EDUCATIONAL QUALITY AND ASSESSMENT PROGRAMME [EQAP]

Pacific Community
Communauté du Pacifique

SOUTH PACIFIC FORM SEVEN CERTIFICATE [SPFSC]

AGRICULTURE SYLLABUS

GENERAL INFORMATION

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SOUTH PACIFIC FORM SEVEN CERTIFICATE

AGRICULTURE

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AGRICULTURE

1.0 Preamble

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

Each of the student outcomes for the course is to be read in conjunction with the explanatory Notes given for each outcome in this syllabus.

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.

This syllabusisderived from the New Zealand University Entrance, Bursaries and Scholarships Agricultural and Horticultural Science as well as the NCEA Level 3 Agricultural and Horticultural Science Achievement Standards as published by NZQA.

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 the 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 the 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 understandinf 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 ContentComponents

The course content consists of the following five strands and sub-strands and suggested teaching time in weeks per term.

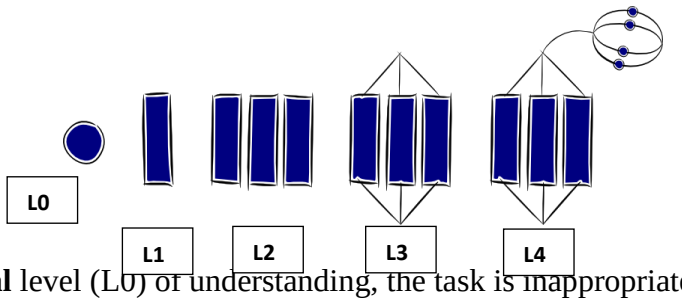
Strand Number	**Strand Title**	**Sub strand number**	**Sub-strand title**	**Time(in weeks) 5 hours / week**
1.	Primary production	1.1	Market opportunities	7 weeks 35 hours
		1.2	Market controls	
		1.3	Processing of a Primary Product	
2.	Sustainable primary production	2.1	Analysis of Management Practices	9 weeks 45 hours
		2.2	Husbandry/ Agronomy Practices	
		2.3	Global issues affecting primary production	
3.	Production management	3.1	Schedule of Operations	11 weeks 55 hours
		3.2	Factors influencing Schedule of Operations	
		3.3	Analysis of Agricultural Production	

It is expectedthat examples of local plants and animals will be usedtomeettheoutcomesof this course. Suggestions for suitable plants and animals are givenin the Advisory Section.

6.0 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].

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.

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

7.0 Learning Outcomes

Strand1: PrimaryProduction [External Assessment]

Major Learning Outcome 1: Students are able to examine local and export primary production and analyse 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 1.1 Market Opportunities in Primary Production

Key Learning Outcome 1.1 Students are able to demonstrate an understanding of the range of local and export market opportunities and match these with primary products.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	Define seasonality in terms of primary production	1	agr1.1.1.1
2.	Describe the effects of seasonality on supply and demand in primary production	2	agr1.1.2.1
3.	Explain using graphs how effects of seasonality influence the supply and demand in primary production	3	agr1.1.3.1
4.	Discuss and recommend ways of managing the effects of seasonality on supply and demand in primary production	4	agr1.1.4.1
5.	State what is meant by competition from imports in terms of primary production	1	agr1.1.1.2
6.	Describe the effects of competition from imports on primary production	2	agr1.1.2.2
7.	Explain how competition from imports influences primary production	3	agr1.1.3.2
8.	Discuss and recommend ways of managing the effects of competition from imports on primary production	4	agr1.1.4.2
9.	Define market access in terms of primary production	1	agr1.1.1.3
10.	Identify the effects of market access on primary production	1	agr1.1.1.4
11.	Explain how market access influences primary production	3	agr1.1.3.3
12.	Define product storage/ shelf life in relation to primary production	1	agr1.1.1.5
13.	Describe the effects of product storage/shelf life on primary production	2	agr1.1.2.3
14.	Explain how product storage/shelf life influence primary production	3	agr1.1.3.4
15.	Discuss and recommend ways of managing the influence of product storage/shelf life on primary production	4	agr1.1.4.3
16.	State the transport methods used in primary production	1	agr1.1.1.6
17.	Describe the effects of transport methods used on primary production	2	agr1.1.2.4
18.	Explain how transport methods used influence primary production	3	agr1.1.3.5

