



Stage 5 Agricultural Technology

Rationale

In programming for our school we have to not only fulfil the requirements of the syllabus but also develop units that are both relevant and diverse, in order to expand the experiences and knowledge of our students. Consequently, the topic selection and sequencing for the Stage 5 course is dependent on a range of factors including:

- enterprises significant to the local area
- enterprises significant to the Australian economy and experience
- enterprises significant to the students
- school farm and district resources
- staff expertise
- climate and other environmental influences
- the demands of other courses on the farm's resources
- syllabus requirements.

At Deniliquin High School we have two 75-minute lessons per week and topics will generally run for 6–10 weeks. There are about fourteen different classes in the agricultural area running in the school. Students electing Agriculture in Year 9 continue it in year 10. District enterprises are generally broad scale and irrigation areas are extensive. The school farm is some 36ha, half of which is flood irrigated. It runs beef cattle, sheep for prime lambs and poultry. Four hectares of irrigated *Lucerne* has recently been established and there is a small citrus orchard. Deniliquin is in the South West Riverina with a 450 mm rainfall, high summer temperatures and mild winters with significant frosts. Soils are generally heavy clays with some sand ridges. Major enterprises include wool, dairying, rice, winter crops, beef cattle and prime lambs. Students are from both farms and town and therefore have different skills, knowledge and expectations.

Considering these factors, we would choose topics for Year 9 that will then be built upon in Year 10 in order to create a deep understanding of concepts reflecting the interactive nature of Agriculture Technology. The suggested order of topics reflects both the need to build on prior knowledge and also the seasonality of agriculture.

Year	Topic	Rationale and description
Yr 9	Vegetable production	Six weeks on intensive plant production that provides students with basic skills and a sense of ownership at the plot through their garden beds. The theory work covers the needs of plants, basics of production and an economic overview. It is directly transferable to their garden plots. This is the time of year to get gardens in and productive.
Yr 9	Poultry 1 including layers	Seven weeks on an intensive animal production system. The student's animal handling and husbandry skills are developed with a small animal with clearly measurable production in a short space of time. The theory side of the topic augments this and also introduces basic animal management, requirements and function. This is the time of year our pullets are coming in to lay.
Yr 9	Fruit	Five weeks looking at a semi-intensive production system placed here to take advantage of the availability of apple varieties and to match the management needs of our orchard. We also prune trees and roses late in term 2.
Yr 9	Cereal cropping	Eight weeks studying a broad acre cropping system beginning at the start of the growing season so plots can be established and trials/experiments started. Due to the nature of the production cycle students will monitor plots and gather data throughout the next few terms.
Yr 9	Sheep 1 Wool production	This eight-week topic is usually run at this time of year for two reasons: it coincides with shearing and lambing; and it ties in well with crop production. Sheep are a smaller animal to deal with than cattle and the students build confidence in handling and husbandry. This topic covers an extensive animal production system that is highly significant to both our district and also Australia.
Yr 9	Dairying	Dairying is surprisingly important to our district due to the prevalence of irrigation. This six-week topic allows students to explore its significance, exposes them to a semi-intensive production system and allows some cattle skills to develop. Two of our cows are artificially inseminated at this time of the year, this allows for breeding and reproduction to be covered here.
Yr 10	A year in the life of a cattle producer	This is the beef cattle production topic. It runs for the full ten weeks. Students are able to build on their livestock knowledge and skills as they study another extensive animal production system. The timing suits our school as we calve most of our cattle in first term and the irrigated pastures are watered in March, tying in with the pasture component in this topic.
Yr 10	Horticulture	This eight-week topic builds on both the fruit and vegetable topics. Our climate is warm enough at this time of year for success in plant establishment and propagation.
Yr 10	Making meat	An eight-week topic based on extensive meat production with a focus on prime lambs and links to beef cattle. Our ewes have lambed and lamb growth rates etc are able to be collected, recorded and analysed.
Yr 10	Poultry 2 including	This six-week topic builds on the poultry topic in year 9. It is positioned in term 3 as this is the best time to hatch chicks



	broilers	and the students can conduct growth trials etc on farm bred birds or on replacement layers that will start producing in term 1 in the following year. Nutrition is integral to this topic.
Yr 10	Rice and summer cropping	Six weeks on an industry which is very important to our area. Preparation of paddocks and sowing occurs at this end of the year.

Sequencing and outcome summary

Year 9	Outcomes	Year 10	Outcomes
Vegetable production 6 weeks with ongoing practical at farm.	5.1.1, 5.3.1, 5.3.3, 5.5.1, 5.6.1, 5.6.2	A year in the life of a cattleman 10 weeks	5.1.1, 5.1.2, 5.2.1, 5.3.1, 5.3.2, 5.3.3, 5.3.4, 5.4.2, 5.4.3, 5.5.1, 5.5.2, 5.6.1, 5.6.2
Poultry 1 including layers 7 weeks	5.1.2, 5.2.1, 5.3.2, 5.3.4, 5.4.2, 5.4.3, 5.5.1, 5.5.2, 5.6.2	Horticulture 8 weeks	5.2.1, 5.3.1, 5.3.2, 5.3.3, 5.4.1, 5.5.1, 5.5.2, 5.6.1, 5.6.2
Fruit 5 weeks	5.1.1, 5.2.1, 5.3.1, 5.3.3, 5.5.2, 5.6.1, 5.6.2	Making meat 8 weeks	5.1.1, 5.1.2, 5.2.1, 5.3.1, 5.3.2, 5.3.3, 5.3.4, 5.4.2, 5.4.3, 5.5.1, 5.5.2, 5.6.1, 5.6.2
Cereal cropping 8 weeks	5.1.1, 5.1.2, 5.2.1, 5.3.1, 5.3.2, 5.3.3, 5.4.1, 5.4.2, 5.5.1, 5.5.2, 5.6.1, 5.6.2	Poultry 2 including broilers 6 weeks	5.1.2, 5.2.1, 5.3.2, 5.3.4, 5.4.2, 5.4.3, 5.5.1, 5.5.2, 5.6.2
Sheep 1 Wool production 8 weeks	5.1.1, 5.1.2, 5.2.1, 5.3.1, 5.3.2, 5.3.4, 5.4.1, 5.4.2, 5.4.3, 5.5.1, 5.5.2, 5.6.1, 5.6.2	Rice and summer cropping 6 weeks	5.1.1, 5.1.2, 5.3.1, 5.3.2, 5.3.3, 5.4.1, 5.4.2, 5.6.1, 5.6.2
Dairying 6 weeks	5.1.1, 5.1.2, 5.2.1, 5.3.1, 5.3.4, 5.6.2		