

SUVA SANGAM COLLEGE

YEAR 12 AGRICULTURAL SCIENCE

WEEK 1 (05/07 – 09/07)

STRAND: AS 12.3.2 – HORTICULTURE

SUB STRAND 11.3.2.2 – TREE COPRS

LESSON 1 – INTRODUCTION

Lesson Outcome: Students will differentiate among the main use of trees in Fiji

Vocabulary – Arboriculture - is the study of the selection, planting, care and removal of individual trees, shrubs, vines and other perennial woody plants.

Trees are tall perennial plants which have a single stem or trunk and bear lateral branches some distance from the ground. They are grown for the following purposes:

- i) food
- ii) non- food materials like wood
- iii) horticultural purpose – for aesthetic purpose and preservation of wildlife
- iv) shade
- v) boundary markers
- vi) environmental purposes – to preserve soil and prevent soil erosion

ACTIVITY (refer to text book page 94)

1. Discuss the role of trees have in Fiji

2. Discuss the role that a tree close to your school compound has

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YEAR 12 AGRICULTURAL SCIENCE

WEEK 2 (12/07 – 16/07)

STRAND: AS 12.3.2 – HORTICULTURE

SUB STRAND 11.3.2.2 – TREE CROPS

LESSON 2 – TREE CROPS IN FIJI

Lesson Outcome: Students will differentiate among the types of tree crops in Fiji

Vocabulary – Hardwood - the wood of angiosperm tree and is relatively heavy and hard,

Softwood – the wood of coniferous tree and is relatively light and soft

Although Fiji has introduced exotic tree species especially for the production of wood, she has many unique species of her own. These trees can be divided using many criteria but will be studied under the following criteria:

- i) food and beverage producing trees eg. Breadfruit, coconut, citrus, mango etc
- ii) wood producing trees eg pine, dakua. Mahogany etc
- iii) Mulberies eg beach mulberry and paper mulberry

Activity (refer to textbook pages 95 – 99)

1. Name three endemic hardwood trees and their use

2. Name three endemic softwood trees and their use

3. Name two exotic hardwood trees and their use

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YEA 12 AGRICULTURAL SCIENCE
WEEK 3 (19/07 – 23/07)

STRAND: AS12.3.2 HORTICULTURE

SUB STRAND: AS 12.3..2 .4 TREE CROPS IN FIJI

LESSON 1 MATCHING A TREE TO SITE

LESSON OUTCOME:

Students will discuss factors to consider when matching a tree to a site.

Trees a long term crops which usually grow to considerable heights and size. Careful consideration must be made when matching a tree to a site.

1. Size of the tree – trees are large plants
2. Life span of the tree species – trees have a longer life span than most other plants
3. Main product – what is the tree being planted for?
4. Requirements of the tree – will the tree adapt to the precipitation, wind, cloud cover and temperature of the site
5. Number of trees – are saplings available for the number of trees to be planted?
6. Environmental considerations – will the trees benefit or harm the local species and wild life?

ACTIVITY (Refer to text book page100)

1. Once the site has been looked at, outline four other factors of the tree species that must be considered?

1. _____

_____ 2. _____

_____ 3. _____

_____ 4. _____

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YEA 12 AGRICULTURAL SCIENCE
WEEK 4 (26/07 – 30/07)

STRAND: AS12.3.2 HORTICULTURE

SUB STRAND: AS 12.3..2 .4 TREE CROPS IN FIJI

LESSON 2 TRANSPLANTING SAPLINGS

LESSON OUTCOME:

Students will discuss land preparation for tree planting

VOCABULARY

1. ***Grove*** – a group of tree planted and cultivated to bear fruit, nuts, etc (**orchard**)
2. ***Sapling*** – a young tree especially one with a slender trunk

The method chosen for the transplanting of tree seedlings or saplings depends on the soil type and the number of plants to be transplanted,

Seedlings and saplings may be planted using the following methods:

- i) **Hole Planting:** Suitable when transplanting a few saplings
- ii) **Mattock or Hoe Planting** Suitable for planting many saplings in clay based soil
- iii) **Dibble Planting** Suitable for planting many saplings in sand based soil.

ACTIVITY (Refer to text book pages 101 – 102)

1. List the steps in whole planting method.

2. Outline the steps in the mattock or hoe planting method.

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YEA 12 AGRICULTURAL SCIENCE
WEEK 5 (02/08 – 06/08)

STRAND: AS12.3.2 HORTICULTURE

SUB STRAND: AS 12.3.2 .4 TREE CROPS IN FIJI

LESSON 3: TREE CARE

LESSON OUTCOME:

Students will discuss the care of tree crops

Like other crops, tree crops require mulching feeding, and pruning. However, special requirements of trees will be discussed here. Being long term crop, the needs and wellbeing of trees must be provided.

These includes:

1. Weather phenomena: Little can be done to protect forest plantations against the damage cause by weather except to grow species known to be resistant to the detrimental effects of local weather pattern.
2. Fire: Damage caused by fire imposes a serious threat to plantations and should be a major consideration from the early stages of development
3. Insects and fungi: Are selective of the host species so the risk of damage from pests is higher when the plants are physiologically weakened from planting on unsuitable sites, neglect of weed control and other maintenance operations
4. Wild Animals: Damage to forest plantation by wild animals mainly takes the form of tree browsing or de-barking.
5. Domestic Animals: Grazing or browsing by sheep, goats and cattle can be a menace to young plantations

ACTIVITY (Refer to text book page104)

1. Explain the silvicultural measures of controlling pest in plantations.

2. Differentiate between weed suspension and weed elimination.
