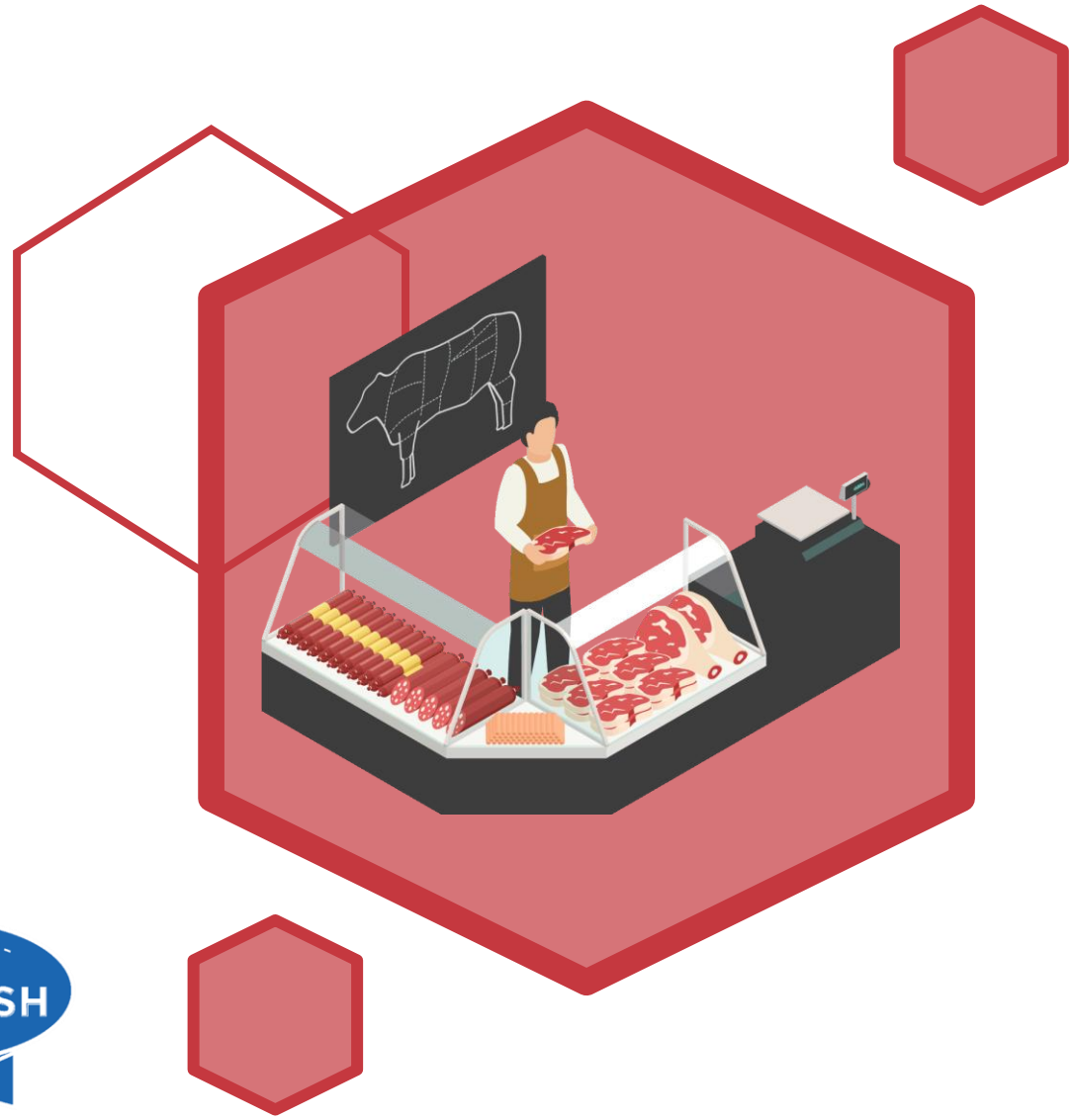
LESSON 3

Food Production, Packaging & Labelling



Learning Intentions

By the end of this presentation, we will learn about:

