Pacific Community
Communauté du Pacifique

South Pacific Form Seven Certificate

AGRICULTURE

SYLLABUS

2023

EQAP

GENERAL INFORMATION

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SOUTH PACIFIC FORM SEVEN CERTIFICATE

AGRICULTURE

Contents

AGRICULTURE

1.0 Preamble

This syllabus defines the requirements for the South Pacific Form Seven Certificate Agriculture program.

Students also require knowledge and understanding of outcomes from the National Year 12 or an equivalent certificate, which are related to the specific outcomes of this syllabus.

The course is designed for students within the Pacific Islands who may undertake further studies in a tertiary institution as well as for those students who will complete their formal education at the end of Form 7.

2.0 Aims

This course of study in applied agriculture is designed to stimulate student interest in and enjoyment of primary production in agriculture. This will be achieved by:

- understanding the relationships between consumer requirements and sustainable primary production
- recognizing and understanding the biological, environmental and economic principles involved in the production of marketable primary produce, and to apply these principles to selected examples
- recognizing and understanding the value and importance of sustainable primary production principles to the Pacific Islands, understanding the regulatory controls that affect primary production, applying scientific methods in a local field and laboratory studies of selected types of primary production
- fostering a continuing interest in primary production and an awareness of the diversity of vocational opportunities.

3.0 Prerequisites

Students are expected to have successfully completed their national Year 12 or Form 6 Agriculture course or its equivalent

4.0 General Objectives

On completing this course of study students will be expected to:

- have a knowledge of ways in which biological, environmental and economic factors can be manipulated to affect the sustainable production and supply of primary products to the consumer
- have an understanding of the ways in which market forces determine the supply and quality of primary products
- have a knowledge of the ways management and decision-making can influence the production and supply of primary products to the consumer at a profit.
- apply scientific methods to problems related to primary production
- conduct an independent and cooperative investigation
- make independent and logical decisions
- communicate information logically, appropriately and accurately

5.0 Content Components

The course content consists of the following three strands and seven sub-strands. These are outlined below.

Strand Number	Strand Title and Major Learning Outcome	Sub strand number	Sub-strand Title and Key Learning Outcomes
1.	Production Management *Students are able to demonstrate knowledge application and critical evaluation of the production management process of locally produced primary products.*	1.1	Schedule of Operations. *Students are able to demonstrate knowledge application and critical evaluation of the steps involved in the schedule of operations of primary products.*
		1.2	Factors Influencing Schedule of Operations *Students are able to demonstrate knowledge application and critical evaluation of specific factors that influence selected steps of the schedule of operations. Each factor needs to be considered against at least one step of the schedule of operations.*
		1.3	Field Experimentation (Internal Assessment) *Students are able to conduct a field experiment and interpret its outcomes for a specific primary product.*
2.	Sustainable Primary Production *Students are able to demonstrate*	2.1	Analysis of Management Practices for Sustainable Primary Production. *Students are able to demonstrate knowledge application and critical*

	knowledge application and critical evaluation of primary production practices that ensure sustainable production.		*evaluation of the management practices used to maintain sustainable production.*
		2.2	Husbandry/ Agronomy Practices *Students are able to demonstrate knowledge application and critical evaluation of husbandry/agronomy practices to ensure the capability of long-term primary production.*
		2.3	Global Issues Affecting Primary Production. *Students are able to demonstrate knowledge application and critical evaluation of global agricultural issues affect local primary production.*
3.	Marketing in Primary Production *Students are able to demonstrate knowledge application and critical evaluation of local and export of primary production and the influence of market controls.* *In meeting this outcome, students are expected to consider primary production in general and use specific examples where relevant.*	3.1	Market Opportunities in Primary Production *Students are able to demonstrate knowledge application and critical evaluation of the range of local and export market opportunities of primary products.*
		3.2	Market Controls in Primary Production *Students are able to demonstrate knowledge application and critical evaluation of how market controls affect local and export of primary production.*
		3.3	Analysis of Agricultural Production (Internal Assessment) *Students are able to demonstrate knowledge application and critical evaluation of a case study involving the management of a primary product.*

6.0 Suggested Teaching Time in Weeks

Strand Number	Strand Title	Sub strand number	Sub-strand title	Time (in weeks) 5 hours / week
1.	Production Management	1.1	Schedule of Operations	11 weeks (55 hours)
		1.2	Factors Influencing Schedule of Operations	
		1.3	Analysis of Agricultural Production	
2.	Sustainable primary production	2.1	Analysis of Agricultural Productions	9 weeks (45 hours)
		2.2	Husbandry/ Agronomy Practices	
		2.3	Global issues affecting primary production	
3.	Marketing of Primary Products.	3.1	Market Opportunities	8 weeks (40 hours)
		3.2	Market Controls	
		3.3	Processing of a Primary Product	
	TOTAL			28 weeks

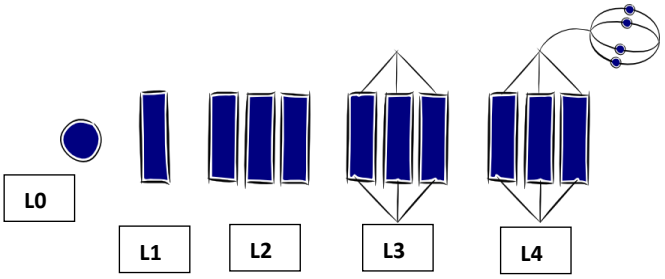
It is expected that examples of local plants and animals will be used to meet the outcomes of this course. Suggestions for suitable plants and animals are given in the Advisory Section.

7.0 Unpacking Learning Outcomes

In this syllabus, Learning Outcomes are stated at three levels of generality: Major Learning Outcomes (MLOs) are stated at the strand level, Key Learning Outcomes (KLOs) are stated at the sub-strand level, and Specific Learning Outcomes (SLOs) are unpacked from the Key Learning Outcomes. Each SLO is a combination of cognitive skill and a specific content component. Each SLO is given a skill level, level 1 – 4, and this skill level results from the categorisation of the cognitive skill that is embedded in the SLO using the SOLO taxonomy[1].

[1] Structure of Observed Learning Outcomes by Biggs and Collis (1982)

The SOLO taxonomy provides a simple, reliable and robust model for three levels of understanding – surface deep and conceptual (Biggs and Collis 1982).



At the **prestructural** level (L0) of understanding, the task is inappropriately attacked, and the student has missed the point or needs help to start. The next two levels, unistructural and multistructural are associated with bringing in information (surface understanding). At the **unistructural** level (L1), one aspect of the task is picked up, and student understanding is disconnected and limited. The jump to the multistructural level is quantitative. At the **multistructural** level (L2), several aspects of the task are known but their relationships to each other and the whole are missed. The progression to relational and extended abstract outcomes is qualitative. At the **relational** level (L3), the aspects are linked and integrated, and contribute to a deeper and more coherent understanding of the whole. At the **extended abstract** level (L4), the new understanding at the relational level is re-thought at another conceptual level, looked at in a new way, and used as the basis for prediction, generalisation, reflection, or creation of new understanding (adapted from Hook and Mills 2011). *[http://pamhook.com/solo-taxonomy/..]*
The progression from Level 1 to Level 4 is exemplified in the progression from *define →describe →explain→discuss* with each succeeding level indicating a *higher level of understanding*, as follows:

- **define** – to state a basic definition of a concept [Unistructural or L1]
- **describe**– to give the characteristics of, or give an account of, or provide annotated diagrams. [Multistructural or L2]
- **explain**– to provide a reason for a relationship – an event and its impact, a cause and an effect, as to *how* or *why* something occurs. [Relational or L3]
- **discuss** – this means *linking biological ideas* (descriptions, explanations) to make generalisations or predictions or evaluations. It may involve relating, comparing, analysing, and justifying.

8.0 Strands, Sub-strands, and Learning Outcomes

Strand 1: Production Management

Major Learning Outcome 1: Students are able to demonstrate knowledge application and critical evaluation of skills of production management of a locally produced animal primary product and produced plant primary product.

In meeting this outcome students are expected to study in-depth on a specific animal and one specific plant that each are produced locally and or of an export primary product(s). Both the animal and the plant should be available to the students and are able to be grown/studied during the teaching period.

