle





# Tough v's Tender

- ❑ In tender meat the fibres are shorter and finer and there is less connective tissue.
  - ❑ In tough meat the fibres are longer and coarser and there is more connective tissue.
  - ❑ Tough meat needs moist slow cooking to make it tender e.g. stewing.
  - ❑ Tender meat can be cooked by frying, grilling or roasting.
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# Causes of toughness

Age	The older the animal the tougher the meat
Activity	Meat from the more active part of an animal is tougher than from a less active part
Incorrect Hanging	Meat must be hung for a certain length of time or it will go tough.
Incorrect cooking method	The method must suit the type of meat e.g. slow moist method for tough meat



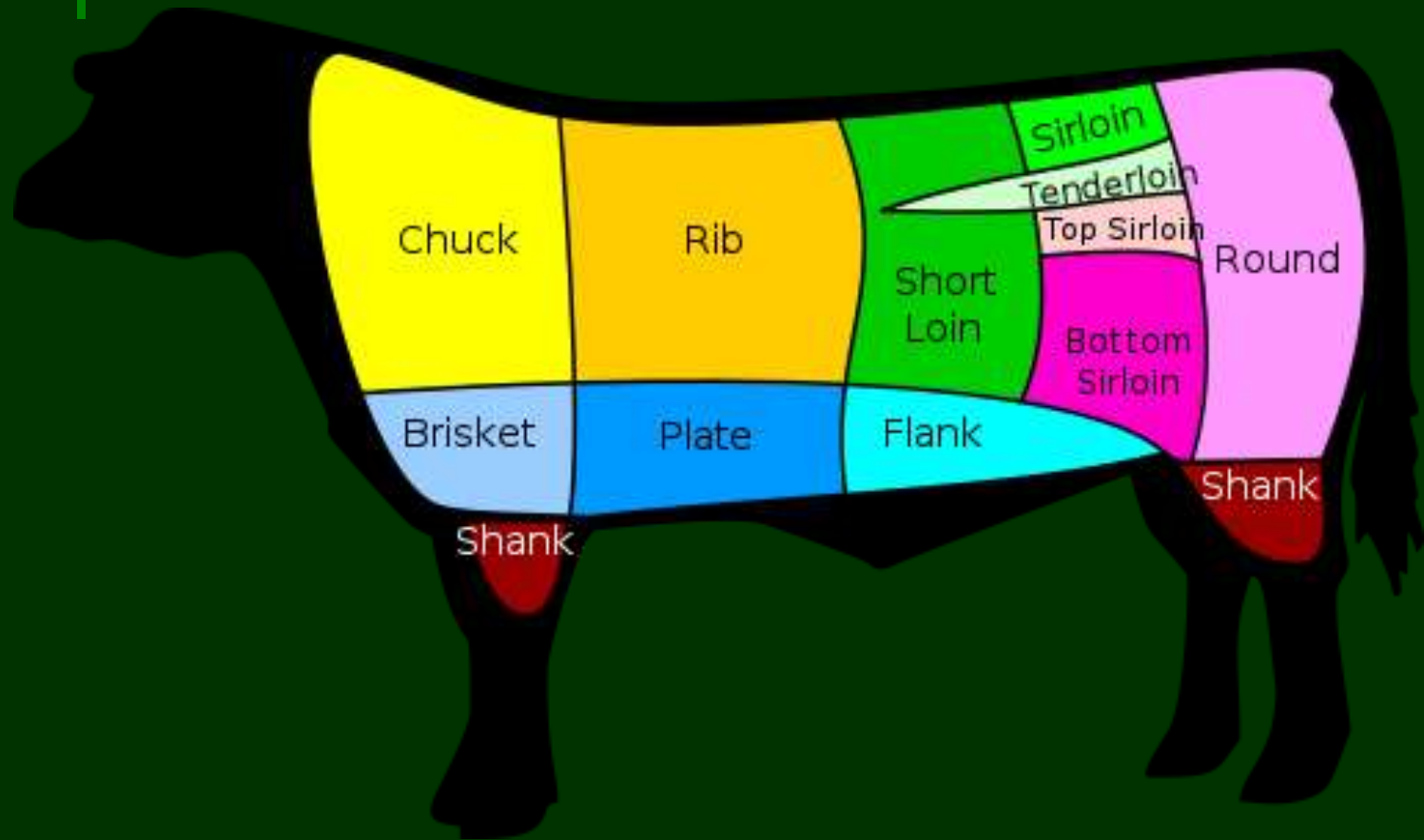
# Tenderising meat

- ❑ Correct hanging, enzymes tenderise meat
  - ❑ Mincing, breaks up fibres
  - ❑ Beating with meat hammer.
  - ❑ Marinating, soaking in oil, acid and flavouring.
  - ❑ Chemical tenderiser e.g. papain.
  - ❑ Slow moist cooking e.g. stewing
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# Tenderising meat

