

PERCEPTIONS OF ADMINISTRATORS, FACULTY,
AND SENIOR STUDENTS CONCERNING THE
CURRICULUM OF FOUR AGRICULTURAL
JUNIOR COLLEGES IN KOREA

By

Young Joo Kim

Certificate
City College of Seoul
Seoul, Korea
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Master of Science
Oklahoma State University
Stillwater, Oklahoma
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Thesis Approved:

Robert R. Price

Thesis Adviser

James N. White

James P. Key

Norman N. Durbin

Dean of Graduate College

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CHAPTER I

INTRODUCTION

Recently, agriculture in Korea has experienced rapid change, largely consisting of changes in technology, with a decided shift from labor-intensive to energy-intensive emphasis. Consequently, training to produce a highly skilled technician was mandated. Such a shift in power application became a part of new a emphasis in technical development with effects felt throughout the agricultural industry. The government of Korea has increasingly given more attention and is allocating more resources for the development of agriculture. The establishment of new programs of agricultural training was given attention. Consequently, programs for the training and preparation of professional agriculturists were given renewed support by the Ministry of Education as well as agricultural divisions of the government. Of particular emphasis were efforts to channel the use of natural resources in order to assure an eventual, yet gradual transition to renewable natural resources. It was anticipated that individuals graduating from Agricultural Junior Colleges (AJCs) would be professionally competent in bringing about such an agricultural transition. Thus, the renewed shift in emphasis brought about through revised and/or newly developed

curricula tended to make the Agricultural Junior College become even more important for the nation's future. It is a well-known and recognized fact that the AJCs have graduated a number of agricultural technicians who have effectively initiated leadership efforts in the agricultural sector of the society, especially during the past two years, but there also remains evidence that continued evaluation of their training and subsequent performance is to be desired.

Statement of the Problem

As was pointed out in the introduction, there is considerable evidence that the Government of Korea has continued to recognize the importance of agricultural development. Proof of this concern has been the willingness to provide resources and funding for programs emphasizing agriculture and agricultural education.

Early in 1964, the Government established five-year Professional High Schools of Agriculture, and in 1979 these were changed to AJCs which now function, to a large extent, as intermediate schools between the High schools and the University. Concomitantly, the Ministry of Education attempted to institute and implement plans for improved instruction at the AJCs. In reality, the program of studies at the AJCs attempts to function at a level largely equivalent to the first two years of university training. An additional, but highly important factor, is that they are being developed in response to a growing expressed need for training at a very practical level.

Therefore, the major purpose of the AJCs is to perform in such a manner as to foster and enhance the dissemination of professional knowledge in both the theory and practice of agriculture. Particularly, to accomplish this, efforts must center upon adequate preparation of the high level technicians now needed for continued progress in agricultural development. It is noteworthy that administration and faculty at the AJCs have endeavored to practice a "living-education" by becoming committed to furthering rapid agricultural development and by improving their curricula, cooperating with agricultural organizations, increasing connections with the community, and serving in various capacities in the agricultural field and management in various parts of the country. Even though opportunity for employment of graduates is not particularly demanding at present, there remains a need for technicians who can satisfy the needs of a rapidly advancing agricultural industry. There is obviously a need to make some assessment of how well students now in training may be expected to perform on the job.

Perceptions of administrators, faculty and fellow students regarding the quality of performance of graduates and the relative importance of selected aspects of current training programs can be recognized as definitely needed. Such perceptions and judgements will help in future development and revision of curricula for the AJCs.

Purpose of the Study

The main purpose of this study was to secure and interpret perceptions of three groups (1) administrators, (2) faculty and (3) senior students presently attending four AJCs. These perceptions were expressions as to how they feel the present instructional program is successfully developing the skills, knowledge, and practices needed by graduates in order for them to serve effectively in the technical agriculture and agricultural education sectors. Also included in the purpose was the securing and interpretation of perceptions as to the relative importance of selected factors, items or procedures in curricula development and revision. A concomitant purpose was to undergird future development and revision of curricula to enhance more rapid development of the agricultural sector in Korea and to assist agricultural specialists at various levels in becoming qualified to carry out their responsibilities.

Objectives of the Study

The specific objectives of the study were:

1. To determine current concensus as to the most effective design and development patterns for curriculum in Junior Colleges both in the United States and selected developing countries.
2. To describe the agriculture curricula presently used in four Agricultural Junior Colleges in South Korea.

3. To obtain perceptions as to the extent of present emphasis:
 - a. given to each of the major study areas,
 - b. the extent of emphasis which should be given in the future, and
 - c. the degree of student adequacy in fields of study, as perceived by each of three groups:
 - (1) College administrators,
 - (2) College instructors, and
 - (3) Senior students now enrolled.
4. To determine perceptions from the three groups as to the importance of selected factors, items and procedures in relation to curriculum design, development and implementation.
5. To discover any noticeable response differences occurring among these three groups.
6. On the basis of (a) research and literature reviewed and (b) findings of the study, make suggestions and recommendations for possible changes in both content and emphasis given to curricula in the future.

Assumptions

The data validity was subjected to the following assumptions:

1. The instrument was reflective of the extent of the agricultural curriculum being offered at the four AJCs studied.
2. The instrument was clear enough to adequately communicate information being sought from all groups involved in this study.
3. Respondents were willing to answer the questionnaires.
4. It was assumed that all respondents had enough knowledge to provide the needed data for making assessments concerning the degree of the adequacies of curricula.

Scope and Limitations

This study included:

1. Student respondents were those who completed a major portion of academic work at each of the four institutions.
2. Respondents at the AJCs, with the exception of senior students, consisted of individuals either in a position of administration or in teaching.
3. Except for General Studies, curricula studied were directly related to some phase of agriculture.

Definition of Terms

Agricultural Junior College (AJC) in this study is an educational institution that offers two years of agricultural and professional education corresponding to those in the first two years of a four-year college and the university that offers technical and vocational studies to students graduated from high school.

Ansung Agricultural Junior College (AAJC) was established in 1979 and located in Kyunggi Province (see Figure 1) to teach agricultural courses and offer a certification in different areas of agriculture. The certification is awarded after at least two years of work in an academic program in agriculture. Those students who are enrolled must complete high school and pass an entrance examination before they are accepted.

Jinju Agricultural and Forestry Technical College (JAFTC) was established in 1979 and located in Kyungnam Province to teach agricultural and forestrial courses. The others are the same as the above achool.

Milyang Agricultural and Sericultural Junior College (MASJC) was established in 1979 and located in Kyungnam Province to teach agricultural and sericultural courses. The others are the same as the above schools.

Yesan Agricultural Junior College (YAJC) was established in 1979 and located in Chungnam Province to teach agricultural courses. The others are the same as the above schools.

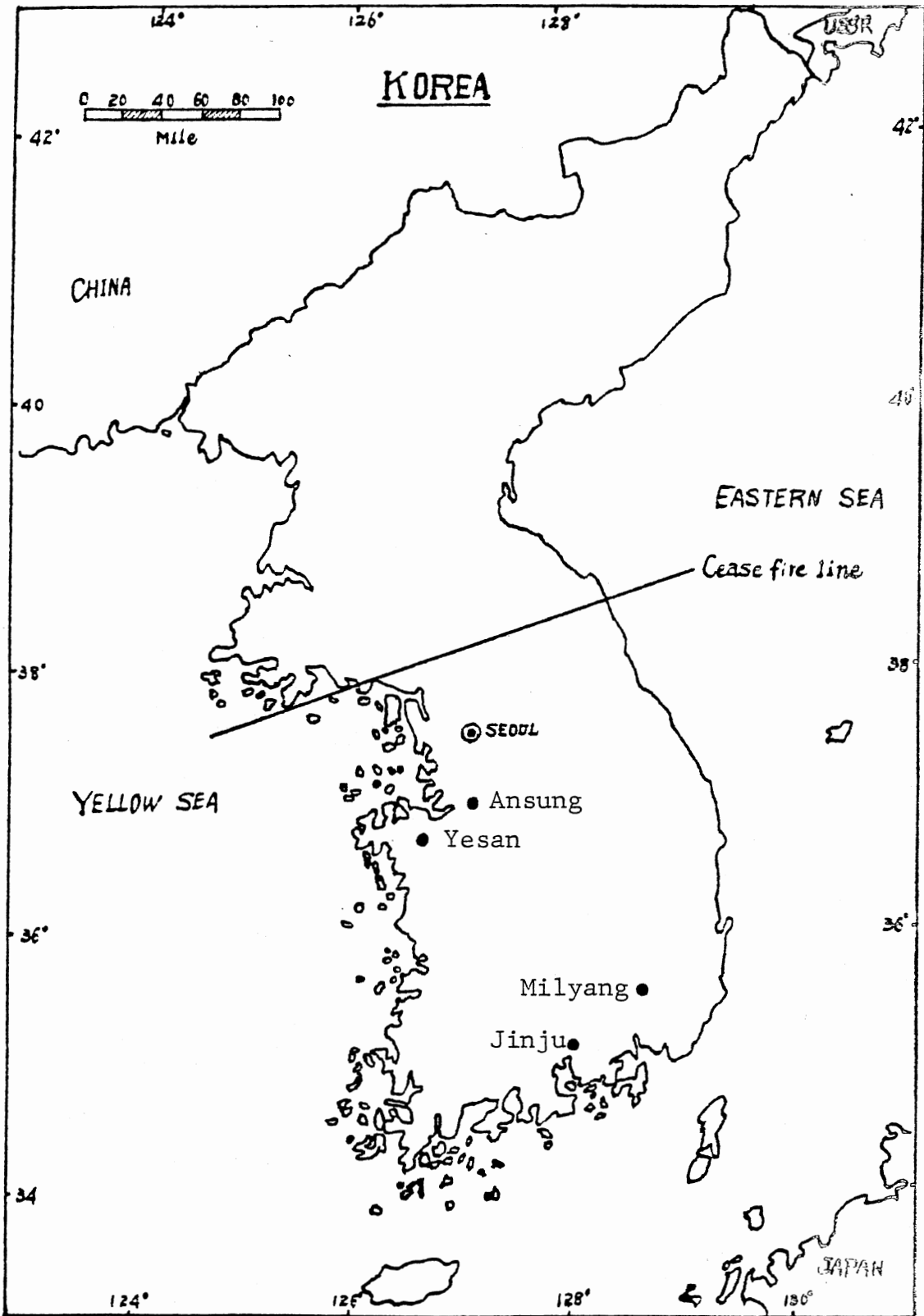


Figure 1. A Map Showing Locations of the Four Agricultural Junior Colleges in Korea Included in the Study

Administrators refer to those persons in positions such as Deans and Assistant Deans in each of the four institutions preparing agricultural workers.

