

Program Review Narrative Summary

I. Summary of the academic program purpose

This program is designed to equip students with employability skills with technical expertise and scientific knowledge in crop and animal productions, to become future agriculturists, and successful entrepreneurs; or for the pursuit of a higher education in the field of Agricultural Science. It also develops concern and awareness of the students to protection and preservation of the eco-system.

II. The relationship of program to the college Mission Statement

As an open- door for technical skills development and training institution for occupational programs, Agricultural Science courses are designed to meet all the required competencies for future employment of students, and become prospective entrepreneurs of their respective communities. The program provides the students with scientific knowledge in farm expertise, and specialized skills in line with the goals of sustainable agriculture as one of the priority programs of the College.

Agricultural Science supports the college Mission through it goals:

- To develop future Agricultural Technologists with competent skills and committed citizens to improve their respective communities.
- To promote the concepts of entrepreneurship and enable the graduates to fully participate in the economic stability of the country.
- To extend technical expertise and assistance that is supportive to the national agricultural policies to strengthen the agricultural sectors of their community.
- To develop concerns and awareness among students in preserving diversities

III. Summary of Program Data

a. Figure 1 – Student Status

Data show that enrolments during fall and spring semesters from fall 2012 to spring 2015 are almost at the same levels with an average of 47.33 students and with an average of 42.83 passers. Enrolments during summers are few since most classes taken are internship and other General Education courses which have not been taken by students. A total of 16 completers for the past four summer sessions are recorded.

b. Figure 2 – Number of Graduates

Spring 2013 and Summer 2014 has the most number of graduates. This was due to a high number of students enrolled during those semesters. Data shows that on spring 2013, there are five (5) graduates while on summer 2014, there are four (4). Mostly, students took AAS degree and only during spring 2014 that have only one AS degree completer.

c. Figure 3 – Class Information

Data shows that during spring 2013 to summer 2015, there are more classes with less than 10 students except on spring 2014 wherein there are three classes with less than 10 students and three classes also with more than ten students

d. Figure 4 – Course Offering Information

AG courses are offered semester by semester. Regularly, there are five classes offered every semester but the internship course is taken in any semester by a qualified student that will add to a class offering in a particular semester. Among the five courses offered, there are four lecture and lab classes with only one as lecture class only.

e. Figure 5 – Faculty Information

From Fall 2012 and Spring 2013 there are two full time faculty who teaches in the program along with one part time faculty. During summer 2013, a CRE staff supervised AG interns at the RnD station. During Fall 2013, Spring 2014 and Fall 2014, there are three full time faculty which include one regular instructor, assistant instructor and an Australian volunteer who teaches in the program. Summer 2014 and 2015 have only one part time faculty who supervised the internship course.

f. Table 1 – Faculty to Class Size Ratio Information

IV. Summary of Student Learning and Curriculum

All AG CLO's are tied-up to program PLO's. The relationships between each CLO and PLO have provided direct links to achieve its effectiveness in meeting the learning objectives. The course assessments have provided an accurate means to evaluate students' progress and to address weaknesses. It provides measures towards improvements to meet the expected learning outcomes. Results of the previous course assessments indicated above average comprehension of students to the different courses learning outcomes

The assessment of program learning outcomes has provided improvements in achieving its objectives. Identified areas of concern are strengthen after assessments to further its improvements. Tied up in ILO's, it has provided guidance and gives added challenge to students to attain satisfactory completion of their degrees. This has led to more graduates that are well placed in their respective jobs.

V. Summary of Evaluation of Previous Goals/Activities from Previous Cycle (Figure 5)

1. To have one computer room for students use in their research/activity work. *Incomplete*
2. Hire one regular faculty with at least a BS degree. *Incomplete*
3. Request to install automatic waterers for the pigs. *Incomplete*
4. Modify the old pighouse walls and partitions. *Incomplete*
5. Request one pick up truck. *Completed*

VI. Summary of Program Major Strengths

- Agricultural Science program produces graduates leading to crop and animal production technologists.
- Students are trained to become future entrepreneurs with knowledge in farm management that can own and operate their own farms.
- Integrates electronic means of presentation of lessons and uses instructional support materials and equipments during practical application of skills during laboratory.
- Has qualified faculty with Masters Degree and PhD units to teach the courses of the Program.
- Has one assistant instructor who teaches two courses, and assist the instructor during laboratory classes
- Has its own piggery, poultry, nursery and crop production farm where students practically apply their knowledge to improve their skills.
- Has a collaborative tie up with the Bureau of Agriculture, Taiwan Technical Mission Farm, and private sectors to enhance the capability skills of students through attendance in seminars and workshops that demonstrate approved farming practices.