19.	Discuss and recommend ways of managing the influence of transport methods on primary production	4	agr1.1.4.4
20.	State the market channels available in primary production	1	agr1.1.1.7
21.	Describe the effects of available market channels on primary production	2	agr1.1.2.5
22.	Describe the factors affecting the available market channels on primary production	2	agr1.1.2.6
23.	Explain how the available market channels influence primary production	3	agr1.1.3.6
24.	Discuss and recommend ways of managing the influence of market channels on primary production	4	agr1.1.4.5
25.	State where primary products are marketed	1	agr1.1.1.8
26.	Identify marketing systems used in primary production	1	agr 1.1.1.9
27.	Identify market opportunities in relation to primary production	1	agr 1.1.1.10
28.	Describe the market opportunities available for local primary products.	2	agr1.1.2.7
29.	Explain steps to take when identifying new market opportunities for business growth in primary production,	3	agr1.1.3.7
30.	Evaluate the market opportunities that exist in local primary production	4	agr1.1.4.6
31.	Describe the marketing risks of primary product	2	agr 1.1.2.8
32.	Explain strategies to manage marketing risks of primary product	3	agr1.1.3.8
33.	List market quality requirements in primary production	2	agr1.1.2.9
34.	Describe the effects of market quality requirements on primary production	2	agr1.1.2.10
35.	Explain how market quality requirements influence primary production	3	agr1.1.3.9
36.	Discuss and recommend ways of managing the effects of market quality requirements on primary production	4	agr1.1.4.7
37.	Identify the factors affecting the supply of primary products by producers	1	agr1.1.1.11
38.	List the range of products produced for local markets	2	agr1.1.2.11
39.	Describe the factors that affect the range of products produced for local markets	2	agr1.1.2.12
40.	Explain the reasons for primary product changes during the year	3	agr1.1.3.10
41.	Explain how the needs of people and future prospects influence primary production	3	agr1.1.3.11
42.	Discuss and recommend ways of managing the effects of primary product changes during the year.	4	agr1.1.4.08

Sub-strand 1.2 Market Controls in Primary Production

Key Learning Outcome 1.2 Students are able to demonstrate an understanding of how market controls affect local and export primary production.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	Define the term grower organisations	1	agr1.2.1.1
2.	Name grower organisations that exist for local primary products and for the export of primary products	1	agr1.2.1.2
3.	List grower organisations that exist for local primary products and for the export of primary products	2	agr1.2.2.1
4.	Explain how grower organisations affect local primary production and export of primary products	3	agr1.2.3.1
5.	Discuss and recommend ways to manage the influence of grower organisations on local primary production and on the export of primary products	4	agr1.2.4.1
6.	Define marketing organisation	1	agr 1.2.1.3
7.	Name marketing organisations that exist for the export of primary products	1	agr1.2.1.4
8.	Describe the effects of marketing organisations on export primary production	2	agr1.2.2.2
9.	Discuss and recommend ways to manage the influence of marketing organisations on local primary production	4	agr1.2.4.2
10.	Identify biosecurity regulations that are relevant to primary production	1	agr1.2.1.5
11.	Describe the requirements of each biosecurity regulation that is relevant to primary production	2	agr1.2.2.3
12.	Describe the effects of biosecurity regulations, e.g. quarantine, on export primary production	2	agr1.2.2.4
13.	Explain how biosecurity regulations e.g. quarantine, affect local primary production	3	agr1.2.3.2
14.	Discuss and recommend ways of managing the influence of biosecurity regulations e.g. quarantine on export primary production	4	agr1.2.4.3
15.	Define import or export control in terms of primary production	1	agr 1.2.1.6
16.	State the reasons for import or export controls and regulations for primary products	1	agr 1.2.1.7
17.	Describe the effects of import or export controls and regulations on local primary production	2	agr1.2.2.5
18.	Discuss and recommend ways to manage the impact of import or export controls and regulations on local primary production	4	agr1.2.4.4
19.	Define free trade agreements for primary production,	1	agr1.2.1.8
20.	Define bilateral trade agreements	1	agr1.2.1.9
21.	Describe the nature of trade agreements, e.g. WTO, PICTA, PACER Plus, MSGTA, bilateral trade agreements that apply to local and export primary production	2	agr1.2.2.6

