

REFERENCES CITED

1. Manley, Fred William. A Study Summary. Commission on Education in Agriculture and Natural Resources, National Research Council. June, 1968.
2. Thompson School of Applied Science. Bulletin of the University of New Hampshire Issue 1966-67, 1967-68.
3. Agricultural and Technical College at Alfred Bulletin 1966-68. State University of New York.
4. Pasto, Jerome K. Two-Year Technical Education Programs in Agriculture and Natural Resources.
5. Wietgreffe, W. H. 1967 Placement and Job Opportunities, Agriculture Department. State University of New York, Agricultural and Technical College, Alfred, New York.
6. Feddema, L. W. Academic Performance of Transfer Students From State University of New York Agricultural and Technical Colleges From 1950-1965. A Report to the President's Committee To Study The College of Agriculture. Cornell University.
7. Jennings, Wm. E. Personal correspondence to Professor Charles W. Cameron. March 21, 1967.

The minimum number of semester hours of agriculture scheduled for the freshman year was 5, the maximum 18, and the average 10.8.

The minimum number of semester hours of agriculture scheduled for the sophomore year was 3, the maximum 24, and the average 10.7.

There were ten out of thirty-one (or 32.25 per cent) of the reporting institutions that had integrated certain freshman and sophomore classes during the last five years. Nineteen (or 61.3 per cent) of the institutions reporting had integrated no freshman and sophomore classes.

Twenty-two (or 71 per cent) of the institutions reporting have not dropped any freshman or sophomore courses from the catalog during the last five years.

Twenty-five (or 80.6 per cent) of the institutions reporting have not added any freshman or sophomore courses during the last five years. One institution reported a few courses had been added but did not give the number. One institution reported that committees were working on plans to integrate introductory courses in animal husbandry, dairy husbandry and poultry. There were a total of thirty-six courses dropped and sixteen courses added during the last five years in the institutions surveyed. Thirty-three of the courses dropped from the agriculture curricula totaled eighty-three semester hours. Twelve of the courses added to the agriculture curricula total forty semester hours.

Table No. 1 gives the number of semester hours of agriculture required for students majoring in the various agriculture curricula and the number of institutions reporting in each category.

Table 1. Agricultural requirements for various agricultural curricula.

Agricultural Curricula	Requirements in Semester Hours				
	24-28	29-34	34-43	44-48	over 48
General Agriculture	3	8	6	4	7
Agronomy		3	4	2	5
Animal Industry		4	4	3	5
Agricultural Business	1	6	4	4	3
Agricultural Economics	1	3	2	3	1
Agricultural Engineering			3	2	1
Dairying		1	2	4	3
Forestry				2	1
Horticulture	1	1	2	2	5
Agricultural Education			2	2	5
Agricultural Education (Non-vocational)		1			
Agricultural Inspection		1			
Enology					
Entomology		1			
Food Technology		2			
Plant and Soil Science			1		
Plant Pathology		1			
Poultry Science			1		1
Pre-Forestry					1
Range Management			1		
Viticulture					1

The total number of institutions in the various categories would not necessarily be the total number of institutions sampled because of the variations in the number of fields of agriculture at the different institutions.

There was a wide variation in the number of semester hours of agriculture required of those students majoring in different specific fields at a given institution as well as from one agricultural curriculum to another at different institutions.

Table No. 2 gives the number of semester hours of general and organic chemistry required in the various agricultural curricula and the number of institutions reporting in each category.

A Committee Survey On Improvement of Instruction

JAMES HAMILTON, *Chairman*
Austin-Peay State University

Thirty-six questionnaires were sent to institutions that are members of the National Association of Colleges and Teachers of Agriculture. Thirty-two (or eighty-nine per cent) of these questionnaires were returned.

The purpose of this study was to inquire concerning the requirements of the various institutions that are members of NACTA in the following areas:

1. The number of semester hours required for a bachelor of science degree with a major in agriculture.
2. The number of semester hours of agriculture scheduled in the freshman and sophomore years.
3. The total number of hours of agriculture required in the various agricultural curricula.
4. The number of hours of chemistry, biology, and mathematics required in the various agricultural curricula.

The minimum number of semester hours required for a B.S. degree in agriculture was 124, the maximum 146, and the average 128.7.