VII. Recommendations for Improvements

1. Some improvements in the facilities need immediate attention by personnel concerned. These facilities are used to support the learning process of students.
2. Assistant instructor needs to be evaluated also to determine his efficiency in working with instructors and students during classes.
3. Schedule immersion trips to different locations that will improve students familiarity and develop their skills to achieve proficiency levels of CLO's

VIII. Summary of Action Plans

Objective	Timeline	Person Responsible
1. Request a storage room for agricultural supplies, materials, and equipments. Storage room will help students learn correct housekeeping of farm tools and supplies.	August 2016	AG instructor
2. Hire one regular faculty. It will reduce the work load of the instructor and can assist in the preparations of teaching materials	Fall 2016	Administration
3. Request to modify the nursery roof into a monitor type of roofing. It will improve the ventilation of the nursery.	September 2016	AG instructor
4. Request to install automatic waterers for the pigs. This will provide sufficient drinking water to all pigs at all times.	September 2016	AG Instructor
4. Request one computer room with 10 computers and printer for students use in their research work	Fall 2016	AG Instructor
5. Repair of the old pig house. Its walls and partitions should be changed into hog panels to provide ventilation.	August 2016	AG Instructor
6. Schedule field trips to identified locations. Reflected in SLO's and CLO's, exposures of students to external facilities will improve their familiarity and in identifying specimens accurately.	For every SLO's and CLO's which require	AG instructor

*Note: Other college plans may include the 15-Year Institutional Master Plan, the 5 Year Technology Plan, or other plans such as an approved academic department plan or committee plan.

Appendix A: Program Review Assessment Data

1.0 Program Data

Figure 1. Number of Students Enrolled, Pass/Credit, Fail/No Credit, Audit and Withdraw