Instructors or teachers in this study include those currently serving as instructors and in a teaching position in agriculture at one of the four institutions included in this study.

Senior students in this study refer to students who are near completion of requirements for an academic degree at their respective institute of agriculture.

Adequacy as used in this study refers to how well the worker will meet performance expectations or how well the student is now performing. This expresses the degree of proficiency possessed by the students upon completion of training at the respective institutions.

Curriculum as used in this study refers to the courses generally included in the individual student's plan of study, but also includes selected other learning experiences more or less common to graduates of the four institutions studied.

CHAPTER II

REVIEW OF LITERATURE

Introduction

As mentioned earlier, the Government of Korea has given the agricultural sector as a high priority and engaged in agriculture planning, production, and education. This will be more helpful since most of the people in Korea always recognize the importance of agriculture. Government support is most needed in the development of agricultural colleges in Korea.

For the purpose of the study, and especially in this chapter, various research projects and related materials were reviewed. These included literature on origin and present status of the colleges included in this study. Definitions and general comments regarding curricula and courses of study were posited as well as positions regarding accepted theories of curriculum development. Also included were brief excerpts and comments from and about studies and research related to agricultural curriculum development and function in Junior Colleges both in the United States and selected developing countries.

Origin and Present Status

Each of the four Agricultural Junior Colleges selected for the study was established by Government action in January of 1979 (1). Prior to this date each school served as a vocational agricultural high school, two originating as early as 1910, the others in 1923 and 1939. In 1970 Ansong and in 1974 Jinju, Milyang, and Yesan were designated as professional agricultural schools with a two-year program beyond the high school. Early in 1964, the Government actually established five-year Professional High Schools of Agriculture (1); therefore, in the following year Ansong and Jinju, in 1968 Milyang, and in 1969 Yesan were changed from three-year High Schools to five-year Professional High Schools (3, 12, 17, 26).

The Agricultural Junior Colleges are now functioning, to a large extent, as intermediate schools between the High Schools and the University. Concomitantly, the Ministry of Education has full responsibility for programs of education at the national level. Agricultural education policies are promulgated by the agricultural education supervisors of the Ministry who work in co-operation with the Board of Education in each province (1). The Ministry of Education also attempted to better plan for and implement improved instruction at the Agricultural Junior Colleges. The program of studies at the AJCs have attempted to function at a level largely equivalent to the first two years of University training. Additionally, they have developed in

response to a growing expressed need for training at a very practical level.

The Agricultural Junior Colleges have a dean and heads of the different technical departments who administer the College functions of instruction, research and extension.

As mentioned previously, the purpose of the Agricultural Junior Colleges is to perform in such a manner as to foster and enhance the dissemination of professional knowledge in both the theory and practice in agriculture. Particularly, it is to prepare adequately the high level technicians now needed for the progress in agricultural development (22). Their curricular objectives are teaching and conducting research on theories and technologies, determining methods of applying these to practical work for the benefit of the nation and human society as a whole, and cultivating qualities of leadership and personality, although the latter aims more specifically towards producing technicians for industry.

According to the Bulletin of Yesan Agricultural Junior College (26) the educational ideology of the College is (1) research of the truth, (2) industry and sincerity, and (3) harmony and cooperation. The Bulletin (26) also stated the main purpose of agricultural education and the objectives of education as following:

1. The purpose of Education:

The educational objectives of the College is to cultivate the men of ability and patriotism to

contribute to the prosperity of nation to be a standard-bearer for agricultural development with a new knowledge and technique of farming by the education which is based on the ideology of the Charter of National Education and developed in educational renovation and nationality.

2. The objectives of education.
 - a. Intensification of mental education for nationality.
 - b. Making of new academic traditions.
 - c. Emphasis of producing technological education.
 - d. Completion of moral education (26, p. 9).

The other three Agricultural Junior Colleges: Ansong, Jinju and Milyang have similar purposes and objectives of their agricultural education.

According to the National Junior College Conference (22), each of the four schools has slightly different departments as shown in Table I. In YAJC, there are thirteen big departments: Agriculture, Agricultural Civil Engineering, Agricultural Home Economics, Agricultural Machinery, Dairy Farming, Extension Education, Farm Management, Food Manufacturing, Forestry, Horticulture, Landscape Architecture, Livestock and Plant Protection. However, MASJC has only seven departments: Agricultural Architecture, Agricultural Engineering, Agricultural Home Economics, Farm Management, Filature, Food Manufacturing and Sericulture. In JAFTC, all nine departments are the same as of YAJC except Agricultural Home

TABLE I
 DISTRIBUTION OF DEPARTMENTS AMONG THE
 FOUR JUNIOR COLLEGES (3, 12, 17, 26)

Department	School Name			
	AAJC	JAFTC	MASJC	YAJC
Agriculture (AGR)	0*	0		0
Agricultural Architecture (AAR)			0	
Agricultural Civil Engineering (ACE)	0	0		0
Agricultural Economics (AEC)	0			
Agricultural Engineering (AEN)			0	
Agricultural Home Economics (AHE)	0		0	0
Agricultural Machinery (AMA)	0	0		0
Dairy Farming (DFA)	0	0		0
Extension Education (EED)				0
Farm Management (FMA)			0	0
Filature (FIL)			0	
Food Manufacturing (FOM)	0	0	0	0
Forestry (FOR)		0		0
Horticulture (HOR)	0	0		0
Landscape Architecture (LAR)		0		0
Livestock (Animal Science) (LIV)	0	0		0
Plant Protection (PPR)				0
Sericulture (SER)			0	

* "0" means the School has the Department.

Economics, Extension Education, Farm Management and Plant Protection; and in AAJC, seven of nine departments are also the same as YAJC except Extension Education, Farm Management, Forestry, Landscape Architecture, Plant Protection and Agricultural economics which is only in AAJC. Seven departments: AAR, AEC, AEN, EED, FIL, PPR, and SER are located only in one school, not in common.

The Junior College staff members must have a B.S. or higher degree and experience in research work to qualify for the different faculty grades as follows: assistant, over 2 years; instructor, over 3 years; assistant professor, over 4 years; associate professor, over 6 years; and professor, over 10 years (1).

The approximate distribution of faculty members in Yesan Agricultural Junior College (5) in 1982 is as follows (numbers): assistant (9), instructor (8), assistant professor (11), associate professor (10), and professor (33). The highest degrees possessed by these faculty members are: Ph.D., one percent; M.S., 38 percent; and B.S., 61 percent.

Most of the graduates from the Agricultural Junior Colleges are working in Government employment, self-management, or the army. The others work in private companies and research centers, while the rest are engaged in administration, business, teaching and extension work or are studying abroad.

A study conducted in 1981 of the graduates of Yesan Agricultural Junior College showed the placement as follows

(percentages in parentheses): self-farming management (18.2), technical assistants in the Government and private sectors (25.1), employment (the government or others) (18.6), continued studies (12.3), the army or waiting the list (24.4),(26).

Definitions and General Comments Including
Positions Regarding Theories of
Curriculum Development

A term of curriculum and curriculum development has been defined by many influential educators and recognized authorities in a number of ways. Johnson (14) defined curriculum as all the planned learning experiences that students have under the auspices of the school.

Oliver (19) broadly defined as follows:

Curriculum is all the experiences the child has regardless of when or how they take place; all the experiences the learner has under the guidance of the school; all the courses which the school offers; the systematic arrangement of certain courses designed for certain pupil purposes; courses offered within a certain subject field; the program in a specialized professional school; those courses taken by an individual (p. 5).

According to Taba (20), curriculum is as a certain statement of aims, objectives that indicated a selection and organization of content. It either implies or manifests certain patterns of learning and teaching, whether because of the objectives demanding them or because of the content organization requiring them.

Comb (7) also stated that:

A curriculum, primarily concerned with content, leads itself to a neat hierarchical organization in which materials can be presented step by step in sequential order (p. 113).

Curriculum consists of designated activities for an individual or group within like abilities or interests by Umstated (24). However, Amatayakul (2) mentioned that:

Curricula are planned for groups, not for individuals. To better benefit individual needs, the total group has often been subdivided in various ways: on the basis of general intelligence, special aptitude, interest or vocational goal (p. 7).

Curriculum is necessary to be carefully planned and involve experiences and expertness. Kelly (15) similarly defined as all learning that is planned and guided by the school carried on either individually or in groups.

Nevertheless, Cay (6) described a more clear and specific definition of curriculum as an umbrella that covers school experiences. Cay also defined:

Curriculum is the education design of learning experience for children, youth, and adult in school. It is people and their value systems, their beliefs, their philosophies, and their practices regarding education (p.1).