Table 2. Chemistry requirements for various agriculture curricula and the number of institutions reporting in each category¹

Agricultural Curricula	General Chemistry Requirements ² (Sem. Hrs.)					Organic Chemistry Requirements (Sem. Hrs.)				
	2-4	5-6	7-8	9-12	2-3	4-5	6-7	8-12	over 12	
General Agriculture	2	11	9	5	8	2			4	
Agronomy	1	3	8	4	4	5	5	2		
Animal Industry	1	2	10	3	5	6	1	1		
Agricultural Business	1	3	10	2	3	0	0	2		
Agricultural Economics	1	4	2	2	2	0	0	1		
Agricultural Engineering	2	0	3	3	1	0	1	1		
Agricultural Education	1	2	5	3	2	2	0	2		
Dairying	1	2	5	3	2	3	1	1		
Forestry	1	0	3	2	1	2	1	1		
Horticulture	1	3	5	3	5	3	0	1		
Agricultural Inspection		1			1					
Enology		1					1			
Food Technology			1	1		1				
General Agriculture (For Teachers)	1									
Plant Pathology				1		1				
Poultry Science		1		1	1					
Pre-Forestry			1				1			
Range Management										
Viticulture		1			1					

¹The total number of institutions reporting in the various categories would not necessarily be the same as the number sampled.

²One institution reported that no chemistry was required of those students majoring in the field of agriculture.

There was the expected variation in the number of semester hours of both general and organic chemistry required in specific agriculture curricula. The requirements in general chemistry ranged from a minimum of none to twelve semester hours in specific fields of agriculture. The requirements of organic chemistry, also, ranged from none to over twelve semester hours. In one or two institutions no general chemistry was required but organic chemistry was required.

Table No. 3 gives the number of semester hours of general biology and the number of semester hours of zoology and botany required in the various agriculture curricula and the number of institutions reporting in each category.

Table 3. Biological Science requirements for various agricultural curricula and the number of institutions reporting in each category

Agricultural Curricula	General Biology (Semester Hours)				Zoology and or Botany (Semester Hours)				
	2-4	5-6	7-8	9-12	2-4	5-6	7-8	9-12	12 & over
General Agriculture	4	5	6	2	2	7	4	0	6
Agronomy	2	1	4	1	2	5	3	1	5
Animal Industry	2	1	4	2	1	7	4	0	5
Agricultural Business	1	4	1	1	2	5	3	1	3
Agricultural Economics	0	4	3	0	2	4	2	0	0
Agricultural Engineering	1	2	1	0	1	3	1	2	0
Agricultural Education	1	2	1	2	1	5	2	0	3
Dairying	1	2	2	1	1	7	1	0	1
Forestry	0	1	0	0	1	1	0	1	2
Horticulture	1	1	3	1	1	5	2	2	2
Agriculture Inspection	1					1			
Enology	1								
Entomology			1			1			
Food Technology			1			2			
Plant Pathology			1			1			
Poultry Science	1		1			2			
Pre-Forestry								1	
Pre-Veterinary								1	
Range Management				1		1			
Viticulture	1					1			

There was a notable variation in the number of semester hours of general biology, zoology, and botany in specific fields of agriculture. The requirements in zoology and botany ranged from a minimum of none to a maximum of over twelve semester hours. There were a few institutions that required no general biology but required zoology and botany.

Table No. 4 gives the number of semester hours of beginning mathematics required in the various agriculture curricula and the number of institutions reporting in each category.

Table 4. Beginning mathematics requirements for various agricultural curricula and the number of institutions reporting in each category

Agricultural Curricula	REQUIREMENTS				
	1 Sem. Col. Alg. & Trig.	2 Sem. Col. Alg. & Trig.	2 Sem. Bus. Math.	2 Sem. Gen. or Frac. Math.	None Apply
General Agriculture	8	1	0	2	4
Agronomy	5	0	0	1	4
Animal Industry	5	0	0	1	5
Agricultural Business	6	0	4	1	3
Agricultural Economics	1	0	2	0	2
Agricultural Engineering	2	0	0	0	2
Agricultural Education	2	0	1	1	2
Dairying	2	0	0	0	3
Forestry	3	0	0	0	0
Horticulture	2	0	0	0	3
Agricultural Inspection					0
Enology					1
Food Technology				1	1
General Agriculture for Teachers					
Plant Pathology					1
Poultry Science					2
Pre-Forestry	1				
Pre-Veterinary	1				
Range Management	1				
Viticulture					0

There was noticeable variation in the amount and type of mathematics required in agriculture curricula of the reporting institutions. The requirements also varied within the specific fields of agriculture.

Summary Statements

There was a wide range in the required number of semester hours of agriculture, chemistry, biological science, and mathematics in the various agriculture curricula as evidenced by the responses of the institutions sampled in this survey.

There was a wide range in the number of hours of agriculture scheduled in the freshman and sophomore years. This situation could affect the student in at least two ways. First of all, if the number of agriculture courses scheduled is at a minimum, contact of the agriculture faculty with the student is greatly limited, therefore possibly threatening the loss of majors in this field. The number of hours of basic science needed by the student may be adversely affected if too many hours of agriculture are scheduled in the freshman and sophomore years.

Doubtless further study of the agriculture curricula of institutions that are members of NACTA should be made with the idea of upgrading the institutions that are weak in their science and mathematics requirements and to offer some feasible solution to student-contact during the freshman and sophomore years.