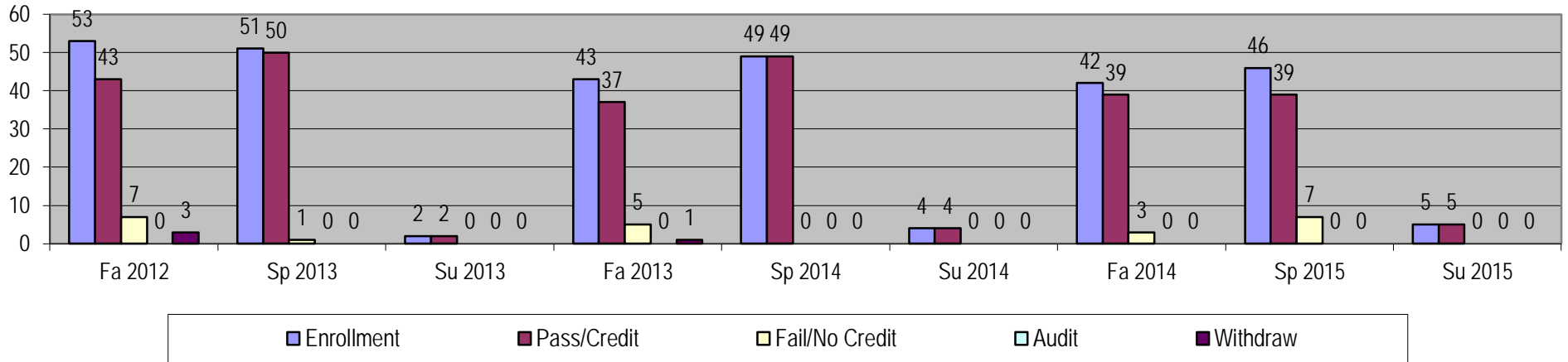


Figure 2. Number of Graduates

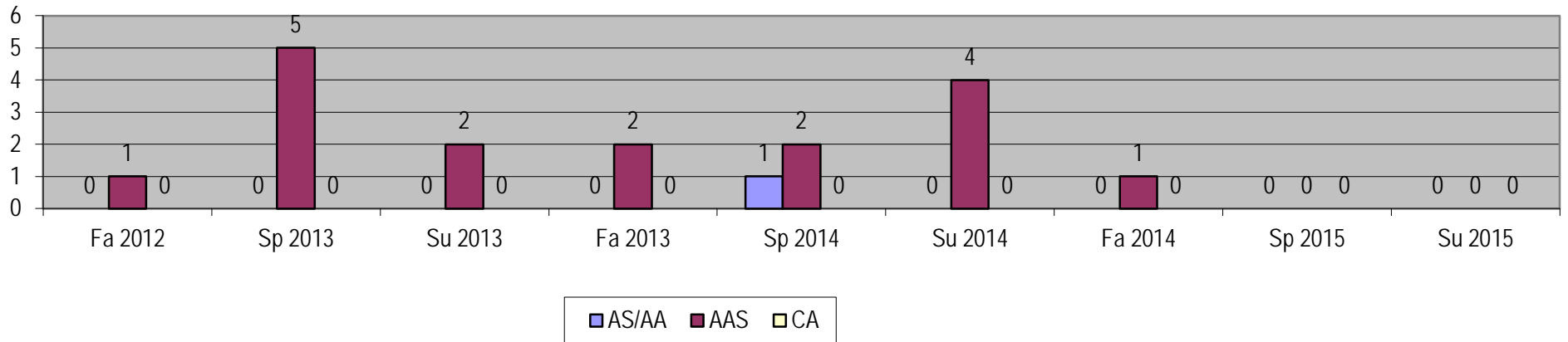


Figure 3. Number of Classes Based on Student Enrollment

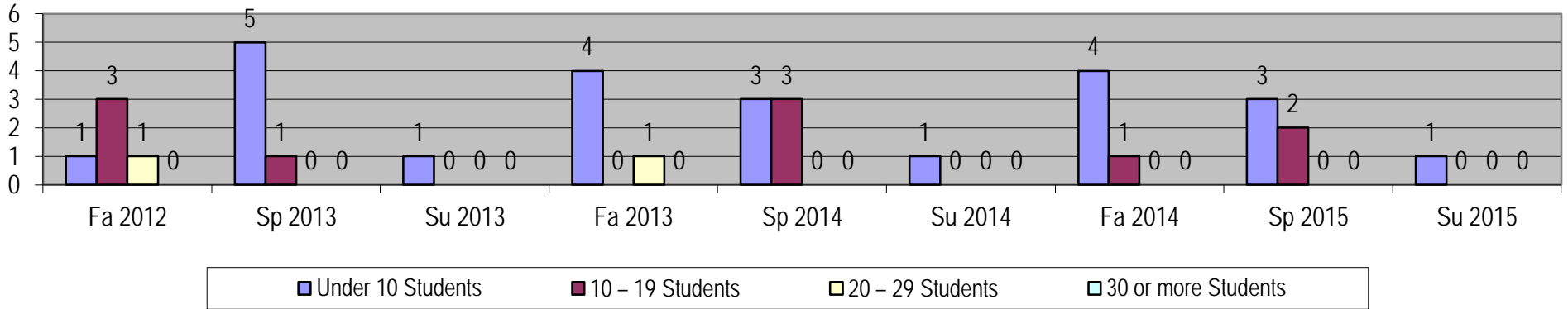


Figure 4. Class Offering

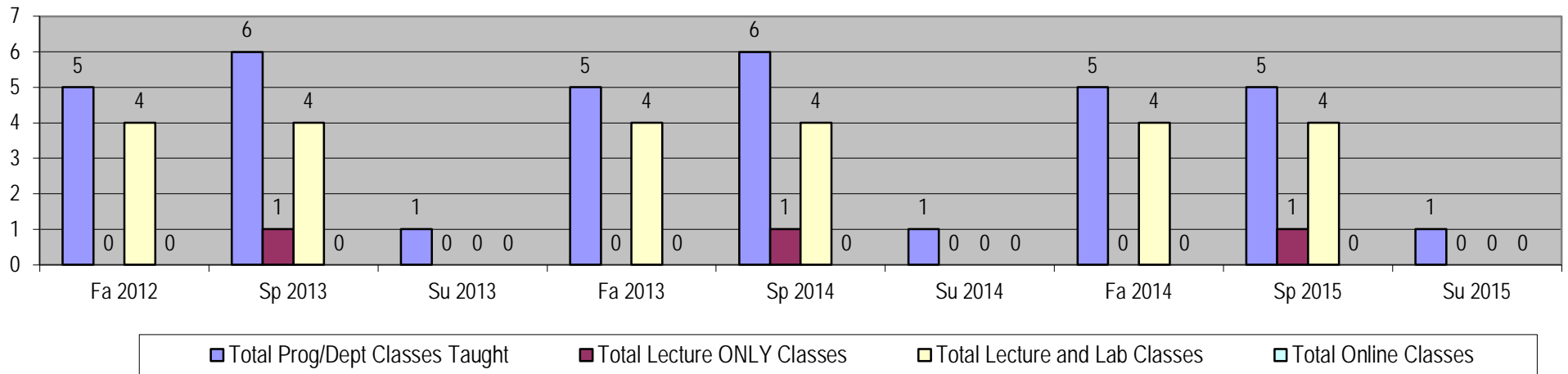
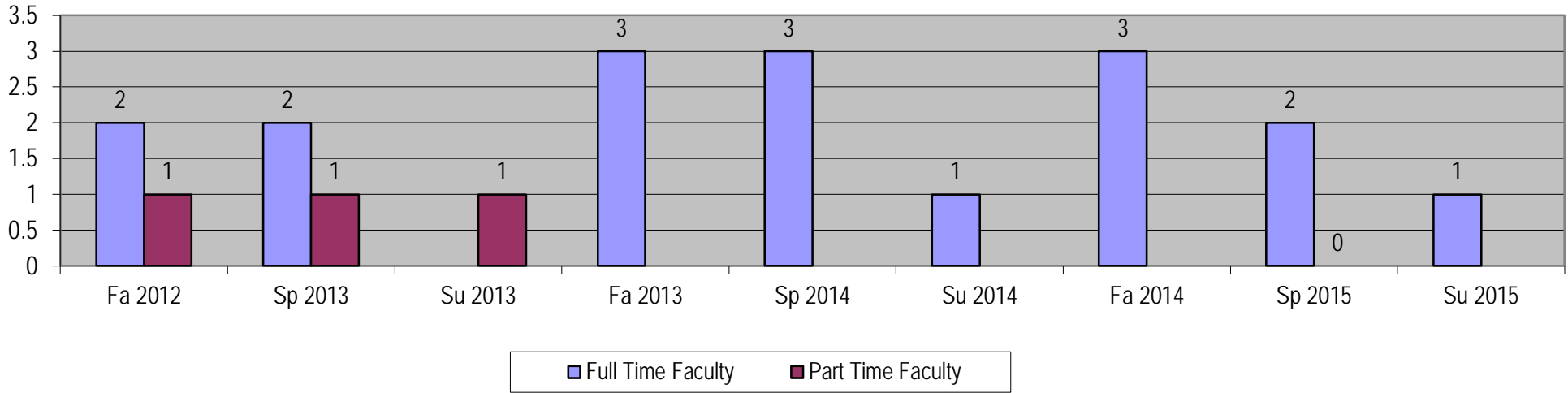


Figure 5. Faculty Head Count



NOTE: Full Time Faculty refers to full time faculty in the program/department. A Part Time Faculty includes adjuncts as well as Full Time Faculty that are teaching courses not within their program/department. These Full Time Faculty are assisting other programs outside of their own, therefore, are considered Part Time Faculty.

Table 1. Faculty to Class Size Ratio (program headcount).

