

PENANG SANGAM HIGH SCHOOL
P.O.BOX 44, RAKIRAKI
LESSON NOTES

School: Penang Sangam High School
Subject: Agricultural Science
Year/Level: 11

Week 26

Strand	Strand as 11.4 LIVESTOCK
Sub Strand	Sub-strand 11.4.4 PIG
Content Learning Outcome	The students will explore on the livestock concepts common to sheep, pig , and goat in Fiji .

Lesson 7: Raw products from Sheep Farms

Vocabulary

Lamb - flesh from sheep that are less than one year old.

Yearling mutton - the meat from a sheep that is between one and two years of age.

Mutton - meat from a sheep that is over one year of age.

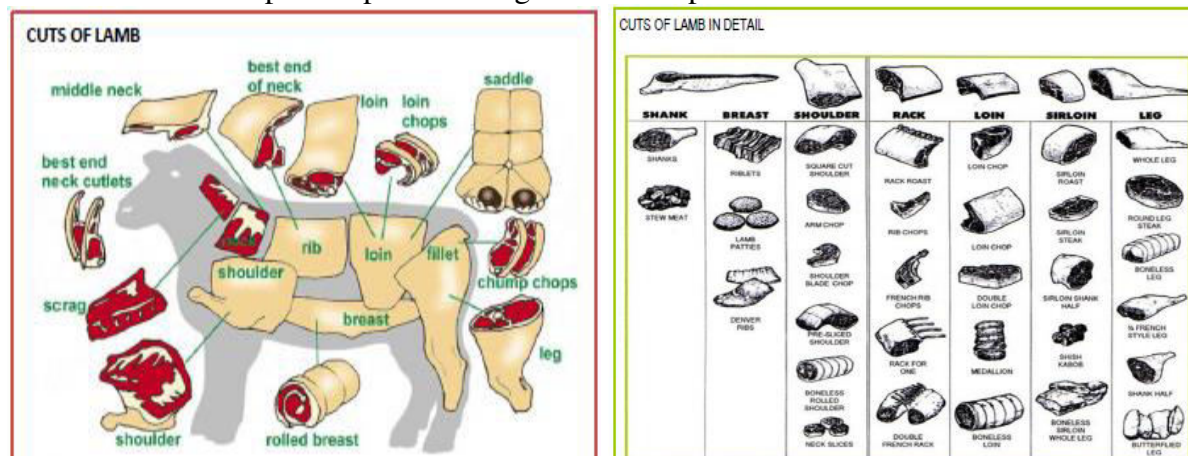
Wool - the fine, soft, curly hair that forms the fleece of sheep and certain other animals.

Notes

Discuss the sheep industry in Fiji and discuss the potential for meat, milk and wool.

1. **Meat**

The most important product we get from sheep is meat.



2. **Wool**

Wool is the product for which sheep are best known.

Uses of wool:

Clothing (socks, jumpers)	Furniture (chair covers, upholstery)
Carpets	Fill mattresses
Ball covers	Pool table baize
Mulch pad	Wool Casket



Lesson 9: Sheep By-Product

Vocabulary

- **Tanning** - convert hide (animal skin) into leather by soaking in a liquid containing tannic acid, or by the use of other chemicals.

Notes

Discuss the use of By-Products of sheep production

1. Skin

Sheep skins are removed from the carcasses after slaughter. They are treated in a process called tanning and made into soft leather and chamois cloth which are commonly used for washing cars.

2. Dairy

Sheep cheese comprises about 1.3% of the world's cheese production. Some of the world's most famous cheeses were originally made from sheep's milk: Roquefort, Feta, Ricotta, and Pecorina Romano. Sheep's milk is also made into yogurt, butter, and ice cream.

3. Landscape management

Along with goats, sheep are the best livestock to use to control unwanted vegetation, such as noxious weeds and invasive plants.

4. Intestines

Once cleaned, the intestines can be used as:

- natural casings for foods such as sausages and frankfurters.
- instrument strings.
- suture material.

5. Horns, Hooves & bones

The horns, hooves, and bones are rich sources of keratin and collagen which are used for their binding ability and strength.

6. Manure

The manure contains nitrogen, phosphorous, potassium carbonate, and lower levels of various minerals.

7. Fat and Fatty Acids

Fat and fatty acids are processed and:

- added to dog and chicken feeds
- are an inexpensive source of energy to fill the needs of the diet.

AS 11.4.4: PIGS

Lesson 1: Introduction

Vocabulary

- **Undulate** – hoofed animal
- **Babirusa** - forest-dwelling wild pig with several upturned hornlike tusks, native to Malaysia.
- **Warthog** - an African wild pig with bristly gray skin, a large head, warty lumps on the face, and curved tusks.

