

Cattle Showing and the Stage 5 Syllabus

Students will develop:	Stage 5 Outcomes	Cattle Preparation and Showing provides the following:-
<p>1.knowledge and understanding of agriculture as a dynamic and interactive system that uses plants and animals to produce food, fibre and other derivatives</p>	<p>5.1.1 explains why identified plant species and animal breeds have been used in agricultural enterprises and developed for the Australian environment and/or markets</p>	<p>Students have the opportunity to examine the carcass traits of the steers they have raised and shown. They can look and compare with other animals of the same and different breeds both at the show and in the show results for same animals. They can identify breed trends in breeding for phenotype to meet market criteria. They can observe how breeds best fit or are aiming to breed livestock that will fulfil these criteria. They examine pests and diseases and environmental impacts that have personally affected their cattle. They see the impacts of heat resistance if their cattle reduce feed consumption on really hot days and they understand tick resistance in Bos indicus cattle, but they also appreciate the carcass penalty on bodies that contain Bos Indicus and how deleterious traits in the Bos Indicus breeds impact on how a carcass can meet consumer expectations regarding taste.</p>
	<p>5.1.2 explains the interactions within and between agricultural enterprises and systems</p>	<p>Students are able to examine firsthand the interactions between the plant, animal, soil and management subsystems. They observe how cattle can impact soils and their structure, but also how cattle add nutrients to soil through application of their faeces. They observe how plants contribute to weight gain in their respective livestock and also observe that cattle grazing benefit plants by the nutrients applied to the soil and the cropping of</p>



		grass that promotes grasses reshooting at multiple growth nodes. Students have the opportunity to observe cause and effect between the successful management of the soil, plant and animal subsystems and how this can impact on the animals overall productivity and therefore be selected as representative of best practice when judged amongst its peers in the Cattle industry by attending shows. For example when students assist in daily feeding that are able to quantitatively measure weight gain and feed conversion ratios and measure these against both cattle and other meat industry standards
2.knowledge and understanding of the local and global interaction of agriculture with Australia's economy, culture and society	5.2.1 explains the interactions within and between the agricultural sector and Australia's economy, culture and society	Students learn how the cattle industry in Australia is the second largest exporter of cattle in the world (ref National Farmers Federation) and how their participation at a world class event such as the Sydney Royal Easter Show is where students examine excellence through competition and how Australian cattle have and continue to strive to meet global demand and market expectations..
3.knowledge of and skills in the effective and responsible production and marketing of agricultural products	5.3.2 investigates and applies responsible marketing principles and processes	Students are able to examine both virtual and auction processes through their participation in bringing cattle to the live auction at the Sydney Royal Easter Show and also in preparing those animals which are sold over the grid. Students more fully appreciate the supply and demand concept and how those animals which best meet market criteria are awarded more competitive pricing in the market place as a result of attending the Sydney Royal Easter Show.



5.3.3 explains and evaluates the impact of management decisions on plant production enterprises

Students are able to examine the feedstuffs fed to cattle. They are able to examine their feed components and how these components are affected by both mechanical cultivation, fertiliser application and herbicide use and how these management applications affect the protein and energy content of the feed in addition to the overall tonnes yielded/hectare which thereby impact on the feed conversion and hence \$/ha yield from the beef cattle that consume this feed. Students have the opportunity to learn from industry representatives and keenly discuss ideas whilst at the Sydney Royal Easter Show.

5.3.4 explains and evaluates the impact of management decisions on animal production enterprises

Students are able to gain firsthand knowledge and experience of the management processes that affect cattle. They are able to evaluate feed conversion based on various feed stuffs fed in the steer ration diet. They examine how preventative measures such as probiotics additives can assist feed conversion and how best practice in disease prevention through vaccinations and drenches etc. promotes optimum growth and overall productivity. By preparing cattle for a market date (attending the Sydney Royal Easter Show) students understand the concept of preparation for a sale window and how their management processes will assist or prevent the stock being market ready at the appointed show date.



4.an understanding of sustainable and ethical practices that support productive and profitable agriculture	5.4.1 evaluates the impact of past and current agricultural practices on agricultural sustainability	Students look at the previous industry use of unevaluated feed stuffs, the lack of market criteria available to farmers and how the lack of knowledge in these areas had impacted on the economic sustainability of cattle enterprises... Students also explore how Sydney Royal Easter Show demands livestock entered to be dehorned and how the use of lower stress dehorning techniques have improved animal bounce back to gaining weight and how dehorned cattle reduce bruising in livestock which also leads to improved prices and carcase yield
	5.4.2 evaluates management practices in terms of profitability, technology, sustainability, social issues and ethics	Students examine the use of technology including the use of electronic tagging systems, how this had aided lifelong traceability of stock. This in turn has yielded benefits in disease control, improvements in breeding systems by affording more accurate record keeping for the parents of the animal they have at school and the genetic heritability of traits from both sire and dam. DNA sequencing has afforded the breeding of desirable genes and the culling of animals with less desirable genes that impact on beef enterprise profitability .As students replicate behaviour of farmers who have adopted more sustainable practices such as topical skin applications of pesticides the farmer has also reduced the ethical and animal welfare implications of more invasive disease control such as oral drenches.



	<p>5.4.3 implements and justifies the application of animal welfare guidelines to agricultural practices</p>	<p>Students examine the implications of animal welfare guidelines, particularly in relation to the gentling of stock in preparation for attending the show ring at Sydney Royal Easter Show and how this process requires skills to minimise impacts on the animals and also prevents lost profitability to the overall enterprise of cattle rearing</p>
<p>5.skills in problem-solving including investigating, collecting, analysing, interpreting and communicating information in agricultural contexts</p>	<p>5.5.1 designs, undertakes, analyses and evaluates experiments and investigates problems in agricultural contexts</p>	<p>Students have the capacity to measure both quantitative outcomes with regards cattle height, weight and fat coverage. Students can determine both limiting as well as beneficial criteria that affect their experiments. For example students can quantify weight variations based on disease or improved weight gain from protection from adverse weather conditions such as cold and wet natural environments</p>
	<p>5.5.2 collects and analyses agricultural data and communicates results using a range of technologies</p>	<p>In conducting feed conversion trials amongst a cohort of steers, students can be assessed on their understanding thought written, electronic and media presentation formats. The showing of cattle affords the opportunity for public speaking in Beef cattle judging competitions at the Sydney Royal Easter Show. Here students display the depth of knowledge of the criteria essential to carcass production and how live assessment can be used in making management decisions. Students develop their comparative analysis skills, critical thinking and assessment of agricultural production systems based on quantitative and qualitative criteria.</p>



6.knowledge and skills in implementing cooperative and safe work practices in agricultural contexts	5.6.1 applies Occupational Health and Safety requirements when using, maintaining and storing chemicals, tools and agricultural machinery	Students have the opportunity to reinforce and display cognitive development in suitable behaviour around livestock through experiential leaning opportunities. Students develop their forward thinking skills to offset potential accidents in a work environment as well as use displaying safe operating procedures that are compliant with handling both livestock and the chemicals involved in their husbandry.
	5.6.2 performs plant and animal management practices safely and in cooperation with others	Students are required to develop effective team building skills. Gentling a steer is an experiential opportunity for students to develop skills working as a team so that they achieve the outcome as safely and quickly/efficiently as possible.