Ratio	Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014	Summer 2014	Fall 2014	Spring 2015	Summer 2015
Full Time Faculty (F : S)	2:43	3:42	1:2	3:43	3:49	1:4	3:42	2:46	1:5
Part Time Faculty (F : S)	1:10	1:9	—:—	—:—	—:—	—:—	—:—	—:—	—:—

2.0 Student Learning and Curriculum

How many program courses are there? (refer to catalog)	% of courses with Identified CLOs	% of course outlines updated	% of courses whose Textbooks are updated (outline reflects change)	% of PLOs aligned with ILOs
12	100%	90%	90%	100%

3.0 Course Assessment Data

Year 1: School Year 2012-13

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2012	AG 214	CLO 1- PLO 1 CLO 2,3-PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	CLO 1 = 56% of the students assessed performed at proficiency level. Need to have more demonstration and field exposures of students CLO 2 = 78% of the students assessed performed at proficiency level CLO 3 = 100% of the students assessed performed at proficiency level. No action needed at this time CLO 4,5 = 90% of the students assessed performed at proficiency level. No action needed at this time
	AG 215	CLO 1,4,6- PLO 1 CLO 2,5- PLO 2 CLO 7- PLO 3 CLO 3- PLO 4	No course assessment
	AG 216	CLO 1- PLO 1 CLO 4,5- PLO 2 CLO 3- PLO 3 CLO 2- PLO 4	CLO 1, 5 = 100% of the students assessed performed at proficiency level. No action needed at this time. CLO 2, 4 = 91% of the students assessed performed at proficiency level. No action needed at this time. CLO 3 = 73% of the students assessed performed at proficiency level. Field trips to several parks and hotels can enhance learning of students to proper installations of plants.
	AG 111	CLO 4,5-PLO 1 CLO 1,3-PLO 2 CLO 2- PLO 3 CLO 2- PLO 4	CLO 1 = 82% of the students assessed performed at proficiency level. CLO 2,4 = 78% of the students assessed performed at proficiency level. Assistant instructor can help in demonstrating procedures in the farm. Instructor to integrate electronic presentations and actual specimens for better identification of internal organs of animals. CLO 3, 5 = 83% of the students assessed performed at proficiency level. No action needed at this time

	AG 223	CLO 5- PLO 1 CLO 1,4- PLO 2 CLO 2,6- PLO 3 CLO 3- PLO 4	CLO 1-6 = 100% of the students assessed performed at proficiency level. No action needed at this time.
Spring 2013	AG 124	CLO 1,2,3-PLO 1 CLO 6- PLO 2 CLO 4- PLO 3 CLO 5- PLO 4	CLO 1, 5 - 89% of the students assessed performed at proficiency level. CLO 2,3,4 - 100% of the students assessed performed at proficiency level. No action needed at this time.
	AG 122	CLO 1,2,3- PLO 1 CLO 4- PLO 2 CLO 5- PLO 3 CLO 3 PLO 4	CLO 1- 67% of the students assessed performed at proficiency level. CLO2,4,5 - 100% of the students assessed performed at proficiency level. No action needed at this time. CLO 3 - 89% of the students assessed performed at proficiency level.
	AG 123	CLO 1,2,3- PLO 1 CLO 4- PLO 2 CLO 5- PLO 3 CLO 3 PLO 4	No course assessment
	AG219	CLO 1- PLO 1 CLO 2- PLO 2 CLO 5- PLO 3 CLO 3,4- PLO 4	CLO 1,4,5 - 100% of the students assessed performed at proficiency level. No action needed at this time. CLO 2 - 78% of the students assessed performed at proficiency level. CLO 3 - 67% of the students assessed performed at proficiency level.
	AG 220	CLO 1,2- PLO 1 CLO 3,4- PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	CLO 1 - 60% of the students assessed performed at proficiency level. CLO 2,4 - 90% of the students assessed performed at proficiency level. CLO 3 - 70% of the students assessed performed at proficiency level. CLO 5 - 80% of the students assessed performed at proficiency level.

Year 2: School Year 2013-14

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2013	AG 111	CLO 4,5-PLO 1 CLO 1,3-PLO 2 CLO 2- PLO 3 CLO 2- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
	AG 216	CLO 1- PLO 1 CLO 4,5- PLO 2 CLO 3- PLO 3 CLO 2- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.

