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FACILITATOR GUIDE

Industry Overview

Level 4

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Title:		**Give an Overview of the Industry Structure**					
Applied Title:		**Give an Overview of the Industry Structure**					
Field:		Agriculture and Nature Conservation					
Sub-Field:		Primary Agriculture					
SETA (SGB):		AgriSETA					
Skills Area:		Industry Overview					
Context:		Citrus Production					
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Table of Contents

Directions

1. Learning Material

This guide has developed to assist the facilitator in presenting this unit standard. The guide contains all necessary material to ensure that the facilitator will be able to assist the learner to attain the competencies required by the unit standard.

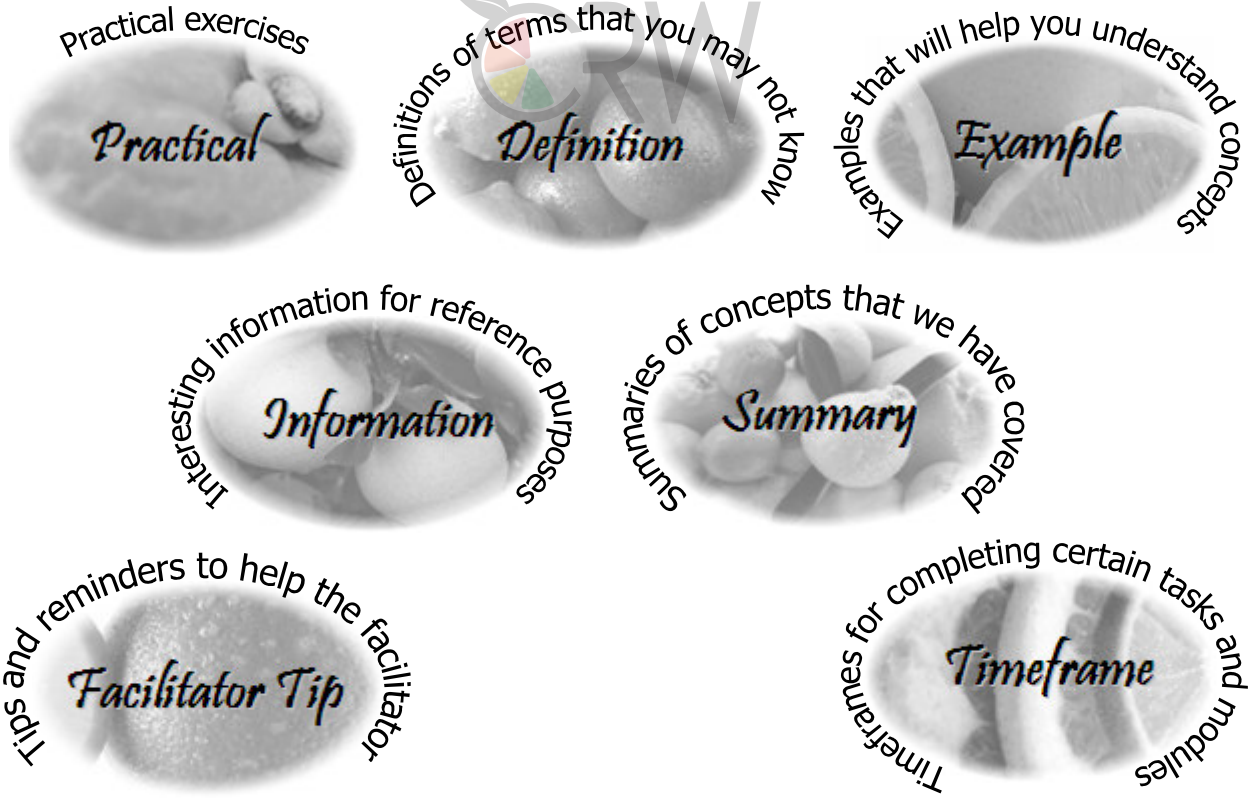
This set of learning material consists of the following guides:

- ***Learner guide*** that contains all the information required by the learner to attain competency in this unit standard
- ***Facilitator guide*** that is a copy of the learner guide but contains additional instructions for the facilitator.
- ***Assessment Guide for Assessors and Facilitators*** that contains all the documentation needed by the assessor and facilitator to assess the competency of the learner against this unit standard.
- ***Assessment Guide for Learner and Learner Workbook*** that contains the documentation required by the learner to complete the assessment, along with the worksheets and practical exercises that the learner needs to complete as part of the formative assessment.

Please ensure that you are familiar with the contents of all of these guides before presenting this unit standard.

Although the learner and facilitator guide contains all the information required for attaining competency in this unit standard, references to additional resources (both printed and electronic) are provided for further study by the learner.

Information in boxes is indicated by tags that show:



2. Learning Program Timeframe

This is a summary of the timeframe for this learning program. You will be reminded of the time allowed for each module as you work through the guide.

Process	*Total Allocated Time*	*Theoretical Learning*	*Practical Learning*	*Activities*
Complete Program (Including summative assessment)	**20h**	**8h 30min**	**11h 30min**	
Learner Orientation and Ice Breaker	30min	15min	15min	n/a
Purpose, Introduction and Learner Directions	30min	15min	15min	n/a
Introduction to Citrus Production	45min	30min	15min	n/a
Session 1 (Chapter 1)	2h	1h	1h activities	1
Session 2 (Chapter 2)	3h 30min	2h	1h 30min activities	2
Session 3 (Chapter 3)	1h 45min	1h	45min activities	3
Session 4 (Chapter 4)	2h	1h	1h activities	4
Session 5 (Chapter 5)	2h 30min	1h	1h 30min activities	5
Session 6 (Chapter 6)	5h 45min	1h 15min	4h 30min activities	6-8
Preparation for Assessment and Revision	45min	15min	30min	n/a

3. Technical Program Specifications

Format	Programmed instruction workshop, combined with structured internship format as prescribed for learnership, skills program or short course.
Target Learner Description	A typical level 4 learner should have been exposed to the working world for a reasonable period and should have a reasonable level of experience in the subject matter. **EE Ratios:** 1 Male: 1 Female 8 PDI : 2 W 1 Employed : 1 Unemployed
Articulation Options	Nil formal in place
Delivery Mode	A combination of small group mode and individual mode

Training Method and Activities	**Program Instruction:** This program forms part of an apprenticeship where coaches provide practical training in the fields requiring functional competency. The theoretical study section of the training is conducted as a 4-day workshop in the Cohort group format. Additional training activities include buzz groups, rotating roll plays, simulations, games and brainstorming sessions, and group discussions.
Learner Support Strategies	Learners are inducted by "explore strategies to learn program". Learners are supplied with all resources and aids as required by the program, including: • Objects and devices such as equipment • Manuals and guides • Visual aids

This unit standard is aimed at level 4 learners.

Typical level 4 learners:

- Have a broad knowledge base of the theoretical concepts related to the skills area.
- Have wide ranging scholastic and technical skills related to the industry and skills area targeted in this learning program.
- Are able to access, analyse, and evaluate information independently.
- Are able to operate in a range of contexts under broad guidance and evaluation.
- Are able to select from a considerable range of procedures in order to give quantity and quality output in terms of evidence required.
- Are able to give presentations to others.
- Take complete responsibility for the quality and quantity of their outputs and may possibly also be responsible for the output of others, meaning they are in a supervisory position, a member of junior management, or technical experts in their field.

The examples given in this resource guide might be for a different geographical area or commodity to what the learner is exposed to. Please adapt your examples according to the learning context.

4. Facilitator's Checklist

This checklist has been designed to assist you in delivering the best possible facilitation to the learners.

Please use it and supply whatever resources you might have in short supply at your venue of learning.

Preparation	*Yes*	*No*
Content Knowledge I have sufficient knowledge of the content to enable me to facilitate with ease.		

Preparation	*Yes*	*No*
Application Knowledge I understand the program matrix and have prepared for program delivery accordingly.		
Ability to Respond to Learners Background and Experience I have studied the learner demographics, age group, experience and circumstances, and prepared for program delivery accordingly.		
Enthusiasm and Commitment I am passionate about my subject and have prepared my program delivery to create a motivating environment with real commitment to success.		
Enterprise Knowledge I know and understand the values, ethics, vision and mission of the Citrus Academy and the service provider under whose auspices the program will be conducted, and have prepared my program delivery, reporting and administrative tasks accordingly.		
Equipment Checklist:		
Learner Guides: 1 per learner		
Learner Assessment Guides: 1 per learner		
Writing material and stationery for facilitator and learner		
White board and pens		
Flip chart paper		
Proxima projector and screen		
Notebook computer and program disk		
Documentation Checklist:		
Attendance register		
Course evaluation		
Learner course evaluation		
Portfolios of evidence		

5. Proposed Floor Plan

No floor plan is prescribed for this training module.

