Citrus Orchard Foreman Occupational Learning

Progressive Activities Assessment Guide

A1:

New Enterprise Planning

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Contents

Chapter 1
Activity P1

Complete this activity to test your knowledge of the entire chapter:
1. What are the basic climatic requirements of citrus production?
The climatic requirements include temperature, sunlight, and rainfall.
2. What are the basic environmental requirements of citrus production?
The environmental requirements include soil and topography.
3. What important biological process, found in most plants, is sunlight required for?
Photosynthesis
4. How do farmers in dry regions ensure that their trees receive enough water?
Irrigation
5. Name three macronutrients vital for the functioning of citrus trees.
Nitrogen (N), phosphorus (P), potassium (K).
6. What is the ideal soil pH for citrus?
A pH range of 6 to 7.
7. What is the rootstock?
The rootstock is the lower portion of a grafted citrus tree, consisting of the root system and the lower stem; and serves as the foundation and support for the entire tree.
8. What is a cultivar?
A cultivar, short for "cultivated variety," represents the upper portion of the grafted citrus tree, including the branches, leaves, and the fruit-bearing scion or budwood.
9. What is the process of combining a rootstock and cultivar called?
"Budding" or "grafting".
10. Name three possible functions of off-site infrastructure:
Packing, logistics, research, storage.
11. What is the expected market growth trend for citrus?
Upwards, i.e. an increase in consumption.
12. What do MRLs stand for?
Maximum Residue Levels.

Chapter 2
Activity P2

Complete this activity to test your knowledge of the entire chapter:
1. What are the two important resources in citrus farming when determining layout?
Land and sunlight.
2. What are microclimates?
Microclimates refer to small-scale variations in climate conditions within the larger orchard area.
3. Name three soil characteristics which topography can impact?
Soil depth, composition, and drainage capacity.
4. What are windbreaks usually made of in citrus orchards?
Windbreaks usually come in the form of trees.
5. What are the dangers of excessive soil moisture?
Root rot, reduced oxygen availability to roots, and poor overall tree health.
6. In South Africa, is it more common to grow trees as free-standing or using trellises?
In South Africa, almost all citrus is grown in free-standing systems.
7. What is hail netting designed for?
Hail netting is designed to shield citrus trees from the damaging effects of hail, ensuring the protection of both the crop and the long-term health of the trees.
8. What is pollen?
A powdery substance that plays an important role in fruit formation.
9. Which reproductive parts do flowers have?
Each flower possesses both male and female reproductive parts.
10. Why is cross pollination favourable?
Cross pollination can enhance the fruit set and yield of the trees significantly.

Chapter 3
Activity P3

Complete this activity to test your knowledge of the entire chapter:
1. Why are soil surveys usually done when planning a new orchard or farm?
To determine the readiness of the soil for planting, and if any additional soil preparation is needed.
2. What are the two types of soil surveys?
Chemical and physical soil surveys.
3. What is soil texture?
Soil texture refers to the relative proportions of sand, silt, and clay particles present in the soil.
4. What are the three primary soil particles that make up soil texture?
Sand, silt, and clay.
5. What are soil horizons?
Soil horizons are the several distinct levels that soil consists of.
6. What are the three major horizons that soils have?
A (Topsoil), B (Subsoil), and C (Parent Material).
7. What is the fourth horizon that some soils have?
O (Organic or Humus).
8. What does root depth refer to?
The depth within the soil profile at which the trees' roots typically extend and grow.
9. What is soil compaction?
A condition which occurs when soil particles are pressed together, reducing pore space between them.
10. Why is adequate soil drainage necessary?
To prevent waterlogging.

Chapter 4
Activity P4

Complete this activity to test your knowledge of the entire chapter:
1. What are the three main types of irrigation systems?
Flood, mobile, and static.
2. What do pumps do in an irrigation system?
Pumps move water to the orchards and supply pressure to the emitters to work properly.
3. What do filters do?
Filters 'clean' your irrigation water by trapping and removing suspended material that can block emitters.
4. What are the three most common types of filters?
Sand, disc, and screen filters.
5. What is the first step when reading an irrigation design plan?
Determining the orientation.
6. What is a bill of quantities used for?
The bill of quantities is used to check and verify all the materials that are delivered.
7. How often do well-run and well-installed irrigation systems need major maintenance?
Never under normal circumstances.
8. What does CU stand for?
Coefficient of Uniformity.
9. What are the three classifications of water quality factors?
Physical, chemical and biological.

Chapter 5
Activity P5

Complete this activity to test your knowledge of the entire chapter:
1. When is citrus farming profitable?
Citrus farming is usually only profitable when most of the fruit produced on the farm is exported.
2. What is income?
Income refers to all the money the farm receives.
3. What is gross income?
The part of the farm's income that is left over after direct costs are subtracted.
4. What are the three types of income?
Current, capital, and sundry.
5. What are fixed costs?
Fixed costs are constant costs that are paid regularly.
6. What are variable costs?
Variable costs are costs that change depending on the time of year and what is happening on the farm.
7. What is net profit?
The amount of money that the farm made as a profit for a given period if it earned more income than the amount it spent on costs.
8. What is sustainability in farming?
The ability of the farm to minimise the negative environmental and social impacts caused by their farming operations.
9. How often is budgeting done?
Every year.
10. What are the two main types of budgeting?
Delta based and zero-based.
11. What are goals?
Goals are statements of what you aim to achieve over a specific period.
12. What are objectives?
Objectives are the small, more detailed targets that you break down goals into.
13. What does PERT stand for?
Program Evaluation and Review Technique.