The term curriculum "includes all activities of students which take place under the school direction, whether the activities are curricula or extra-curricula, inside or outside the classroom," as Gwynn and Chase (10, p. 220) indicated.

On the other hand, Doll (9, p. 4) emphasized that curriculum includes: "(1) guidance, (2) plans for learning, (3) ends or outcomes of being educated, and (4) systems for achieving educational production." In addition, Doll (9) also perceived a workable definition to be the following:

The curriculum of a school is the formal and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes, appreciations, and values under the auspices of that school (p. 6).

It includes what to learn, how to learn, and what to outcome in the forms of knowledge comprehension, skills, attitudes, appreciations, and values, whether the curriculum is planned or hidden under the auspices of the school which is able to legislate and control it.

In developing any curriculum and plan of instruction, a brief summary of the position taken by Tyler (23) is formed as following four fundamental questions:

1. What should be the educational objectives of the curriculum?
2. What learning experiences should be developed to enable students to achieve the objectives?
3. How should the learning experiences be organized to increase their cumulative effect?
4. How should the effectiveness of the curriculum be evaluated?

These questions can represent the four-step sequence of (1) identifying objectives, (2) selecting the means for the attainment of these objectives, (3) organizing these means, and (4) evaluating the outcomes that have been chosen for the curriculum. These emphasized the fact that curriculum planning is a continuous cyclical process, involving constant replanning, redevelopment, and reappraisal.

Tyler's conceptual framework for curriculum development

was reconstructed by Tanner and Tanner (21). They noted that Tyler identified the following three sources: (1) studies of the learners themselves, (2) studies of contemporary life outside the school and (3) suggestions from subject specialists.

Another conceptual framework such as that proposed by Tyler can be readily expanded depending on the goals and objectives. Herrick's proposal of a model for curriculum design expands Tyler's framework and conforms more to the meaning of curriculum design. Herrick (11) attempts to organize the consideration as following: (1) the chief points at which curriculum decisions are made, (2) the considerations that apply to each, (3) the relationships that should exist among these points, and (4) the criteria. The emphasis related to process are graphically shown in Figure 2.

Emphasizing the active role of the learner has important implications for selecting curriculum goals and objectives and for achieving transfer-of-training. Tyler (23) indicated that the curriculum objectives selected should (1) stress those things being important to learn in order that students participate constructively in contemporary society, (2) be sound in terms of the involved subject matter, (3) be in accord with the educational philosophy of the instruction, (4) be of interest or be meaningful to the prospective learners, and (5) be capable of being made so in the process of instruction.

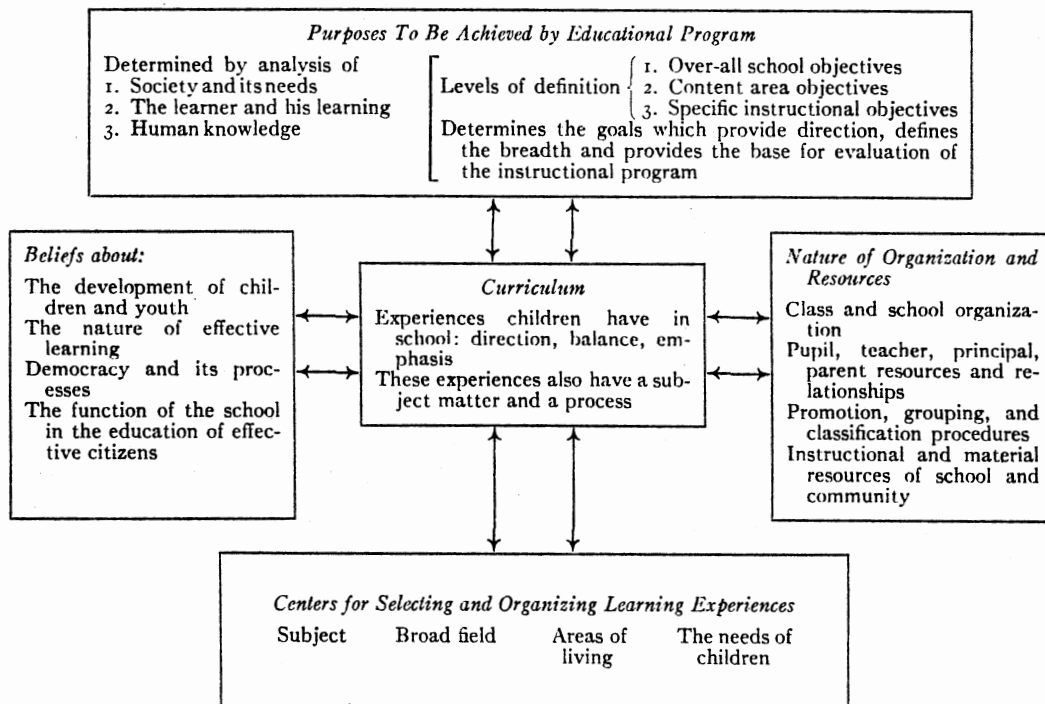


Figure 2. A Proposed Curriculum Design by Herrick

On the other hand, Tyler (23) described significant implications for developing curriculum and for improving the total educational system can be found in the following two facts:

1. While the time available to the school has remained relatively constant, the time given to education by parents, community agencies, and work settings has been greatly reduced;
2. An adequate educational system in a modern society must include experiences that take place outside the school, which is where young people spend most of their time (p. 167).

These two facts have implications for making maximum use of the school's resources, strengthening the out-of-school curriculum, and helping students deal with the non-school environment.

In implication for achieving transfer-of-training, Tyler (23) mentioned that the failure of students to transfer what to learn in school to situations outside the school is a problem dealing with the active role of the learner and one which has long been central to educational psychology. It means that schools are established to help students acquire behavior being important for constructive out-of-school activities.

For developing countries, when curriculum design is seriously considered, it is necessary that designers be more heavily dependent upon a certain design that considers both concerns and experiences, and it should be geared to social change affecting situations that actually exist within the society; these for both individuals and groups.

Manning (16) explained that curriculum design is the substructure in curriculum organization, and the substructure is developed with great sensitivity to internal and environmental needs. Manning also described that the curriculum design is regarded by many teachers as a remote consideration that does not relate itself in any important way to the teacher's work. Curriculum design affects students and teachers in highly important ways.

According to Taba (20) educators designing curricula must approach their task as a systematic process, and she identified the following sequence of steps in the process:

(1) diagnosis of needs, (2) formulation of objectives, (3) selection of content, (4) organization of content, (5) selection of learning experiences, (6) organization of learning experiences, and (7) determination of what to evaluate and of the ways and means of doing it (p.2).

Although Taba conceived of these steps as a linear sequence, Tanner and Tanner (21, p. 85) held that these steps of functions are interdependent rather than rigidly sequential. For example, the diagnosis of needs and formulation of objectives derive from the teaching-learning situation and involve evaluation which, in turn, is integral to every step - including those concerned with the selection and treatment of subject matter. Tanner and Tanner (21) summarized that:

Curriculum designs are the end results of curriculum decisions. The sources for curriculum cannot in and of themselves provide criteria for curricula. Without a compass of sorts to find one's way, the sources are virtually useless. There is a compass available to curriculum leaders: philosophy. The development of a

philosophy is fundamental in determining criteria for design (21, p. 683).

In developing curriculum, Johnson (13) described that "one should consider the need of the students, contemporary life outside the school, and the subject matter specialists" (p. 20).

According to Amatayakul (2), curriculum:

1. Starts with everyday concerns and experiences of students or learners;
2. Deals with those aspects of persistent life situations appropriate to the learner's background and maturity;
3. Helps learners deal with the one or more persistent situations which are a part of the immediate situation and most closely related to their needs; and
4. Provides opportunities for learners to share in the selection and development of experiences (p. 6).

Amatayakul (2) added that a curriculum plan is a result of decisions regarding three different matters:

1. Selection and arrangement of content;
2. The choice of the learning experiences by which the content is to be manipulated and by which the objective not achievable through content alone can be attained; and
3. Plans for the optimum condition for learning (p. 8).

A statement by Burns and Brooks (4) seems to be in accord with others. The viewpoint is:

What is needed are curricula designed not as collections of independent bits of knowledge, not as isolated and static subjects learned in a vacuum. Instead, our curricula must reflect the complex interrelationships and processes inherent in the many problems facing our society. Knowledge, understanding skills, attitudes, appreciations, interests and

processes should be studied as integrated units in curricula designs which reflect the rapidly changing aspects of our society (p. 7).

Curriculum needs to go step by step to meet the learners needs because curriculum design is the fundamental step for any curriculum development and revision. Gwynn (10) defined five steps of curriculum development in the modern school: (1) the aim and objectives, (2) the survey movement, (3) the development of the unit technique, (4) system-wide curriculum revision, (5) and the core curriculum and large unit procedures.

Norton and Norton (18) explained the reason for the curriculum revision. The reason is that through curriculum revision teachers are redefining the purpose of education, improving the means for achieving these purposes, and keeping teachers abreast of the times.

Curriculum revision needs to be planned and involve all agencies or people who apply and use the revision, and then reviewed before implementing the suggestion of change and revision for the future development.

Selection of Available Complete Studies
and Research Related to Curriculum
Development for Agricultural
Education in Junior
Colleges

Although UNESCO (6) explained general survey of agricultural education in Korea, there were no studies

directed toward curriculum design and/or development for agricultural education in Junior Colleges in Korea. Limited studies in closely related areas were available. Other studies related to curricula in Agricultural Junior Colleges in selected developing countries and the United States seem to provide some background helpful for designing and implementing this study.