Introduction

1. Purpose

The learner achieving this unit standard will be able to understand the historical and current structure of the relevant industry within which he operates, including organisations, media, government and NGO structures, as well as awareness of any relevant legislation pertaining to all aspects of the industry. In addition, they will be well positioned to extend their learning and practice into other areas of any industry.

Learners will understand the importance of the application of business principles in agricultural production with specific reference to the agricultural industry.

They will be able to operate farming practices as businesses and will gain the knowledge and skills to move from a subsistence orientation to an economic orientation in agriculture. Learners will gain the knowledge and skills to access mainstream agriculture through a business-orientated approach to agriculture.

2. Learning Assumed to Be in Place

It is assumed that the learner has successfully completed the unit standards listed below:

NQF Level	*Unit Standard Number*	*Unit Standard Description*
NQF3		Literacy and Numeracy

Facilitator Tip

It is important to ensure that the learners who are undertaking this learning program has already completed the correct prior learning modules, to ensure that they are not unfairly disadvantaged by the learning process, and can be supported accordingly.

Do not forget to complete the Diagnostic Assessment (Step 3 in the Assessment Guide).

Introduction to Citrus Production

You have to complete this section as follows:

Total time	*Theory*	*Practical*
45min	30min	15min

While this section does not form part of the unit standard as such, it is essential for the learner's orientation to the learning context. Please take time to ensure that the learners have a thorough understanding of this section.

1. Introduction

This learning material has been developed in the context of citrus production, which means that the skills area is dealt with in terms of and as applied to citrus production. To help the learner place the material in the right context, it is necessary for the learner to understand the background to citrus production, and the manner in which a citrus plant produces fruit.

2. Background

Citrus originates from the subtropical regions of south-east Asia. In the wild, citrus trees in these regions produce fruit all year round, and the fruit are small, poorly coloured and blemished. In the absence of effective production practices, citrus trees do not produce fruit suitable for the market.

Citrus production is largely concerned with management of the practices and processes that manipulate the tree to produce high yields of marketable fruit. Production management, together with the selection of superior varieties and plant improvement, can be seen as an on-going effort to influence the natural tendencies of the tree.

Consumers want the fruit of their choice to be available at all times. Fruit should look good, be unblemished, well-coloured (superior exterior quality), taste good (high interior quality) and be of the right size. At the same time, the citrus producer wants orchards that will provide high yields over an orchard lifespan of 18 to 30 years. On top of all this, the citrus orchard must be managed in such a way that production practices have the least possible impact on the natural environment. Commercial citrus production management is about achieving these objectives efficiently and cost effectively.

3. Citrus Planting

Citrus trees are planted in rows in orchards. The planting distance, also called tree spacing or espacement, between rows and between trees within rows, is determined by numerous factors including climate, variety, and soil type. A typical tree spacing is 6m between rows by 3m between trees, meaning that 555 trees per hectare (ha) are planted (1ha = 10,000 m^2).

Once planted, trees take three or more years before bearing fruit that can be marketed. Thereafter, per tree and per hectare yields steadily increase to 40 to 70 t/ha – depending on cultivar and variety – after a further 4 to 7 years. If the trees are well looked after, this level of production will remain fairly constant until trees start to decline naturally.

Yield

Yield refers to the amount of fruit produced, and can be expressed in terms of:

Tree yield	kg per tree	kg/tree
Orchard yield	tons per hectare	t/ha
Export yield	15kg carton equivalents per hectare (10kg carton equivalents for soft citrus)	cartons/ha

4. Lifespan

The average economic lifespan of a commercial citrus orchard varies between 18 and 30 years, and can be as high as 30 to 60 years in hot, dry areas. Citrus is therefore viewed as a long-term crop. For citrus production to be profitable, the orchard must produce high yields of quality fruit every year, and do this consistently over a long period of time.

In citrus production the challenge is therefore to make production decisions and take actions to ensure high annual production of marketable fruit, while ensuring that these decisions and actions contribute to the long-term sustainability of the orchard.

5. Citrus Plant Phenology

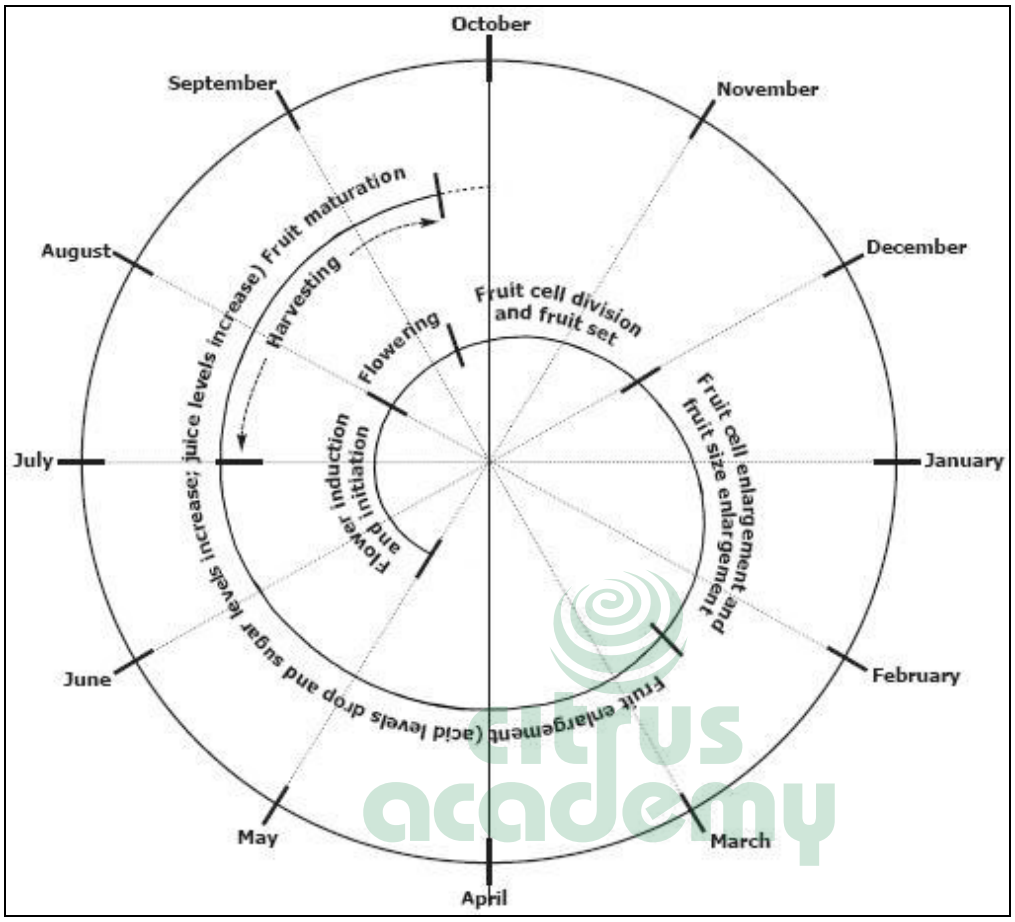
This is a difficult concept for level 2 learners and should be handled with care and extra attention.

Phenology

Phenology refers to regularly recurring biological phenomena and the environmental and climatic factors that influence them. In citrus, phenology specifically refers to the annual cycle of the citrus tree.

Understanding the phenology of the citrus tree is essential to understanding the reasoning behind many of the practices and actions employed in citrus production. For example, the timing of fertiliser applications is linked to the phenology of the tree, with most fertilisers being applied at appropriate times to optimise flowering, fruiting, fruit development and fruit maturation.

The figure and table below set out the annual cycle of the citrus tree with regard to fruit production. Please note that this figure and table reflect the approximate flower and fruit development cycle of a valencia orange tree, and that the phenology of various cultivars differ.



Stage	***Description***	***Time Period***
Flower Induction and Initiation	Flower initiation is the induction and differentiation of vegetative buds into flower buds at a cellular level, and cannot be seen with the naked eye.	May to July
Flowering	Flowering or "bloom" is when blossoms appear on the tree.	August to Mid-September
Cell Division and Fruit Set	Cell division is the period when cells making up the fruit increase in number. Fruit set is the period from flowering or "bloom" until the end of fruitlet drop, after which the final fruit load is determined.	Mid-September to November
Cell Enlargement and Fruit Growth	Cell enlargement is the period during which cells making up the fruit increase in size. Fruit growth is the period during which the fruit grows and develops.	December to Mid-February
Fruit Maturation and further Fruit Growth	During this period fruit enlarges further and matures internally, meaning that the flavour, sugars and acids reach their optimum levels.	Mid-February to September
Harvest		July to September

It is important to note the term **citrus season** refers to the period from when flower initiation begins to the harvest. The season is generally from the beginning of August of one year to the end of July of the next year, although harvesting may extend to September and October for late cultivars.

