



national science week 2021

National Science Week 2021, Rockhampton Beef Industry, Years 5-6

Overview

Students to compare different cuts of beef with particular interest in grain and grass fed beef cuts and have the opportunity to taste

Resources

Handout provided for each student; pieces of meat for cooking and tasting including as suggested at least one cut of identified grass fed beef, and one cut of identified grain fed beef; electric frying pan; oil; baking paper; tongs; knife; toothpicks and disposable plates for serving.

Learning intentions

- (ACSSU043) "Living things have structural features and adaptations that help them to survive in their environment"
- (ACSHE081) (ACSHE098) "Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions"
- (ACSHE083) (ACSHE100) Scientific knowledge is used to solve problems and inform personal and community decisions
- (AC SIS213) (AC SIS232) With guidance, pose clarifying questions and make predictions about scientific investigations

Success criteria

For students to compare grain and grass fed beef cuts observing meat colour, fat colour and marbling in line with MSA grading, and have the opportunity to taste test, observe and discuss key differences whilst considering animal habitat and environment across Australia.

Introduction

Lean red meat plays an important role in a healthy, balanced diet. Beef is naturally protein rich and provides a wide array of other nutrients including iron, zinc and B12. These are important for our overall health, brain development and a healthy immune system. Beef production in Australia is an important sector to our agriculture industry with cattle grazing in every state and territory. But Queensland takes the prize and has around 50% of our national herd! There are many breeds of cattle so farmers can select the best breed to thrive on their farm and produce the most delicious beef. The environmental conditions and natural habitat of a farm may determine which breed is most suitable, for example, bos indicus cattle breeds (or humped cattle!), such as Brahman, are more suited to hotter, more tropical climates.



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Lesson steps

- Provide each student with a copy of the handout and a pen/pencil.
- Get students to complete the 'Judge that beef' table using the scoring charts on the reverse page. The scoring charts are MSA grading tools. You may like to discuss further MSA grading (see additional resource) to showcase how science has helped develop consistent delicious beef for consumers.
- Cook each meat sample. Allow to rest.
- Cut into bite-sized tasting samples for each student. Offer students the opportunity to taste test.
- Get students to complete the 'Taste that steak' table. Discuss the tenderness, appearance and taste.

Conclusion



Discuss with students differences in their predictions to their tasting results.

Discuss with students the importance of protein in our diets and using varied sources of protein.

Discuss with students the different environments cattle are raised in. [See additional resources](#)

Additional Resources

Information and guidance on including red meat in a healthy diet:

www.mlahealthymeals.com.au

Background on MSA grading helping to deliver delicious beef on the plate:

www.youtube.com/watch?v=1-slgNKnCZs