Sub-strand 1.1: Schedule of Operations in Primary Production (EA)

Key Learning Outcome 1.1: Students are able to demonstrate knowledge application and critical evaluation of the schedule of the steps involved in the schedule of operations of primary products.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
	Schedule of Operations		
1.	**explain** the reasons for having a schedule of operation.	3	Agr1.1.3.1
2.	**state** the factors to be considered in a site selection in a given context.	1	Agr1.1.1.1
3.	**list** the process of site selection as a step in the schedule of operations.	2	Agri1.1.2.1
4.	**outline** the desired outcomes in site selection within the schedule of operations.	2	Agri1.1.2.2
5.	**explain** the importance of site selection requirements within the schedule of operations.	3	Agri1.1.3.2
6.	**discuss** the significance of site selection as a step in the schedule of operations and suggest ways of improving a selected site that does not meet particular requirements.	4	Agr1.1.4.1
	Cultivar/ Breed Selection		
7.	**describe** a cultivar or a breed selection as a step in the schedule of operations.	2	Agri1.1.2.3
8.	**explain** the significance of cultivar or breed selection in production management.	3	Agr1.1.3.3
9.	**discuss** the effect of cultivar or breed selection on the biodiversity of plants or animals concerned and recommend appropriate strategies for minimising the negative impacts.	4	Agr1.1.4.2
	Planting Materials		
10.	**describe** the types of planting materials available in	2	Agr1.1.2.4

	primary production.		
11.	**explain** the significance of planting material availability as a step in the schedule of operations.	3	Agr1.1.3.4
12.	**differentiate** between sexual reproduction and asexual reproduction in plants.	3	Agri1.1.3.5
13.	**explain** the difference between examples of roots that undergo vegetative reproduction (rhizomes, suckers, stem tubers, corms).	3	Agri1.1.3.6
14.	**discuss** with examples the impact of the availability of planting materials on production.	4	Agri1.1.4.3
15.	**discuss** the importance of the availability of high-quality planting material in obtaining high yields and suggest optimal conditions for production.	4	Agr1.1.4.4
	Management Practices		
16.	**identify** a particular management practice used in the production process of selected primary product.	1	Agri1.1.1.2
17.	**describe** various management practices used in the production process of selected primary product.	2	Agr1.1.2.5
18.	**explain** the effectiveness of the different management practices carried out during the management period in production.	3	Agr1.1.3.7
19.	**explain** the difference between the various types of cultivation (Crop rotation, Intercropping, Alley cropping, Fallowing, Monoculture, Agro forestry).	3	Agri1.1.3.8
20.	**explain** the importance of timing of management practice to enhance productivity in animal/plant product.	3	Agr1.1.3.9
21.	**discuss** the effectiveness of certain management practices and recommend strategies for improvement.	4	Agr1.1.4.5
	Establishment Process		
22.	**describe** the establishment process (soil/crop preparation; planting/rearing) as a step in the schedule of operations.	2	Agri1.1.2.6
23.	**explain** the significance of the establishment process (including soil/crop preparation; planting/rearing) as a step in the schedule of operations	3	Agr1.1.3.10
24.	**explain** the significance of proper management (e.g., irrigation/water; pest and disease control; weed control; fertility/nutrition; light/temperature) as a step in the schedule of operations.	3	Agr1.1.3.11
25.	**discuss** and recommend optimal conditions for the establishment process (including soil/crop preparation; planting/rearing) as a step in the schedule of operations.	4	Agr1.1.4.6
26.	**discuss** and recommend optimal conditions for harvest/slaughter timing and method as a step in the schedule of operations.	4	Agr1.1.4.7
27.	**discuss** and recommend optimal conditions for management (e.g., irrigation/water; pest and disease control; weed control; fertility/nutrition; light/temperature) as a step in the schedule of operations.	4	Agr1.1.4.8

	Post-harvest Process		
28.	**describe** post-harvest processes, including quality control/grading and sorting; packaging and handling; storage as steps in the schedule of operations.	2	Agr1.1.2.7
29.	**explain** the significance of post-harvest processes (quality control/grading and sorting; packaging and handling; storage) in the schedule of operations.	3	Agr1.1.3.12
30.	**evaluate** the contribution of post-harvest processes (quality control/grading and sorting; packaging and handling; storage) to production quality and suggest ways of minimising negative impacts.	4	Agr1.1.4.9

Sub-strand 1.2: Factors Influencing Schedule of Operations (EA)

Key Learning Outcome 1.2 Students are able to demonstrate knowledge application and critical evaluation of specific factors influencing selected steps of the schedule of operations. Each factor needs to be considered against at least one step of the schedule of operations.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
	Factors of Production (Resources)		
1.	**identify** the factors of production in a given situation.	1	Agr1.2.1.1
2.	**list** examples of primary and secondary products.	2	Agr1.2.2.1
3.	**discuss** the impact of the availability of factors of production (land, labor, capital, Technology / entrepreneurship) on primary production.	4	Agr1.2.4.1
	Land		
4.	**identify** land as a resource in a given context.	1	Agr1.2.1.2
5.	**describe** methods of acquiring land for farming.	2	Agr1.2.2.2
6.	**explain** the influence of land availability on a particular step in schedule of operation.	3	Agr1.2.3.1
7.	**evaluate** the effects of land availability issues and suggest ways of minimising the effects.	4	Agr1.2.4.2
	Labour		
8.	**identify** labour as a resource in a given context.	1	Agr1.2.1.3
9.	**list** the types of labour available in primary production.	2	Agr1.2.2.3
10.	**explain** the impact of labor availability on the different steps in the schedule of operation.	3	Agr1.2.3.2
11.	**discuss** the impact of minimizing the effect of labor shortage in primary production using examples.	4	Agr1.2.4.3
	Capital		
12.	**identify** capital as a resource in a given context.	1	Agr1.2.1.4
13.	**list** the sources of capital for primary production.	2	Agr1.2.2.4
14.	**explain** how capital influences various steps in the schedule of operation.	3	Agr1.2.3.3

15.	**discuss** the impact of maximizing return for capital invested in the various steps of primary production.	4	Agr1.2.4.4
	Technology / Entrepreneurship		
16.	**describe** recent technologies and their importance in agricultural production and /or marketing.	2	Agr1.2.2.5
17.	**evaluate** the benefits of specialist/technical information/advice on various steps in the schedule of operation.	4	Agr1.2.4.5

Sub-strand 1.3: Field Experimentation (IA)

Key Learning Outcome 1.3: Students are able to conduct a field experiment and interpret its outcomes for a specific primary product.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
1.	**state** the hypothesis of the investigation.	1	Agr1.3.1.1
2.	**state** the background information (rationale) related to the investigation.	1	Agr1.3.1.2
3.	**describe** the method to be used in the investigation.	2	Agr1.3.2.1
4.	**formulate** a field trial plan of different research designs and approaches.	4	Agr1.3.4.1
5.	**conduct** a field trial in order to gather information of product performance and testing of new technology in agriculture.	4	Agr1.3.4.2
6.	**evaluate** findings in terms of reliability and validity of results by identifying sound and unsound reasoning in scientific and lay contexts of the trial carried out.	4	Agr1.3.4.3
7.	**draw** conclusion that is relevant to the data and link back to hypothesis and suggest improvements.	3	Agr1.3.3.1
8.	**list** bibliography/ references / acknowledgements.	2	Agr1.3.2.2

Strand 2: Sustainable Primary Production

Major Learning Outcome2: Students are able to demonstrate knowledge application and critical evaluation of primary production practices that ensure sustainable production.

In meeting this outcome students are expected to consider the use of selected primary production practices and illustrate these with specific primary products where relevant.