6. Citrus Learning Material

The following citrus specific learning material is available from the Citrus Academy:

Skills Area	***Description***
Enterprise Selection, Planning and Establishment	Concerns itself with identifying the various components of an agricultural enterprise, and with the selection and planning processes for a new enterprise, and looks at the physical layout of a farm, with specific reference to infrastructure, orchard layout, etc.
Propagation	Concerns the various methods and requirements for the multiplication of plant material of specific varieties that possess desired qualities.
Crop Establishment	Concerns the establishment of a new citrus orchard, in terms of the physical planting of trees and the care for young trees.
Plant Structures and Functions	Considers the structure and function of various plant parts and the manner in which nutrients, water, air and sunlight is taken up and processed.
Plant Nutrition and Soil Management	Concerns itself with plant nutrients, in terms of the requirements of the citrus plant and the supplementation of nutrient elements through fertilisation, with specific reference to the timing and manner of application.
Water Quality	Considers the various factors that influence water quality and manners in which water quality can be measured and controlled. Considers furthermore the effect of water quality on tree and fruit growth and development, in combination with effective irrigation, fertilisation and pest control.
Plant Manipulation	Concerns various types of physical and chemical plant manipulation, with specific reference to pruning, girdling and the application of plant growth hormones, and tools and equipment used for this purpose.
Irrigation	Looks at the technical aspects of orchard irrigation, with reference to the types of irrigation systems, the installation of new irrigation systems, and the repair and maintenance of an irrigation system. Also concerns irrigation scheduling, and measures to ensure effective irrigation.
Pests, Diseases and Weeds	Concerns the identification of pests, diseases and weeds that threaten citrus production. Also considers various methods of effective control, and the planning required for this purpose.
Crop Protection	Looks at the practical application of crop protection agents through various methods, with specific reference to tools and equipment used, and health and safety requirements.
Food Safety	Concerns the requirements in terms of health and safety, and environmental control for ensuring food safety and hygiene.
Harvesting	Looks at the process of determining fruit maturity through maturity indexing, the harvesting of fruit, and the tools and equipment used for this purpose.
Conservation	Considers the impact of farming practices on the environment, with reference to the measures required to minimise this impact and protect the environment.

Skills Area	***Description***
Marketing	Concerns the factors influencing citrus marketing, and the development of an effective marketing plan.
Production Management	Concerns the actions and processes involved in effective production management, with specific reference to the coordination of the various production tasks and processes and the creation of a strategic plan for the enterprise.
Industry Overview	**An overview of the citrus industry and the various institutions involved.**
Packhouse Practices	Concerns the specific principles and practices that are employed in Packhouse environments, and specifically: • Receiving • Sorting • Grading • Fruit Sizing • Cold Chain Management • Packing • Palletising • Storage • Dispatch • Fruit Markets • Fruit Quality • Fruit Treatment • Health and Safety • Hygiene • Product Characteristics

Remember that learners from a specific geographical area might not be aware of the real scope and distribution of citrus production and marketing. If possible, take multimedia resources and SA Fruit Journals to the class and try to expose learners to pictures and news from other geographical areas. This will help to instil a sense of pride and commitment in the learner that will not only have positive results for the acquisition of the skills, knowledge and attitudes required by the learning program, but will have a positive impact on the workforce of the citrus sector.

Try to avoid strictly theoretical class sessions where text is merely rephrased. Where possible, use diagrams, flow charts, visual aids, and multimedia presentations, and allow time for group work and participation from learners. Give frequent breaks and build in ice breakers and energisers into the facilitation time. Where possible and accessible, arrange for site visits to the bodies and institutions discussed in this module. Encourage learners to read as much as possible in advance and in preparation for facilitation to allow for class discussions and sessions in which questions can be posed and debated.

Chapter 1

After completing this chapter, the learner will be able to:

Explain the historical and current framework structure of the industry

You have to complete this section as follows:

Total time	*Theory*	*Practical*
2h	1h	1h activities

1. Early Developments

Explain the history and early developments of the citrus industry with the help of visual timelines. Prepare a flow diagram or time line prior to starting the facilitation. Be alert to learners showing disinterest and lack of concentration.

Where possible, encourage learners to read in advance and in preparation for the class. An open ended discussion can then be held, rather than merely working through the text.

Allow time for frequent breaks and energisers, such as celebrating the fact that South African citrus has now been exported for more than 100 years.

The structure of the citrus industry today is the consequence of an evolutionary process which started in 1906 when the first ever consignment of 3,000 cases of export oranges arrived in London from the then Transvaal.

In 1914, the Fruit Export Act was passed and prescribed regulations to which all export citrus fruit had to conform. These regulations were however so elementary that in 1921, with export volumes having grown to over 60,000 cases, it was reported that:

> *"Large quantities of oranges arrived in England in a condition of complete waste while, as regards anything fit for sale, there being no system or order or control of distribution, prices were poor and heavy losses were suffered by the shippers, especially in the speculation section."*
> (Extracted from a letter written by Richard Rusk to the Citrus Exchange)

This led to a series of grower meetings culminating in the formation in July 1922 of the Fruit Growers' Exchange of South Africa, an organisation that covered both deciduous fruit and citrus fruit. In December of that year, the Exchange was registered under the new Cooperative Societies Act.

The Fruit Growers' Cooperative Exchange Limited, as it was known, was the first cooperative organisation in the country to embrace local cooperatives linked together into a number of district associations. However, the only real and lasting achievement of the organisation during the first three years of its existence was the establishment of the Perishable Products Export Control Board (PPECB).

2. The South African Cooperative Citrus Exchange

Following representations by citrus growers, the Citrus Exchange, which would have the local citrus cooperative companies as its members, was formally constituted as a separate entity on the 27th of April 1926.

It was recognised that the standardisation of the grading and packing of citrus fruit and the control of the distribution of the packed fruit, would be greatly facilitated if it were packed in as few packhouses as possible. The Citrus Exchange therefore promoted the establishment of cooperative citrus packhouses and by 1939, 74% of the total crop was being packed in eight packhouses, the remaining 26% being packed by 528 individual packhouses.

By 1950, the Citrus Exchange was:

- Regulating the packing and forwarding of fruit;
- Purchasing packing material on behalf of its members;
- Distributing and marketing fruit locally and overseas;
- Pooling the proceeds of the sales and paying out growers;
- Providing inputs for fruit quality, grading and packing regulations; and
- Providing a technical advisory service

It continued to widen and improve its range of services until major restructuring occurred in the mid-1990s, resulting in the conversion of the Citrus Exchange into a public company named Outspan International.

3. The Citrus Board

Some of the difficulties confronting the Citrus Exchange in the 1930s was finding the fruit to develop new markets and spreading the cost of transport from packhouses to markets. While these issues were being debated, the outbreak of World War II added to the need for greater unity in the industry.

The export market collapsed and it became evident that protection of individual grower interests lay in the creation of a Citrus Board under the Marketing Act. The Board could act for the whole industry and not just part of it as the Exchange had done until then. By 1939 approximately 80% of exports were marketed by the Exchange, but the 20% marketed outside of the Exchange hampered planned distribution, particularly in respect of keeping up a continuity of supply to each market.

Accordingly, at a special meeting of the members of the Exchange on the 6th of November 1939 it was unanimously decided to adopt a Citrus Scheme under the Marketing Act. The Citrus Board had its first meeting on the 1st of January 1940.

Having been forced by war conditions to institute the Citrus Board, it was nevertheless recognised that it was critical to retain the cooperative organisation of the Citrus Exchange. This was guaranteed through a decision of the Board in 1940 to appoint the Exchange as secretaries to the Board and to designate the Exchange's overseas organisation as the sole agency through which citrus could be sold.

In practice, therefore, the Exchange continued to provide all the services while the Board was vested with the statutory powers through which levy collection, grading regulations and other functions requiring government approval, were channelled.

4. Trademarks

Illustrate the concept of trademarks by bringing examples to class or assigning homework tasks to learners to collect citrus trademarks. Then explain the relevance of the current trademarks and how they came about. Remind learners why trademarks exist and of their international importance.