According to the National Junior College Conference (22) and UNESCO (1), the two-year Agricultural Junior College requires 80 units distributed as follows: general education, 10 units; science, two units; humanities, four units; and agricultural courses, 64 units. The courses are included with the purpose of developing needed skills in mathematics and a working knowledge of the basic sciences. In addition, certain introductory courses are offered in the major field of agricultural sciences and food technology. After having completed work largely comprising a basic requirement, approximately from second semester, the students choose a major field of study or specialization offered within the department. During the first year of study, students concentrate mostly on their major field by taking related, compulsory and restricted elective courses.

Additionally, in method of teaching in Junior Colleges, lectures occupy the largest proportion of time followed by laboratory exercises, field work, demonstrations, field trips, seminar reports, and a very limited amount of class discussion. Field work or farm practice is required for

graduation. The length of time for farm practice depends upon the major for specialization.

UNESCO (1) surveyed:

A common feature of the existing curricula of agriculture. . . .at the third level is the presence of introductory courses in agriculture, notably those dealing with general principles and techniques of crop and animal production, which are usually given in the earlier years. Concurrently offered are basic sciences such as chemistry, physics, biology (botany, zoology), physiology, etc. to acquaint the student with the fundamentals of those sciences which directly or indirectly affect agriculture. . . .Student is introduced to more areas of general education including social sciences, humanities and languages (p. 36).

UNESCO (1) also added:

The basic and general education courses are taken, in most countries of Asia, in the same faculty or college of agriculture, although in some they are taken by all students in another faculty of the same college (p. 36).

In the method of teaching in all countries of Asia, lecturing is reported as being the most common method of teaching agriculture subjects at the third level. It is followed by laboratory or practicum, demonstrations, field trips, discussions, and seminars, in that order (1).

In the developing countries of Asia, there are many problems in curriculum of agricultural education such as lack of funds, lack of qualified teachers, motivations of students and teachers, need for curriculum reforms, and administration of agricultural education. In these problems, the administration of agricultural education is the lack of long-range program planning in relation to economic development. Also lack of coordination has been observed

between the agricultural training instructions and potential employers of agricultural graduates, especially in the curriculum development.

With regard to the problem in the need for curriculum reforms, UNESCO (1) stated that:

The problem arising from curricular reforms have been noted by several countries and range from revision methods to the question of what additional courses should be included in new extended curricula to meet changing requirements. Some doubts have been expressed as to capability of existing curricula, especially at the high-school level, to attain the objectives set (p. 57).

In developing countries such as Korea, change should be dealt with speedily, for it is inescapable that a host of the problems arise. For the sector of education, this calls for rapidity of curriculum revision in order to respond to future development needs.

In developing nations, the decreasing of agricultural production is too often caused by different factors such as financing, manpower, lands, cooperation and agricultural curriculum. With regard to agricultural curriculum development in the nations, Casey and Price (5) emphasized that there are some of the more commonly observed weaknesses that may be categorized as follows:

1. Little or no involvement of college or school in the nation's efforts to substantially improve agricultural production or rural development. . . .
2. College or school experiment stations, even when functioning in the field of agriculture, are often ill-maintained and under-utilized. . . .
3. Perhaps as a result of being structured in a ministry other than agriculture, the college

or school may be functioning at a level essentially out of touch with the mainstream of the nation's agricultural industry. . . .

4. Faculty in agriculture, although perhaps academically able, often lack agricultural skills or field experience. . . .
5. The students in attendance at institutions of higher education in developing nations are more often from urban areas. . . .
6. . . . The college or school tends to perpetuate, rather than dissipate, the philosophy that 'working with the hands' or manual labor is beneath the dignity of the truly educated person.
7. Instructural methods used at any level of formal or informal agricultural education should not be shackled by strict adherence to the traditional approach often based largely upon Western curriculum and learning patterns (p. 64).

Within the Junior College system in the United States, the nature of curriculum involved in training of people in the United States to assist universities in developing countries with organization management and curriculum development in indigenous colleges and universities is of great importance. According to Conner and Hessel (8),

Since many students in colleges of agriculture will become involved, at one time or another, in international agricultural development programs, it is also important that they gain basic knowledge in the agricultural sciences and that a variety of courses with international emphasis be able to help them (p. 78).

In the United States, the rapid development of Community and Technical Colleges during the late 1960s and early 1970s provided a comprehensive capability for delivery of agricultural occupation training in less than the four-year baccalaureate agricultural program.

According to Vogler and Garrison (25, p. 24), the descriptive data for the curriculum, the faculty, and the students evolved from 102 programs in Agricultural Junior Colleges in the United States. The predominant program titles included agri-business (31), agriculture (31), and horticulture (24). The remaining program titles were animal science, food processing and distribution, forestry, pulp and paper; and soil. The curriculum was operated on both a quarter and semester plan. They also found that:

More than 70% of the programs culminated with the associate in applied science degree. These programs included an average of 99 quarter hours of credit with an average of 63 quarter hours of technical credit and 27 quarter hours of general education credit. The balance of the program, nine quarter hours, was general electives. Approximately 59% of the programs required on-the-job training, whereas 25% of the programs provided it as an option (p. 25).

The other characteristics appeared as the expected turnover of faculty, the small faculty size, the low credit hour teaching-assignment, the higher proportion of full-time students, and the high proportion of students coming with secondary agricultural training.

Prior to the above study, there was deficiency of literature that provided data related to characteristics of curriculum of Agricultural Junior Colleges in the United States. There was also no study that set forth national data related to development implementation, or evaluation of post secondary agricultural programs.

Summary

First in this chapter was the history and present status of the four Agricultural Junior Colleges in Korea included in this study, which presented their purpose and objectives, function, and programs. From these statements it can be concluded that a rather comprehensive and viable program of preparation for professional work in agriculture is being offered.

Also included are theoretical positions regarding curriculum development of which positions of Taba and Tyler seem to be most relevant. Salient features of these positions would seem to be that of identifying curricular needs and objectives, selecting and organizing content, selecting and organizing learning experiences, and evaluating the outcomes compared to objectives chosen for the specific curriculum.

Also included were sections dealing with (1) recognized weaknesses of higher education in developed countries and (2) selected studies completed relevant to curriculum design and development. Typical of these were those of Casey and Price who stressed the importance of some weaknesses in agricultural curriculum in developing countries which can be corrected to further promote agricultural production, also those of Vogler and Garrison who stress the importance of studies in planning, implementing and evaluating of Agricultural Junior College curricula in the United States.

CHAPTER III

METHODOLOGY

Introduction

This chapter is designed to deal with the population for the study, development of the questionnaire and/or instrument, and the handling and administering of the questionnaires and treatment of data.

Population for the Study and Administration of Questionnaires

The study population included the total of administrators, instructors and senior students presently serving at Ansung Agricultural Junior College, Jinju Agricultural and Forestry Technical College, Milyang Agricultural and Sericultural Junior College, and Yesan Agricultural Junior College. The actual or estimated number of population of each school shown on Table II was approximately within the following numbers:

Administrators	2 persons
Instructors	45-70 persons
Senior Students	500-736 persons

The number of actual or estimated population of senior

TABLE II
ORIGINAL POPULATION PARAMETERS, SAMPLE SIZE, AND STRATIFICATION

Institution	Institutional Group	Actual or Estimated Population	Sample Percentage	Total Respondents Expected
Ansung Agricultural Junior College	Administrators*	2	100%	2
	Instructors	50	20%	10
	Senior Students	500	6%	30
Jinju Agricultural and Forestry Technical College	Administrators*	2	100%	2
	Instructors	70	14%	10
	Senior Students	644	5%	30
Milyang Agricultural and Sericultural Junior College	Administrators*	2	100%	2
	Instructors	45	22%	10
	Senior Students	506	6%	30
Yesan Agricultural Junior College	Administrators*	2	100%	2
	Instructors	70	14%	10
	Senior Students	736	4%	30
TOTAL		2629		168

*Deans, etc.

students in each school was much greater than the number of administrators and instructors.

Sampling

Responses from administrators, who consist of Deans and Assistant Deans, was secured through personal interview and/or questionnaires of all respondents (100%) at each institution. Student samplings of six percent from Ansung Agricultural Junior College and Milyang Agricultural and Sericultural Junior College, four percent from Yesan Agricultural Junior College, and five percent from Jinju Agricultural and Forestry Technical College were drawn randomly from an alphabetical listing of students.

Administrators were requested to request every seventh instructor listed on the faculty rolls to complete the questionnaire. Further, they were requested to secure responses from at least one student in each department with a second and/or third student, if necessary to complete the total 30 students requested in the respective school. Students were to be systematically selected from an alphabetical listing of students enrolled in each department.

All students selected were asked to respond to the questionnaire during group interview sessions held at the Junior College with the cooperation and assistance of the students' advisors.

An instructor sampling of 14 percent from Jinju Agricultural and Forestry Technical College and Yesan

Agricultural Junior College, 20 percent from Ansong Agricultural Junior College, and 22 percent from Milyang Agricultural and Sericultural Junior College will likewise be drawn randomly from a listing of agricultural faculty in their respective department.

In each school, the sampling percentages were as follows:

Administrators	100%
Instructors	14-22%
Senior Students	4-6%

Also the number of total respondents expected in each school were also as follows:

Administration	2 persons
Instructors	10 persons
Senior Students	30 persons

The summary of projected population included in this study is shown in Table III.