Sub-strand 2.1: Analysis of Management Practices (EA)

Key Learning Outcome 2.1: Students are able to demonstrate knowledge understanding and critical evaluation of the management practices used to maintain sustainable production.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
	Sustainable Agriculture		
1.	**identify** an example of sustainable agriculture in a given situation.	1	Agr2.1.1.1
2.	**explain** the sustainable agriculture practices that contribute to maintaining primary production.	3	Agr2.1.3.1
3.	**evaluate** how a particular management practice contributes to maintaining sustainable primary production and suggest ways of improvement.	4	Agr2.1.4.1
	Genetic Resources		
4.	**identify** genetic resource materials used to maintain sustainable primary production in a given situation.	1	Agr2.1.1.2
5.	**describe** the features of genetic resource management practices used to maintain sustainable primary production.	2	Agr2.1.2.1
6.	**explain** how genetic resource management is used to maintain sustainable primary production.	3	Agr2.1.3.2
7.	**discuss** the advantages and disadvantages of genetic resource management and propose a sustainable primary production plan that is suited to the situation.	4	Agr2.1.4.2
	Waste Management		
8.	**list** waste management practices used to maintain sustainable primary production.	2	Agr2.1.2.2
9.	**explain** how waste management practices are used to maintain sustainable primary production.	3	Agr2.1.3.3
10.	**discuss** the benefits of using waste management practices to maintain sustainable primary production.	4	Agr2.1.4.3
	Soil Management		
11.	**explain** the different types of soil management practices which contribute to maintaining sustainable primary production.	3	Agr2.1.3.4

12.	**discuss** ways to improve sustainable soil management practices in primary production.	4	Agr2.1.4.4
	Water Management		
13.	**explain** water management practices which are used to maintain sustainable primary production.	3	Agr2.1.3.5
14.	**discuss** ways to improve water management practices to enhance sustainable primary production.	4	Agr2.1.4.5
	Green Economy Concept		
15.	**describe** the green economy concept.	2	Agr2.1.2.3
16.	**explain** the importance of the green economy concept in achieving the United Nations 2030 Sustainable Development goals.	3	Agr2.1.3.6
17.	**discuss** the types of "green" jobs in your locality and its significance in the community.	4	Agr2.2.4.6

Sub-strand 2.2: Husbandry/ Agronomy Practices (EA)

Key Learning Outcome 2.2: Students are able to demonstrate knowledge application and critical evaluation of husbandry/agronomy practices to ensure the capability of long-term primary production.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILLS LEVEL	SLO CODE
	Pests, Weeds and Diseases		
1.	**identify** different pest, disease and weeds that affect long term primary production.	1	Agr2.2.1.1
2.	**describe** the control mechanism used for each pest, disease, and weeds in primary production.	2	Agr2.2.2.1
3.	**explain** the suitability of the control mechanism for each pest, disease and weeds in primary production.	3	Agr2.2.3.1
4.	**discuss** the nature of pest, disease and weed control measures and recommend viable and sustainable alternatives that ensure the capability of long-term primary production.	4	Agr2.2.4.1
	Crop Rotation		
5.	**identify** an example of crop rotation.	1	Agr2.2.1.2
6.	**explain** the importance of crop rotation cultivation to ensure the capability of long-term primary production.	3	Agr2.2.3.2
7.	**discuss** the advantages and disadvantages of crop rotation cultivation and recommend cost-effective ways of ensuring the capability of long-term primary production.	4	Agr2.2.4.2
	Fertilizer/Feed Application		

8.	**explain** how fertilizer/feed application ensures the capability of long-term primary production.	3	Agr2.2.3.3
9.	**discuss** the advantages and disadvantages of fertiliser/feed application methods used and suggest alternatives ways of improving the capability of long-term primary production.	4	Agr2.2.4.3
	Hygiene		
10.	**list** hygiene practices used to sustain long-term primary production.	2	Agr2.2.2.2
11.	**justify** the choice of hygiene practices used and provide evidence to support its effectiveness in ensuring the capability of long-term primary production.	4	Agr2.2.4.4
	Genetic Selection		
11.	**describe** the importance of genetic selection	2	Agr2.2.2.3
12.	**explain** the importance of genetic selection in ensuring the capability of long-term primary production	3	Agr2.2.3.4
	Certified Seeds		
14.	**explain** the importance of using certified seeds in primary production.	3	Agr2.2.3.5
15.	**discuss** ways to resolve issues related to long-term usage of seeds in long term primary production.	4	Agr2.2.4.5

Sub-strand 2.3: Global Issues Affecting Primary Production (EA)

Key Learning Outcome 2.3: Students are able to demonstrate knowledge application and critical evaluation of global agricultural issues that affect local primary production.

SLO No	SPECIFIC LEARNING OUTCOMES Students are able to:	SKILL LEVEL	SLO CODE
	Invasive and New Species		
1.	**identify** invasive species that affect local primary production in a given situation.	1	Agr2.3.1.1
2.	**analyse** how invasive species affect local primary production.	3	Agr2.3.3.1
3.	**explain** the advantages/disadvantages of the introduction of new species in local primary production.	3	Agr2.3.3.2
4.	**discuss** the impact of invasive species (plant and animal/insects) on local primary production.	4	Agr2.3.4.1
	Genetic Engineering		
5.	**describe** the importance of genetic engineering as related to local primary production.	2	Agr2.3.2.1
6.	**describe** the features of genetic engineering used in local primary production.	2	Agr2.3.2.2
7.	**explain** the advantages and disadvantages of genetic engineering in local primary production.	3	Agr2.3.3.3
8.	**discuss** and recommend viable alternatives to genetic engineering in local primary production.	4	Agr2.3.4.2

	Organic Husbandry		
9.	**describe** the features of organic husbandry in local primary production.	2	Agr2.3.2.3
10.	**explain** the different organic husbandry practices which contributes to local primary production.	3	Agr2.3.3.4
11.	**discuss** the factors that influence the application of organic husbandry and suggest ways of maximising the benefits for local primary production.	4	Agr2.3.4.3
	Pollution		
12.	**describe** the different types of pollution that affect that affect local primary production.	2	Agr2.3.2.4
13.	**explain** a specific type of pollution that affects local primary production.	3	Agr2.3.3.5
14.	**discuss** and recommend the most cost-effective pollution control mechanism for different pollution in local primary production.	4	Agr2.3.4.4
	Biodiversity		
15.	**identify** an example of biodiversity in the natural environment.	1	Agr2.3.1.2
16.	**explain** how to conserve genetic resource.	3	Agr2.3.3.6
17.	**explain** how biodiversity/ genetic resource conservation enhances local primary production.	3	Agr2.3.3.7
18.	**discuss** and recommend ways to minimise the effect of biodiversity and genetic resource conservation and sustainable use in local primary production.	4	Agr2.3.4.5
	Global Issues		
19.	**list** global agricultural issues facing local primary production.	2	Agr2.3.2.5
20.	**compare** the strength and weakness of specific actions taken to prevent the negative influence of global agricultural issues.	3	Agr2.3.3.8
21.	**discuss** the effectiveness of the actions taken to reduce the negative influence of certain global agricultural issues.	4	Agr2.3.4.6

Strand 3: Marketing in Primary Production

Major Learning Outcome 3: Students are able to demonstrate knowledge application and critical evaluation of local and export primary production and the influence of market controls.

In meeting this outcome, students are expected to consider primary production in general and use specific examples where relevant.

Sub-strand 3.1 Market Opportunities in Primary Production (EA)

Key Learning Outcome 3.1 Students are able to demonstrate knowledge application and critical evaluation of the range of local and export market opportunities of primary products.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
	Seasonality		
1.	**describe** seasonality in relation to primary production.	2	Agr3.1.2.1
2.	**explain** the effects of seasonality on the supply of primary products.	3	Agr3.1.3.1
3.	**explain** using graphs how seasonality affects supply and price of primary products.	3	Agr3.1.3.2
	Competition		
4.	**describe** the effects of competition from imports on primary production.	2	Agri3.1.2.2
5.	**explain** how competition from imports influences primary production.	3	Agr3.1.3.3
6.	**discuss** and recommend ways of managing the effects of competition from imports on primary production.	4	Agr3.1.4.1
	Market Access		
7.	**identify** an example of market access in terms of primary production in a given context.	1	Agr3.1.1.1
8.	**explain** how market access influences primary production.	3	Agr3.1.3.4
9.	**discuss** ways of managing and improving market access on primary production.	4	Agr3.1.4.2
	Storage/ Shelf Life		
10.	**describe** the effects of product storage/shelf-life on primary production.	2	Agr3.1.2.3
11.	**explain** how to prolong product storage/shelf life of primary products.	3	Agr3.1.3.5
12.	**discuss** and recommend ways of managing product storage/shelf life of primary products.	4	Agr3.1.4.3
	Transport		
13.	**state** the modes of transport used in primary production in a given context.	1	Agr3.1.1.2
14.	**explain** how the different modes of transport used in primary production affects production levels.	3	Agr3.1.3.6
	Marketing Channels		
15.	**state** the marketing channels available in primary production in a given context.	1	Agr3.1.1.3
16.	**explain** how the available market channels influence primary production.	3	Agr3.1.3.7
17.	**discuss** and recommend ways of managing and improving the available market channels on primary production.	4	Agr3.1.4.4
	Market Quality		
18.	**list** the market quality requirements in primary production.	2	Agr3.1.2.4