- The different red meat products produced from **pigs, cattle** and **sheep**
- How red meat can be **traced from farm to consumer**
- How the red meat industry contributes to **food security**
- How red meat is kept **safe** throughout the **food chain**
- How red meat is **processed, packaged** and **labelled**



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Red Meat Products

- Sheep provide meat called either **lamb** (younger sheep) or **mutton** (older sheep).
- Cattle provide **beef**
- The main product that comes from pigs is **pork.**

Bones – gelatine, collagen, bone meal

Wool & hair – clothing, carpets (useful properties including natural resistance to flame!) insulation

Hides & skins – leather

Fat – tallow, soap, candles

Horns & hooves – fertiliser

Organs & offal – food, pet food

Blood – fertiliser, animal feed

Other parts – pet food, cosmetics, industrial products









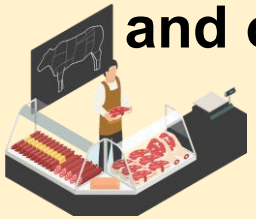
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Abattoirs – Safe & Humane

Cattle, sheep and pigs are slaughtered in **approved abattoirs**, where food safety, hygiene and animal welfare requirements must be followed.



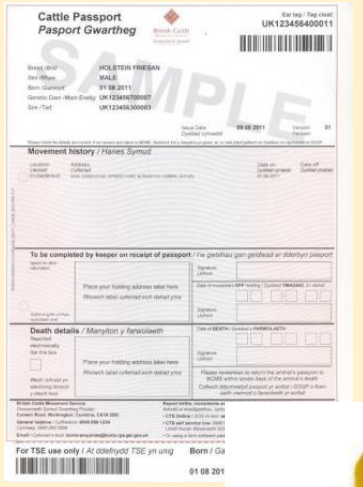
- **Animals are inspected** before slaughter and **carcases are inspected** afterwards.
- **Trained staff** handle and stun animals using approved methods.
- **CCTV** is required in Scottish slaughterhouses where live animals are present.
- After slaughter, carcases are processed into **meat cuts and other products**, including offal.



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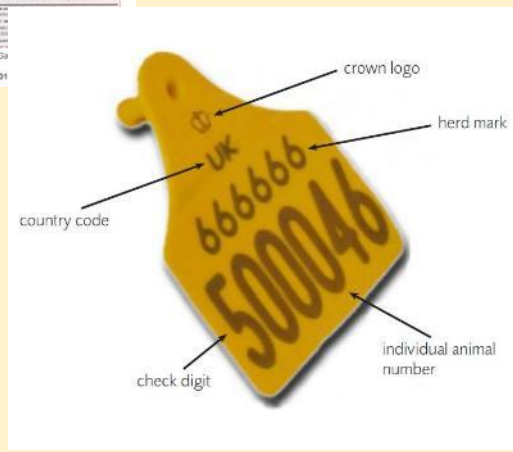
What does traceability mean?

Traceability is the ability to trace the **origin of food** and the **journey food** has made.



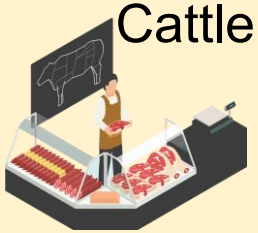
Cattle passport

Cattle tag



Why do you think it's important?

- In red meat production, traceability (from farm to fork) is important when considering the **safe** production of our food.
- If there is a problem with any of the meat produced, **the source can be easily traced and the issue resolved.**
- All cattle, sheep and pigs in the UK must have ear tags. Cattle also have passports to **monitor their movements.**



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Food Processing

Foods are processed for several reasons:

- ✓ to extend the shelf life, e.g. ham and bacon (this is why they are classed as **processed meat** because they have been **processed** to change their properties.)
- ✓ **convenience,** e.g. ready-made lamb curry
- ✓ **health,** e.g. reduced fat mince
- ✓ to provide more **variety and choice**, e.g. pork and apple sausages
- ✓ to provide additional **nutritional** benefits, e.g. fortified breakfast cereals
- ✓ making food **safe** to eat by killing harmful bacteria, e.g. blast freezing
- ✓ making foods become available that are out of **season**, e.g. freezing
- ✓ making foods easier to prepare, this is important for people who live busy lifestyles and disabilities



Processing can be as simple as freezing food, but it can also be complex, e.g. formulating a frozen meal with the right balance of nutrients and ingredients.



