Cattle Breeds and Market Specification Worksheets
courtesy of Graham Wilson, Mudgee High School

1. Cattle Breed Types – Questions

Download the Primefact #623: Beef Cattle Types at


From the article, answer the following questions:

1. What important factors should be considered before choosing a breed or breed type for your property?

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2. Outline the special features of:

a. British Breed Cattle

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b. European Breed Cattle

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c. Bos indicus (Zebu) Breed Cattle

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3. Define and give examples of a composite breed.

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2. Tropical Cattle – Questions

Download the document at: http://www.fao.org/docrep/009/t0095e/T0095E04.htm

From page 1, summarise the 3 paragraphs that outline why Zebu cattle are well adapted to tropical environments

3. Market Specifications for Beef – Questions


1. Define the term ‘Store’ when describing cattle

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2. Explain why some producers will sell store cattle rather than growing them to feedlot or slaughter specifications.

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3. Complete the following table that compares supermarket and local butcher specifications:

<table>
<thead>
<tr>
<th></th>
<th>Local Butcher (trade) Cattle</th>
<th>Supermarket Cattle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teeth (age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcase Weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat depth at P8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
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<td></td>
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</tbody>
</table>

4. Compare Carcase weight and fat score for early and late maturing breeds.

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5. Explain how cross breeding can help meet specific market specifications.

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6. Complete the following table that compares export feedlot specifications:

<table>
<thead>
<tr>
<th></th>
<th>Short Feed Steers Japan/Korea</th>
<th>Jap Steers</th>
<th>Long Fed Steers Japan/Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial age (teeth)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Live Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Fat at P8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding</td>
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<td></td>
<td></td>
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<tr>
<td>Sex</td>
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<td></td>
</tr>
<tr>
<td>Breed Preference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Carcase Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Describe the effect of sex, muscling and frame size affect the rate of maturity (age that fat begins to be laid down).
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8. Describe the feeds that are best for fast deposition of fat
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4. **Beef Cattle Breeding Systems – Questions**

Download the Primefact #624: Beef Cattle Breeding Systems


From the document answer the following questions:

1. Define and give the desired outcome of the following breeding systems:
   a. Straight breeding
   b. Cross breeding

2. Explain why it is important to base a cross breeding program on “animals of high genetic merit”.

3. Explain why cross breeding provides greater flexibility in the marketing of beef.

4. In a ‘terminal sire’ breeding system, some breeds of sire may not be suitable for mating with heifers. Explain this statement.
5. Outline the benefits of a ‘terminal sire’ system:

6. Outline the disadvantages of this system:

7. Describe one ‘terminal sire’ breeding system that would be suitable for the central tablelands on NSW on dryland pastures:

8. Define and give examples of a ‘composite breed’:

9. Outline the advantages of developing a composite breed:

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5. B taurus X B indicus under Different Environments – Questions


Answer the following questions while consulting the article:

1. Use table 1 for the following
   a. Under which pasture types would Braham out-perform Hereford cattle?
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   b. Identify the best performing cattle under each pasture type.
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   c. Define ‘F1’.
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   d. Explain why B x H produces different results to H x B on poor pastures.
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2. Use table 2 for the following
   a. Identify the best performing cattle under each pasture type post-weaning.
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   b. Compare these results to the answer for 1b.
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   c. Explain the similarities and differences you identified when comparing pre-weaning to post-weaning growth.
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6. Marbling in a Nutshell - Questions

Download the document:

Read pages 32-33 then answer these questions:

1. Define marbling

2. Outline the benefits of marbling in meat

3. Explain why heavily marbled beef is mostly marketed to restaurants in Australia

4. Outline the factors that affect marbling and explain the effect they have on this
7. Why Wagyu? - Questions


Read the information and answer the following questions.

1. The article claims that Wagyu beef is the world’s tastiest beef.
   a. Outline the characteristics of this meat that make it taste good.

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   b. Explain how this claim was supported.

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2. Outline the characteristics of Wagyu fat that make it the best beef.