Development of Instrument to Obtain Data

The instrument used to obtain the information needed for this study was in the form of comprehensive questionnaires. An attempt was made to design questionnaires containing questions seeking to secure pertinent data relating to each of the four schools. The schedule would also be designed in such a manner that perceptions could be readily obtained regarding major topics of agricultural curricula. It also sought the teachers' and senior students' opinions on the

feasibilities of teaching and learning some detail topics of agricultural education curricula, and the extent of emphasis needed for those areas.

Table III
SUMMARY OF PROJECTED POPULATION
INCLUDED IN THIS STUDY

Group of Respondents	Total Respondents Expected
(1) Administrators	8
(2) Instructors	40
(3) Senior Students	120
Total	168

Questionnaires and/or interview forms were developed by the researcher in consultation with the faculty of the Department of Agricultural Education and other faculty in related fields.

The instrument was pretested to insure a satisfactory degree of communication between researcher and the respondents. The questionnaires were first constructed in English and then translated into Korean for submission to the respondents. Three graduate students from Korea, studying

at Oklahoma State University, reviewed the schedule and gave constructive criticism during the time of construction and initial revision.

Data Treatment

Data were secured and collated from the approximate 168 respondents in four Agricultural Junior Colleges in Korea. In collected data, mean scores were determined for each item and given weight according to an established scale of values fixing absolute limits as shown in Figure 3. Comparisons were made and conclusions will be drawn largely from the yields of data completed through establishment of group mean scores. The detailed findings data are presented in Chapter IV.

Questionnaire Part Number	Judging Degree	Numbers Offered For Response	Absolute Limits
Part II-A & III	Extremely Important	5	4.5-5.0
	Very Important	4	3.5-4.49
	Important	3	2.5-3.49
	Little Importance	2	1.5-2.49
	No Importance	1	1.0-1.49
Part II-B	Totally Adequate	5	4.5-5.0
		4	3.5-4.49
		3	2.5-3.49
		2	1.5-2.49
	Totally Inadequate	1	1.0-1.49

Figure 3. Absolute Limits for Use in Establishing Group Mean Scores for Questionnaires Part II-A to V

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study was to secure and interpret perceptions as to (a) the relative importance of selected items of the curriculum and (b) student adequacy for job performance in these same items. Perceptions were obtained from three groups (1) administration, (2) faculty, and (3) senior students presently either serving in or attending four Agricultural Junior Colleges of Korea. Also included as an objective was to make analyses and interpretation of these perceptions as to the relative importance of selected factors, items or procedures in curricula development and revision. A concomitant purpose was to undergird future development and revision of curricula to enhance more rapid development of the agricultural sector in Korea.

The objectives of the study were:

1. To review literature to agricultural curriculum development and function in Junior Colleges both in the United States and selected developing countries.
2. To describe curricula in agriculture presently in use in four Agricultural Junior Colleges.

3. To obtain perceptions as to the extent of present emphasis: (a) now given to each of the major study areas, (b) the extent of emphasis which should be given in the future, and (c) the degree of student adequacy in fields of study, as perceived by each of three groups.
4. To determine perceptions from the three groups as to the importance of selected factors, items, and procedures in relation to curriculum design, development, and implementation.
5. To discover any noticeable difference in response which may be observed as occurring among these three groups.
6. On the basis of (1) research and literature reviewed and (2) findings of the study, make suggestions and recommendations for possible changes in both content and emphasis given to curricula in the future.

Population for the Study

The population from which data were secured consisted of faculty and students within four Agricultural Junior Colleges in Korea. These institutions were either represented by group samplings, randomly selected, or by the entire population of the respective group. Therefore, the groups were constituted as follows:

1. Administrators at the four schools (100%).

2. Instructors at AAJC and MASJC, randomly chosen (20% and 22%), and at JAFTC and YAJC, randomly chosen (14%).
3. Senior students at AAJC and MASJC, randomly chosen (6%), and at JAFTC and YAJC, randomly chosen (5% and 4%).

Data presented in Table IV showed the groups who were involved in the study and also show sampling percentage, as well as percentage of return.

Collection of Data

Perfected forms of the questionnaire were mailed to anticipated respondents in four Agricultural Junior Colleges. Questionnaires were translated into the Korean language and pre-tests were conducted prior to their submission to respondents. Distribution, percentage of responses received, and collected data are further shown in Table IV.

Treatment of Data

Treatment of data involved compiling mean scores and ranking them in order to compare and judge the relative importance of each item. This procedure was also used to determine and compare assessments of student adequacy in ability to perform in agriculture positions involving such skills and knowledge. Means and ranks were calculated for each individual group as well as for groups within the respective institutions included in the study. Absolute

TABLE IV
ACTUAL POPULATION AND SAMPLE SIZE RETURN

Institution	Group	Total Population	Size of Sample	Sample Percentage	Actual Number Returned	Percentage Returned
Ansung Agricultural Junior College	Administrators	2	2	100%	2	100%
	Instructors	52	11	20%	10	91%
	Senior Students	240	15	6%	30	200%
Jinju Agri-Forestry Technical College	Administrators	2	2	100%	1	50%
	Instructors	72	10	14%	8	80%
	Senior Students	633	32	5%	29	91%
Milyang Agri-Sericultural Junior College	Administrators	2	2	100%	1	50%
	Instructors	43	10	22%	7	70%
	Senior Students	460	28	6%	30	108%
Yesan Agricultural Junior College	Administrators	2	2	100%	1	50%
	Instructors	70	10	14%	10	100%
	Senior Students	708	29	4%	30	104%
TOTAL		2286	153		159	

limits for assessing values had been predetermined and are shown in Figure 3. Comparisons were made and conclusions were drawn largely from the yield of data completed and expressed by group mean scores. The detailed findings are shown in Tables V through XXV.

Present and Future Importance and Student
Adequacy of Selected Areas in the
Agricultural Curriculum

General Courses

With regard to the area of general courses, administrators from the four AJCs gave their judgements as presented in Table V. It appeared that all items which individual and combined groups of administrators in three of the four schools indicated as the most important both at the present time and also in the future was "Korean Language". In terms of student adequacy for successful job performance, administrators rated students as highly adequate in "Korean Language". In terms of such importance, "Korean Language" was followed by "History and Culture" and "General Plant Culture". Study areas rated as of little or no importance and of correspondingly low student adequacy were designated by administrators as "Calculus", "Geology", and "Mathematics". In MASJC, the item "Physics" and "General Chemistry" received a judgement by administrators as being of more importance and a higher level of adequacy acquired by students than was true of JAFTC and YAJC.

TABLE V

JUDGEMENT OF ADMINISTRATORS AS TO PRESENT AND FUTURE IMPORTANCE AND
STUDENT ADEQUACY OF GENERAL COURSES MAKING UP CURRICULA

Items	AAJC* Administrators; 0			JAFTC Administrators; N=1			MASJC** Administrators; N=1			YAJC Administrators; N=1			All School Administrators Combined Group; N=1+1+1=3					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Organic Chemistry	--	--	--	3.00	4.00	4.00	--	--	--	4.00	4.00	3.00	3.50	4	4.00	4	3.50	8
2. Geology	--	--	--	2.00	3.00	3.00	--	--	--	2.00	2.00	2.00	2.50	10	2.50	10	2.50	10
3. Physics	--	--	--	2.00	3.00	3.00	4.00	4.00	4.00	2.00	2.00	2.00	2.67	9	3.00	9	3.00	9
4. General Chemistry	--	--	--	2.00	3.00	3.00	4.00	4.00	4.00	3.00	3.00	3.00	3.00	8	3.33	8	3.33	7
5. Korean Language	--	--	--	5.00	5.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	1	4.67	1	5.00	1
6. History & Culture	--	--	--	4.00	5.00	5.00	--	--	--	5.00	4.00	5.00	4.50	2	4.50	2	5.00	1
7. Mathematics	--	--	--	2.00	2.00	2.00	--	--	--	3.00	3.00	2.00	2.50	10	2.50	10	2.00	11
8. Calculus	--	--	--	2.00	2.00	2.00	--	--	--	2.00	2.00	2.00	2.00	12	2.00	12	2.00	11
9. Biochemistry	--	--	--	3.00	4.00	4.00	--	--	--	4.00	3.00	4.00	3.50	4	3.50	6	4.00	4
10. General Plant	--	--	--	4.00	4.00	4.00	--	--	--	4.00	4.00	5.00	4.00	3	4.00	3	4.50	3
11. General Zoology	--	--	--	3.00	3.00	4.00	--	--	--	4.00	4.00	4.00	3.50	4	3.50	6	4.00	4
12. General Agriculture	--	--	--	2.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.33	7	3.67	5	4.00	4

^aPI = Present importance^bFI = Future importance^cSA = Student adequacy

*AAJC's administrators did not return this part of schedules.

**MASJC's administrators did not respond to items 1, 2, 6 through 11.

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	Totally adequate
Very important = 3.5-4.49 = †	
Important = 2.5-3.49 =	
Little importance = 1.5-2.49 = ‡	
No importance = 1.0-1.49 = Totally inadequate	

Judgements of administrators with regard to the section of "General Courses" making up curricula were difficult because the AAJC's administrators did not return a part of schedules, and MASJC's administrators did not respond to several items.

Regarding the judgements given by instructors from the four schools which is listed in Table VI, data show that the item "Korean Language" was the highest rating in terms of importance both at the present time and also in the future and in terms of student adequacy, judged by both the combined and individual groups. However, MASJC shows a slightly different rating in terms of student adequacy. The second item in terms of importance and student adequacy as determined by the combined group was also "History and Culture". The lowest rating was given to the items "Calculus" and "Geology" in terms of importance and student adequacy.