19.	**explain** the importance of market quality requirements and its influence on primary production.	3	Agr3.1.3.8
20.	**discuss** and recommend ways of managing and improving the market requirements of primary production.	4	Agr3.1.4.5
	International Marketing		
21.	**identify** a role of international marketing in a given context.	1	Agr3.1.1.4
22.	**discuss** the advantages of increasing international markets for local producers.	4	Agr3.1.4.6

Sub-strand 3.2 Market Controls in Primary Production (EA)

Key Learning Outcome 3.2 Students are able to demonstrate knowledge application and critical evaluation of how market controls affect local and export of primary production

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
	Grower Organizations		
1.	**identify** grower organizations that exist for local and export markets in primary production.	1	Agr3.2.1.1
2.	**explain** how grower organizations affect local primary production and export of primary products.	3	Agr3.2.3.1
3.	**discuss** and recommend ways to manage the influence of grower organisations on local primary production and on the export of primary products.	4	Agr3.2.4.1
	Market Supply and Market Demand		
4.	**identify** market supply/market demand in a given context.	1	Agr3.2.1.2
5.	**describe** the factors affecting the supply and demand of a primary product.	2	Agr3.2.2.1
6.	**illustrate** using a graph to show the effects of supply and demand on a primary product.	3	Agr3.2.3.2
	Biosecurity		
7.	**identify** biosecurity regulations that are relevant to primary production in a given situation.	1	Agr3.2.1.3
8.	**describe** the requirements of each biosecurity regulations that are relevant to primary production.	2	Agr3.2.2.2
9.	**explain** how biosecurity regulations such as quarantine affect local primary production.	3	Agr3.2.3.3
10.	**discuss** and recommend ways of managing the influence of biosecurity regulations e.g. quarantine on export of primary production.	4	Agr3.2.4.2
	Import/ Export Control		
11.	**identify** an example of import and export control of a primary product produced locally.	1	Agr3.2.1.4
12.	**explain** the reasons for import or export controls and regulations on local primary production.	3	Agr3.2.3.4

13.	**discuss** and recommend ways of managing the impact of import or export controls and regulations on local primary production.	4	Agr3.2.4.3
	Trade Agreements		
14.	**explain** how trade agreements e.g. WTO, PICTA, PACER Plus, MSGTA bilateral trade agreements affect local and export of primary products.	3	Agr3.2.3.5
15.	**discuss** and recommend ways of managing the impact of trade agreements, e.g. WTO, PICTA, PACER Plus, MSGTA, bilateral trade agreements on local and export of primary products.	4	Agr3.2.4.4
	Regulations Policy		
16.	**describe** the effects of local/national control/regulations/policy on local primary production.	2	Agr3.2.2.3
17.	**explain** how local/national controls/regulations/policy affect local and export of primary production.	3	Agr3.2.3.6
18.	**discuss** and recommend ways to manage the impact of export/national controls/regulations/policy on the local and export of primary products.	4	Agr3.2.4.5

Sub-strand 3.3: Analysis of Agricultural Production (IA)

Key learning Outcome 3.3: Students are able to demonstrate knowledge application and critical evaluation by carrying out a case study and reporting on their findings of a case study involving the management of a primary product.

SLO No	SPECIFIC LEARNING OUTCOMES (SLO) Students are able to:	SKILL LEVEL	SLO CODE
1.	**state** the context (or background) of a case study report.	1	Agr3.3.1.1
2.	**describe** the types of information from primary and secondary sources.	2	Agr3.3.2.1
3.	**evaluate** trends, relationships or patterns used to address the purpose of the study.	4	Agr.3.3.4.1
4.	**justify** the recommendations made in the report and interpret and present ideas gathered.	4	Agr3.3.4.2
5	**draw** conclusions that is relevant to the collected data and link it to the aim of the report	3	Agr3.3.3.1
6.	**acknowledge** sources of information using appropriate referencing.	2	Agr3.3.2.2

9.0 Assessment

The assessment of the Agriculture course has two components (internal and external evaluation).

1.	External Assessment	70%
2.	Internal Assessment	30%

The School Principal, or his/her nominee, will certify that the syllabus requirements have been fulfilled.

9.1 Assessment Blueprint

The assessment blueprint for Agriculture Studies is given below. The weighting for each strand and skill level is to be noted as these will be adhered to for assessment.

SPFSC Assessment Blueprint- Agriculture

Content Area/Strand	Assessment Type	SOLO Skill Levels				Weighting (%)
		Level 1	Level 2	Level 3	Level 4	
Strand 1: Production Management	EA					**27**
	IA	**3**	**1**	**1**	**3**	**20**
Strand 2: Sustainable Primary Production	EA					**29**
Strand 3: Marketing in Primary production.	EA					**14**
	IA	**1**	**1**	**1**	**1**	**10**
Number of Items		**10**	**10**	**10**	**10**	**40**
TOTAL		**10**	**20**	**30**	**40**	**100%**

9.2 External Assessment

This will be a three-hour written examination, with a total score of 70, which will assess learning outcomes from all three strands in the following proportions:

Strand	Strand Title	Weighting
Strand 1	Production Management	27%
Strand 2	Sustainable Primary Production	29%
Strand 3	Marketing in Primary Production	14%

All questions are **COMPULSORY**

Questions will require students to demonstrate skills of different levels (Levels 1, 2, 3 and 4). The common skills being assessed include identifying, describing, explaining, discussing, and evaluating agricultural concepts and processes using sentences and paragraphs. They will be expected to interpret resource material supplied (including diagrams, table, and graphs), and questions will require reference to specific plants or animals studied during the year. All questions in the written examination paper are **COMPULSORY.**

9.3 Internal Assessment

There are two internal assessment tasks and will focus on Sub-strands 1.3 and 3.3 as follows:

Task No.	Task	Sub-strand	Weighting %
Task 1	Practical Investigation	1.3	20
Task 2	Case-study	3.3	10

Task 1: Practical Investigation

- the investigation must be carried out independently
- students must maintain a logbook that should be submitted together with the completed report
- the investigation produces quantitative data and use simple statistical procedures (e.g. mean, standard deviation)
- a list of suggested topics is provided in the advisory section (students are not restricted to these topics)
- assessment will be made using the criteria specified in the Scoring Rubric for Task 1 Practical investigation in Appendix 1

Task 2: Case Study

It is expected that the case study would require about 6-8 hours of class time. A list of suggested topics is provided in the Advisory Section (students are not restricted to these topics) students need to have access to a range of sources of information on the topic. Assessment will be made using the criteria specified in the Assessment Schedule: Case study is in Appendix 2

Teacher guidelines, assessment activities, assessment criteria and sample recording templates for the two tasks are provided in appendices 1 to 4. These will be used by **all** schools and teachers *to ensure consistency in practice.* All student reports plus research material and logbooks will be retained on file by the schools after marking. This will assist with ensuring the authenticity of work from year to year and the information contained in them may be referred to by teachers to assist both teachers and students in future assessment activities.

10.0 Appendices

Appendix 1: IA Task 1 - Teacher and Student Guidelines

IA Task 1: Practical Investigation (20%)

Major Learning Outcome: Students are able to carry out and report on a practical investigation with guidance to determine the effect of altering one aspect of the production process for a primary product.

The Specific Learning Outcomes that guide this task are listed in **Sub-strand 1.3**.

Explanatory Notes

1. An investigation is an activity covering the complete process from planning to reporting and will involve students in the collection of primary quantitative and qualitative data.
2. Students will select a primary product, in consultation with the teacher, and investigate one aspect of the production process that influences the supply/demand/profitability of the primary product.
3. The investigation will be conducted with teacher guidance. This means the teacher is supporting the student throughout the investigation but the whole process is student-driven. Teacher's support gives general information only e.g. broad questions, resource suggestions or possible new directions.
4. Students should be provided with the opportunity to undertake research into their primary product and some form of trialing or checking before developing their plan into a method.
5. At the completion of the investigation, students are required to produce a written research report. The report is to include:
    a. Introduction: brief information on the plant or animal and its production process
    b. Hypothesis/Aim
    c. Method used
    d. Results: Recorded observations, measurements and data. The data needs to be systematically recorded using tables and/or graphs. Processing of data is expected to involve the use of simple statistical procedures
    e. Interpretation of processed data to show trends, relationships and patterns.
    f. Conclusions relevant to data and linked back to the hypothesis.
        a. Discussion of the relationship of the results to the background information and the experimental results.
        b. Evaluation of the investigation which considers:
            i. Validity and reliability of the results
            ii. Limitations and difficulties encountered in the investigation and suggested solutions
            iii. Significance of the findings in relation to the aspect of the production process being studied.
    c. Bibliography/references/acknowledgements.