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3. Explain the meaning of ‘IMF’. Search the internet for a full explanation.

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4. Search the internet for photos of marbling scores for Australian beef. Save it to a PDF and attach it to this document. Your teacher will help you with these tasks.

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5. Explain why Wagyu beef is more suited to the restaurant trade rather than the retail market. The answer is found in a previous worksheet.

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6. Comment on this article. Consider the following:
   a. As a producer, would you be convinced to use Wagyu?
   b. Is this an unbiased article?
   c. Is the quoted research reliable?
   d. Awards are claimed to be based on taste rather than other carcase characteristics. Suggest a reason why.
It briefly describes the method and results of a study.

1. Define Stage I, Stage II and Stage III in the development in tick resistance.

2. Re-write the method in point form and in your own language.

3. Outline the results of this study in your own words

4. Outline the conclusion in your own words
November 2013 Newsletter

Foundation News

Primary Industries Partnerships in Schools (PIPS) Toolkit
The Primary Industries Partnerships in Schools (PIPS) toolkit has been developed by PIEF to build links between agribusiness and school classrooms to open up a wide range of career opportunities in Australia’s primary industries. PIEF plans to progressively expand the toolkit. If you are a teacher or in agribusiness and have experience of school partnerships that you would like to share with PIPS, please contact us. PIPS is supported by the Australian Government Department of Agriculture and NAB. More information is available from: http://www.primaryindustrieseducation.com.au/pips/index.html

Food on the Curriculum - Online Community
As part of the Department of Agriculture’s ‘Food in the Curriculum’ project in conjunction with Agrifood Skills Australia, PIEF has launched a page on Education Services Australia’s ‘Scootle Community’ entitled ‘Food and Fibre: Supporting the Australian Curriculum’. Scootle Community has been developed in collaboration with Australian teachers to discuss implementation of the Australian Curriculum and to share professional advice, information and support. Through Scootle Community, teachers can also access digital lesson plans, curriculum resources and research.

Scootle Community (https://community.scootle.edu.au/login) can be used anywhere and at anytime using a desktop computer, smart phone or tablet. It was released in May 2013. Scootle is a ‘one stop shop’ that provides teachers with access to more than 20,000 digital curriculum resources in the National Digital Learning Resources Network which is managed by Education Services Australia (ESA). - http://www.esa.edu.au/

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If you are an existing Scootle user follow this page today and contribute. If not, please get a Scootle account established at: http://www.scootle.edu.au/ec/preregister.action

For more information contact info@primaryindustrieseducation.com.au

Resources on PrimeZone

NEW! New Organic Schools Curriculum Available
Australian Organic Schools have released their new curriculum for students aged five to 12 which teaches them how to create, care and cook from an organic garden. All 32 lessons and digital resources are aligned with the Australian Curriculum with lesson links to sustainability, maths, science and literacy skills. For more information go to: http://www.organicsohools.com.au/teaching-resources/introduction/

This Month’s Stories

Industry News

Education and Engagement for Sustainability Vision, Agenda and Advisory process (NSW)
Stakeholder consultation is now open on the Draft Education and Engagement for Sustainability Vision, Agenda and Advisory process for NSW. The Office of Environment and Heritage (OEH) has funded the NSW Chapter of the Australian Association for Environmental Education (AAEE NSW) to develop a framework for NSW. This follows several years’ partnership in a research project that has documented emerging trends in sustainability education. More information can be found at:

http://www.aaeensw.org.au/content/draftframework&lang=en
Ag Inspirations inspires the next generation
In October, Agforce Qld, Rural Skills Australia and Growcom, with support from the Lockyer Valley BEST (Bringing Employers & Schools Together) group, developed and ran a three-day Ag Inspirations program for three schools in the region.