Data secured from senior students are presented in Table VII, and reveal that the item "Korean Language" and "History and Culture" received the highest rating both in terms of importance and student adequacy by the combined group of students; however, the individual groups gave a slight difference which show the item "Physics" as considered of the most importance by AAJC. Respondents from the same grouping assessed the items "General Zoology" and "Organic Chemistry" as being highly adequate in student's job performance, this being true for responses both from AAJC and MASJC. The lowest rating was given by the combined group to the items "Calculus" and "Geology" in terms of both importance and student adequacy.

TABLE VI

JUDGEMENTS OF INSTRUCTORS AS TO PRESENT AND FUTURE IMPORTANCE AND
STUDENT ADEQUACY OF GENERAL COURSES MAKING UP CURRICULA

Items	AAJC Instructors; N=10			JAFTC Instructors; N=8			MASJC Instructors; N=7			YAJC Instructors; N=10			All School Instructors Combined Group; N=10+8+7+10=35					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Organic Chemistry	3.00	2.75	2.25	3.00	3.00	3.25	4.40	4.00	3.80	3.00	3.67	3.33	3.35	4	3.36	8	3.16	8
2. Geology	2.50	2.50	3.00	2.29	2.67	3.00	1.80	3.00	2.00	2.30	2.33	3.00	2.22	12	2.63	11	2.75	11
3. Physics	3.50	2.50	2.50	3.83	4.00	3.87	2.40	3.00	2.80	2.00	2.33	3.00	2.93	9	2.96	10	3.04	10
4. General Chemistry	3.00	4.50	3.67	3.83	3.20	3.00	4.40	4.00	4.20	3.00	3.33	3.00	3.56	3	3.76	5	3.47	6
5. Korean Language	4.71	5.00	5.00	4.63	4.43	4.38	4.67	4.33	4.00	4.67	4.00	4.67	4.67	1	4.44	1	4.56	1
6. History & Culture	4.50	5.00	5.00	4.25	4.14	4.14	4.60	4.00	3.40	4.00	4.00	4.00	4.34	2	4.29	2	4.14	2
7. Mathematics	2.50	3.67	4.00	4.13	3.86	4.25	3.00	3.40	2.80	2.33	2.67	3.33	2.99	8	3.88	3	3.60	5
8. Calculus	2.25	1.33	1.25	3.29	3.00	3.33	2.60	3.00	2.40	1.00	1.00	1.33	2.29	11	2.08	12	2.08	12
9. Biochemistry	4.00	2.33	2.25	3.29	3.00	2.86	3.60	3.80	3.00	2.67	3.33	4.00	3.39	5	3.12	9	3.08	9
10. General Plant	4.00	4.50	4.25	2.71	3.33	3.00	2.60	4.00	2.60	3.33	3.67	3.67	3.16	6	3.63	6	3.88	3
11. General Zoology	3.50	4.00	4.25	2.71	3.17	3.29	2.40	4.80	2.60	3.00	3.33	3.67	2.90	10	3.58	7	3.45	7
12. General Agriculture	4.25	4.50	4.50	2.86	3.83	4.33	2.60	3.60	2.40	2.33	3.33	4.00	3.01	7	3.81	4	3.81	4

^aPI = Present importance^bFI = Future importance^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

TABLE VII

JUDGEMENTS OF SENIOR STUDENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF GENERAL COURSES MAKING UP CURRICULA

Items	AAJC Students; N=30			JAFTC Students; N=29			MASJC Students; N=30			YAJC Students; N=30			All School Senior Students Combined Group; N=30+29+30+30=119					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Organic Chemistry	3.88	3.62	3.18	3.48	3.74	3.25	2.90	4.00	4.41	3.20	3.25	2.75	3.37	6	3.65	4	3.40	7
2. Geology	3.57	3.57	3.20	3.35	3.40	3.28	2.35	3.06	2.58	2.50	2.58	2.42	2.94	11	3.15	11	2.87	12
3. Physics	4.10	4.33	4.11	3.39	3.59	3.05	2.26	2.29	2.63	2.89	2.62	2.67	3.16	10	3.21	10	3.12	9
4. General Chemistry	4.00	3.78	4.00	3.29	3.00	3.16	2.85	3.35	3.50	3.00	2.92	3.00	3.29	8	3.26	9	3.42	6
5. Korean Language	4.07	4.11	3.88	4.03	4.50	4.29	3.83	3.77	3.91	4.50	4.47	4.29	4.11	2	4.21	1	4.09	1
6. History & Culture	4.20	4.13	3.87	4.25	3.57	4.23	3.93	4.24	3.74	4.29	4.36	4.21	4.17	1	4.08	2	4.01	2
7. Mathematics	3.20	3.50	3.29	3.68	3.77	3.74	2.87	2.86	3.22	3.22	3.25	3.17	3.24	9	3.35	7	3.36	8
8. Calculus	3.29	3.33	3.60	2.90	2.86	2.75	2.25	2.58	2.90	2.40	2.50	2.29	2.71	12	2.82	12	2.89	11
9. Biochemistry	3.42	3.34	3.44	3.26	3.32	3.06	3.50	3.65	3.38	3.20	2.92	2.58	3.35	7	3.31	8	3.12	9
10. General Plant	3.43	3.50	3.80	3.57	3.40	3.63	3.21	3.40	3.15	3.45	3.46	3.46	3.42	4	3.44	6	3.51	4
11. General Zoology	3.86	3.86	4.20	3.27	3.40	3.16	2.90	3.09	2.86	3.50	3.67	3.67	3.38	5	3.51	5	3.47	5
12. General Agriculture	3.87	4.08	4.00	3.61	3.69	3.41	3.05	3.24	3.29	3.85	3.83	4.17	3.60	3	3.71	3	3.72	3

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

Agricultural Economics, Rural Sociology,
and Agricultural Extension

It can be readily seen from perusal of data presented in Table VIII that all nine items listed in this area were judged by administrators at all four AJCs as either "very important" or "important" and in terms of student adequacy, judged as highly adequate by the combined group. The highest ranked items in terms of future importance and student adequacy by the combined group were the two items "Marketing and Agricultural Accounting" and "Using Computer in Agriculture"; however, "Agricultural Extension Planning" received the highest ranking in terms of present importance. The lowest ranked item in terms of importance and student adequacy by the combined group and individual groups, except MASJC's administrators, was determined as "Statistics and Research Methods". Respondents at two of the four schools gave a higher rating of importance for the future than present for this item. Judgements were quite different in one college, MASJC, in as much as "Korean Agricultural Economics" and "Statistics and Research Methods" were the highest ranked item both in terms of importance and student adequacy.

With regard to responses of instructors, data presented in Table IX show that by their judgements the most important items both at present and in the future were "Farm Management" and "Korean Agricultural Economics", as given by the combined group, this followed by "Rural Social Development

TABLE VIII

JUDGEMENTS OF ADMINISTRATORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL ECONOMICS, RURAL SOCIOLOGY AND AGRICULTURAL EXTENSION

Items	AAJC Administrators; N=2			JAFTC Administrators; N=1			MASJC Administrators; N=1			YAJC Administrators; N=1			All School Administrators Combined Group; N=2+1+1+1=5					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Rural Social Development & Leadership	3.00	4.00	3.00	4.00	5.00	5.00	4.00	4.00	4.00	3.00	3.00	3.00	3.50	5	4.00	3	3.75	4
2. Korean Agricultural Economics	3.00	4.00	3.00	3.00	4.00	4.00	5.00	5.00	5.00	3.00	3.00	3.00	3.50	5	4.00	3	3.75	4
3. Marketing & Agricultural Accounting	4.00	5.00	4.00	3.00	4.00	5.00	5.00	5.00	5.00	3.00	3.00	3.00	3.75	2	4.25	1	4.25	1
4. Farm Management	3.00	4.00	3.00	4.00	5.00	5.00	4.00	4.00	4.00	3.00	3.00	3.00	3.50	5	4.00	3	3.75	4
5. Agricultural Cooperatives	3.50	4.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.63	4	3.88	7	3.63	8
6. Statistic & Research Methods	2.50	3.50	2.50	3.00	4.00	4.00	5.00	5.00	5.00	2.00	2.00	2.00	3.13	9	3.63	9	3.38	9
7. Using Computer in Agriculture	4.00	4.00	4.00	3.00	5.00	5.00	3.00	3.00	3.00	4.00	5.00	5.00	3.50	5	4.25	1	4.25	1
8. Agriculture Extension Planning	4.00	4.00	4.00	3.00	3.00	3.00	4.00	4.00	4.00	5.00	5.00	5.00	4.00	1	4.00	3	4.00	3
9. Extension Teaching & Demonstration	3.00	3.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	5.00	5.00	5.00	3.75	2	3.75	8	3.75	4

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

TABLE IX

JUDGEMENTS OF INSTRUCTORS AS TO PRESENT AND FUTURE IMPORTANCE AND
STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED
ITEMS OF AGRICULTURAL ECONOMICS, RURAL SOCIOLOGY
AND AGRICULTURAL EXTENSION