6. Logbooks must be kept by all students and must contain all raw data and notes. Logbooks are a working record of all the work students do and are used for authenticity. Logbooks should be regularly checked by the teacher. The logbook is a necessary component of this task. It must be checked regularly and then submitted together with the final report in order for the report to be assessed. A final report that is submitted without the logbook should not be assessed.
7. Students are expected to have carried out formative work before attempting the practical investigation. The practical investigation is to be completed individually over a period of time e.g. 4 to 6 weeks. A typical time period would include 10-12 hours of classroom time. Students would also be expected to do work outside of school hours.

Teacher Guidelines:

The following guidelines are supplied to enable teachers to carry out a valid and consistent assessment.

This study is designed to be an investigation of a specific plant or animal.

This investigation requires students to:

Process information from background reading and observations to briefly describe relevant aspects of the production process for the plant or animal. This will form the introduction section of the student report and should be brief (about one page in length). It is not intended to be a major part of the study but to provide the background from which the student will select an aspect for further investigation.

Investigate in detail one particular aspect of the production process and determine the effectiveness of a manipulation. The manipulation needs to have an impact on the attributes of the primary product. Students should focus on one aspect of environment e.g. wind, light, temperature, soil, space; cultivar or breed selection, crop or livestock production techniques e.g. fertilizer rates, pasture composition, fruit thinning, grazing or planting density, pest or disease control; post-harvest e.g. chemical treatment, storage, heat treatment and drying method.

Students are required to keep a logbook in which all ideas, rough notes, brainstorming, possible investigations, collection of data and observations, research and planning, failure, successes, tentative conclusions should be kept. It is a working document, and its neatness is not important – its function is to record all findings and show the students investigative skills.

It is from this that students will write the formal report and it will be used to ensure authenticity as well as support the students 'final assessment for this achievement.

Suggested plants and Animals

The following contains suggestions only. Other plant or animals locally available can be used. Suggestions for other suitable plants or animals should be made to EQAP.

Plants	Animals	Marine/Aquatic
• Vegetables: e.g. Beans, Peanuts, • Cabbage, Tomatoes, Cucumber • Crops: e.g. Kumalo (sweet potato), Maize, Squash • Non-food: e.g. Kava, Vanilla • Forestry	• Meat: e.g. Beef, Poultry, Pork, • Goat • Animal product: e.g. Poultry, Dairy	• Any shellfish, Prawns, Fish (farmed), Crabs

Ideas for investigation

The following list contains ideas that could be used or modified for the investigation. Teachers are free to use other ideas.

1. The effect of plant spacing on the yield of a vegetable
2. The effect of different rates/types of fertilizers on the yield of a plant. Comparison of growth rates for different pastures species/cultivars. Comparison of an animal's growth with different feeds
3. Effect of stocking rate on production (e.g. milk volume, egg)
4. Effect of an aspect of housing on egg production.
5. Comparison of the moisture content of copra using different drying methods.
6. Comparison of storage life of taro under different conditions
7. Effect of pruning on fruit size/yield
8. Effect of different mulching practices on crop growth
9. Comparison of the effect of different treatments on the propagation of cassava
10. Comparison of the effectiveness of different pest or disease controls
11. Comparison of fruit fly species or number collected over a period of time.

Investigation Guidelines

The following guidelines are provided for teachers to carry out a valid and consistent assessment and are to be modified for a specific investigation.

Teacher Guide notes:

Context/setting:
Students may choose their own practical investigation or choose from a list given by the teacher. Students must have their topic approved by the teacher to decide if the topics are feasible or workable.

Conditions

This investigation is to be done individually over a period of time. A typical time period would include 5-6 weeks in total and 10-12 periods of classroom time. Students will be expected to do work outside of class time.

Additional information

Students will need to submit a logbook with their report. Logbooks are working record of all the work done by the student to complete the investigation. Logbooks should be substantially hand-written, and students must put into their logbooks any notes, research and photocopies they collect. The logbook should be checked by the teacher at regular intervals throughout the investigation to assist authenticity.

Student Guide notes

1. Choose your topic for your practical investigation. This work will take about 5-6 weeks including 10-12 hours of class time. You will be expected to do work in your own time. You will proceed with a suggested list of topics to choose from, but you may include a topic of your own. Have your topic checked and approved by your teacher. You must work independently
2. You are to investigate one aspect of the production process that influences the supply/demand/profitability of one primary product.
3. You must keep a logbook. This logbook must contain all your rough notes. You put photocopied materials into it or an accompanying folder. This logbook will be checked by your teacher at regular intervals and is part of the authentication process. **The logbook must be handed in along with your case study report.** It does not have to be neat.

Stages of the Task

a) Planning the investigation

1. Do some initial research to determine the suitability of your topic and collect any relevant background information. Record this in your logbook and decide the purpose of your investigation.
2. Workout the key variables for your investigation, that is, independent and dependent variables (the key factors to be compared)
3. Write a hypothesis/ prediction – a statement describing what you predict to be the relationship/ pattern between the chosen variables for your investigation.
4. Now design a method for your investigation - the method needs to detail the procedures to follow. It needs to include sufficient, appropriate and consistent data to produce a valid and reliable conclusion, e.g. by repeated measures, considering sample sizes, eliminating errors etc.

   The design of the method needs to specify:

   a. The independent variable and how it will be controlled. The range for the independent variable.

b. The dependent variable and how it will be measured
c. Fixed values for and ways of controlling other variables or factors that could influence the investigation.

5. Start trialing your plant to see if it will work. This will also help you to refine your method — record evidence of trialing and any changes you make to your plan in your logbook.

b) Collecting Data

1. Follow your plan and start collecting data. Your raw data should be put into your logbook in a systematic way. e.g. tables. It does not have to be tidy. Record everything that you do.
2. Your plan may need modifying. Record any modifications in your logbook, explaining why you changed your plan. You may need to trial the method first.
3. Indicate and record any trends you see developing in your data.
4. Make sure that you have sufficient, accurate and valid data to meet the purpose of the investigation. Review your data as you progress. You may need to collect more by repeating your method, increasing the range of key variables or factors and or eliminating extremes. Processing your data will indicate what is needed.
5. Record any changes to your method in your logbook.

c) Processing data:

After you have gathered all your raw data you now process it. This will help you to identify patterns and trends in your data.

1. Process your data – make sure that you have collected
   - the right data for your investigation, that is, valid data
   - enough data is sufficient data if you do not go back and gather some more
   - accurate data to indicate any trends, patterns or relationships- these should relate back to your hypothesis or aim but they may show you something that you had not thought of
2. Data is processed to ensure sufficient, accurate and valid interpretations by some or all of the following techniques:
   - Averaging of repeated measurements
   - Exclusion of extreme/odd data
   - Statistical analysis e.g. mean and standard deviation using relevant calculations
   - Drawing relevant graphs

d) Interpreting your data:

1. Now look at your processed data and identify any trends, patterns or relationships that you can see. These should relate back to your hypothesis or aim. Describe these in your logbook
2. This may mean that you have finished your data collecting and processing or that you need to go back and collect some more data.

3. If you have sufficient, accurate and valid data, it is time to write up the report.

e) Writing up the report

1. You are to present your investigation as a scientific report. Your report will need to communicate information clearly.
2. Your report must include the following sections:
   a) **Introduction/background**- brief information on the plant or animal and its production process and any relevant background information.
   b) **Hypothesis/aim/prediction** – a statement describing what you think will be the relationship between the chosen variables or factors for your investigation.
   c) **Method –** the method written up here is the final method that you used after all the modifications. This explains how you collected and recorded sufficient, accurate and valid data. Your method should be clear and concise so that another person exactly repeating your procedures could produce the same results. Include the key variables or factors and their ranges and how you controlled other variables or factors.
   d) **Results –** the report only needs to contain the processed data recorded in a systematic format e.g., the raw data should have been put into clear tables showing the averages etc. graphed or statistically analyzed where appropriate.
   e) **Interpretation -** any trends/ patterns or relationships shown by your results
   f) **Discussion –** this will include the interpretation, conclusion and the evaluation of the investigation.
   g) **Conclusion –** this summarizes what you have found out and relates back to the hypothesis/ predictions or the aim/purpose, background information and experimental results.
   h) **Evaluation –** this includes
      - The limitations and reliability of the investigation
      - Why was your initial method modified?
      - Errors that may have affected the results
      - Suggestions for improvements that may have made the conclusions more valid
      - Comments on the accuracy of the method
      - Comments on the validity, accuracy and sufficiency of the data.
      - Suggestions and justifications for further investigation.

   i) **References –** all references must be listed using an approved system.