Over the three days, the students visited eight industries and heard from a range of employees, business managers and owners. They got to experience the world of horticulture, hydroponics, the paddock to plate meat industry, research and development, agribusiness, and even disaster coordination in a regional food-production area. Students also learnt about the variety of employment pathways such as apprenticeships and traineeships, fulltime/part time/casual or seasonal work.
Students learned more about themselves and the sorts of careers that might fit with their current interests and personality type, as well as hearing about the career journeys of staff they met at each industry. At the end of the program, all students reported significantly increased awareness of the variety of jobs available within Agriculture that are not traditionally thought of, such as marketing, quality assurance and research. One aspect of the various industry visits which virtually all students commented on, was the amount of technology used in modern agriculture.

For more information about the Ag Inspirations program contact Alison Beaty, beatya@agforceqld.org.au or Terri Henry, TerriH@ruralskills.com.au. Ag Inspirations was also supported by the Australian Government Regional Education, Skills and Jobs Planning Coordination Pool.

**Project to grow new careers in agriculture for Sudanese students**

Agribusiness Gippsland have launched a project introducing careers in agriculture to secondary school students of Sudanese background from Melbourne’s south-east suburbs. The group will visit dairy and beef farms and a propagating nursery and it is hoped Gippsland farmers will give these young people a chance to enter agriculture. This story has been shared from the Agribusiness Gippsland newsletter. Find out more: [http://agribusinessgippsland.com.au/](http://agribusinessgippsland.com.au/)

**Agricultural degree now available via distance education**

Students with a relevant diploma or advanced diploma are now able to enrol (with some course credits) in Charles Sturt University’s (CSU) Bachelor of Agriculture or Agricultural Business Management which will be delivered via distance education. This is an initiative of CSU Wangaratta, which is a partnership between CSU, Goulburn Ovens TAFE (GOTAFE) and the National Centre for Dairy Education Australia (NCDEA). While study is via supported distance education, some face-to-face tutorials and field exercises are required, therefore it suits students located in regional Victoria. Find out more at: [http://www.csu.edu.au/go/wang/?utm_source=wang&utm_medium=print&utm_campaign=wang](http://www.csu.edu.au/go/wang/?utm_source=wang&utm_medium=print&utm_campaign=wang)

**Marine WATERS Poster Giveaway**

The Department of Fisheries in Western Australia is giving away copies of their popular posters to interested schools. Available posters include:

- Balancing Act
- Management for a Sustainable Future
- Who goes with the Flow?

Limited numbers of the posters featured on the Marine WATERS website are also available at: [http://marinewaters.fish.wa.gov.au/](http://marinewaters.fish.wa.gov.au/). If you would like a poster, please email marinewaters@fish.wa.gov.au with your preferred poster and your postal address. They will do their best to accommodate all requests.
Ausline Cattle Association LEAD Program
With funding from the Gambling Communities Fund, the Ausline Cattle Association ran a program called LEAD - Leaders Engaged in Agricultural Development. Its purpose was to encourage students, aged 13 to 21, who are passionate about careers in agriculture and give them the skills required for future success in rural and regional Queensland and in particular the Beef Industry. The format emphasised both practical and theoretical knowledge, covering topics such as leading cattle, public speaking and careers advice. More information and photos: http://auslinecattle.com.au/index.html

LEAD program participants learning how to do pregnancy tests

Cracking myths and hatching ideas
Seventy high school students from south-east Queensland recently joined with poultry industry representatives to celebrate the completion of the 14th annual World’s Poultry Science Association Schools’ Poultry Education Competition. A total of 45 schools from Queensland, New South Wales and South Australia undertook school-based poultry projects designed to crack a few urban myths about modern poultry production. For more information please contact Tanya Nagle, Competition Co-ordinator at poultrycomp@optusnet.com.au or 040 879 4496

Dakabin State High School’s prize winning poster – Factors that affect yolk colour, Free Range vs Barn Eggs

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VFF Food and Fibre Careers Officer
The Victorian Farmers Federation (VFF) with the support of the Victorian Government has recently employed a Food and Fibre careers officer, Heidi Knowles. A key focus of her role is fostering positive relationships with careers advisers in secondary schools. Assisting career action plans with a food and fibre flavour helps broaden the traditional thinking of what it means to have a career in Food and Fibre industries. Please Contact Heidi on 0458 010 386 for any further information.