Types of Food Processing

Primary Food Processing:

Foods are processed after harvest or slaughter.

Example: cattle carcass is butchered to produce sirloin steaks.



Secondary Food Processing:

Food is made into edible products.

Example: beef is diced and is combined with other ingredients to be sold as a steak pie.



Red Meat Food Security

Food security means having reliable access to enough **safe, nutritious** and **affordable food**.

Food security can be affected by many factors, including:

Crop disease	Population growth
Human pandemic	Climate change
Soil erosion	International trade



Food Safety - Farm to Fork

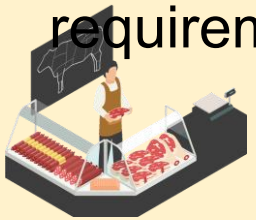
Food safety means handling, preparing and storing food to reduce the risk of foodborne illness. Food can become unsafe through **bacteria, viruses, parasites** or **chemicals**. Food safety is important at **every stage**:

Farm - Animal health, welfare and medicines are managed.

Feed - Animal feed is monitored for safety.

Abattoir - Animals and carcases are inspected. **Hygiene procedures** are followed.

Processors & Butchers - Food safety and hygiene requirements must be followed



Home

Consumers also have a role to:

- Prevent **cross-contamination**
- **Store** meat correctly
- Follow **use-by dates**
- **Cook** safely

Where should raw meat be stored in the fridge? Is this the same for cooked meat, such as sliced ham?

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Packaging – what's its purpose?



- **Protect** meat from damage and contamination
- Keep it **fresh** and extend shelf life
- Help maintain **food safety** and **quality**
- Make meat easier to **store** and **transport**
- Provide a surface for **labelling** and **traceability information**

The majority of red meat products are sold in **plastic** packaging. However, research is underway to develop alternative packaging materials, with a focus on safety and how packaging degrades in the environment.

Pros of plastic	Cons of plastic
• Creates a barrier to protect the meat. • Can extend the shelf life and reduce food waste. • Lightweight and easy to store and transport.	• Environmental impacts. • Waste can enter the environment if not managed properly • Some meat packaging is difficult or impossible to recycle.



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Food Labelling - Mandatory or Voluntary?

Food labels provide information to help consumers make **informed choices.**

Some information is required **by law.** This is called **mandatory information.**

What information can you find on a meat label?



- Name of the food
- Use-by date
- List of ingredients & allergens
- Net quantity (weight)
- Nutrition information
- Storage & cooking instructions
- Country of origin, where required
- Business name and address
- Lot number

Voluntary - Logos

Some logos on food labels provide additional information about a product. There are several logos that can be found on red meat products. By finding out what the logos mean consumers can quickly get useful information about the product which may affect their buying decision.

Comes from animals **born, reared and processed in Scotland.** Covered by **QMS whole-chain assurance. UK GI** protects the name and origin of the product.

Shows the product meets **organic production standards.** Organic food must be **certified by an approved control body.**



BORN & REARED SCOTCH BEEF

GEOGRAPHIC ORIGIN UK PROTECTED

BORN & REARED SCOTCH LAMB

BORN & REARED PRIME SCOTTISH PORK

SOIL ASSOCIATION ORGANIC STANDARD

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List some factors that may influence your food choice when buying red meat.

When buying red meat, you might consider:

- **Price**
- **Quality & freshness**
- **Health & diet**
- **Origin**
- **Food safety**
- **Environmental impact**
- **Packaging**
- **Labels & logos**



Test your knowledge quiz

It’s time to put learning to the test with our simple quiz.

It will cover the content of this lesson, the main learning takeaways and provide opportunities for class discussion.



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1.What do these logos mean?