IA Task 1 Scoring Rubric

Item and SLO code	Skill Level 1	Skill Level 2	Skill Level 3	Skill Level 4
1. State the hypothesis of the investigation. Agr1.3.1.1	The hypothesis is stated correctly.			
2. State background information (rationale) related to the investigation Agr1.3.1.2	Rational is stated correctly.			
3. Describe the method used. Agr1.3.2.1	Method is outlined but not complete.	Method is complete and accurate.		
4. Formulate a field trial plan of different research designs and approaches. Agr1.3.4.1	Lacks understanding of relationship of practical research designs, concepts and ideas from one approach and research method by using ideas inaccurately or uses irrelevant facts to explain scientific phenomena.	Uses basic understanding of practical research designs, concepts and ideas from **one** approach and research methods to assess the appropriateness of research designs but requires guidance in discerning most appropriate methods for a given situation.	Uses knowledge of practical research designs, concepts and ideas from **two** approaches and research methods to assess the appropriateness of research designs for a variety of situations, settings, or problems.	Provides a field trial plan that contains different practical research designs, concepts and ideas of various approaches and various research methods to readily match the appropriate design to the problem at hand.
5. Conduct a field trial in order to gather information of product performance and testing of new technology in agriculture. Agr1.3.4.2	Avoids solving problems, seeks easy answers if possible. Has no interest in or understanding of the advantages and disadvantages of various approaches, the assumptions required, or how the nature of the problem affects the choice of approach.	Recognizes conspicuously inappropriate design applications. Understands that different problems or settings require different approaches but requires guidance in discerning most appropriate methods for a given situation without considerable guidance.	Able to assess the appropriateness of research designs for a variety of situations, settings, or problems. Can apply or use simple research methods in uncomplicated cases.	Clearly appreciates the advantages and disadvantages of various approaches, understands the underlying assumptions of various research methods, and readily matches the appropriate design to the problem at hand.
6. Evaluate findings in terms of reliability and	Findings stated in one line/idea	Findings are described but not related	Findings are related to interpretations and related to one	Findings are related to interpretations

validity of results by identifying sound and unsound reasoning in scientific and lay contexts of the trial carried out. Agr1.3.4.3			of the following: validity, reliability and limitations, but no recommendation given.	and related to two or more of the following: validity, reliability and limitations, and recommendation provided.
7. Draw conclusion that is relevant to the data and linked back to hypothesis and suggest improvements. Agr1.3.3.1	Has difficulty expressing empirical findings of any form and conclusion made but not related to the hypothesis.	Can express some empirical findings but limited in ability to identify practical or theoretical implications with incomplete conclusions that are not related to the hypothesis.	Can express empirical findings and identify the impact of findings on theory development and/or practical application with complete conclusions linked back to hypothesis.	
8. List bibliography or acknowledgements. Agr1.3.2.2	A list of references or acknowledgement found in the report.			

Appendix 2: IA Task 2 Teacher and Student Guidelines

IA Task 2: The Case Study (10%)

Major Learning Outcome: By the end of this strand, students are able to complete a case study and report on the findings, with the case being a specific aspect of agricultural production.

The Specific Learning Outcomes that guide this task are detailed in **Sub-strand 3.3**

Explanatory Notes:

1. Students are to complete one case study that is based on a specific aspect of agricultural production in the country.
2. Each case study will be conducted with teacher guidance. This means the teacher is supporting the students throughout the investigation but the whole process is student-driven. Teacher's support gives general information only, e.g. broad questions, resources suggestions or possible new directions.
3. The case study will focus on a specific aspect of agricultural production. This may include a judgement about the appropriateness or effectiveness of practice or procedure. The judgement must be supported with references or quoted information from more than one secondary source.
4. The topic may be set by the teacher or agreed by negotiation with the student. The student is required to develop the question related to the topic.
5. The case study will be a structured written document that shows evidence of information gathering, information processing and interpretation.
6. In case study, students may collect and interpret information from secondary sources and from primary sources. Students are expected to appropriately record citations for their sources of information and must acknowledge these sources of information in their research report.
7. The case study is to be completed individually and would include about 6-8 hours of classroom time. Students would be expected to also do research and writing outside of school.

IA Task: Case Study Guidelines

Teacher Guidelines:

The following guidelines are supplied to enable teachers to carry out a valid and consistent assessment. The case study is designed to be an open context as long as the information is available to the student.

The study is designed to be individually researched and completed over a period of time. A typical time period would include about 5 hours of classroom time. Students need access to a library and internet if possible.

Teachers should note that students are expected to have done some formative research before attempting something of this magnitude. Teachers could provide a list of approved topics from

which the students can choose. Students may choose their own topic but must have their topic approved by the teacher to decide if the topics are feasible or workable.

The format of the case study is open but could be a survey, cost analysis, scrapbook, research task, poster/pamphlet, schedule of operations, power point presentation, audiovisual presentations or annotated model.

Suggested topics

1. Consumer survey e.g., consumer preference for different cultivars/attributes
2. Market analysis e.g., comparison of profitability of different market opportunities
3. Pest control. e.g., the extent of use of organic husbandry techniques in different crops in different islands
4. Quarantine controls e.g., the effect these have on pest/disease occurrence in different islands
5. Analysis of a schedule of operations for the production of a particular primary product
6. Sustainability e.g., the effect on long term productivity of an aspect of atoll agriculture
7. Genetically Modified Organisms e.g. scrapbook on the pros and cons of the introduction of GMO organisms within the Pacific Islands.
8. Conservation of biological diversity in an aquatic environment
9. Interview and analysis of a successful farmer
10. Pest/Disease control e.g., survey on the attitude to and use of safety equipment by farmers
11. Analysis of the attributes of different breeds/cultivars
12. Analysis of the effect of the trade agreement on local export production
13. Research on the impact of fruit flies on primary production within the Pacific Islands

Authenticity

Authenticity is very important in internal assessment. This can be determined by:

- Regular checking of logbooks
- Interviewing the students
- Signed agreements with the student and or parents or caregivers

General

The internal assessment tasks, weightings, requirements, assessment criteria or scoring rubrics and due dates must be given to students and clearly explained at the beginning of the year. Results must be recorded and maintained by teachers so that accurate information on each student 'progress is readily available.

At the beginning of each year, each school presenting students for the SPFSC Agriculture assessment my complete an Internal Assessment Summary Form (AGR-IA) and forward to EQAP by the indicated due date.

The assessment statement and copies of all assessment tasks and assessment schedules used, as well as a sample of student responses to all internal assessment work undertaken, must be available for verification on request until 30 November of the year of the examination.

The moderation of Internal Assessment will be done in accordance with EQAP policy as specified from time to time.

Item and SLO code	Skill Level 1	Skill Level 2	Skill Level 3	Skill Level 4
1. State the context (background/ introduction) of the case study report Agr3.3.1.1	Background/ introduction to the report is stated.			
2. Describe information from primary and secondary sources. Agr3.3.2.1	One relevant piece of information from a primary and secondary source is provided	More than one relevant piece of information from primary and secondary sources provided		
3. Evaluate trends, relationships or patterns used to address the purpose of the study and interpret and present ideas gathered. Agr3.3.4.1	One required value is correctly stated.	More than one required value is stated.	More than two values are stated correctly but are not linked.	Linking of two or more relevant values are interpreted correctly.
4. Draw conclusion that is relevant to the data and link it to the aim of the report. Agr3.3.3.1	Only one relevant recommendation is provided.	A list of relevant recommendations are provided but not linked to show trends.	Linking of relevant recommendations that show trends and causes or impacts	

10. Appendix

10.1 Internal assessment Summary Form

South Pacific Form Seven Certificate

IA Summary Form 2023

AGR – IA

AGRICULTURE

COUNTRY	
SCHOOL	

Task	Brief Description of Tasks	Start Date	End Date	Date to EQAP	Weighting
1. Practical Investigation	Report on a particular Topic of choice is written. Investigation uses both quantitative data & simple statistics.				20%
2. Case Study	A Case study on a specific aspect of Agricultural production is carried out. It is an individual report.				10%
TOTAL					**40%**

Note:
1. Be specific about dates, not just Week 3 Term 1, etc.
2. Assessment Schedules/Scoring Rubrics for the tasks will be provided by EQAP. Teachers must use these when scoring students' work.
3. All IA Score Capture Sheets will be provided by EQAP to schools.