Notes

The pig is a member of the family **Suidae**, even toed undulates and is closely related to numerous species of wild pig, such as the babirusa, *Babirusa babirusa* and the warthog *Phacochoerus aethiopicus*.



Lesson 2: History of Pigs in Fiji

Vocabulary

- **Churn** - agitate or turn (milk or cream) in a machine in order to produce butter

Notes

Pre- Commercial pigs rearing in Fiji	Commercial pig rearing in Fiji
When the explorers and sandalwood traders voyaged to Fiji, they wanted a protein source other than fish and some suffered from protein deficiency diseases including marasmus and kwashiorkor.	The pig industry grew out of dairy farms.
To address this situation, it is believed that the early traders and voyagers released pigs on the main islands	Commercial pig production is closely related to tourist arrivals, approx. 64% of local pork production entering the hotel trade, 20% is sold from the farm gate for social and cultural occasions and 16% enters the local butcher trade.

Student Activity

Explain the relationship between the dairy and pig industry in Fiji.

Lesson 3: Breeds of Pigs in Fiji

Vocabulary

- **Bacon** - the back and sides of the pig, salted and dried or smoked, usually sliced thin and fried for food.
- **Pork** - the flesh of a pig used as food, especially when uncured

Notes

They have an average life span of 8 years.

Large White

First recognised in 1868 the Large White owes its origins to the old Yorkshire breed.



The Large White pig is also known as the English Large White pig or the Yorkshire Pig.

Features include picturesque bearing, erect ears, slightly dished faces, white color, pink skins, long deep sides and large size.

This rugged and hardy breed can withstand variations in climate and other environmental factors; has the ability to cross with and improve other breeds; produce high quality bacon and pork; produce large litters; heavy milk producers; excellent maternal instincts.

While the Large White was originally developed as an active outdoor breed, they do very well in concentrated or confined conditions.

Temperament is sociable, outgoing, and vocal and is quick to learn routines.

Landrace

First recognised in 1895, the Landrace pig was developed in Denmark by crossing a native pig with a Large White.



Features include ears droop and slant forward with its top edges nearly parallel to the bridge of a straight nose, white colour, pink skin.

Landrace pigs are noted for their ability to farrow and raise large litters, length of body, high percentage of carcass weight in the ham and loin, ideal amount of finish. The sows produce large litters and are exceptionally heavy milkers. They are known for their good mothering ability.

Duroc

The Duroc breed originated in New England, America in the 1800's possibly from pigs imported from Africa.

Features include slightly dished face, medium frame with colour ranging from light golden to mahogany.

Duroc pigs can withstand both hot and cold conditions and are less susceptible to heat stress and sunburn.

They have a fast growth rate and produce good carcass quality.

- they are known for being docile with good mothering ability.





Hampshire

The hampshire breed originated in South Scotland and Northern England in the 1800's.

Features include erect ears, black animal with a white strip across the shoulders, front legs and belly.

hampshire are heavy muscled, hardy and good foragers that produce good carcass quality. The sows are prolific and good mothers.

Lesson 4: Classes of Pigs on Fiji

Vocabulary

- **Boar** – whole male pig
- **Barrow** – castrated male pig
- **Gilt** – young female pig, up to and including Primiparous
- **Primiparous** – bearing young for the first time
- **Grower pig** - pig being grown out to market weight, usually 16 weeks.
- **Porker** - 4 to 6 month old pig slaughtered between 40 and 67 kg, fattened to provide meat such as pork chops.
- **Baconer** - 8 to 10 month old pig slaughtered between 80 & 100 kg reared for bacon rather than pork.
- **Sow** - adult female pig

Notes

- Pigs are divided into classes based on their age and function on a farm. This classification also assists in determining the husbandry requirements of the animals.
- Young pigs, under the age of four months are called pigs or piglets.
- Young male pigs are sometimes castrated and are then called barrows. These pigs are reared for pork or bacon. Gilts are young female pigs. They are usually sold as breeding stock or kept as replacement animals. Breeding pigs include boars and sows.

The four main breeds introduced to Fiji are compared below.

	Large White	Landrace	Duroc	Hampshire
Boar	 http://www.hypor.com	 http://rattlerow.co.uk	 acutabovesires.com	 http://nationalswine.com
Sow	 http://topignorsvin.us	 waldogenetics.com	 adambeckshowpigs.com	 brinkgenetics.com
Gilt				