	AG 215	CLO 1,2- PLO 1 CLO 3,4- PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	No course assessment
	AG 214	CLO 1- PLO 1 CLO 2,3-PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
Spring 2014	AG 122	CLO 1,2,3- PLO 1 CLO 4- PLO 2 CLO 5- PLO 3 CLO 3 PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
	AG 123	CLO 1,2,3- PLO 1 CLO 4- PLO 2 CLO 5- PLO 3 CLO 3 PLO 4	No course assessment
	AG 124	CLO 1,2,3 PLO 1 CLO 6 PLO 2 CLO 4 PLO 3 CLO 5 PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
	AG 219	CLO 1- PLO 1 CLO 2- PLO 2 CLO 5- PLO 3 CLO 3,4- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
	AG 220	CLO 1,2- PLO 1 CLO 3,4- PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	CLO 1= 75% of the students assessed performed at proficiency level. CLO 2,3 = 100% of the students assessed performed at proficiency level. No action needed at this time. CLO 4 = 63% of the students assessed performed at proficiency level. Exposures of students to specialized and diversified farms during field trips can encourage and develop their strategies. CLO 5= 85% of the students assessed performed at proficiency level.
	AG 223	CLO 5- PLO 1 CLO 1,4- PLO 2 CLO 2,6- PLO 3 CLO 3- PLO 4	CLO 1-6 = 100% of the students assessed performed at proficiency level. No action needed at this time.

Year 3: School Year 2014-15

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2014	AG 111	CLO 4,5-PLO 1 CLO 1,3-PLO 2 CLO 2- PLO 3 CLO 2- PLO 4	No course assessment
	AG 214	CLO 1- PLO 1 CLO 2,3-PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
	AG 215	CLO 1,2- PLO 1 CLO 3,4- PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.

	AG 216	CLO 1- PLO 1 CLO 4,5- PLO 2 CLO 3- PLO 3 CLO 2- PLO 4	CLO 1-5 = 100% of the students assessed performed at proficiency level. No action needed at this time.
Spring 2015	AG 122	CLO 1,2,3- PLO 1 CLO 4- PLO 2 CLO 5- PLO 3 CLO 3 PLO 4	100% of students assessed performed at proficiency level. No action needed at this time.
	AG 123	CLO 1,2,3- PLO 1 CLO 4- PLO 2 CLO 5- PLO 3 CLO 3 PLO 4	CLO 1,2,3,5= 100% of the students assessed performed at proficiency level. No action needed at this time. CLO 4 = 71% of the students assessed performed at proficiency level. Inviting specialized resource person to discuss lessons can help improve learning of students
	AG 124	CLO 1,2,3-PLO 1 CLO 4- PLO 3 CLO 5- PLO 4	100% of students assessed performed at proficiency level. No action needed at this time.
	AG 219	CLO 1- PLO 1 CLO 2- PLO 2 CLO 5- PLO 3 CLO 3,4- PLO 4	100% of students assessed performed at proficiency level. No action needed at this time.
	AG 220	CLO 1,2- PLO 1 CLO 3,4- PLO 2 CLO 5- PLO 3 CLO 4- PLO 4	100% of students assessed performed at proficiency level. No action needed at this time.

1.0 Program Learning Outcomes (PLOs) Assessment

List PLOs	Proficiency Level	Results of Assessments
PLO 1 PLO 2 PLO 3 PLO 4	AG 111-CLO 4,5- 90% proficient AG 111-CLO 1,3- 91% proficient AG 111- CLO 2- 89% proficient AG 111- CLO 2- 89% proficient	90% of students assessed performed at proficiency level. No action needed at this time.
PLO 1 PLO 2 PLO 3 PLO 4	AG 122 -CLO 1,2,3- 95% proficient AG 122-CLO 4- 100% proficient AG 122-CLO 5- 100% proficient AG 122-CLO 3- 96% proficient	98% of students assessed performed at proficiency level. No action needed at this time.
PLO 1 PLO 2 PLO 3 PLO 4	AG 123 CLO 1,2,3 00% proficient AG 123 CLO 4- 00% proficient AG 123 CLO 5- 00% proficient AG 123 CLO 3- 00% proficient	No course assessment
PLO 1 PLO 3 PLO 4	AG 124 CLO 1,2,3- 99% proficient AG 124 CLO 4- 100% proficient AG 124 CLO-5 96% proficient	98% of students assessed performed at proficiency level. No action needed at this time.
PLO 1 PLO 2 PLO 3 PLO 4	AG 214 CLO 1- 85% proficient AG 214 CLO 2,3- 96% proficient AG 214 CLO 5- 97% proficient AG 214 CLO 4- 97% proficient	94% of students assessed performed at proficiency level. No action needed at this time.
PLO 1 PLO 2 PLO 3 PLO 4	AG 215 CLO 1,2 00% proficient AG 215 CLO 3,4- 00% proficient AG 215 CLO 5- 00% proficient AG 215 CLO 4- 00% proficient	No course assessment
PLO 1	AG 216 CLO 1- 100% proficient AG 216 CLO 4,5 99 % proficient	97% of students assessed performed at proficiency level.