22.	Explain how trade agreements e.g. WTO, PICTA, PACER Plus, MSGTA,bilateral trade agreements affect local and export of primary products	3	agr1.2.3.3
23.	Discuss and recommend ways of managing the impact of trade agreements, e.g. e.g. WTO, PICTA, PACER Plus, MSGTA, bilateral trade agreements on local and export of primary products.	4	agr1.2.4.5
24.	Define local/national controls / regulations policy on local primary product	1	agr1.2.1.10
25.	Describe the effects of local/national controls/regulations/policy on local primary production	2	agr1.2.2.7
26.	Explain how local/national controls/regulations/policy affect local and export primary production	3	agr1.2.3.4
27.	Discuss and recommend ways to manage the impact of export/national controls/regulations/policy on the local and export of primary products.	4	agr1.2.4.6

Sub-strand 1.3: Processing of a Primary Product (Internal Assessment)

Key Learning Outcome 1.3: Students are able to demonstrate an understanding and skills in investigating how a primary product is processed in the community.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	State the aim/purpose of the investigation	1	Agr1.3.1.1
2.	State the rationale of the investigation	1	Agr1.3.1.2
3.	State the hypothesis of the investigation	1	Agr1.3.1.3
4.	State background information related to the investigation	1	Agr1.3.1.4
5.	Describe the method to be used in the investigation	2	Agr1.3.2.1
6.	Process data with use of tables and graphs	2	Agr1.3.2.2
7.	List bibliography/ references / acknowledgements	2	Agr1.3.2.3
8.	Interpret processed data to show trends, relationships and patterns	3	Agr1.3.3.1
9.	Draw conclusion that is relevant to the data and linked back to hypothesis	3	Agr1.3.3.2
10.	Evaluate findings in terms of reliability and validity of results and suggest improvements	4	Agr1.3.4.1

Strand 2: Sustainable Primary Production [External Assessment]

Major Learning Outcome2: Students are able to analyseprimaryproductionpracticesthatensuresustainableprimary production

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

Sub-strand 2.1:Analysis of Management Practices for Sustainable PrimaryProduction

Key Learning Outcome 2.1: Students are able to demonstrate an understanding of howmanagementpracticesareusedtomaintainsustainableproduction.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	Define the term sustainable production	1	agr2.1.1.1
2.	Name sustainable practices that are used in primary production	1	agr2.1.1.2
3.	Describe the sustainable agriculture practices that contribute to maintaining primary production	2	agr2.1.2.1
4.	Explain the sustainable agriculture practices that contribute to maintaining primary production	3	agr2.1.3.1
5.	Evaluate how a particular management practice contributes to maintaining sustainable primary production and suggest ways of improvement.	4	agr2.1.4.1
6.	Identify genetic resource management practices used to maintain sustainable primary production	1	agr2.1.1.3
7.	Describe the features of genetic resource management practices used to maintain sustainable primary production	2	agr2.1.2.2
8.	Explain how genetic resource management is used to maintain sustainable primary production	3	agr2.1.3.2
9.	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
10.	Identify waste management practices used to maintain sustainable primary production	1	agr2.1.1.4
11.	Describe howwaste management practices maintain sustainable primary production	2	agr 2.1.2.3
12.	Explain how waste management practices used to maintain sustainable primary production	3	agr2.1.3.3
13.	Discuss the benefits of and suggest improvements to waste management practices used to maintain sustainable primary production	4	agr2.1.4.3
14.	Identify the types of soil management practices used to maintain sustainable primary production	1	agr2.1.1.5
15.	Describe the features of soil management practices used in maintaining sustainable primary production	2	agr2.1.2.4
16.	Explain howsoil management practices contribute to maintaining sustainable primary production	3	agr 2.1.3.4

17.	Explain how soil management practices maintain sustainable primary production	3	agr2.1.3.5
18.	Discuss the advantages of soil management practices and suggest ways of improving sustainable primary production	4	agr2.1.4.4
19.	Identify types of water management practices used to maintain sustainable primary production	1	agr2.1.1.6
20.	Describe the features of water management practices used to maintain sustainable primary production	2	agr2.1.2.5
21.	Describe how water management practices maintain sustainable primary production	2	agr2.1.2.6
22.	Explain how water management practices are used to maintain sustainable primary production	3	agr2.1.3.6
23.	Discuss ways to improve water management practices to enhance sustainable primary production	4	agr2.1.4.5
24.	Identify the factors of production in primary production	1	agr2.1.1.7
25.	Describe features of labour availability or requirements related to sustainable primary production	2	agr2.1.2.7
26.	Explain how labour availability issues impact sustainable primary production.	3	agr 2.1.3.7
27.	Discuss how labour availability issues can be resolved and suggest suitable strategies to enhance sustainable primary production	4	agr2.1.4.6