When the Citrus Exchange was formed in 1926, the trademark "Goldland" was registered, but there were insufficient funds available to make effective use of it. Each packhouse or region therefore created and made use of its own brand name. Nevertheless, regular discussions continued about the merits of establishing a national trademark.

In 1933 the Exchange decided to establish two brands, namely "Springbok" and "Gemsbok". For various reasons, however, neither was registered. In 1936, the Exchange acquired at no cost the rights to the name "Outspan", which at that time was registered in the name of the Amanzi Estate Limited. The first consignment of 220,000 cases was exported under the Outspan trademark in 1936.

With the implementation of the Citrus Scheme, all fruit were exported under the Outspan trademark if it met the required standards, or as Standard Grade. Through imaginative promotion of the trademark Outspan, it became almost as well known as the famous Sunkist brand of California, and played a significant role in the growth and success of the South African citrus industry.

5. Technical Services

In 1931 the Exchange appointed its first technical officer. By the late 1950s, the technical staff consisted of ten field advisors and a small entomology research unit.

In 1973, the Exchange opened the doors of its own research facility, the Outspan Citrus Centre, and by the mid-1990s the Exchange's technical division employed over 120 staff members, comprising production research, field advisory services, the Citrus Improvement Programme, operations research and a quality management department. It was during this time that the first edition of the four volume Citrus Production Guidelines series was published.

In 2001, Citrus Research International (CRI) was established as a wholly owned subsidiary of the Citrus Growers' Association of Southern Africa. The CRI took over the facilities and functions of the Exchange's technical division.

6. Export Orientation

The South African citrus industry has always been export oriented. While being only the twelfth largest producer of citrus in the world, South Africa has been the second largest exporter of citrus in the world after Spain since 2004.

South Africa's dependence on exports is apparent from the following:

- While the average USA citrus farmer exports only 7% of his crop, for South African growers the average export level in 2005 was 64%, with 19% of production being processed and the balance of 17% being sold on the local fresh markets.
- Local market returns in South Africa are substantially lower than export market returns. For example, during 2003, the typical packhouse door return for export citrus was between R1,900 and

R2,300 per metric ton (Mt). The comparative return for local market fresh fruit was between R600 and R700 per Mt, and for processed citrus R270 to R320 per Mt.

As a result, the average citrus producer generates over 80% of his revenue from exports. In 2005, the industry statistics indicate that 86% of revenue was generated from exports, 12% from local fresh markets, and only 2% from processing.

A producer that employs above average management practices and has favourable growing conditions, packs out 70% of his crop for exports and derives over 90% of his revenue from exports.

7. Local Marketing

Control over the local marketing of fruit was instituted with the creation of the Citrus Board in 1939. In 1957 this control was lifted, but in 1966 the Exchange successfully approached the government to have control re-instituted. Local market control was lifted again in the early 1990s.

8. Growth of the Citrus Industry

Spend sufficient time on the discussion of the concepts covered in this section, especially on the challenges facing the industry. Encourage learners to read in advance and prepare for a clas discussion.

Collective efforts made by Southern African producers and exporters do not have a very significant influence on global market forces in most cases. The industry is faced with the following challenges that are not within its power to control:

- Worldwide oversupply
- Mismatches in supply and demand
- Fluctuations in the value of the local currency
- Performance of competitors' currencies
- Status of the economies of importing countries
- Competition with other food-kinds
- Foreign government subsidies and assistance
- The limited ability of the local market to absorb production
- Weather patterns and climatic conditions
- Unforeseen global crises
- Changes in consumer preferences
- World oil prices

Furthermore, the production and packing of citrus to meet export market expectations is a difficult and risky business, taking into account that South Africa is located long distances from its markets, that the crop is grown over a wide geographic area with varying climatic conditions and soil types, and that it is home to some of the most destructive pests and diseases found anywhere in the world.

In spite of these challenges, the South African citrus industry has grown steadily and at times dramatically, over the century of its existence. At the outbreak of war in 1939, exports totalled 3.7 million cases. By 1944, due to the collapse of export markets, exports had dropped to 1 million cases, but by 1949 had climbed back to 3.9 million. Thereafter, exports increased steadily, reaching 7.2 million cases by 1959 and, following the opening of markets in the Middle East and expansion of European markets, reached 25 million 15kg cartons by 1976. During the 1980s, production and exports continued to increase steadily.

Dramatic growth occurred in the 1990s during which time total citrus production in South Africa grew from 700,000Mt to 1.7 million Mt, a growth of some 8% per annum compared to the average global citrus growth rate of 1.4% per annum. South Africa now produces 1.8% of the world's citrus and is ranked 12th in total production.

Exports have similarly grown and reached 70 million 15kg equivalent cartons in 2004. South Africa has been the second largest exporter of fresh citrus fruit in the world after Spain since 2004.

The high growth rate in Southern African production over the past 10 years is the result of buoyant export prices realised during the 1980s and early 1990s which in turn are linked to the political changes in South Africa resulting in the opening of export markets previously denied to the country.

In 2005, the citrus industry comprised a total of approximately 1,600 farming units packing fruit in between 120 and 150 packhouses. The total area planted under citrus was 57,168ha, distributed around the citrus producing regions of the country as indicated in figure 1.2 below.

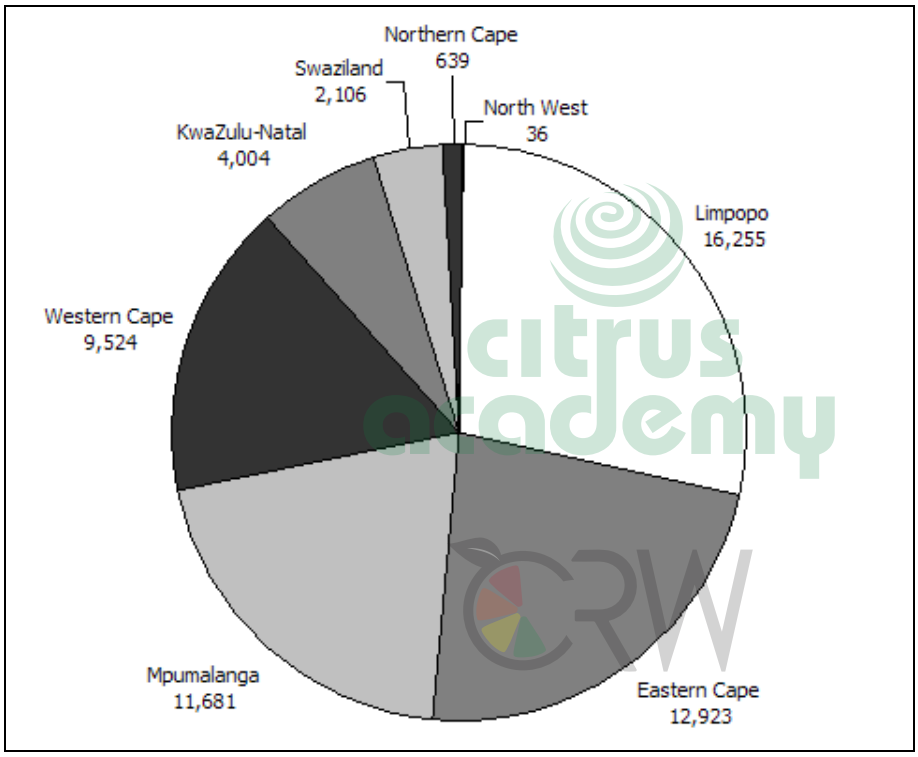


Figure 1.1: Citrus Plantings (ha) per Region (2005)
CGA Key Industry Statistics

Fresh citrus fruits from Southern Africa reach over 60 markets around the world through the services of 250 exporting companies, twelve of which account for 80% of all exports. Approximately 100,000 people are directly employed by the industry and a total of approximately 1,000,000 people are dependent on income derived from industry activities. The revenue earned by South Africa through citrus exports totalled R3 billion in 2004.

9. Deregulation – A New Era

All the learners may not be familiar with the concepts of regulation versus deregulation. An easy way to explain it is by posing a regulated scenario to one group and a deregulated scenario to the

other group, and holding a five minute mini-debate around the pros and cons of deregulation and regulation. Discuss the deregulation of the citrus industry, why deregulation occurred, and what the advantages or disadvantages might be.

Throughout its history, the citrus industry has had to adapt to constantly changing circumstances, for example the effects of World War II bringing about statutory control, and the collapse of the export market in 1960 heralding a new era in the structure of the Exchange, its approach to export marketing, and the innovative promotion of the Outspan brand.