A - The food is organic

B - The meat has been sustainably born, reared and processed in Scotland

C - The meat has been sustainably born, reared and processed in England

D - The food is certified gluten free



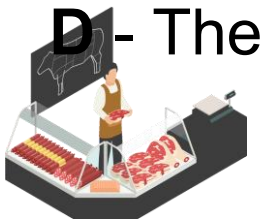
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2. Traceability is the ability to trace the journey food has made and its source. Why is it important? (tick all that apply)

A - It ensures the safe production of food

B - Meat can be traced back to source ensuring it's a genuine product

C - It allows farmers to take their livestock with them on holiday

D - If there is a problem with a product the source of the problem can be quickly traced





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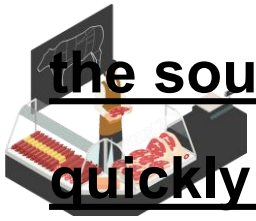
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3. By law, which of the following details must be included on a food label? (Select the 4 correct answers)

A - The name of the food

B - The best before date or use by date

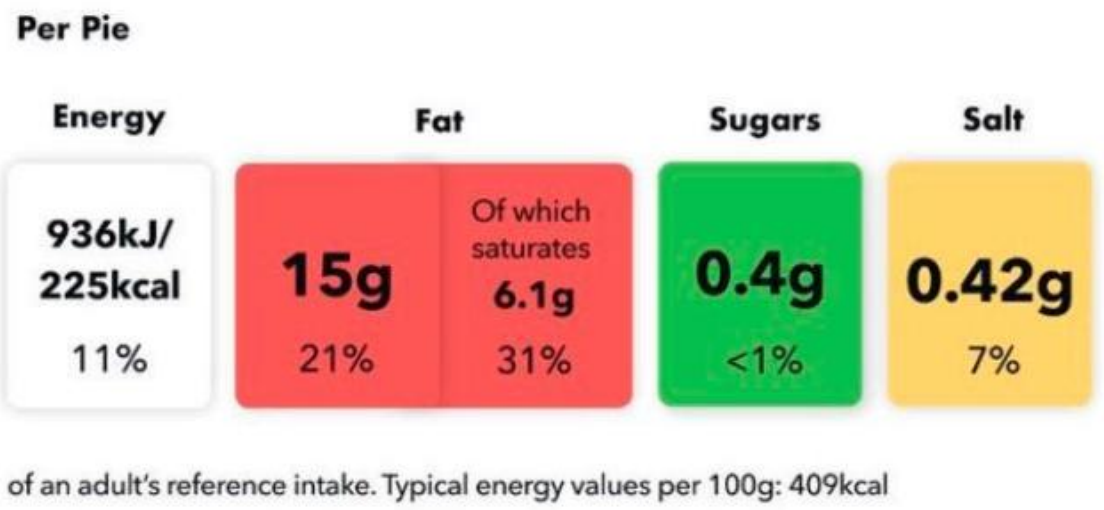
C - traffic light nutrition information

D - Ingredients list

E - farmers name

F - Allergens





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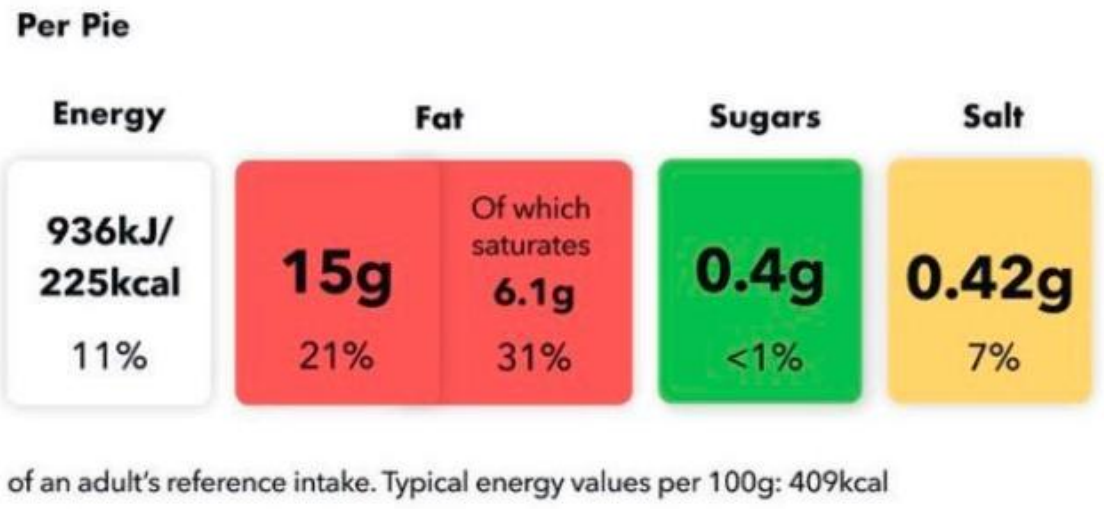
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4. Why are meat products processed? (tick all that apply)