Sub-strand 2.2: Husbandry/ Agronomy Practices

Key Learning Outcome 2.2: Students are able to demonstrate an understanding of how husbandry/agronomy practices ensure the capability of long termprimaryproduction.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILLS LEVEL	SLO CODE
1.	Name the key issues affecting long term primary production	1	agr2.2.1.1
2.	Describe the nature of pests, diseases and weeds that need to be controlled in long term primary production	2	agr2.2.2.1
3.	Describe the control mechanism used for each pest, disease and weeds in primary production	2	agr2.2.2.2
4.	Explain how pest, disease and weed control measures used are suited to the problems they are meant to deal with in enhancing long term primary production.	3	agr2.2.3.1
5.	Discuss the issues of pest, disease and weed control and recommend viable and sustainable alternatives that ensure the capability of long term primary production	4	agr2.2.4.1
6.	Define crop rotation	1	agr2.2.1.2
7.	Describe the practice of crop rotation cultivation in long term primary production	2	agr2.2.2.3
8.	Explain how crop rotation cultivation ensures the capability of long term primary production	3	agr2.2.3.2

9.	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
10.	Identify the methods of fertiliser application	1	agr2.2.1.3
11.	Describe the steps in fertiliser/feed application in ensuring the capability of long term primary production	2	agr2.2.2.4
12.	Explain how fertiliser/feed application ensure the capability of long term primary production	3	agr2.2.3.3
13.	Discuss the advantages and disadvantages of fertiliser/feed application and suggest with reasons more sustainable alternatives that ensure the capability of long term primary production.	4	agr2.2.4.3
14.	Describe the ways in which hygiene ensures the capability of long term primary production	2	agr2.2.2.5
15.	Assess the cost-effectiveness of hygiene practices that ensure the capability of long term primary production	3	agr2.2.3.4
16.	Justify the choice of particular hygiene practices and provide evidence to support its effectiveness in ensuring the capability of long term primary production	4	agr2.2.4.4
17.	Define genetic selection.	1	agr2.2.1.4
18.	Describe the importance of genetic selection in ensuring the capability of long term primary production	2	agr 2.2.2.6
19.	Explain how genetic selection contributes to enhancing capability of long term primary productions	3	agr2.2.3.5
20.	Discuss how genetic selection ensures the capability of long term primary production and provide a strategy that enhances the advantages while minimising the disadvantages.	4	agr2.2.4.5
21.	State the importance of using certified seeds in primary production.	1	agr2.2.1.5
22.	Describe the merits of using certified seedsto ensure the capability of long term primary production	2	agr2.2.2.7
23.	Explain how certified seeds ensure the capability of long term primary production	3	agr2.2.3.6
24.	Discuss the comparative advantage of using certified seeds and suggest ways to resolve issues related to long-term usage of seeds in long term primary production	4	agr2.2.4.6

Sub-strand 2.3: Global Issues Affecting Primary Production

Key Learning Outcome 2.3: Students are able to demonstrate an understanding of how global agricultural issues affect local primary production.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	Identify invasive species that affect local primary production	1	agr2.3.1.1
2.	Describe the problems caused by invasive species for local primary production.	2	agr2.3.2.1
3.	Analyse how invasive species affect local primary production.	3	agr2.3.3.1

4.	Evaluate the impact of invasive species (plant and animal/insects) on local primary production.	4	agr2.3.4.1
5.	Define genetic engineering as related to local primary production	1	agr2.3.1.2
6.	Describe the features of genetic engineering used in local primary production	2	agr2.3.2.2
7.	Assess the advantages and disadvantages of genetic engineering in local primary production	3	agr2.3.3.2
8.	Discuss and recommend viable alternatives to genetic engineering in local primary production	4	agr2.3.4.2
9.	State the features of organic husbandry in local primary production	1	agr2.3.1.3
10.	Describe the features of organic husbandry in local primary production	2	agr2.3.2.3
11.	Explain how organic husbandry contributes to local primary production	3	agr2.3.3.3
12.	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
13.	Name the main types of pollution that affect local primary production	1	agr2.3.1.4
14.	Describe how a specific type of pollution affects local primary production	2	agr2.3.2.4
15.	Describe control mechanisms used to deal with specific pollution problems in local primary production.	2	agr2.3.2.5
16.	Analyse the advantages and disadvantages of each pollution control mechanisms	3	agr2.3.3.4
17.	Recommend with reasons the most cost-effective pollution control for different pollution problems	4	agr2.3.4.4
18.	Define biodiversity	1	agr2.3.1.5
19.	Define genetic resource conservation.	1	agr2.3.1.6
20.	Describe the nature of conservation of Biodiversity and Genetic Resources for sustainable primary production	2	agr2.3.2.6
21.	Explain how biodiversity and genetic resource conservation and sustainable use enhances local primary production	3	agr2.3.3.5
22.	Discuss how food production connected to all the causes of biodiversity loss and recommend ways to minimise it.	4	agr2.3.4.5