In the late 1980s, increasing discontent amongst growers regarding the pooling of proceeds and the obstructive effects of this on direct rewards for individual performance, culminated in an in-depth investigation into the role and functions of the Citrus Exchange. Amongst the findings were that the industry was not sufficiently market oriented and that its future prosperity would require a major revamp of policy and approach.

Shortly thereafter, the government called for a full investigation into the Marketing Act and its implications for agriculture under the new political dispensation. The key consequences of these two independent developments on the citrus industry were:

- The restructuring of the Citrus Exchange, which was converted to a public company named Outspan International in 1996

- The deregulation of the citrus industry brought about by dissolution of the Citrus Board in October 1997 in terms of the new Marketing Act (No. 47 of 1996)

The immediate and most dramatic effects of deregulation on the industry were that:

- Grower levies were no longer compulsory
- Single-channel exports were replaced by multi-channel exports
- Industry structures and services had to be transformed and relocated

In 1998, the entities formerly responsible for providing the full range of services related to the production and export of both citrus and deciduous fruit, namely Outspan International and Unifruco, joined forces to form Capespan (Pty) Ltd. This created a vacuum for a national body to act as the mouthpiece for the citrus growers.

10. Citrus Growers' Association of Southern Africa

Encourage learners to read in advance to ease facilitation of this part and to research the CGA by visiting its website (www.citrusacademy.co.za). Discuss the make-up of the CGA, what its functions are, and how it contributes to the citrus industry. Contextualise the influence of the CGA in the learners' life and work.

In 1997, in anticipation of the impact of pending deregulation on industry unity, citrus producers from South Africa, Swaziland and Zimbabwe formed the Citrus Growers' Association of Southern Africa (CGA). The CGA is wholly grower-owned and -controlled, and its directors represent all seventeen separately identified citrus growing regions on the sub-continent, as shown in figure 1.2.

Figure 1.2: Citrus Growing Regions in Southern Africa

The mission of the CGA is to:

- Provide the industry with access to global markets
- Optimise the cost effective production of quality fruit
- Be committed to research, development and communication with all stakeholders
- Care for the environment and community in which it operates

In 2000 the CGA submitted an application to the Minister of Agriculture for a statutory grower levy, which was granted in March 2001. The levy amount was originally 21c per 15kg carton equivalent of fruit exported, and was increased to 32c per 15kg carton in 2004.

Approximately 75% of levy income is spent on research, with the balance used to fund various important industry functions, such as transformation, statistics and trade information.

Market access, especially to the more lucrative markets (USA, Japan and Far East) is considered the cornerstone of the citrus industry. This requires the production of fruit that meet the quality standards of the importing countries, and adhering to their food safety and phytosanitary requirements. This can only be maintained through well-directed research, which is considered the primary function of the CGA.

Sanitary Measures

Sanitary measures refer to measures applied to protect the health and safety of the human population of the country to which fruit is exported, and includes food safety measures such as chemical residues (MRLs), bacterial infections and unwanted substances.

Sanitary measures are normally regulated by health organisations, such as the World Health Organisation (WHO), and national health departments.

Phytosanitary Measures

Phytosanitary measures refer to measures applied to protect the life and health of animals and plants in the country to which fruit is exported from risks arising from the entry, establishment or spread of pests, diseases or disease-carrying organisms.

Protecting flora and fauna, pests and diseases that may be transported – plant health and animal health departments – International Plant Protection Convention

Phytosanitary measures are regulated by the International Plant Protection Convention, and national animal and plant health departments.

Spend sufficient time in explaining the concepts of sanitary phytosanitary measures.

Ensure that learners understand why these measures exist and what their impact is on food safety, market access, and the success of the citrus industry.

The CGA drives its research effort through Citrus Research International (Pty) Ltd (CRI), a subsidiary entity with the vision of creating a single collaborative environment for all citrus research, incorporating Universities, the Agricultural Research Council, and other organisations and individuals involved in citrus research. The primary task of the CRI is to:

- Ensure that research funding is adequate and sustainable;
- Determine growers' research priorities;
- Direct research efforts; and
- Control research expenditure

Transformation within the citrus industry is another important function of the CGA. For this purpose, the CGA appointed a transformation manager to focus on transformation imperatives, including land reform and access to resources. The CGA also recently established the Citrus Academy, which fulfils the function of creating an enabling environment for skills development within the citrus industry.

11. Other Industry Bodies

Lead a class discussion in which the question is posed: Are you aware of any other bodies in the citrus industry that might be of importance?

11.1. Citrus Industry Trust

The Citrus Industry Trust (CIT) was established in 1997 with the dissolution of the Citrus Board. The CIT was entrusted with the funds that the Citrus Board held at the time of its dissolutions, and has the responsibility of investing in skills development and transformation in the citrus industry.

11.2. Fresh Produce Exporters' Forum

The Fresh Produce Exporters' Forum (FPEF) is a voluntary Section 21 company established by exporters in 1998 to create order in export markets and to rebuild a database of strategic industry information that was in danger of being lost after deregulation.

Members represent over 80% of South African fruit export volumes. They work closely with growers associations in forums aimed at ensuring the best possible return for all parties.

11.3. Citrus Marketing Forum

The Citrus Marketing Forum (CMF) was established in 2003 by the FPEF and growers as an informal forum that brings together growers and exporters to:

- Serve as a marketing forum and mouthpiece with regard to the export and marketing of citrus;
- Serve, promote and protect the interests of growers and exporters;
- Work for and promote the development of the citrus export industry as a whole;
- Gather, verify and circulate to growers and exporters relevant information to encourage orderly and responsible export marketing of citrus;
- Keep growers and exporters informed of matters concerning the citrus export industry and to provide guidance on the best methods for the promotion of the industry and the exportation of citrus fruit; and
- To decide on guidelines, rules, regulations, standards, limitations and general trading terms and conditions to be applied by growers and exporters in the conduct of their business. These decisions are binding on its members.

Summary

This is an opportunity to check the progress that learners have made.

Allow time for the learners to read through the summary and to gauge their own progress. Make sure that each and every learner gets and opportunity to ask questions.

Chapter 1

- In 1906 the first South African export citrus arrived in London.
- In 1914, the Fruit Export Act was passed and prescribed regulations to which all export citrus fruit had to conform.
- In July 1922, the Fruit Growers' Exchange of South Africa was established, which was a cooperative organisation, and which established the PPECB.
- In April 1926, the Citrus Exchange was constituted.
- By 1950, the Citrus Exchange was regulating the packing and forwarding of fruit, purchasing packing material on behalf of its members, distributing and marketing fruit locally and

overseas, pooling the proceeds of the sales and paying out growers, providing inputs for fruit quality, grading and packing regulations, and providing a technical advisory service.

- In 1939, the Citrus Board was established under the Marketing Act, which was a statutory body that all growers had to belong to, and who appointed the Citrus Exchange as secretaries.
- In 1936, the first citrus was exported under the trademark Outspan.
- The Citrus Exchange conducted citrus-related research, provided technical support services to citrus growers, and published the Citrus Production Guidelines.
- The South African citrus industry is export oriented, and is the third largest exporter of citrus in the world.
- Control over local marketing was finally deregulated in the 1990s.
- In spite of many challenges, the South African citrus industry has grown consistently over the past 100 years in terms of both exports and production.
- In 1996, the Citrus Exchange was converted into a public company called Outspan International.
- In 1997, the Citrus Board was dissolved in accordance with the new marketing act.
- In 1997, the Citrus Growers' Association of Southern Africa was established by the citrus growers of South Africa, Swaziland and Zimbabwe.
- In March 2001, statutory levies for the CGA were approved.
- About 70% of the levy income of the CGA is spent on research, for which Citrus Research International is responsible.
- The CGA employs a transformation manager and has established the Citrus Academy to create an enabling environment for skills development.
- The Citrus Industry Trust manages the funds that were held by the Citrus Board at the time of its dissolution.

Complete activity 1 in the **Learner Workbook**.

Activity 1 – Flow Diagram

Remind learners of the lay-out of a flow diagram. Encourage learners to first organise the basic structure of the flow diagram, and then elaborate into sub-flow diagrams under the main body.

Timeframe: 1h

Chapter 2

After completing this chapter, the learner will be able to:

Describe the various relationships within the industry as well as between the specific industry and its components and others within and outside of the sector

You have to complete this section as follows:

Total time	*Theory*	*Practical*
3h 30min	2h	1h 30min activities

1. Introduction

It is recommended that a flow diagram is prepared prior to facilitation to ease the explanation of the links between different role-players in the citrus industry. Discuss the role of each role-player according to this and alert learners to the links to other role-players.