Verification and Endorsement of IA Program

Principal's Name	Teachers Name	School Stamp
Signature	Signature	
Date	Date	

A full IA program is to be submitted together with this IA Summary Form.

10.2 IA Programme Proposal Template

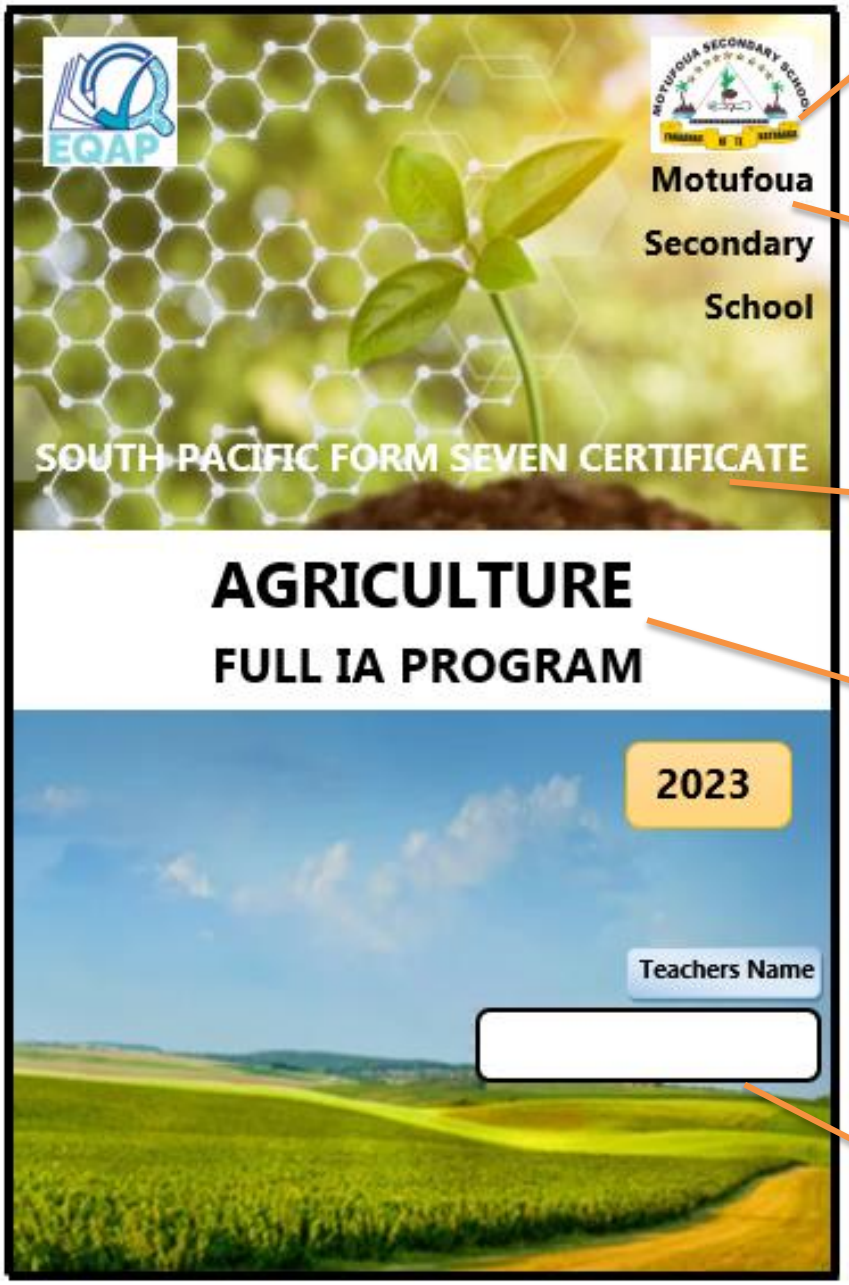
FULL IA PROGRAM

Page 1 : Cover Page

The Cover Page will have the name of the:

- School
- Subject : FULL IA PROGRAM
- Teachers Name:

An Example of a Cover Page



School Logo/ OPTIONAL

Name of School

Name of Program

Subject

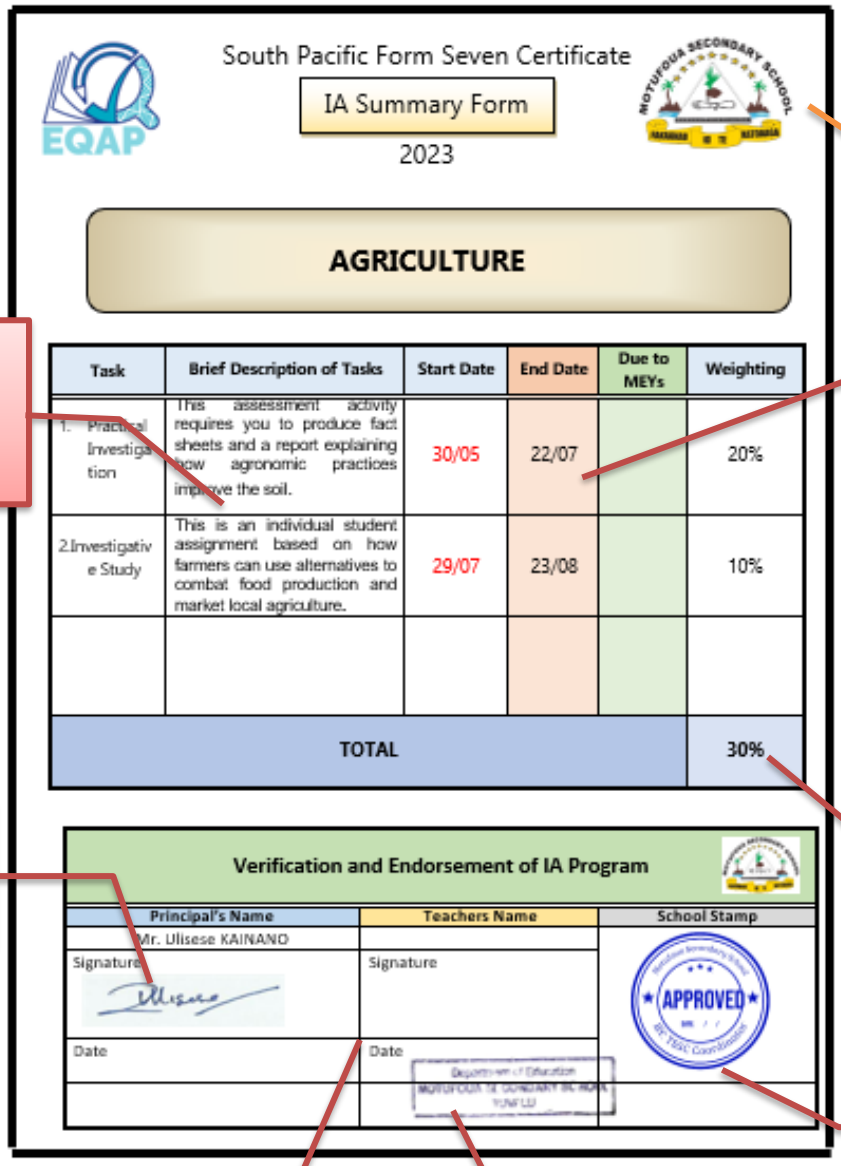
Teachers Name

Page 2 : IA SUMMARY FORM

The IA Summary Form must have the following:

- Number of Tasks
- Brief Description of the Tasks
- Start and End Dates
- Signature of Principal and Teacher
- School Stamp/Date

An Example of an IA Summary Form



South Pacific Form Seven Certificate

IA Summary Form

2023

AGRICULTURE

Task	Brief Description of Tasks	Start Date	End Date	Due to MEYs	Weighting
1. Practical Investigation	This assessment activity requires you to produce fact sheets and a report explaining how agronomic practices improve the soil.	30/05	22/07		20%
2.Investigative Study	This is an individual student assignment based on how farmers can use alternatives to combat food production and market local agriculture.	29/07	23/08		10%
TOTAL					30%

Verification and Endorsement of IA Program

Principal's Name	Teachers Name	School Stamp
Mr. Ulisese KAINANO		
Signature	Signature	
Date	Date	

Pages 3-12:

1. **Task title: Task 1:** _____

   The title should be brief and include a reference to the particular syllabus topic or skill which is being assessed by the task.