23.	Discuss and recommend ways to minimise the disadvantages of biodiversity and genetic resource conservation and sustainable use in local primary production	4	agr2.3.4.6
24.	Describe the effects of the introduction of new species on local primary production	2	agr2.3.2.7
25.	Assess the advantages and disadvantages of the introduction of new species in local primary production	3	agr2.3.3.6
26.	Discuss and recommend ways of minimising the negative impact of new species in local primary production	4	agr2.3.4.7
27.	List global agricultural issues facing local primary production	2	agr2.3.2.8
28.	Describe actions taken to prevent or minimise the negative influence of global agricultural issues	2	agr2.3.2.9
29.	Compare the strength and weakness of specific actions taken to prevent the negative influence of global agricultural issues	3	agr2.3.3.7
30.	Recommend with reasons your choice of action to be taken to prevent the negative influence of specific global agricultural issues	4	agr2.3.4.8

Strand 3: Production management [External Assessment]

Major Learning Outcome3: Students are able to demonstrate an understanding of production management of a locally produced animal primary product and of a locally 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 produce local and or 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 3.1: Schedule of Operations in Primary Production

Key Learning Outcome 3.1: Students are able to demonstrate an understanding of the steps in the schedule of operations.

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	State the factors to be considered in site selection	1	agr3.1.1.1
2.	List the process of site selection as a step in the schedule of operations	2	agr3.1.2.1
3.	Outline the desired outcomes in site selection within the schedule of operations	2	agr 3.1.2.2
4.	Explain how a selected site meets the requirements for site selection within the schedule of operations	3	agr 3.1.3.1
5.	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	agr3.1.4.1
6.	State the main factor in cultivar or breed selection in the schedule of operations	1	Agr3.1.1.2
7.	Describe what cultivar or breed selection is as a step in the schedule of operations	2	agr3.1.2.3
8.	Explain the significance of cultivar or breed selection in production management	3	agr3.1.3.2
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	agr3.1.4.2
10.	Name the types of planting material available in primary production	1	Agr3.1.1.3
11.	Explain the significance of planting material availability as a step in the schedule of operations	3	agr3.1.3.3
12.	Discuss the impact of the availability of planting material and suggest optimal conditions for the production	4	agr3.1.4.3
13.	Name a management practice in production management	1	agr3.1.1.4
14.	State the key difference between one management practice from another	1	agr3.1.1.5
15.	Identify a particular management practice used in the production process of selected primary product	1	agr3.1.1.6

16.	Describe management practices that must be carried out throughout the management period	2	agr3.1.2.4
17.	Describe a particular management practice used in the production process of selected primary product	2	agr3.1.2.5
18.	Describe the importance of timing in production management	2	agr3.1.2.6
19.	Compare different management practices carried out throughout the management period in terms of their effectiveness	3	agr 3.1.3.4
20.	Explain how the timing of management practice enhances productivity in animal/plant product	3	agr 3.1.3.5
21.	Explain why one management practice contributes more to the production of animal/plant product than another	3	agr 3.1.3.6
22.	Discuss the effectiveness of management practice and recommend strategies for improvement. Justify your recommendations.	4	agr3.1.4.4
23.	Describe the establishment process (soil/crop preparation; planting/rearing) asa step in the schedule of operations	2	agr3.1.2.7
24.	Describe the significance of the establishment process (including: soil/crop preparation; planting/rearing) as a step in the schedule of operations	2	agr3.1.2.8
25.	Describe management practice (e.g. irrigation/water; pest and disease control; weed control; fertility/nutrition; light/temperature) as a step in the schedule of operations	2	agr3.1.2.9
26.	Explain the significance of management (e.g. irrigation/water; pest and disease control; weed control; fertility/nutrition; light/temperature) as a step in the schedule of operations	3	agr3.1.3.7
27.	Discuss and recommend optimal conditions for the establishment process (including: soil/crop preparation; planting/rearing) as a step in the schedule of operations	4	agr3.1.4.5
28.	Identify harvest/slaughter timing and method as a step in the schedule of operations	1	agri3.1.1.7
29.	Describe harvest/slaughter timing and method as a step in the schedule of operations	2	agr3.1.2.10
30.	Explain the significance of harvest/slaughter timing and method as a step in the schedule of operations	3	agr3.1.3.8
31.	Discuss and recommend optimal conditions for harvest/slaughter timing and method as a step in the schedule of operations	4	agr3.1.4.6
32.	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	agr3.1.4.7
33.	Name a post-harvesting process.	1	agri3.1.1.8
34.	Describe post-harvest processes, including: quality control/grading and sorting; packaging and handling; storage as steps in the schedule of operations	2	agr3.1.2.11
35.	Explain the significance of post-harvest processes (quality control/grading and sorting; packaging and handling;	3	agr 3.1.3.9