The citrus industry does not and cannot function independently from the wider agricultural sector. Its primary stakeholders are its growers, who have created structures to ensure that their voices are heard by all other industry stakeholders and role players. The primary representative body is the Citrus Growers' Association.

2. Sector Structure

Fruit SA was established in 2001 as a joint initiative between the citrus, deciduous and subtropical fruit industries. It focuses on transformation, information and logistics, market access and market development. It is one of the sixteen Export Councils registered with the Department of Trade and Industry (DTI). Fruit SA has played a central role in coordinating a positive international image for the South African fruit industry.

The structure of Fruit SA is as follows:

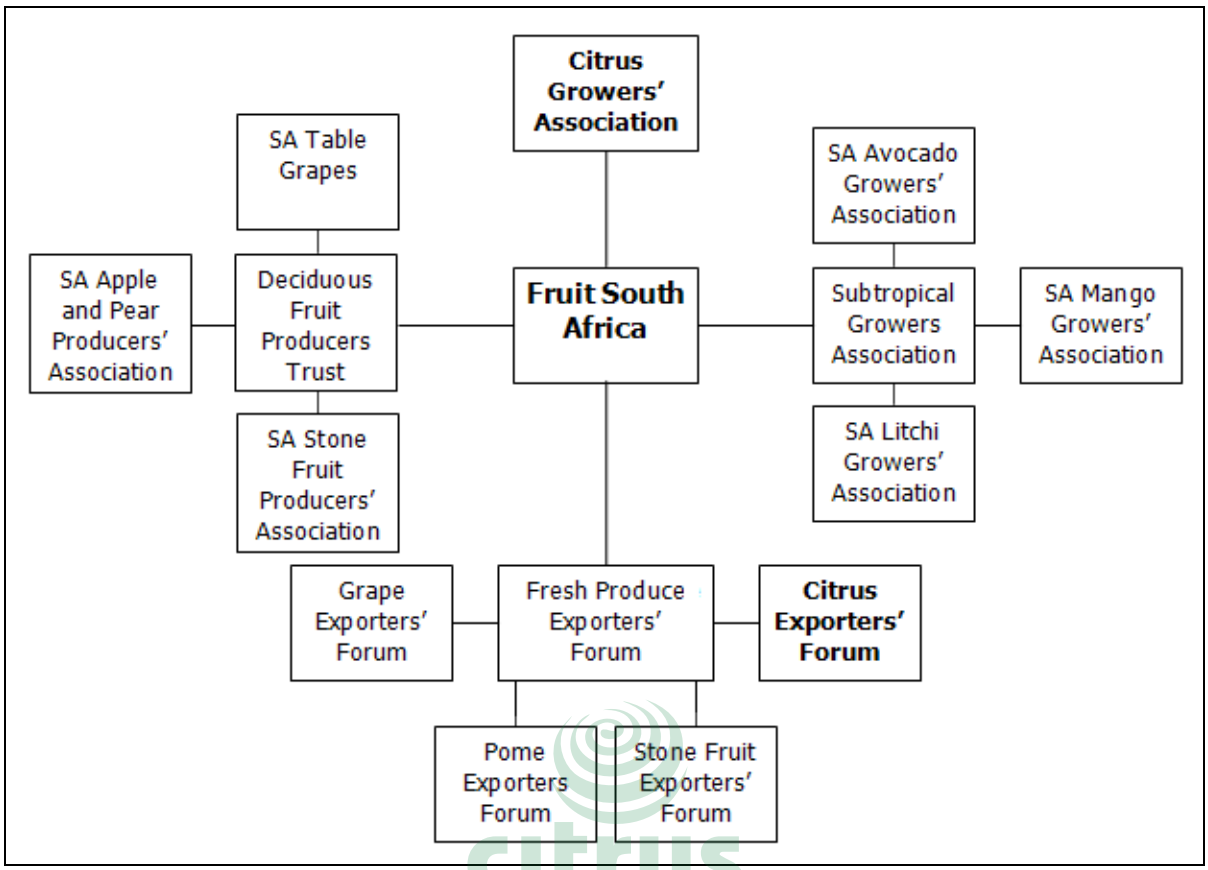


Figure 2.1: Fruit SA Structure

3. Industry Representation

The CGA maintains close links with a number of organisations as the representative of growers and their interests. Figure 2.2 sets out representation within the citrus industry.

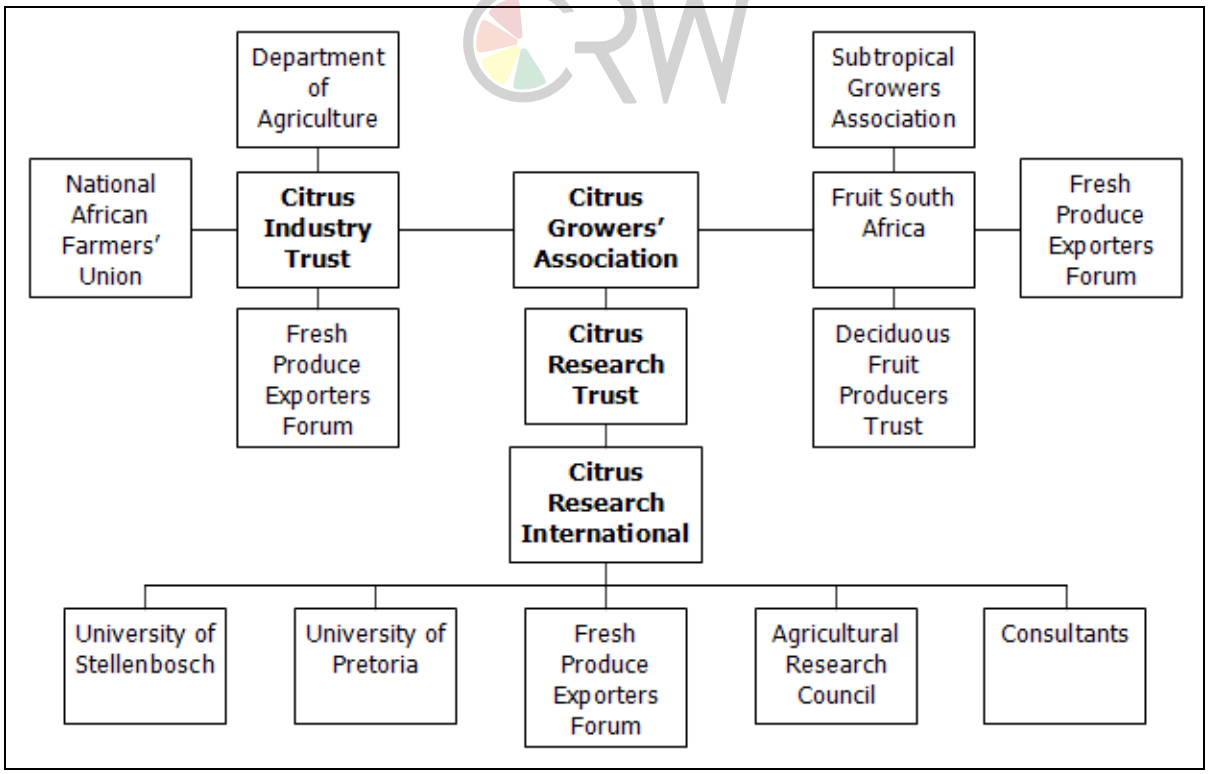


Figure 2.2: Citrus Industry Representation

The CGA also represent growers at various other entities, attending relevant meetings and making contributions as and when appropriate. These organisations and committees include:

- Agri SA
- Citrus Exporters' Forum
- Citrus Industry Trust
- Citrus Marketing Forum
- Citrus Southern Africa
- Department of Agriculture, Forestry and Fisheries
- Agricultural Trade Forum
- Market Access Committee
- Sanitary and Phytosanitary Committee
- Fresh Produce Exporters Forum
- Fruit SA
- Japan Focus Group
- National Agricultural Farmers Union
- USA Alliance
- Southern Hemisphere Association of Fresh Fruit Exporters

The CGA from time to time mandate certain of its members to form sub-committees to discuss issues of concern to the industry, with relevant parties participating in discussions on quality standards and other such issues.

The CGA liaises closely with similar organisations, such as the Deciduous Fruit Producers' Trust (DFPT). Close contact is also maintained with commercial research and technical units and exporters who provide technical services of various kinds to their suppliers.