A - To extend the shelf life

B - To increase variety and improve convenience to the consumer

C - To improve the health of the product such as reducing fat

D - To provide additional nutritional benefits





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4. Why are meat products processed? (tick all that apply)

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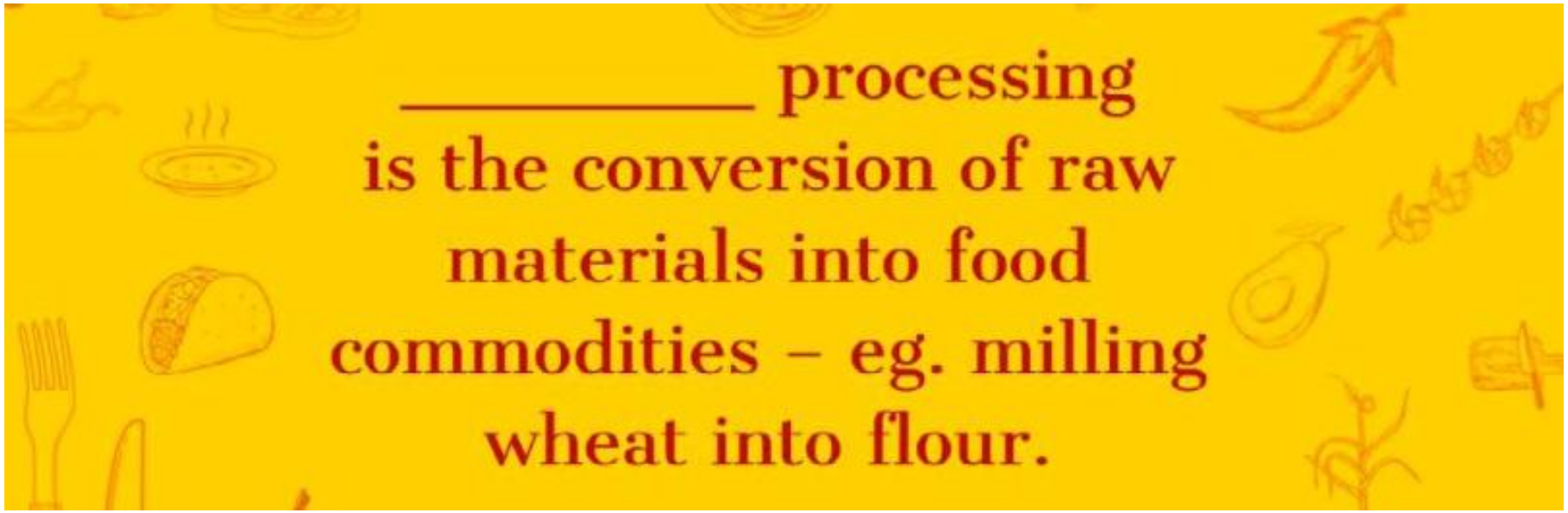


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5. Which stage of food processing does the statement describe?