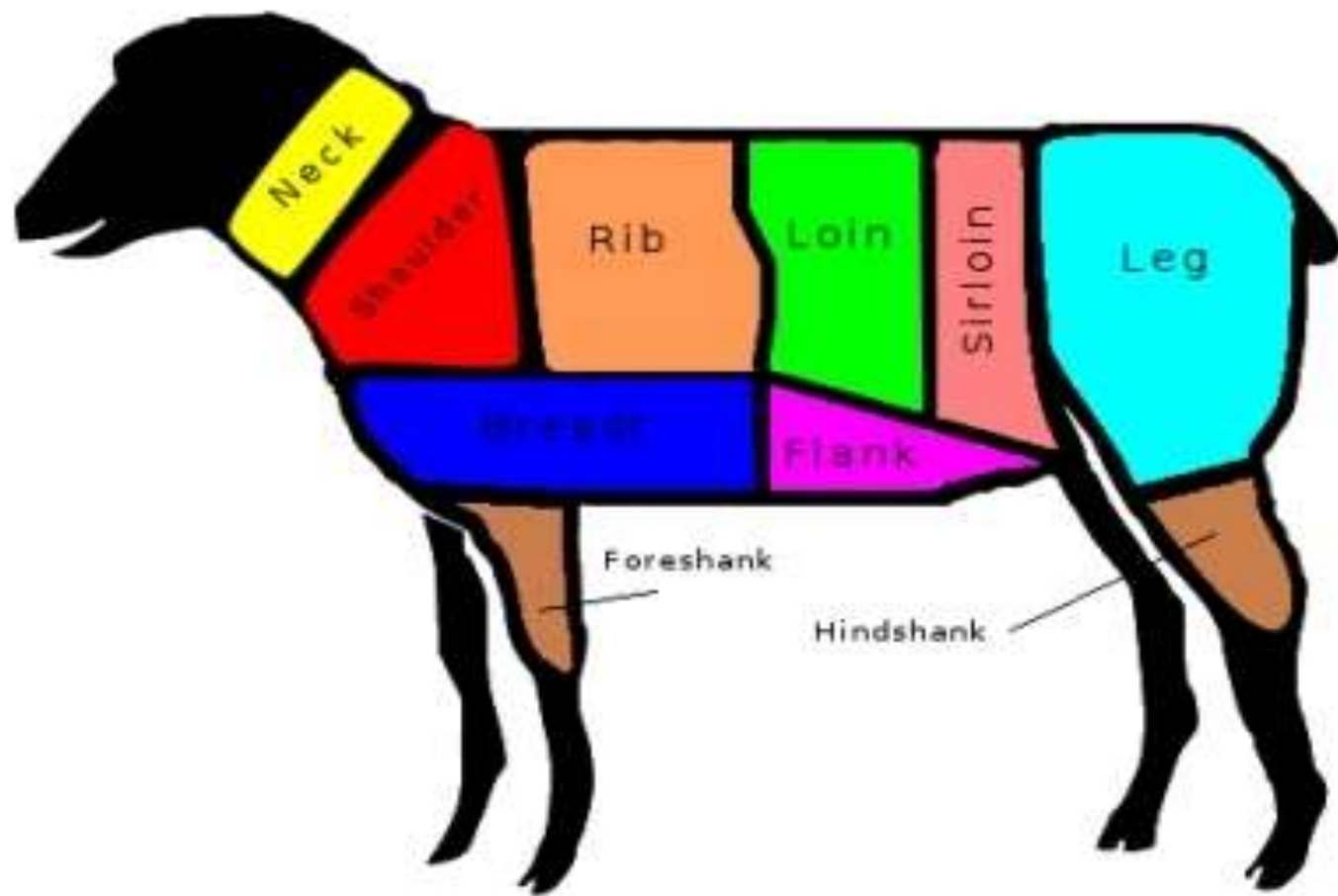


# Cuts of Beef

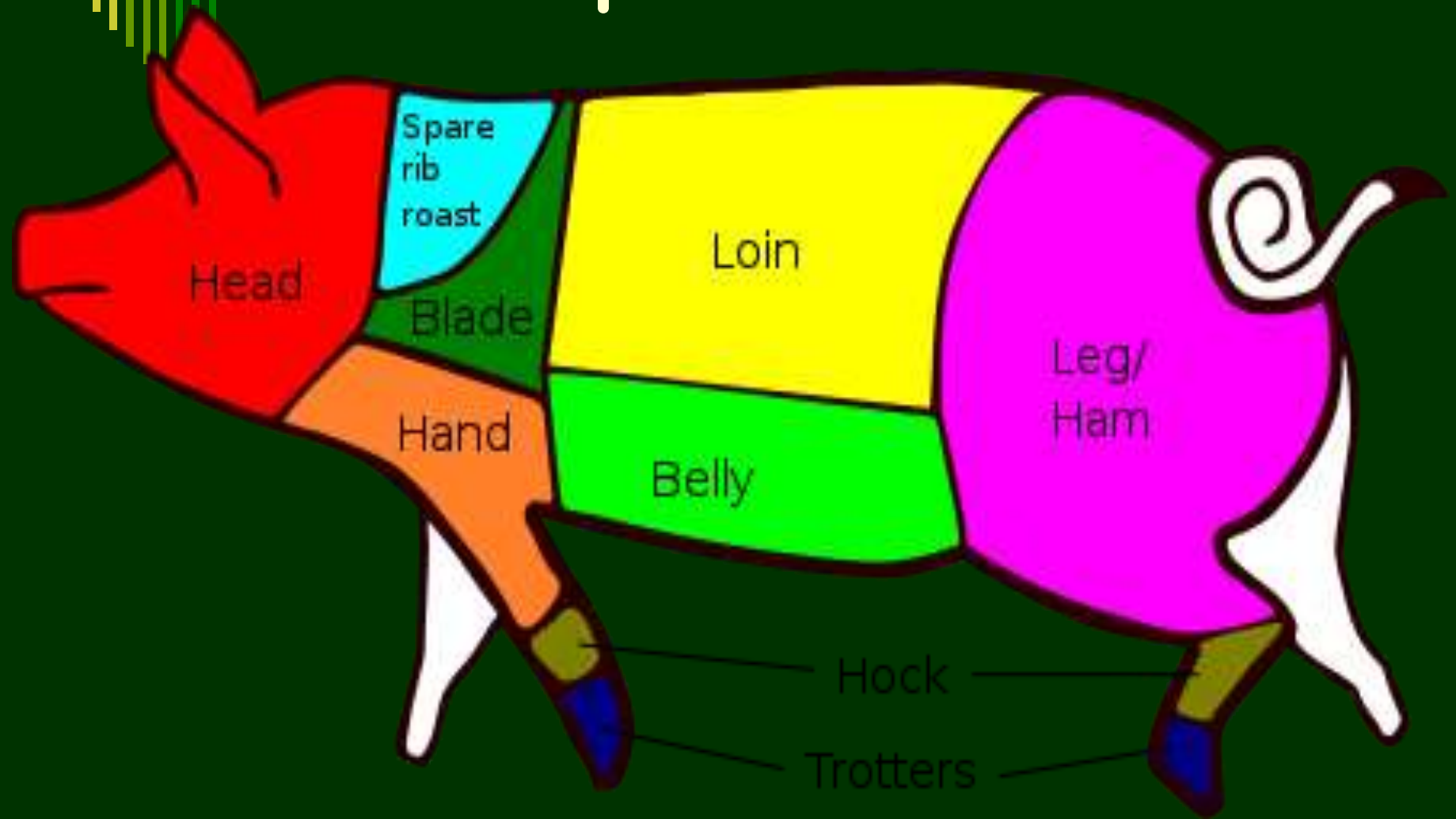




# Cuts of Lamb



# Cuts of pork





# Buying Meat

- ❑ Buy meat from clean reliable shop with traceable meat.
  - ❑ Cut should suit cooking method
  - ❑ Avoid too much fat, bone, gristle.
  - ❑ Cheaper cuts just as nutritious as expensive cuts.
  - ❑ Check date stamp on packaged meat
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# Quality Assured Label



- Look out for Quality Assured label on Irish meat



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# Storing Meat

- ❑ Remove packaging
  - ❑ Put on clean plate and cover
  - ❑ Refrigerate as soon as possible
  - ❑ Use within 2 days
  - ❑ Store raw below cooked meat
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# Cooking Meat

## Reasons for:

- ☐ Destroy bacteria
- ☐ Improve flavour
- ☐ Make it more tender