	storage) in the schedule of operations		
36.	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	agr3.1.4.8
37.	Define marketing.	1	Agr3.1.1.9
38.	List the steps in the schedule of operations for the marketing of a primary product.	2	agr3.1.2.12
39.	Explain the significance of marketing as a step in the schedule of operations	3	agr3.1.3.10
40.	Discuss and recommend optimal conditions for marketing as a step in the schedule of operations	4	agr3.1.4.9

Sub-strand 3.2: FactorsInfluencing Schedule of Operations

Key Learning Outcome 3.2 Students are able to demonstrate an understanding of howspecificfactorsinfluenceselectedsteps 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	SKILL LEVEL	SLO CODE
1.	Identify the factors of primary production. (L1) agr3.2.1.1	1	agr3.2.1.1
2.	List examples of primary and secondary products.	2	agr3.2.2.1
3.	Explain reasons for having a schedule of operations	3	agr3.2.3.1
4.	Define land as a resource	1	agr3.2.1.2
5.	Describe methods of acquiring land for farming.	2	agr 3.2.2.2
6.	Explain the influence of land availability on a particular step in schedule of operation	3	agr 3.2.3.2
7.	Evaluate the effects of land availability issues and suggest ways of minimising the effects.	4	agr 3.2.4.1
8.	Define Labour as a resource	1	agr3.2.1.3
9.	List the types of labour available in primary production	2	agr3.2.2.3.
10.	Explain the impact of labour availability on the different steps in the schedule of operation and suggest ways of minimising its impact on production.	3	agr3.2.3.3
11.	Define capital.	1	agr3.2.1.4
12.	List the types and sources of capital for primary production.	2	agr3.2.2.4
13.	Explain how capital influences various steps in the schedule of operation and suggest ways of maximising return for capital invested in the various steps	3	agr3.2.3.4
14.	Define technology.	1	agr3.2.1.5
15.	Describe recent technologies and their importance in agricultural production and /or marketing	2	agr3.2.2.5
16.	Evaluate the benefits of specialist/technical information/advice on various steps in the schedule of operation and recommend options for enhanced and cost-	4	agr3.2.4.2

	effective production.		
17.	Define market supply and market demand.	1	agr3.2.1.6
18.	Describe the factors affecting the supply and demand of a primary product.	2	agr3.2.2.6
19.	Illustrate using a graph to show the effects of supply and demand functions of a primary product.	3	agr3.2.3.5
20.	Evaluate how market demand influence steps in the schedule of operations and suggest ways of effectively responding to market demand.	4	agr3.2.4.3
21.	Define international marketing.	1	agr3.2.1.7
22.	List the advantages of increasing international markets for local producers.	2	agr3.2.2.7
23.	Explain the relationship between profitability (farm production function/marginal analysis) and the various steps in the schedule of operation in animal production.	3	agr3.2.3.6
24.	Analyse how profitability (farm production function/marginal analysis) is influenced by various steps in the schedule of operation in animal production and suggest optimal conditions for profitability.	4	agr3.2.4.4

Sub-strand 3.3: Analysis of Agricultural Production (Internal Assessment)

Key learning Outcome 3.3: Students are able to demonstrate understanding and skills in analyzing case studies involving the management of a product