Share your news with us!
The quality and diversity of activities in primary industries education continues to be the most commented on aspect of our newsletter. Please share how you are encouraging young people to consider careers in primary industries by emailing a short article, including a photo if you like, to info@primaryindustrieseducation.com.au

Our deadline is around the 20th of each month.

School News

Shoalhaven High School wins the 2013 Archibull Prize
Showcasing the Australian dairy industry through art has won Shoalhaven High School the 2013 Archibull Prize. Their entry "Udderly Brilliant" tells a detailed story about the importance of natural resource management in the dairy industry as well as the increasing use of technology and mechanisation. Students designed the Archibull to open on one side where a material model of an actual sized ruminant digestive system can be pulled out. A record number of 37 schools from across 3 States entered the Archibull Prize this year. The Awards were handed out at the Sydney Showground by the Acting Director General of NSW DPI, Mr Michael Bullen and Sara Leonardi McGrath. See http://www.art4agriculture.com.au/ for more information.
**Tasmania’s Mulching Munchkins**
The Mulching Munchkins program in Bridport and Ringarooma primary schools in Tasmania will develop a comprehensive theoretical and practical curriculum in which the links between food, agriculture, health and the environment are examined. Importantly the curriculum is being developed by the teachers to link with the Australian curriculum through history, maths, science and literacy. The learning is set against the backdrop of the rural agricultural community in which the children live. PIEF have contributed to the cost of teacher relief for curriculum development. When the program content is reviewed and evaluated it will be available on the PIEF website.

**NT News - Taminmin College Update**
Delegates to the PIEF Conference in Canberra this year may have heard the presentation by Taminmin College’s Agriculture Teacher and Farm Manager Matt Deveraux, on how to incorporate Agricultural VET in a school environment. The success of this integration can be seen by students from both Certificate II Rural Operations and Certificate III Agriculture competing successfully in the Darwin and Katherine Rural Shows, earlier this year. This is the second year Taminmin has been able to enter 10 of their own home grown Brahman Cattle for exhibition and won Champion Exhibit at both Darwin and Katherine Shows.

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Grants, Awards and Prizes

**Agsafe Education Bursary Competition 2013**
Agsafe and its programs Accreditation & Training, *drumMUSTER* and ChemClear will offer $2500 to two people looking to further their careers in agronomy, agribusiness, farming, quality management, best practice and financial management or other related agricultural fields. The money can go towards either vocational or tertiary level studies. Entrants are required to fill out the online application form and submit a 500 word essay on how Agsafe and its programs benefit the farming industry and wider community. Applications close 20 December 2013. See [http://agsafe.com.au/bursary/](http://agsafe.com.au/bursary/) for details

**RASF Community Futures Grant 2014 (NSW)**
The RAS Foundation, through its Community Futures Grant, is giving young people (under the age of 35) who live in rural and regional NSW the chance to secure up to $25,000 to deliver a new and innovative community project. For more information go to: [http://www.rasnsw.com.au/832.htm](http://www.rasnsw.com.au/832.htm)

Conferences

**NAAE Conference**
12 - 16 January 2014, New Zealand
The National Association of Agricultural Educators (Australia) will be holding their National Conference in Telford, New Zealand next year. For application forms, see page 13 of this BAAT.

**Catchments, Corridors and Coasts - A snapshot of Environmental Education in WA**
15 - 17 January 2014, Western Australia
Participants in this program developed by the Australian Association of Environmental Education (WA) will learn about environmental issues, what is being done by community groups and various levels of government, what resources are available and how to work together for a better environment. It is a practical program, which focuses on learning through experience and skill development, while also reflecting the synergies between the environmental education practitioners in WA. See [http://www.aaeewa.org.au/](http://www.aaeewa.org.au/) for details.

Something Missing?
If you would like to submit a news item please email info@primaryindustrieseducation.com.au

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