## Preparing meat for cooking:

- ☐ If frozen, defrost slowly in fridge.
- ☐ Remove excess fat and gristle, wipe with damp kitchen paper.
- ☐ Weigh meat and calculate the cooking time



# Effects of cooking on meat

- ❑ Protein coagulates, meat fibres squeeze out juices and meat shrinks
  - ❑ Fat Melts
  - ❑ Some vitamin B and amino acids destroyed
  - ❑ Colour changes red to brown
  - ❑ Bacteria destroyed
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# Accompaniments

Meat	Accompaniments
Roast Pork	Apple sauce
Roast Duck	Orange sauce
Roast Beef	Horseradish, Yorkshire pudding
Roast Lamb	Mint Sauce
Turkey	Cranberry sauce



# Offal

- ❑ Edible internal organs
- ❑ Liver, kidney, heart, brain, tripe, sweetbread

## Dishes:

- ❑ Baked stuffed liver and bacon.
  - ❑ Roast stuffed heart
  - ❑ Beefsteak and kidney pie
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# Meat Products

- ❑ Sausages, black & white pudding, hamburger.
  - ❑ Processed cooked meats e.g. salami.
  - ❑ Tinned foods, ravioli, beefsteak & kidney pie, corned beef.
  - ❑ Fats: suet, lard
  - ❑ Gelatine: used to set dishes
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# Meat Alternatives and Substitutes

## Textured Vegetable Protein (TVP)

- ☐ Made from soya beans
  - ☐ Cheaper to produce than meat
  - ☐ Less land needed
  - ☐ Grows in any climate
  - ☐ Contains fibre
  - ☐ No saturated fat.
  - ☐ Useful for vegetarians
  - ☐ Other soya products: milk, quark, tofu
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T.V.P.





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# Meat Alternatives & Substitutes

## Quorn

- ❑ Protein food made from micro-organisms e.g. fungi
  - ❑ Cheap to produce
  - ❑ Sold frozen in chunks or like mince and in ready meals like burgers
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# Quorn