SLO N^{O}	SPECIFIC LEARNING OUTCOMES	SKILL LEVEL	SLO CODE
1.	State purpose of the case study	1	Agr3.3.1.1
2.	Formulate a question for investigation	1	Agr3.3.1.2
3.	Collect agricultural information from primary or secondary sources	1	Agr3.3.1.3
4.	Present relevant information for the study from primary and secondary sources	2	Agr3.3.2.1
5.	Explain trends, relationships or patterns to address the purpose of the study	3	Agr3.3.3.1
6.	Calculate required values and process as well as data/information showing trends/relationship/patterns	2	Agr3.3.2.2
7.	Interpret and present ideas gathered from the case study	3	Agr3.3.3.2
8.	Compare case study results and agricultural standards	3	Agr3.3.3.3
9.	Acknowledge sources of information using appropriate referencing	2	Agr3.3.2.3
10	Evaluate findings in terms of purpose of the study	4	Agr3.3.4.1

8.0 Assessment

Theassessmentofthe Agriculture course has two components (internal and external evaluation).

1	ExternalAssessment:	70%
2	Internal Assessment:	30%

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

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: Primary production	EA					**15**
	IA	**4**	**3**	**2**	**1**	**20**
Strand 2: Sustainable Primary Production	EA					**22**
Strand 3: Production Management	EA					**33**
	IA	**1**	**3**	**1**	**0**	**10**
Number of Items		**20**	**15**	**10**	**5**	**50**
TOTAL		**20**	**30**	**30**	**20**	**100%**

A. 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:	Primary Production	15%
Strand 2:	Sustainable Primary Production	22%
Strand 3:	Production Management	33%

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 defining, identifying or stating or naming, 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.**

B. 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 produce 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.

9.0 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 dertermine the effectiveness of a manipulation. The manipulation needs to have an impact ooon 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-harves e.g. chemical treatment, storage, heat treatment, 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(sweetpotato),Maize,Squash Non-food:e.g.Kava,Vanilla Forestry	Meat:e.g.Beef,Poultry,Pork, Goat Animal product: e.g.Poultry,Dairy	Anyshellfish,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 f 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. Comparicone of the effect of different treatments on the propagation of cassava
10. Comparison of the effectiveness of different pest or diease 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 annnddd 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 student does to complete the investigation. Logbooks should be substantially hand-written and students must put into their logbook 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 authentification 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 determin the suitability of your topic collect any relevant background information. Record this in your logbook decide the purpose of your investigation.
2. Workout the key variables for your investigation, that is independent and dependent variable (the key factors to be compared)
3. Write a hypothesis/ prediction – a statement describing what you predict the relationship/ pattern between the chosen variables for your investigation will be.
4. Now design a method for your investigation the method needs to detail the procedures to follow. It needs to produce sufficient, appropriate and consistent data to produce a valid and reliable conclusion, e.g. by repeated measures, considering sample sizes, eliminating errors etc.

   Your method need needs to specify:

   i. The independent variable and how it will be controlled. The range for the independent variable.
   ii. The dependent variable and how it will be measured
   iii. Fixed values for and ways of controlling other variables or factors that could influence the investigation.

5. Start trialling your plant to see if it will work. This will also help you to refine your method — record evidence of trialling 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 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.

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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 don't go back and gather some more
   - accuuurate 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 hadn't thought of

2. Data is processed to esuresuggicieeent, accurate and valid interpretations by some or all of the following techniques:
   - Averaging of repeated measurements
   - Exclusion of extreme/odd data
   - Statistical analysis eg 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. Descript 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 enough sufficient, accurate and valid data it is time to write up the report.

e) Writing up the report

1. You are to present your investifation 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 the relationship between the chosen variables or factors for your investigation will be
   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 for 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 analysed where appropriate.
   e) **Interpretation -** any trends patterns or relationships shown by your results
   f) **Discussion –** this will include the interpretation, conclusssion and the evaluation of the investigation.
   g) **Conclusion –** this summarises 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 your initial method was 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 aim of the investigation Agr1.3.1.1	The aim is stated correctly			
2. Rational of the investigation Agr1.3.1.2.	Rational correctly stated			
3. State the hypothesis of the investigation Agr1.3.1.3	Hypothesis is stated correctly			
4. Back ground information Agr1.3.1.4	Information related to investigation			
5. Describe the method Agr1.3.2.1	Method is outlined but not complete	Method is complete and accurate		
6. Process data into tables Agr1.3.2.2	Data tables not complete, or not all accurate	Data tables complete and accurate		
7. Interpret processed data Agr1.3.3.1	Data described in one line/idea	Data trends described but not related	Interpretations complete with good linking of relationships	
8. Evaluate findings Agr1.3.4.1	Findings listed in one line/idea	Findings are described but not related	Findings are related to interpretations and related to one of the following: validity, reliability and limitations, but no recommendation given	Findings are related to interpretations and related to two or more of the following: validity, reliability and limitations, and recommendation provided
9. Conclusions drawn from findings Agr1.3.3.2	Conclusions made	Conclusions complete and accurate	Conclusions relevant to data and linked back to hypothesis	
10. List bibliography, references, acknowledgements Agr1.3.2.3	Only one reference or acknowledgement found in report	More than one source found in in-text and end of text reference list		