A - Primary Processing

B - Secondary Processing

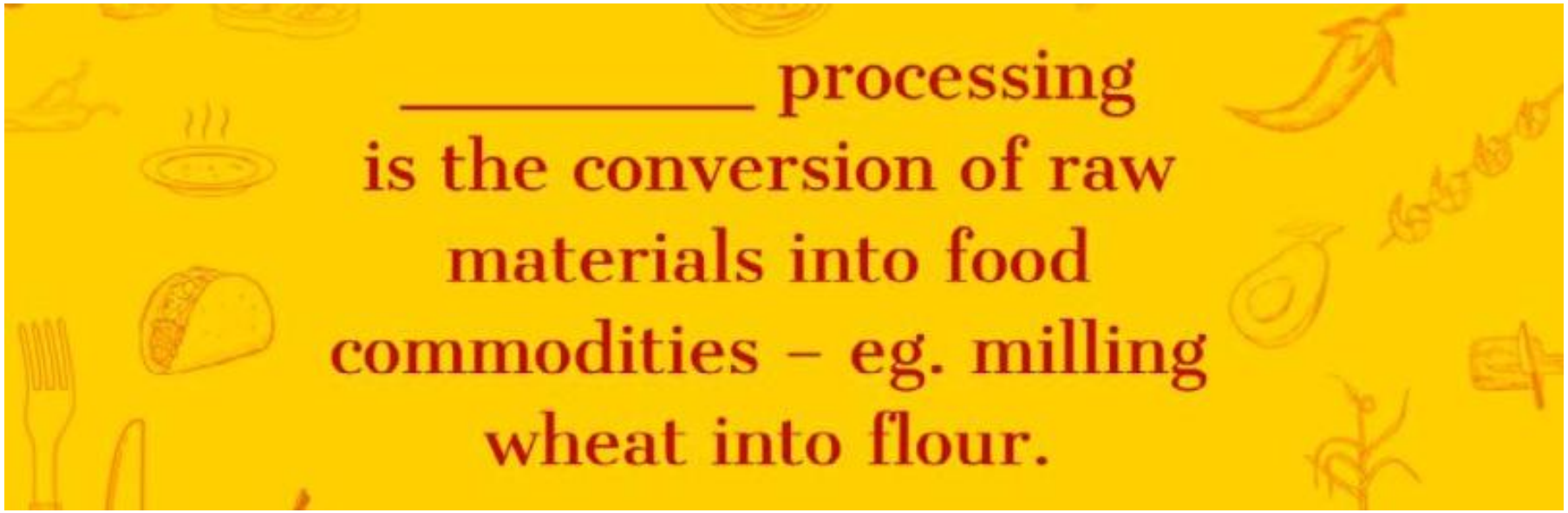




5. Which stage of food processing does the statement describe?

A - Primary Processing

B - Secondary Processing





6. Why should consumers consider the country of origin that meat is produced in? (select all that apply)

A - Not all countries have animal welfare standards that are as high as the UK

B - They shouldn't worry about it – all meat is produced equally

C - The sustainability credentials are not always the same (Scotland's climate & landscape allows it to grow livestock naturally – this is not the same globally)

D - Traceability & farm assurance standards in the UK are some of the best in the world, not all other countries rate so highly.





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7. Animals go to abattoirs to ensure humane slaughter is carried out. There is always a vet present to ensure the highest welfare of the animals and that no injured sick animals enter the food chain.

A - True

B - False





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A - True

B - False





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Key Points

- **Red meat products** – cattle, sheep and pigs provide a range of meat and other products.
- **Traceability** – red meat can be tracked through the food chain from **farm to consumer**.
- **Food processing** – meat can be processed into different **cuts and products**.
- **Food security & safety** – red meat is part of the wider food system and food safety is important **at every stage**.
- **Packaging & labelling** – these help **protect food and provide information** to consumers.



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Success Criteria

- ❑ I can identify different products made from beef, lamb and pork.
- ❑ I can explain what **traceability** means and why it is important.
- ❑ I can describe some ways red meat safety is maintained from farm to consumer.
- ❑ I can explain how packaging and labelling provide information to consumers.
- ❑ I can identify different types of food processing used for red meat.



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- MAKE IT -
SCOTCH


- BORN & REARED -
SCOTCH
BEEF
GEOGRAPHIC
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