   Example: "Research Topic – Investigation of a Social Issue."

2. **Learning Outcomes: List the Specific Learning Outcomes (SLOs) to be assessed by the task**

   These are found in the syllabus and need to be identified before the tasks are constructed.

   Example: Describe a feature of ….

   (Copy and paste the relevant IA SLOs directly from the Syllabus: show strand, sub strand and SLOs)

3. **Assessment/Task:**

   Describe the task as a form of assessment to measure student achievements of the above learning outcomes at different stages of the lesson/task implementation.

   (Think of what the best types of assessment for the above LOs are, so that your students can demonstrate they have achieved the learning outcomes. Also include how you will pre-assess their knowledge at the beginning of the lesson and how you will continuously assess them throughout the strand/topic to monitor their learning progress. The summative assessments are the final IA tasks.)

e.g. Diagnostic: (can be oral questions/short tests/ surveys/questionnaires to find out what students already know before the lesson)

Formative: 1. This is the formative use of the summative assessment such as the drafts submitted, self-assessment, peer assessment, teacher assessment of the drafts and specific feedback provided to improve the task. 2. For CATs – this can be similar items prepared by teachers using the SLOs and given to students for practice. After scoring, the feedback needs to be given to improve learning. If majority students are not doing well then re-teach using another strategy, assess and monitor learning.

Summative: (these are the final IA tasks or the CATs to measure how much the students have learnt/achieved after the learning period)

4. **Resources: List materials required for completing the task (for learning & demonstrating the achievement of the SLOs.**

   This must specify any material items such as books, documents, maps, stimulus material, equipment required by the task, including use of technology and chemicals.

5. **Guidelines for the teacher on advance preparation requirements**
   a) **time required** by the student for task completion (monitoring progress)
   b) recommended dates/date range for task completion
   c) organization of room/lab and hardware to facilitate task completion.

(After the task has been completed and scored, teachers will need an IA score capture sheet to record the performance of all students in the class.)

6. Guidelines for the teacher on task completion and task control

This must specify:

- the role of the teacher during the period of task completion
- instructions that are to be given by the teacher to the students
- actions that are required of the teacher during task completion

7. Preparation by the students beforehand

If students are required to prepare in advance of the task date, preparatory notes must indicate the requirements. For example, students may need to collect support materials for a task that is supervised in a classroom.

8. Task outline for the student

This outline is a brief description of the task that the student is to complete. It is a general description without specific detail.

Example: Your task is to focus on an important social issue. After investigating that issue, you need to process information collected and suggest possible courses of action that authorities could take.

9. Task detail for the student

This must provide a detailed description of the task in the sequence that the student would be expected to follow during task completion. This must clearly state:

- what the student is expected to do
- what the student is expected to record and present for assessment.

(NB: Task details can be extracted from the Syllabus)

10. Feedback & Support

Using calendar days, allocate time for:

i. Student's self-assessment and correction
ii. Peer assessment, feedback, and time for improvement
iii. Teacher assessment, feedback, and time for time improvement

(NB: Provide week/dates, and state how the above will be carried out)

11. Final submission & scoring

State when the final task is due and how it will be assessed. State how the school (HOD/SPFSC Coordinator) will monitor the scoring of the tasks.

12. Assessment Schedule/ Scoring Rubric

Copy and paste directly from the aligned Syllabus the relevant scoring rubrics

13. Assessment score capture sheet for the task

Provided by EQAP when the task is due.

(Repeat 1-13 for other tasks)

10.3 Useful References

1. Henry D. Foth 8E, Fundamental of Soil Science, John Wiley & Sons.
2. J.A. Sutherland, Understanding Farm Animals, Mc Gaw-Hill Book Co, Sydney
3. Plant Protection in the Pacific Islands – a course for senior high schoolers, Macpherson, Colin, SPC Plant Protection Services
4. Brown L, Hindmarsh R, McGregor R, Dynamic Agriculture Book 1,2,3 & 4
5. An introduction to Animal Husbandry in the Tropics, Payne, ELBS (Longman)
6. Pacific Agroforestry – An information kit, Pacific Regional Agricultural Programme, SPC, 982-343-038-1
7. Agroforestry – A way to better farming module 1 and module 2, I Ratukalou, T Nakalevu, J Waradi, H Hartel, H Raedler, E Reigner, MAFF Fiji, 982-209-005-6
8. Animal Production SPC Paravet
9. Pacific Kava – A producer's Guide, SPC 982-203-810-0
10. Farm Management Handbook, Queensland Department of Primry Industries, Brisbane,
11. Livestock Husbandry Techniques, MsNitt, Collins
12. An introduction to economics for students of Agriculture, Berkeley Hills, Pergamon Press
13. Jarvis 2000 Biotechnology Techniques and issues new House
14. Jones RN, Karp A and Giddings G2001 The Essentials of Genetics Advance Biology Readers John Murray.

Student

15. Certificate Agriculture, Akinsanmi, Longman
16. Agriculture for South Africa, Elliot, Slut Collins Educaion
17. The tropical vegetable Garden, Messiaen, Macmillan

10.4 Other Support Materials

1. **Pacific Community (SPC)**
   A wide range of support material and specialist information and advice for teachers and students is available. Contact the Librarian. **Private Mail Bag**
   Suva
   FIJI
   www.spc.int

2. **Internet Resources :** www.spc.int
   www.usp.ac.fj
   www.biozone.co.nz
   www.nzqa.govt.nz

3. **Scientific Periodicals/Magazines/Journals**

   South Pacific Agricultural News
   Pacific Pest Info (SPC) Pest Alert (SPC)
   Pest Advisory Leaflet (SPC) New Scientist
   Scientific American
   National Geographic

4. **Video**

   Video Education Australia
   P.O.Box4390
   Shortland St, Auckland, NZ

   BBC
   Endeavour / Roadshow Entertainment
   PrivateBag56905
   Dominion Road, Auckland

   Educational Media Australia
   7MartinSt
   South Melbourne, Victoria3205

   SPC
   Private Bag
   Suva
   FIJI

10.5 Glossary

Experimental Terms:

Hypothesis	A prediction/statement which can be tested by experimentation
Dependent variable	Variable whose value is determined by one or more other (independent) variables.
Independent variable	Variable whose value is set over a range to produce a measured effect on the dependent variable 5+2
Controlled variables	Variable whose values are set throughout an experiment to prevent any effect on the dependent variables
Validity	Measures what if intended
Reliability	The probability that the same result can be produced again
Primary data	Original data obtained by direct measurement or observation of the event
Secondary data	Data from another source

Assessment terms

Describe	Requires the student to recognize, name, state the features or characteristics (of an object or process)
Explain	Requires the student to show an understanding by stating what happens or giving reasons for an even or observation
Discuss	Requires the student to show an understanding by linking ideas. Usually, an extended answer that explores concepts and issues and uses examples in the explanation.
Informed judgement	Opinion based on an understanding of the facts information
Reasoned judgement	Opinion based on analysis of the facts/information
Judgement	Opinion based on an analysis of facts information
Critically evaluate	Form an opinion by comparing and contrasting information
Concise	Information presented clearly in a few words. Systematic (record) record that follows a set plan or system,

Other terms

Attribute	Property of the primary product normally present in the product harvest
Export product	Any locally produced primary product which is exported
Genetic engineering	Any process that modifies or alters the genetic make up of an organism
GMO	Genetically Modified Organism – an organism that is modified by the transfer of specific genes to a new host organism.
Local product	Any primary product produced within the students local region.
Market opportunity	Any point of sale of the primary product. This covers a wide range, including gate sales, local retailer, export, wholesaler, processing, direct, selling
Marketing technique	Any practice used by the producer to influence supply or demand for the primary product.
Primary product	Unprocessed plant or animal crop produced by the grower from the land
Production process	The complete process for the production of the primary product from the establishment to the market
Resources	Includes the physical environment, as well as the availability of labor and technical/specialist, advise. This includes the role of government and non-government agencies
Schedule of operations	Identifies the husbandry practices used in the production process and identifies when they occur within the process.
Sustainable production	A production that is able to meet consumer demand without affecting the long-term ability of the environment to produce (no environmental degradation)

THE END.