Summary

This is an opportunity to check the progress that learners have made.

Allow time for the learners to read through the summary and to gauge their own progress. Make sure that each and every learner gets and opportunity to ask questions.

Chapter 2

- The CGA is the chief representative organisation of growers in Southern Africa.
- Fruit SA was established in 2001 as a joint initiative between the citrus, deciduous and subtropical fruit initiatives.
- The CGA represent the interests of citrus growers in a number of organisations and forums, and liaises with other industry organisations.

Complete activity 2 in the **Learner Workbook**.

Activity 2 – Organisational Diagram

Encourage learners to read through the text of this section and then organise the role-players and their links to each other as they understand it. Encourage learners to avoid simply copying the diagrams in this section.

Timeframe: 1h 30min

Chapter 3

After completing this chapter, the learner will be able to:

List media published from time to time within, for, about, on and on behalf of the industry

You have to complete this section as follows:

Total time	*Theory*	*Practical*
1h 45min	1h	45min activities

1. Introduction

The industry structures described in the previous chapter communicate with stakeholders and the public in various ways. To keep up to date with the latest developments, it is important for growers and other stakeholders to use these publications and information sources.

Apart from magazines and other media publications that concern the entire agricultural industry, there are a number of publications that are specific to the fruit industry and the citrus industry.

2. Fruit Industry Publications

Bring as many physical examples of publications to the classroom and discuss the information and relevance of each publication accordingly.

Learner groups can also be given specific publications in preparation for the class, which they have to read or evaluate and then report back regarding the information contained in the publication. Encourage the groups to try and identify the target audience of the publication.

In addition to the variety of commercially available agricultural magazines and other publications, the fruit industry issues specific publications aimed at their members.

2.1. The SA Fruit Journal

The SA Fruit Journal is a fruit industry publication that is issued every second month. It is produced by an alliance between the Deciduous Fruit Producers' Forum, the Fresh Produce Exporters' Forum, and the Citrus Growers' Association.

The Journal contains general fruit industry information, together with popular and topical scientific articles on different fruit types. In each edition a whole section of the journal is devoted to citrus.

The Journal is distributed to growers through the various representative associations. One can also subscribe to the Journal by visiting their website at www.safj.co.za.

2.2. Trade Chain Manuals

The trade chain manuals consist of a set of nine books that cover the entire trade chain from production to exporter activities. The manuals are published by the Fresh Produce Exporters' Forum, and provide information about citrus, deciduous fruit, including grapes, and subtropical fruit.

The trade chain manuals are essential reading for all participants in the industry, as it provides a concise overview of the entire trade chain. The manuals can be ordered by email from pa@fpef.co.za, or by visiting the website of the Fresh Produce Exporters' Forum at www.fpef.co.za.

3. Citrus Industry Publications

3.1. CGA Annual Reports

The CGA annual reports cover the activities of the CGA over the year under review and include sections on communication, market access research, transformation, production quantities, finance and other topical issues.

The CGA annual reports are distributed to citrus growers, and can be obtained from the CGA.

3.2. CGA Key Industry Statistics

The Key Industry Statistics booklet is published annually by the Citrus Growers' Association. The booklet contains the following information for the preceding season:

- The **scope of the industry** in terms of total production and exports, including comparisons to other citrus producing countries.
- **Production statistics for specific cultivars**, including regional production and plantings, exports by selection and by country, and historical data.
- **Special export programs** including volumes shipped per cultivar.
- **International information**, including the volumes produced and exported per cultivar and variety by the various citrus producing countries around the world.

The booklet is distributed to citrus growers and other role players. A copy can be obtained by contacting the CGA at (031) 765-2514.

3.3. Citrus Transformation Booklet

The CGA publishes a booklet on transformation in the industry every second year, providing the reader with information on overall transformation, specific case studies and contact information for assistance.

The booklet is distributed to citrus growers and other role players. A copy can be obtained by contacting the CGA at (031) 765-2514.

3.4. Citrus Production Guidelines

The Citrus Production Guidelines are a series of four technical compilations providing technical information and guidance to the grower, including the establishment of citrus, cultural practices, integrated pest and disease management, and the harvesting and packing of citrus. This series provides a comprehensive prescription on all facets of pre- and postharvest citrus management.

The guidelines were first published in the mid 1990s and are now regularly updated by Citrus Research International. The guidelines can be ordered by contacting the CRI at (013) 759-8000.

4. Electronic Information Sources

Various websites provide updated details on all facets of the activities and operations of the citrus industry. Visit them at the addresses listed in the table below.

Organisation	*Web Address*
Citrus Growers' Association	www.cga.co.za
Citrus Research International	www.cri.co.za
Citrus Academy	www.citrusacademy.co.za
SA Fruit Journal	www.safj.co.za
Fruit SA	www.fruitsa.co.za
Fresh Produce Exporters' Forum	www.fpef.co.za

Table 3.1: Electronic Information Sources

Summary

This is an opportunity to check the progress that learners have made.

Allow time for the learners to read through the summary and to gauge their own progress. Make sure that each and every learner gets and opportunity to ask questions.

Chapter 3

- The citrus industry communicates with its growers and the general public in a variety of ways.
- The SA Fruit Journal is issued every second month and is distributed to all citrus growers.
- The Trade Chain Manuals is published by the Fresh Produce Exporters' Forum, and contain information about the entire fruit trade chain.
- The CGA annual report contains information of the activities of the association for the year under review.
- The CGA Key Industry Statistics booklet is published annually by the CGA and contains information on the scope of the industry, production for specific cultivars, special export programs, and international production and exports.
- The CGA transformation booklet provides information on emergent growers in the industry.
- The Citrus Production Guidelines is published by Citrus Research International and provides technical information and guidance to growers.
- There are various electronic information services that can be accessed through the Internet.

Complete activity 3 in the **Learner Workbook**.

Activity 3 – Research Project

Encourage learners to complete the activity individually and as per their personal choice of publication(s) or the publications encountered in their workplace.

Timeframe: 45min

Chapter 4

After completing this chapter, the learner will be able to:

List all relevant government departments that affect the specific industry

You have to complete this section as follows:

Total time	*Theory*	*Practical*
2h	1h	1h activities

Prepare diagrams and visual aids in advance to ease facilitation of this section. Explain the role of the different government departments through these diagrams or visual aids.

1. Introduction

The citrus industry is reliant on strong links with various government departments to enable statutory and non-statutory functions to be fulfilled on its behalf. Government also acts as facilitator and convenor of a number of activities and processes.

2. Department of Agriculture, Forestry and Fisheries (DAFF)

The participation of government is achieved largely through two of the five branches that report to the Director General of the Ministry for Agriculture, Forestry and Fisheries. These two are Agricultural Economics and Business Development, and Agricultural Production and Resources Management.

Various programmes fall under these branches, the most relevant to the export citrus industry being Agricultural Production and National Regulatory Services. The latter is responsible for Food Safety and Quality Assurance, Plant Health and Quarantine, and Inspection Services.

Small-scale production of citrus primarily for local consumption aimed at creating opportunities for income generation for marginalised individuals is assisted and facilitated primarily through the directorates of Food Security and Rural Development, and Finance and Cooperative Development.

On matters concerning transformation and land reform in the citrus industry, the industry liaises with provincial and national Departments of Rural Development and Land Reform.

3. Perishable Products Export Control Board (PPECB)

The PPECB acts as the assignee (agency) of the Department of Agriculture, Forestry and Fisheries in terms of the Agricultural Product Standards Act and is, amongst other things, responsible for the certification of quality standards.

4. National Agricultural Marketing Council (NAMC)

The Marketing of Agricultural Products Act of 1996 empowered the establishment of the National Agricultural Marketing Council (NAMC). The mission of the NAMC is to advise the Minister of Agriculture, Forestry and Fisheries and directly affected groups on all agricultural marketing issues. Its core business is to provide timely and relevant information to its stakeholders. One of its key tasks over the past few years has been to investigate the effects of deregulation on food security and how deregulation has affected the wine, ostrich, red meat and dairy industries.

Summary

This is an opportunity to check the progress that learners have made.

Allow time for the learners to read through the summary and to gauge their own progress. Make sure that each and every learner gets and opportunity to ask questions.

Chapter 4

- The citrus industry interacts with the Department of Agriculture, Forestry and Fisheries mainly through the Agricultural Economics and Business Development, and Agricultural Production and Resources Management branches.
- The PPECB is an assignee of the Department of Agriculture, Forestry and Fisheries and is responsible for food safety and quality inspections.
- The NAMC advises the minister of Agriculture, Forestry and Fisheries on matter regarding the marketing of agricultural products.