PLO 2 PLO 3 PLO 4	AG 216 CLO 3 AG 216 CLO 4-	91% proficient 97% proficient	.level.. No action needed at this time.
PLO 1 PLO 2 PLO 3 PLO 4	AG 219 CLO 1- AG 219 CLO 2- AG 219 CLO 5- AG 219 CLO 3,4	100% proficient 93% proficient 100% proficient 95% proficient	97% of students assessed performed at proficiency level. No action needed at this time.
PLO 1 PLO 2 PLO 3 PLO 4	AG 220 CLO 1,2- AG 220 CLO 3,4- AG 220 CLO 5- AG 220 CLO 4-	88% proficient 87% proficient 88% proficient 84% proficient	87% of students assessed performed at proficiency level. No action needed at this time.

Note: All **AG 223-Internship** course record of assesment is kept by Internship coordinator
AG 111, AG 123, and AG 215 assessments were not available. These were assigned to adjunct faculty and to assistant instructor.

5.0 Evaluation of Previous Program Review Action Plans

Indicate the status of the previous program review action plans

Action Plan Activity/Objectives	Status Complete/Ongoing/Incomplete	Remarks
To have one computer room for students use in their research/activity work	Incomplete	
Hire one regular faculty with at least a BS degree.	Incomplete	
Request to install automatic waterers for the pigs.	Incomplete	
Modify the old pighouse walls and partitions	Incomplete	
Request one pick up truck	Completed	Flatbed was purchased instead of pick up truck

6.0 Action Plans

Based on this program review results, describe the program action plan for the next three (3) academic years. Include necessary resources.

Action Plan Activity/Objectives	How will this action plan improve student learning outcomes? (CLO, PLO, ILO)	Needed Resources (if any)	Timeline
To have one computer room for students use in their research/activity work	Research through internet on educational websites can provide students a good source of accurate and detailed informations to support their knowledge	10 computers	Fall 2016
Hire one regular faculty with at least a BS degree.	It will reduce the work load of the instructor and can assist in	Salary	Fall 2016

	the preparations of teaching materials		
Request to install automatic waterers for the pigs.	This will provide sufficient drinking water to all pigs at all times. Indicated in management of farm animals to have drink sufficient amount of water everyday	Water pipes and fittings	Spring 2017
Modify the old pighouse walls and partitions	Hog panels provide better ventilations than concrete walls. This will serve as a model to students in choosing appropriate materials for swine housing	Hog panels and steel bars	Fall 2016
Attendance to training and workshops.	Local training about soil improvement, crop and animal productions and pests and disease control are essential enrichment practices to improve the scientific knowledge of students	All inputs to be provided by host agency	As scheduled

7.0 Resource Requests

Type of Resource	Description	Estimated Amount Requested	Justification
Personnel	AG Instructor		To teach some of the AG courses
Facilities	Nursery roof, Piggery walls, pig waterers		Improvement of existing facilities necessary for updating of knowledge and skills of students

Supplies			
Software	Computers, printer		To be used in advanced learning, research work of students
Training			
Other			
Total			

Appendix B: Provide Program Learning Outcomes (PLOs)

Appendix C: Provide program mapping that shows alignment of CLOs – PLOs – ILOs

Appendix D: Provide signature assignment form

Appendix E: Provide all supporting evidence for this review

Appendix B: Provide Program Learning Outcomes (PLO's)

AG PROGRAM LEARNING OUTCOMES

1. Student will develop competent agricultural skills with ethical standards in their commitment to develop their respective agricultural economy,
2. Student will demonstrate scientific knowledge and technical skills of prospective entrepreneur.
3. Student will recognize the value and awareness in preserving diversities of the environment and cognizant to the principles of presevation.
4. Student will effectively deliver relevant extension services to respective communities providing quality services and assistance to agricultural sectors.