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 and report on a study of a case, 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 aaa judgement about the appropriateness or effectiveness of practice or procedure. The judgement must be supported with references or quoted information form 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, s student 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, powerpoint presentation, audiovisual presentations or annotated model.

Suggested topics

1. Consumer survey e.g consumer preference for different cultivars/attributes
2. Market analysis eg comparison of profitability of different market opportunities
3. Pest control. Eg 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 students'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 EQAO policy as specified from time to time.

IA Task 2 Scoring Rubric
Case Study (SS Total = 10)

Item and SLO code	**Skill Level 1**	**Skill Level 2**	**Skill Level 3**	**Skill Level 4**
1. Purpose of the study Agr3.3.1.1	Purpose of the study is stated correctly			
2. 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. Calculate required values and process as well as data/information showing trends/relationship/patterns Agr3.3.2.2	One required value is calculated	More than one required value is calculated		
4. Explain trends, relationships or patterns to address the purpose of the study Agr3.3.3.1	One relevant idea only is provided	A list of relevant ideas are provided but not linked to show trends	Linking of relevant ideas that show trends and causes or impacts are linked	
5. Acknowledge sources of information using appropriate referencing Agr3.3.2.3	Only one reference or acknowledgement found in report	More than one source found in in-text and end of text reference list		

9.0 Appendix

9.1 Internal assessment Summary Form

South Pacific Form Seven Certificate

AGR-1A

Internal Assessment Summary Form

AGRICULTURE

Country: _____ **School:** _____

Task	Brief Description	Start date	End date	Weighting
Practical Investigation				**20%**
Case Study				**10%**
	Total			**30%**
List of topics for Case Study				
1.				
2.				
3.				
4.				
5.				

Note: 1. Be specific about dates, not just Week 3 Term 1, etc.

2. Assessment schedules for the 2 tasks are provided in the syllabus. Teachers must use these.

3. All IA Score Capture Sheets will be provided by EQAP to schools.

Teacher's Name and Signature: ……

Principal's Name and Signature: ……

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

9.2 IA Programme Proposal Template

FULL IA PROGRAM

Page 1: COVER PAGE

For example:

MOTUFOUA SEC SCHOOL **SPFSC 2020** **BIOLOGY: FULL IA PROGRAM** Name:

Page 2: INSERT IA SUMMARY FORM HERE

(To be completed, signed/school stamped/scan/insert)

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 are the best types of assessment for the above LOs 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 IAscore 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)

9.3 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

9.4 Other Support Materials

1. **PacificCommunity(SPC)**
   A wide range of support material and specialist information and adviceforteachersandstudentsisavailable.ContacttheLibrarian. **PrivateMailBag**
   Suva
   FIJI
   www.spc.int

2. **InternetResources:** www.spc.intwww.usp.ac.fj
   www.biozone.co.nz
   www.nzqa.govt.nz

3. **ScientificPeriodicals/Magazines/Journals**

   SouthPacificAgriculturalNews
   PacificPestInfo(SPC) Pest Alert (SPC)
   PestAdvisoryLeaflet(SPC) NewScientist
   ScientificAmerican
   National Geographic

4. **Video**

   VideoEducationAustralia
   P.O.Box4390
   ShortlandSt,Auckland,NZ

   BBC
   Endeavour / Roadshow Entertainment
   PrivateBag56905
   DominionRoad,Auckland

   EducationalMediaAustralia
   7MartinSt
   SouthMelbourne,Victoria3205

   SPC
   PrivateBag
   Suva
   FIJI

9.5 Glossary

Experimental Terms:

Hypothesis	A prediction/statement which can e 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 labour 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)