



PROMOTING KNOWLEDGE MANAGEMENT CULTURE

GROWING TREES FOR INCOME AND LIVELIHOOD IMPROVEMENT

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Webner on growing tree for income

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Introduction

□ Why Trees

- Trees can offer a sustainable income
- Growing trees is a profitable venture
- It can be done with minimal effort.
- High demand for wood and wood products and fetch good prices
- Yield is not affected much by harsh weather conditions like in crops



Choice of tree species to plant and grow

- Choose trees with a high market demand for their products
- Select trees that have a growth rate that suits your timeline for earning income
- Opt for trees that require less maintenance, as this can save you money in the long run



Choice contn

- The profitability of a tree depends on market demand and the specific products it produces
- Consider optimizing your tree-growing business, such as selling trees, products, or services
- Trees like pine and eucalyptus can be harvested for timber, which is highly valued in construction and furniture

Growing trees

- Site selection
- Land preparation
 - ❖ Slash
 - ❖ Burn trash
 - ❖ Uproot stumps
 - ❖ Kill termites and remove ant hills
 - ❖ Plough or apply herbicides to eliminate notorious weeds





Lining out

- Use strings pitting
- Strings and pegging





Pitting

- Hole size and spacing will depend on species to be planted
- For timber or pole species, dig new hoe width and depth and spacing of 3 x 3 m.
- For fruit trees, dig holes of 2ft x 2ft
- Fruit trees spacing ranges from 5 m x 5 m to 10 x 10 m
- Separate top soil from subsoil



Requires plantlets per acre

Spacing will depend on the goal of your plantation

- Spacing of 2 m x 2 m you will require 1000 seedlings
- Spacing of 3 m x 3 m you will need 450 seedlings
- Spacing of 5 m x 5 m you will need 160 seedlings
- Spacing of 7.5 m x 7.5 m will require 71 seedlings
- Spacing of 8 m x 6 m you will need 83 seedlings
- Spacing of 8 m x 8 m you will need 63 seedlings
- Spacing of 10 m x 10 m you will need 40 seedlings



Planting out

- Select healthy and well hardened seedlings for planting
- Distribute seedlings to the planting holes
- Remove polythene and plant by returning soil upto the root collar
- Firm and leave the plantlet upright along the line





Choices of trees to plant could be;

Timber/pole tree species



Fruit tree species





Field plant management in Fruit trees

- Weed control
- Fertigation
- Pruning
- Mulching
- Irrigation
- Pest and disease control





Economics of Hass farming

- **Establishment costs**
- Land clearing 1 acre = 150,000/=
- Ploughing 1 acre = 120,000/=
- Reploughing = 80,000/=
- Seedlings $166 \times 5000 = 830,000$
- Planting cost = 120,000
- Manure 150,000
- Weeding $4 \times 150,000 = 600,000$
- **Total = 2,050,000/=**



Looking at profitability

Establishment

- Year 1: 2,050,000
- Years 2 – 10 maintenance costs
= $600,000 \times 9 = 5,400,000/=$
- **Total 7,450,000/=**

Returns

- Yr 3 = 50 fruits per tree,
 $8,300 / 3 \text{ fruits} = 2,767,000' =$
- 4th year 200 fruits per tree, 33,200
fruits per acre = $11,067,000' =$
- 5th year 400 fruits per tree,
66,400 fruits per acre @ US\$0.1 =
22,103,000\=



Marketing

☐ Raw sales

- Local
- Exports

☐ Value addition

- Oil extraction
- Organic fertilizer
- Briquettes
- ...



Jackfruit

- 100 to 300 fruits per year
- @ fruit goes 3,000Sh
- $100 \text{ fruits} \times 3000 = 300,000\text{Sh}$
- At a spacing of 8 m x 8 m = 63 trees
- $63 \text{ trees per acre} \times 300,000 = 18,900,000 \text{ Sh}$ annually at reserved age of 10 years.
- The tree continues yielding for the next 30 to 50 years.



Timber/Pole production



Establishment & maintenance costs 1acre/yr

Clonal Eucalyptus (GU lines)

- Land clearing = 150,000/=
- Ploughing 1 acre = 120,000/=
- Seedlings 500 x 1000 = 500,000
- Transportation to field = 200,000
- Planting = 120,000
- Weeding 4 x 150,000 = 600,000
- **Total = 1,690,000/=**

Pinus caribaea

- Land clearing 1 acre = 150,000/=
- Ploughing 1 acre = 120,000/=
- Seedlings 500 x 500 = 250,000
- Transportation to field = 200,000
- Planting cost = 120,000
- Weeding 4 x 150,000 = 600,000
- **Total = 1,440,000/=**



Returns

Clonal Eucalyptus without thinning

- Complete sale at age 10
- 450 stems at farmgate price of 30,000Sh = **13,000,000 Sh.**
- 900 managed coppices at age 18 yrs = $900 \times 30,000 =$
27,000,000Sh
- **1st + 2nd harvest = 40,000,000**

Pines

- 450 stems per acre
- 30% non commercial 1st thinning at age 5 leave 300 stems
- 30% commercial 2nd thinning at age 8 to 10 yrs = 100 stems @ 20,000sh = 2,000,000sh
- Final harvest of 200 stems at age 18 to 20 is $200 \times 80,000\text{sh} =$
16,000,000sh
- 2nd thinning + final harvest =
18,000,000sh



Thank you for your audience

- Q & As