



Stage 5 Agriculture Technology: Year 9

Unit C: Sheep meat

Rationale for the development of this unit of work

Sheep are an accessible and small grazing animal. They allow students to practice skills on animals that would not be possible with the limited number of cattle we have, and due to the constraints of safe handling of a larger animal.

In this unit we are teaching students the basic management skills in livestock production and allowing students to demonstrate some of these skills. As this is an extensive livestock production system the importance of pastures in grazing systems is also a major focus. Students will need to be able to understand the range and seasonality of pasture grasses and legumes.

The major concepts and outcomes addressed are listed below.

Syllabus requirements	Key concepts	Outcomes
Extensive animal enterprise	Breeds	5.1.1
	Routine husbandry activities	5.1.2
	Calendar of operations	5.2.1
	Pastures and their use	5.3.2
	Grasses, legumes	5.3.4
	Native and introduced pastures	5.4.1
		5.4.3
	Pasture grazing strategies	5.6.1
	Seasonality of pasture growth	5.6.2
	Wool types and classing	
	Yards and sheep handling	



Concepts	Resources
Sheep breeds and breeding <ul style="list-style-type: none">Use sheep terms correctly and accurately.	<i>Dynamic Agriculture Blackline Masters Book 1, 4.1, 4.3</i>
<ul style="list-style-type: none">Research the main breeds of sheep used in Australia and identify the uses of each.	<i>Dynamic Agriculture 1, p. 204</i> <i>Handbook of Australian Livestock</i> <i>Dynamic Agriculture Blackline Masters Book 1, 4.2</i> <i>Agriculture and You 1, p. 112</i> <i>Enterprising Agriculture, p. 81</i>
<ul style="list-style-type: none">Compare the characteristics of the breeds used to produce prime lamb and identify the characteristics of these breeds that contribute to the prime lamb carcase.	<i>Enterprising Agriculture, p. 120</i> <i>Agriculture and You 1, p. 115</i> <i>Handbook of Australian Livestock</i>
<ul style="list-style-type: none">Recognise the importance of breeding systems such as <i>lambplan</i> in the production of prime lamb.	http://lambplan.une.edu.au
Meat from sheep <ul style="list-style-type: none">Identify the main products from a lamb carcase and the relative value of each part.	<i>Enterprising Agriculture, p. 112</i> Visit to the supermarket
<ul style="list-style-type: none">Assess product specifications for lamb.	<i>Enterprising Agriculture, p. 118</i>
<ul style="list-style-type: none">Compare the different ways lamb can be sold.	<i>Enterprising Agriculture, p. 115</i>
<ul style="list-style-type: none">Describe the production chain for prime lamb from farm to consumer and analyse the importance of product promotion.Design a poster or pamphlet to promote a lamb product.	<i>Enterprising Agriculture, p. 115</i>



Concepts	Resources
Management of sheep <ul style="list-style-type: none">Identify the parts and functions of the male and female reproductive systems of sheep.	<i>Agriculture and You 1</i> , p. 130
<ul style="list-style-type: none">Investigate the time of year for joining, ram percentage and gestation period of sheep.	<i>Enterprising Agriculture</i> , p. 94 <i>Agriculture and You 1</i> , p. 140
<ul style="list-style-type: none">Recognise the main external parasites of sheep and the methods of treatment and prevention for these.	<i>Dynamic Agriculture Blackline Masters Book 1</i> , 4.6, 4.7 <i>Enterprising Agriculture</i> , p. 100
<ul style="list-style-type: none">Investigate the internal parasites of sheep and the strategies used in their control.	<i>Enterprising Agriculture</i> , p. 95
<ul style="list-style-type: none">The role of vaccination in the prevention of diseases in sheep.	<i>Enterprising Agriculture</i> , p. 97
<ul style="list-style-type: none">Use the school sheep yards to work with sheep and compare their construction with common standards.Use this information to design a set of sheep yards.	<i>AgFact: Sheep yard design</i> Video: <i>Efficient sheep yard design</i> NSW Agriculture Video VO 05
<ul style="list-style-type: none">Perform or observe animal husbandry operations: mouthing, drenching, throwing, crutching, drafting, foot paring, shearing, marking, tail docking, backlining.	<i>Enterprising Agriculture</i> , p. 94 <i>Dynamic Agriculture Blackline Masters Book 1</i> , 4.5 <i>Agriculture and You 1</i> , p. 145
<ul style="list-style-type: none">Read medication labels and calculate the appropriate dose rates for sheep.Evaluate the range of techniques used in castration, mulesing, tail docking and compare them in regard to animal welfare considerations.Construct a calendar of operations and identify the benefits of a calendar of operations for lamb production.	<i>Enterprising Agriculture</i> , p. 105

