

PASSION FRUIT ORCHARD OPERATION

ISCED UNIT CODE:0811 251 02A

TVETCDACC UNIT CODE:AG/CU/PF/CR/02/3/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: Operate passion fruit orchard

Duration of Unit: 60 hours

Unit Description

This unit specifies the competencies required to operate a passion fruit orchard. It involves planning the passion fruit orchard, preparing planting area, planting passion fruit seedlings maintaining soil fertility and moisture, and, controlling weeds, pests and diseases. It also involves pruning and training the passion fruit plants, harvesting mature passion fruits and carrying out post-harvesting practices.

Summary of Learning Outcomes

| SNO | Learning Outcome | Duration (Hours) |
|-----|--------------------------------------|------------------|
| 1. | Plan passion fruit orchard | 5 |
| 2. | Prepare passion fruit planting area | 10 |
| 3. | Plant passion fruit seedlings | 10 |
| 4. | Maintain soil fertility and moisture | 10 |
| 5. | Control weeds, pest and diseases | 10 |
| 6. | Prune and train passion fruit plants | 10 |
| 7. | Harvest passion fruits. | 10 |
| 8. | Carry out post-harvest practices | 5 |

Learning Outcomes, Content and Suggested Assessment Methods

| Learning Outcome | Content | Suggested Assessment Methods |
|------------------|---------|------------------------------|
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| Learning Outcome | Content | Suggested Assessment Methods |
|--|---|---|
| 1. Plan passion fruit orchard | <p>1.1 Definition of terms</p> <ul style="list-style-type: none"> 1.1.1 Market 1.1.2 Demand 1.1.3 Supply 1.1.4 Budgets <p>1.2 Factors affecting supply and demand</p> <p>1.3 Factors affecting scale of production</p> <p>1.4 Factors to be considered in orchard site selection</p> <p>1.5 Orchard layout</p> <p>1.6 Budgeting</p> <ul style="list-style-type: none"> 1.6.1 Importance of budgeting 1.6.2 Types of budgets 1.6.3 Budget preparation process <p>1.7 Record keeping</p> <ul style="list-style-type: none"> 1.7.1 Types of records 1.7.2 Production records 1.7.3 Financial records | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Oral questioning • Written tests |
| 2. Prepare passion fruit planting area | <p>2.1 Land Preparation Procedures</p> <ul style="list-style-type: none"> 2.1.1 Land preparation tools equipment and machinery 2.1.2 Site clearance 2.1.3 Tilling methods 2.1.4 Spacing requirements 2.1.5 Hole preparation procedures <ul style="list-style-type: none"> ▪ Planting holes ▪ Trellising holes <p>2.2 Soil sampling procedures and techniques</p> | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Third party report • Oral questioning • Written tests |
| 3. Plant passion fruit seedlings | <p>3.1 Planting procedures</p> <ul style="list-style-type: none"> 3.1.1 Mixing top soil, manure | <ul style="list-style-type: none"> • Observation • Practical test |

| Learning Outcome | Content | Suggested Assessment Methods |
|---|--|---|
| | <p>&fertilizer</p> <p>3.1.2 Refilling planting holes with the mixture</p> <p>3.1.3 Planting seedlings</p> <p>3.2 Setting up of trellising structures</p> | <ul style="list-style-type: none"> • Portfolio of evidence • Third party report • Oral questioning • Written tests |
| 4. Maintain soil fertility and moisture | <p>3.3 Soil moisture testing techniques</p> <p>3.4 Fertilizer application</p> <p>3.4.1 Types of fertilizers</p> <p>3.4.2 Methods of fertilizer application</p> <ul style="list-style-type: none"> ▪ Top dressing (Granules/FYM) ▪ Fertigation (through irrigation system) ▪ Spraying (foliar) <p>3.5 Mulching</p> <p>3.5.1 Importance</p> <p>3.5.2 Types of mulch</p> <p>3.6 Irrigation</p> <p>3.6.1 Factors to consider in selecting irrigation method</p> <p>3.6.2 Types of Irrigation</p> <ul style="list-style-type: none"> ▪ Drip / spot, ▪ Flooding, ▪ Sprinkler | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Oral questioning • Written tests |
| 5. Control weeds, pest and diseases | <p>5.1 Pests & disease control</p> <p>5.1.1 Types of pests</p> <p>5.1.2 Signs and symptoms</p> <p>5.1.3 Effects of pests</p> <p>5.1.4 Pest control measures</p> <p>5.1.5 Types of diseases</p> | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Third party report • Oral questioning • Written tests |

| Learning Outcome | Content | Suggested Assessment Methods |
|---|---|---|
| | 5.1.6 Signs and symptoms of diseases 5.1.7 Effects of diseases 5.1.8 Disease control measures 5.2 Weed control 5.2.1 Types of weeds 5.2.2 Effects of weeds 5.2.3 Weed control practices | |
| 6. Prune and train passion fruit plants | 6.1 Training of vines 6.1.1 Importance 6.1.2 Training procedure 6.2 Pruning 6.2.1 Importance 6.2.2 Tools and equipment 6.2.3 Pruning procedures 6.2.4 Pruning techniques | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Term project • Third party report • Oral questioning • Written tests |
| 7. Harvest passion fruits. | 7.1 Harvesting procedures 7.2 Harvesting practices 7.2.1 Harvesting tools and equipment 7.2.2 Harvesting Techniques | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Term project • Third party report • Oral questioning • Written tests |
| 8. Carry out post-harvest practices | 8.1 Sorting 8.2 Cleaning 8.3 Grading 8.4 Packing 8.5 Storage | <ul style="list-style-type: none"> • Observation • Practical test • Portfolio of evidence • Term project • Third party report • Oral questioning • Written tests |

Suggested Methods of Instruction

- Demonstration
- Direct instruction
- Practical
- Role play
- Simulation
- Field trips / site visits
- Group discussions
- Computer aided learning
- Viewing relevant videos
- Guest speakers

Recommended Resources for 25 Trainees

- Assorted Agro chemicals
- 5 Computers
- 25 Delivery note books
- 10 Digging hoes
- Assorted Disinfectants
- 2 rolls Fencing wire
- Assorted Fertilizers
- 10 Fork jembes
- 10 Irrigation facilities
- 5 Knapsack sprayers
- Assorted Labels
- 5 LCD projectors
- 10 Machetes
- Manure/ Compost/ Fertilizer
- 25 Measuring tapes
- Mulch
- Assorted Nails
- 200 Passion fruit seedlings
- 25 Pliers

- 2 Ploughs
- 50 Staking Posts
- 25 sets of PPE
- 25 Pruning knives
- 5 Rakes
- Sample Record keeping templates
- 25 Secateurs
- 5 Slasher
- 5 Spades
- Assorted Stationery
- 25 rolls of Strings or wires (6 meters each)
- Assorted Tree pegs
- Water
- 10 Watering cans
- 5 Wheel barrows