Items	AAJC Instructors; N=10			JAFTC Instructors; N=8			MASJC Instructors; N=0*			YAJC Instructors; N=10			All School Instructors Combined Group; N=10+8+10=28					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Rural Social Development & Leadership	4.83	5.00	4.75	4.20	4.00	4.60	--	--	--	3.67	4.00	3.67	4.23	2	4.33	2	4.34	1
2. Korean Agricultural Economics	4.83	5.00	5.00	4.00	3.83	3.80	--	--	--	3.67	4.33	3.00	4.17	3	4.39	1	3.93	2
3. Marketing & Agricultural Accounting	4.33	4.50	4.50	3.40	3.40	3.80	--	--	--	3.33	4.00	3.33	3.69	6	3.97	4	3.88	5
4. Farm Management	4.83	5.00	4.75	4.20	3.67	4.00	--	--	--	4.00	4.00	3.00	4.34	1	4.22	3	3.92	3
5. Agricultural Cooperatives	4.20	4.50	4.75	3.80	3.40	3.20	--	--	--	4.00	3.00	2.67	4.00	4	3.63	6	3.47	8
6. Statistic & Research Methods	3.25	4.25	3.75	3.20	3.83	3.20	--	--	--	3.00	2.67	2.00	3.15	8	3.58	8	2.98	9
7. Using Computer in Agriculture	3.25	4.25	4.50	3.00	4.17	4.20	--	--	--	1.00	3.00	3.00	2.42	9	3.81	5	3.90	4
8. Agriculture Extension Planning	4.20	4.50	4.25	4.00	4.00	4.20	--	--	--	3.00	2.33	2.00	3.73	5	3.61	7	3.48	7
9. Extension Teaching & Demonstration	4.00	3.50	4.25	3.60	3.60	3.80	--	--	--	3.33	3.33	3.33	3.64	7	3.48	9	3.79	6

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

*MASJC Instructors did not return this part of the schedule

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0 =	Totally adequate
Very important = 3.5-4.49 = †	
Important = 2.5-3.49 =	
Little importance = 1.5-2.49 = ‡	
No importance = 1.0-1.49 =	Totally inadequate

and Leadership". In student adequacy, as judged by the combined group of instructors, "Rural Social Development and Leadership" were judged as highly adequate. The lowest rating of importance at present was given to the item "Using Computer in Agriculture". However, when importance in the future was considered, the ranking was much higher. "Extension Teaching and Demonstration" in terms of future importance was ranked by combined group, as lowest among the items considered. The item "Statistic and Research Methods" in terms of student adequacy was rated as slightly inadequate both by the combined group and individual groups. MASJC's instructors did not return this part of the schedule.

Responses received from senior students of the four AJCs are shown in Table X. Data indicate that the highest rating in terms of importance and student adequacy by the combined group of students was approximately the same as that given by instructors. The items ranked lowest by students in terms of student adequacy was "Marketing and Agricultural Accounting" while the item ranking lowest in terms of present and future importance was "Extension Teaching and Demonstration" and "Statistics and Research Methods". However, even though this item ranked lowest, it was rated as "important". Most of these nine items were judged by senior students as either "very important" or "important" and "highly adequate" in terms of student adequacy for job performance by both individual groups and the combined group.

TABLE X

JUDGEMENTS OF SENIOR STUDENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA SELECTED ASPECTS OF AGRICULTURAL ECONOMICS, RURAL SOCIOLOGY AND AGRICULTURAL EXTENSION

Items	AAJC Students; N=30			JAFTC Students; N=29			MASJC Students; N=30			YAJC Students; N=30			All School Senior Students Combined Group; N=30+29+30+30=119					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Rural Social Development & Leadership	4.25	4.17	4.25	3.33	3.78	4.27	3.70	4.00	4.00	2.67	3.75	4.00	3.49	5	3.93	3	4.13	1
2. Korean Agricultural Economics	4.08	4.25	4.00	3.89	3.88	3.36	3.60	4.25	4.50	4.00	4.00	4.00	3.89	2	4.10	1	3.97	2
3. Marketing & Agricultural Accounting	4.00	4.33	2.75	3.65	3.59	3.50	3.60	3.56	3.86	4.00	4.14	3.88	3.81	3	3.91	4	3.50	9
4. Farm Management	4.18	4.22	4.17	4.30	4.28	4.29	3.90	4.40	3.40	4.13	3.88	3.78	4.13	1	4.10	1	3.91	3
5. Agricultural Cooperatives	3.50	4.00	4.00	3.84	3.82	3.88	4.00	4.75	4.20	3.00	2.88	3.38	3.56	4	3.86	5	3.87	4
6. Statistic & Research Methods	4.00	4.00	4.00	3.11	3.56	3.21	3.44	3.75	3.75	2.38	3.50	3.33	3.23	8	3.70	6	3.52	7
7. Using Computer in Agriculture	4.14	4.40	4.00	3.40	3.42	3.20	4.67	4.57	4.67	1.67	2.20	3.20	3.47	6	3.65	8	3.77	6
8. Agriculture Extension Planning	4.38	4.33	4.33	3.83	3.68	3.69	3.83	3.50	2.80	1.88	3.14	3.25	3.46	7	3.66	7	3.52	7
9. Extension Teaching & Demonstration	4.20	4.14	4.29	3.58	3.37	3.13	3.29	4.00	5.00	2.50	3.00	2.75	3.14	9	3.63	9	3.79	5

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0 =	Totally adequate
Very important = 3.5-4.49 = †	
Important = 2.5-3.49 =	
Little importance = 1.5-2.49 = †	
No importance = 1.0-1.49 =	Totally inadequate

Plant Production and Protection

Data presented in Table XI show ratings given by administrators from AAJC, JAFTC, MASJC, and YAJC for various selected items in the area "Plant Production and Protection". Data showed that the item perceived as most important at present by the combined group was "Plant Breeding and Genetics"; however, for future importance the three items "Plant Nutrition", "Plant Physiology" and "Plant Breeding and Genetics" were each considered to be the most important. In terms of student adequacy, the combined group of administrators judged students as highly adequate in the items "Plant Breeding and Genetics" and "Plant Physiology". Also, they felt students were quite adequate in the item "Nurseries and Floriculture". The lowest ranking in terms of importance and student adequacy given by the combined group was for the items "Forage and Forestry" and "Toxicology" in terms of present importance. However, when future importance was considered the respondents did move these items from "little importance" to "important". The combined group of administrators gave a rating as "very adequate," "very important," or "important" to all items except "Forage and Forestry", "Toxicology", and "Useful Insects"; however, they did advance "Toxicology" and "Forage and Forestry" from "little importance" at present to "important" in the future.

Individual groups, as administrators, gave slightly

TABLE XI

JUDGEMENTS OF ADMINISTRATORS AS TO PRESENT AND FUTURE IMPORTANCE AND
STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED
ITEMS OF PLANT PRODUCTION AND PROTECTION

Items	AAJC Administrators; N=2			JAFTC Administrators; N=1			MASJC Administrators; N=1			YAJC Administrators; N=1			All School Administrators Combined Group; N=2+1+1+1=5					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Nurseries & Floriculture	4.50	4.00	5.00	3.00	5.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.63	2	4.00	3	4.00	1
2. Plant Nutrition	4.50	4.50	4.00	3.00	5.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.63	2	4.13	1	3.75	4
3. Plant Physiology	4.50	4.50	5.00	3.00	5.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.63	2	4.13	1	4.00	1
4. Plant Pathology	4.50	4.50	4.50	4.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.63	2	3.63	5	3.63	7
5. Field Crops	4.50	4.50	5.00	3.00	3.00	3.00	3.00	3.00	3.00	2.00	2.00	2.00	3.13	9	3.13	14	3.25	12
6. Vegetables	5.00	5.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	6	3.50	6	3.50	9
7. Fruit Production	5.00	5.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	6	3.50	6	2.50	9
8. Plant Breeding & Genetics	5.00	5.00	5.00	4.00	5.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.75	1	4.00	3	4.00	1
9. Insect Physiology	4.00	4.00	3.50	4.00	4.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	12	3.00	15	2.89	13
10. Agricultural Microbiology	2.00	2.50	3.00	3.00	5.00	5.00	3.00	2.00	2.00	4.00	4.00	4.00	3.00	12	3.38	10	3.50	9
11. Insects and Pest Control	4.00	4.00	4.50	4.00	4.00	4.00	2.00	2.00	2.00	4.00	4.00	4.00	3.50	6	3.50	6	3.67	6
12. Forage and Forestry	2.00	2.00	1.00	3.00	4.00	4.00	2.00	3.00	3.00	2.00	2.00	2.00	2.25	17	2.75	17	2.50	17
13. Useful Insects	2.00	2.50	1.00	3.00	5.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	2.75	14	3.38	10	2.75	14
14. Toxicology	1.50	3.00	2.00	2.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.38	16	3.25	13	2.75	14
15. Nematology	2.50	2.00	2.00	2.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.63	15	3.00	15	2.75	14
16. Landscape Architecture	3.50	3.50	4.50	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.13	9	3.38	10	3.63	7
17. Agricultural Architecture	4.50	4.00	5.00	2.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.13	9	3.50	6	3.75	4

^aPI = Present importance^bFI = Future importance^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

different ratings in terms of both importance and student adequacy. This can be verified by examining data shown in Table XI.

Regarding instructor judgements concerning the same areas "Plant Production and Protection", data presented in Table XII show that items considered of the most importance at present was given to item "Vegetables" and "Fruit Production", while in terms of future importance, "Plant Breeding and Genetics", was ranked highest. When the combined group are considered as to their judgements of student adequacy, the item "Plant Pathology" ranked first followed by "Plant Nutrition" and "Nurseries and Floriculture". Judged by the combined group as of little importance and totally inadequate student performance were the items "Nematology" and "Agriculture Architecture". MASJC's instructors did not return this part of the schedule.