Concepts	Resources
Management of sheep <ul style="list-style-type: none"> Identify different weed and pasture types growing in the local area and submit a collection of grasses, legumes and weeds. 	<i>A guide to better pastures in the temperate climates</i> <i>Enterprising Agriculture</i> , p. 291 <i>Dynamic Agriculture 1</i> , p.122
<ul style="list-style-type: none"> Differentiate between native and introduced pastures and analyse the impact of European and native species in sheep production. Compare Aboriginal and European land management practices and their effect on vegetation and sustainable production. Identify the characteristics of pasture species for sheep nutrition and their seasons of growth, quality of feed, drought and frost tolerance. 	<i>Enterprising Agriculture</i> , p. 312 <i>Dynamic Agriculture Blackline Masters Book 2</i> , 21.1
<ul style="list-style-type: none"> Recognise the importance of legumes in pastures for nutrition and nitrogen fixation and the potential problem of bloat. 	<i>Dynamic Agriculture Blackline Masters Book 2</i> , 21.2
Grazing strategies <ul style="list-style-type: none"> Discuss and evaluate the advantages and disadvantages of different grazing systems including: <ul style="list-style-type: none"> rotational grazing strip grazing cell grazing zero grazing. 	<i>Enterprising Agriculture</i> , p. 303, 315
<ul style="list-style-type: none"> Identify and discuss interactions between soils, pasture plants and grazing sheep on the school farm. Use diagrams and flow charts to show relationships between plants, animals, soils, climate and micro-organisms for the flow of nitrogen through the farm and production chain. Compare growth rates of pastures, the usage of paddock feed and the role of fodder conservation in balancing these. 	<i>Enterprising Agriculture</i> , p. 320 <i>A guide to better pastures in the temperate climates</i> <i>Excel spreadsheet of pasture growth and fodder conservation</i>
Wool <ul style="list-style-type: none"> Describe the process of harvesting wool, and the methods that could be used to achieve this. 	<i>Enterprising Agriculture</i> , p. 147
<ul style="list-style-type: none"> Recognise in samples of wool the characteristics which are relevant to wool quality. Investigate the significance of the wool industry within the Australian economy. 	<i>Enterprising Agriculture</i> , p. 158



Assessment

There are ten assessment tasks listed below for this unit. They consist of tasks which are assignments, skills and formal tests. The mark grid below gives an indication of the value of each task and how it will contribute to the overall assessment of the students for each outcome.

Tasks

- Design a poster or pamphlet to promote a lamb product.
- Skills:
 - Mouthing
 - Drenching
 - Throwing
 - Foot paring
 - Wool classing
 - Drafting
- Design a set of sheep yards.
- Submit a collection of grasses, legumes and weeds.
- Topic test

Tasks contributing to semester report	5.1.1	5.1.2	5.2.1	5.3.2	5.3.4	5.4.1	5.4.3	5.6.1	5.6.2
Design a poster or pamphlet to promote a lamb product			<input type="checkbox"/>	<input type="checkbox"/>					
Mouthing									<input type="checkbox"/>
Drenching								<input type="checkbox"/>	<input type="checkbox"/>
Throwing							<input type="checkbox"/>		
Foot paring									<input type="checkbox"/>
Wool classing				<input type="checkbox"/>					
Drafting							<input type="checkbox"/>		
Design a set of sheep yards.							<input type="checkbox"/>		
Submit a collection of grasses, legumes and weeds.	<input type="checkbox"/>					<input type="checkbox"/>			
Topic test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	