Complete activity 4 in the **Learner Workbook**.

Activity 4 – Worksheet

Encourage learners to complete the worksheet individually and as per their own understanding.

Timeframe: 1h

Chapter 5

After completing this chapter, the learner will be able to:

Name all legislation pertaining to the specific industry

You have to complete this section as follows:

Total time	*Theory*	*Practical*
2h 30min	1h	1h 30min activities

If possible, allow time for groups to break away and read through the Acts listed below. Groups must report back regarding what each Act states and how they impact on the citrus industry.

1. Introduction

The citrus industry operates within the framework of specific legislation, such as laws, or Acts of Parliament, that stipulates requirements or otherwise place boundaries on the various production and marketing activities and how they are conducted.

In this chapter, we look at various acts that have a bearing on the industry, and their implications.

2. Conservation

The Acts regulating the conservation of the environment are the following:

- Conservation of Agricultural Resources Act of 1983
- National Environmental Management Act of 1998
- Plant Improvement Act of 1976

3. Product Standards, Phytosanitary Requirements and Food Safety

Food safety standards in South Africa are prescribed by the Department of Agriculture, Forestry and Fisheries (DAFF) through the Agricultural Product Standards Act of 1990 (APS). The Act in turn empowers a number of regulations which apply to specific commodities. Based on these regulations, standards and requirements documents are developed by DAFF in consultation with commodity organisations. Standards and requirements documents are applicable to specific cultivars and types within a commodity, and are in the form of checklists.

Perishable Products Export Control Act of 1983 regulates the activities of the PPECB, while the Agricultural Pests Act 1983 regulates the movement of plant material between regions and districts in South Africa.

4. Health and Safety

The health and safety related to farming activities are prescribed by the following legislation:

- Health Act of 1977
- Registrar of Fertilisers Act 36 of 1947
- Farm Feeds, Agricultural Remedies and Stock Remedies Act of 1947
- Occupational Health and Safety Act

5. Citrus Marketing

The marketing of fresh produce and the activities of marketing agents are regulated by the following legislation:

- Marketing Act No.47 of 1996
- Marketing of Agricultural Products Act (Amended) of 2001
- Agricultural Produce Agents Act of 1992

6. Citrus Research

The research activities in the industry that are conducted mostly by the CRI are regulated by the following legislation:

- Agricultural Research Act of 1990
- National Advisory Council on Innovation Act of 1997
- Plant Breeders' Rights Act of 1976

7. Technical Advisory Services

The Natural Scientific Professions Act 0f 1993 regulates the activities of individuals and organisations that provide technical advisory services to the industry.

8. Equity and Human Resource Management

The human resource management and employment equity of growers and growers organisations are regulated through the following legislation:

- Employment Equity Act of 1998
- Basic Conditions of Employment Act
- The Land Reform Act (Labour Tenants) of 1996

Summary

This is an opportunity to check the progress that learners have made.

Allow time for the learners to read through the summary and to gauge their own progress. Make sure that each and every learner gets and opportunity to ask questions.

Chapter 5

- The citrus industry is regulated through a variety of legislation.
- The following aspects of the industry is regulated:
  - Conservation
  - Product standards and food safety
  - Health and safety
  - Citrus marketing
  - Citrus research
  - Technical advisory services
  - Equity and human resource management

Complete activity 5 in the **Learner Workbook**.

Activity 5 – Research and Present

Learners can individually complete this research task or base it on the group discussions held during this section. It is important to supply learners with specific Acts to complete the activity.

Timeframe: 1h 30min

Chapter 6

After completing this chapter, the learner will be able to:

Name and describe supportive resources, associations, groups, networks and services available to assist members of the industry

You have to complete this section as follows:

Total time	*Theory*	*Practical*
5h 45min	1h 15min	4h 30min activities

Where possible, organise a site visit to a supportive organisation and have learners discover how this organisation supports the citrus industry and its members.

If possible, pay a site visit to a citrus nursery or show video clips of the operation of a citrus nursery to illustrate their supportive role to the citrus industry.

1. Introduction

The citrus industry draws on a wide range of collaborators in almost every aspect of its operations. In this chapter we will look at a number of the organisations that interacts with the industry and with citrus growers.

2. Research

Production is reliant on the collective inputs made by research and advisory entities and individuals. Research is conducted by various institutions including Universities, industry research bodies and the Agricultural Research Council (ARC), under the auspices of the CRI.

Researchers themselves provide production advice, together with the extension department of the CRI, private consultants and representatives of various product and service providers.

3. Production Input Suppliers

One of the most important input items for citrus growers is good quality, disease-free plant material. Citrus nurseries are represented by an organisation called the South African Citrus Nurserymen's

Association (SACNA). Citrus nurseries are accredited by the Citrus Improvement Programme (CIP), and are only allowed to use bud-wood from the Citrus Foundation Block (CFB).

Agrochemicals used for pest and disease control, crop manipulation, and postharvest treatments in packhouses are supplied by a number of commercial providers.

It is important that agrochemical service providers are affiliated with Agricultural Chemical Distribution Association of South Africa (ACDASA). ACDASA is affiliated to the Association of Veterinary and Crop Associations of South Africa (AVCASA), a Section 21 that was established in 1958 to represent companies involved in the crop protection and animal health products industry in South Africa.

4. Postharvest Treatment and Packing

Citrus is mostly packed in packhouses that are either owned by individual growers or by grower-owned companies. Packhouse design and operations advice is provided by a range of commercial service providers. Packing material is supplied by a number of carton and container manufacturers.

Postharvest disease control programmes are offered by CRI. Inspection of products to assess compliance with minimum standards is carried out by private consultants, but official sanction of compliance to the requirements of importing countries in terms of quality is the domain of PPECB, while DAFF is responsible for phytosanitary issues.

5. Transport and Logistics

Lead a class discussion in which the following questions are posed: What is the road that fruit travels from the farm to the packhouse to the consumer?

Transport of fruit from packhouse to port is carried out either by road or rail.

The Road Freight Association addresses all regulatory, legal and operational matters relating to road transportation. Its membership consists mainly of public road transporters, carriers and fleet owners of commercial goods vehicles. Note that citrus is not transported inland in refrigerated containers.

Rail freight services are provided locally by Spoornet, a subsidiary of Transnet.

6. Forwarding

Forwarding and documentation for export fruit involve the SA Revenue Services (Customs), Transnet (in the form of the National Ports Authority and SA Port Operations), the PPECB, and DAFF.

All of these organisations require documentation before they will approve a product for export. Forwarding agents, commonly known as "logistics service providers", are used to assist with the process of forwarding. The process of forwarding also involves the disbursement of monies on behalf of their clients, which they recover later, and the provision of information to their clients.

7. Cold Stores, Terminals and Depots

Cold stores, terminals and depots provide services critical in the trade chain for accumulating, staging and managing the movement of product from road or rail transport to vessel. The company Fresh Produce Terminals is the dominant provider of these services at the four specialised reefer terminals at Cape Town, Port Elizabeth, Durban and Maputo.

Summary

This is an opportunity to check the progress that learners have made.

Allow time for the learners to read through the summary and to gauge their own progress. Make sure that each and every learner gets and opportunity to ask questions.

Chapter 6

- Research is conducted under the auspices of the CRI by the ARC and a range of universities.
- Citrus plant material is provided by citrus nurseries that are represented by SACNA, and that is accredited by the CIP.
- Agrochemicals are provided by companies that are affiliated with ACDASA, who is a member of AVCASA.
- Postharvest treatment chemicals and packhouse services are provided by a range of service providers.
- Transport of fruit from packhouse to port is carried out either by road, regulated by the Road Freight Association, or rail, provided by Spoornet.
- Forwarding agents (logistics service providers) assist growers with the forwarding of their fruit and the documentation required for this process.
- Cold stores, terminals and depots provide services critical in the trade chain for accumulating, staging and managing the movement of product from road or rail transport to vessel.

Complete activities 6, 7 and 8 in the **Learner Workbook**.

Activity 6 – Group Discussion

Allow time for groups to hold discussions and answer the questions posed in this activity.

Timeframe: 1h

Activity 7 – Interview an Expert

Remind learners to arrange interview time with a relevant expert to obtain answers to the activity.

Timeframe: 1h 30min

Activity 8 – Research Project

Learners have to individually do research and reflect their own opinions and discovery in this activity. Remind learners to think from the perspective of a business owner and to remember to base their answers on an **export** packhouse.

Timeframe: 2h

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