Appendix C: Provide Program mapping that shows alignment of CLO's- PLO's- ILO's

AGRICULTURAL SCIENCE PLO's and CLO's Map

Courses	PLO 1. Students will develop competent agricultural skills with ethical standards in their commitment to develop their respective agricultural sectors	PLO 2. Students will demonstrate scientific knowledge and skills of a prospective entrepreneur	PLO 3. Students will recognize the value and develop awareness in preserving diversities of the environment	PLO 4. Students will effectively deliver relevant extension services providing quality services and assistance to agriculture sectors	ILO's
AG 111	CLO 4, 5	CLO 1, 3	CLO 2	CLO 2	ILO 1-6
AG 122	CLO 1, 2, 3	CLO 4	CLO 5	CLO 3	ILO 1,2,3,6
AG 123	CLO 1, 2, 3, 4	CLO 5	CLO 5		ILO 1-6
AG 124	CLO 1,2,3	CLO 6	CLO 4	CLO 5	ILO 1-6
AG 214	CLO 1	CLO 2, 3	CLO 5	CLO 4	ILO 1-5
AG 215	CLO 1, 4, 6	CLO 2, 5	CLO 7	CLO 7, 3	ILO 1-6
AG 216	CLO 1	CLO 4, 5	CLO 3	CLO 2	ILO 1-6
AG 219	CLO 1	CLO 2	CLO 5	CLO 3, 4	ILO 1-6
AG 220	CLO 1, 2	CLO 3,4	CLO 5	CLO 4	ILO 1-6
AG 223	CLO 5	CLO 1, 4	CLO 2, 6	CLO 3	ILO 1-6

Appendix D: Provide a signature assignment form.

**COURSE LEARNING OUTCOME SKILL SHEET
AG 214 - HORTICULTURAL CROP PRODUCTION**

Student Name:

Semester:

Instructor:

Alex Gachalian

Criteria of Assessment	Rating scale	Points	Grade
CLO 3. Perform the different methods of asexual plant propagation			0
Accuracy in performing the practices: 30%		0	0
Performs correctly the procedures	1 - 5		
Uses appropriate tools correctly	1 - 5		
Demonstrate efficiency in workmanship	1 - 5		
Quality of work: 30%		0	0
Observe standard cutting procedure	1 - 5		
Bark of the material used was intact	1 - 5		
The cambium layers of both scions and stocks are properly jointed	1 - 5		
Work habits: 30%		0	0
Observes safety rules in use of tools	1 - 5		
Uses tools and equipments properly	1 - 5		
Ability to follow directions	1 - 5		
Speed: 10%		0	0
The tasks are accomplished on target time	1 - 5		
CLO 4. Demonstrate efficiency in growing plants in the nursery			0
Strategy: 60%		0	0
Uses the proper mixtures and ratio of soil media	1 - 5		
Plant and transplant seeds and seedlings in proper depths	1 - 5		
Water and fertilize the plants accurately and regularly	1 - 5		
Work Habits: 40%		0	0
Uses tools properly	1 - 5		
Ability to follow directions	1 - 5		
Observe safety rules when working	1 - 5		
CLO 5. Perform the different vegetables, root crops and fruit tree crop production practices			0
Accuracy in performing the practices 40%		0	0

Construct planting beds with correct dimensions	1 - 5		
Transplant seedlings with standard planting distances	1 - 5		
Work Habits 30%		0	0
Uses equipments and tools properly	1 - 5		
Observe safety rules while working	1 - 5		
Ability to follow directions	1 - 5		
Strategy 20%		0	0
Uses appropriate kinds and ratio of soil media	1 - 5		
Handle seedling and transplant carefully to minimize injury	1 - 5		
Water and fertilize the plants accurately and regularly	1 - 5		
Speed 10%		0	0
The activity is accomplished on scheduled time	1 - 5		

Note: This CLO's skill sheet is used to assess students while they perform the tasks during lab to determine their levels of achievements. Other means of assessment are in the form of tests and embedded questions in the midterms and final exams.