With regard to senior students' ratings of items in the same area, data given in Table XIII show that the ranking first and second in terms of both present and future importance, as given by a combined group are the items "Plant Nutrition" and "Plant Physiology" with little difference indicated by individual groups. The lowest ranking in terms of present and future importance was given to "Forage and Forestry" and "Nematology". Student judgements of student adequacy reveal the items "Fruit Production" and "Plant Nutrition" as ranking highest among the 17 items. Students also judged, as ranking lowest among the 17 items, "Nematology". Even though mean scores varied somewhat, all items in

TABLE XII

JUDGEMENTS OF INSTRUCTORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF PLANT PRODUCTION AND PROTECTION

Items	AAJC Instructors; N=10			JAFTC Instructors; N=8			MASJC* Instructors; N=0			YAJC Instructors; N=10			All Schools Instructors Combined Group; N=10+8+10=28					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Nurseries & Floriculture	4.40	3.00	4.00	4.40	4.80	4.80	--	--	--	3.33	4.33	3.67	4.04	6	4.04	6	4.16	3
2. Plant Nutrition	3.75	4.50	4.00	3.60	4.00	4.00	--	--	--	4.33	4.67	4.67	3.89	8	4.39	4	4.22	2
3. Plant Physiology	4.00	5.00	4.33	4.20	4.00	3.80	--	--	--	4.00	4.67	4.00	4.07	4	4.56	2	4.04	6
4. Plant Pathology	4.67	4.67	4.33	3.80	4.20	4.60	--	--	--	4.00	4.33	4.67	4.16	3	4.40	3	4.53	1
5. Field Crops	4.80	5.00	4.25	4.40	4.00	4.20	--	--	--	3.00	3.00	3.33	4.07	4	3.93	8	3.93	7
6. Vegetables	4.75	4.00	4.33	4.80	4.20	4.40	--	--	--	3.67	3.67	3.67	4.41	1	3.96	7	4.13	4
7. Fruit Production	4.75	4.00	4.33	4.80	4.40	4.60	--	--	--	3.67	3.33	3.33	4.41	1	3.91	9	4.09	5
8. Plant Breeding & Genetics	4.25	5.00	4.33	4.20	4.60	4.80	--	--	--	3.67	4.33	2.67	4.04	6	4.64	1	3.60	10
9. Insect Physiology	4.00	3.67	3.00	3.00	3.40	3.60	--	--	--	2.00	3.50	3.00	3.00	13	3.52	10	3.20	11
10. Agricultural Microbiology	3.67	4.00	3.50	3.20	3.00	3.00	--	--	--	3.00	2.67	3.00	3.29	11	3.22	13	3.17	12
11. Insects and Pest Control	3.33	4.33	3.75	3.40	4.20	4.00	--	--	--	4.00	4.67	3.33	3.58	9	4.07	5	3.69	9
12. Forage and Forestry	2.67	2.00	2.00	3.00	2.80	3.00	--	--	--	2.00	3.00	2.33	2.56	10	3.27	12	2.52	15
13. Useful Insects	1.67	2.67	4.50	3.20	3.40	4.00	--	--	--	3.33	3.33	2.67	2.73	14	3.47	11	3.74	8
14. Toxicology	2.00	2.00	2.75	3.40	3.40	3.60	--	--	--	1.67	1.67	2.00	2.36	15	2.36	16	2.78	14
15. Nematology	1.75	2.50	2.50	2.60	2.60	2.60	--	--	--	2.00	2.33	2.33	2.12	17	2.48	15	2.48	16
16. Landscape Architecture	2.75	2.50	3.67	3.60	3.60	3.80	--	--	--	2.67	2.00	2.00	3.01	12	2.70	14	3.16	13
17. Agricultural Architecture	2.00	2.67	2.67	2.40	2.00	2.40	--	--	--	2.00	1.67	1.00	2.13	16	2.11	17	2.02	17

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

*MASJC's instructors did not return this part of the schedule

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

TABLE XIII

JUDGEMENTS OF SENIOR STUDENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF PLANT PRODUCTION AND PROTECTION

Items	AAJC Students; N=30			JAFTC Students; N=29			MASJC* Students; N=30			YAJC Students; N=30			All School Senior Students Combined Group; N=30+29+30+30=119					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Nurseries & Floriculture	3.75	3.83	3.75	3.47	3.75	3.56	--	--	--	3.63	4.14	3.50	3.62	10	3.91	3	3.60	7
2. Plant Nutrition	3.75	4.00	4.00	3.65	3.71	3.19	5.00	5.00	5.00	4.50	3.75	3.57	4.23	1	4.12	2	3.94	2
3. Plant Physiology	3.75	4.17	3.75	4.00	3.82	3.75	5.00	5.00	--	3.71	3.63	3.29	4.12	2	4.16	1	3.43	9
4. Plant Pathology	3.80	4.29	3.40	3.60	3.88	4.06	--	--	5.00	3.67	3.38	3.14	3.69	7	3.85	5	3.90	3
5. Field Crops	4.00	4.22	3.88	3.47	3.72	3.47	3.80	3.33	4.00	3.38	3.38	3.14	3.91	4	3.91	3	3.62	6
6. Vegetables	4.00	3.83	3.67	3.33	3.56	3.65	--	--	--	3.71	3.75	3.43	3.71	6	3.71	9	3.58	8
7. Fruit Production	4.00	4.00	4.75	3.52	3.83	4.29	--	--	--	4.67	3.50	3.71	4.06	3	3.78	8	4.25	1
8. Plant Breeding & Genetics	4.00	4.00	4.25	3.65	4.06	4.06	--	--	--	3.83	3.38	3.00	3.83	5	3.81	6	3.77	4
9. Insect Physiology	3.50	3.67	3.75	3.10	3.24	2.67	--	--	--	2.60	2.57	2.33	3.07	11	3.16	14	2.92	14
10. Agricultural Microbiology	3.40	4.20	4.25	3.41	3.53	3.38	--	--	--	2.00	2.57	2.33	2.94	14	3.43	12	3.32	10
11. Insects and Pest Control	3.80	4.00	4.25	3.57	3.59	3.22	--	--	--	3.67	3.25	2.43	3.68	8	3.61	10	3.30	11
12. Forage and Forestry	3.80	3.60	4.00	2.76	2.94	2.69	--	--	--	1.80	2.14	2.00	2.79	16	3.23	13	2.90	15
13. Useful Insects	3.75	3.75	3.75	2.71	2.82	2.87	--	--	--	2.17	2.71	2.57	2.88	15	3.09	15	3.06	13
14. Toxicology	4.00	3.83	3.75	2.76	2.88	2.80	--	--	--	2.17	2.43	2.14	2.98	12	3.05	16	2.90	15
15. Nematology	3.60	3.67	3.33	2.59	2.71	2.73	--	--	--	2.17	2.71	2.43	2.78	17	3.00	17	2.83	17
16. Landscape Architecture	4.00	4.17	4.00	3.53	3.53	3.69	--	4.00	--	3.50	3.50	3.29	3.68	8	3.80	7	3.66	5
17. Agricultural Architecture	3.60	4.00	3.50	3.24	3.41	3.63	--	4.50	--	2.00	2.13	2.29	2.95	13	3.54	11	3.14	12

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

*MASJC's senior students did not respond to items 1, 4, 6 through 15

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

this area were judged by students as either "very important" or "important" and at least the second or third levels in terms of student adequacy. MASJC's senior students did not completely respond to all items.

Agricultural Mechanics and Soil Science

With regard to the area Agricultural Mechanics and Soil Science, data presented in Table XIV through XVI reveal that the three groups, administrators, teachers, and senior students often tend to disagree particularly in rating student adequacy. As shown by data collected in Table XIV, administrators as a combined group ranked the item "Food Processing Engineering" as the most important both at present and in the future. Further, in terms of student adequacy for job performance, the item was also judged as highly adequate. This item was closely followed in ranking by "Soil Fertilization and Fertilizers" and "Agricultural Machine and Workshop". Study areas rated by administrators as of little importance, both present and future and with student performance being considered inadequate were "Surveying" and "Soil-water Relationship".

Data presented in Table XV regarding this same area of "Agricultural Mechanics and Soil Science" as given by instructors show that "Soil Fertilization and Fertilizers" received an "extremely important" rating, as of the present importance, while "Soil Conservation" received the highest rating in terms of future importance, the combined group of

TABLE XIV

JUDGEMENTS OF ADMINISTRATORS AS TO PRESENT AND FUTURE IMPORTANCE AND ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL MECHANICS AND SOIL SCIENCE

Items	AAJC Administrators; N=2			JAFTC Administrators; N=1			MASJC Administrators; N=1			YAJC Administrators; N=1			All School Administrators Combined Group; N=2+1+1+1=5					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Irrigation and Drainage	2.00	2.00	2.00	4.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	6	3.00	8	3.00	8
2. Irrigation Engineering	2.50	2.50	2.50	4.00	4.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.13	2	3.13	5	3.38	2
3. Surveying	2.50	2.50	2.50	3.00	4.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.38	11	2.63	11	2.63	11
4. Food Processing Engineering	3.50	3.50	3.50	3.00	4.00	5.00	4.00	4.00	4.00	3.00	3.00	3.00	3.38	1	3.63	1	3.88	1
5. Agricultural Machines and Workshop	3.50	3.50	3.50	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.13	2	3.38	2	3.38	2
6. Machine Maintenance and Safety	3.00	3.00	3.00	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	6	3.25	4	3.25	5
7. Soil Morphology and Erosion	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.88	9	2.88	10	2.88	10
8. Soil Chemistry	2.50	2.50	2.50	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	2.88	9	3.13	5	3.13	6
9. Soil Fertilization and Fertilizers	3.50	3.50	3.50	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.13	2	3.38	2	3.38	2
10. Soil Conservation	2.50	2.50	2.50	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.13	2	3.13	5	3.13	6
11. Soil-Water Relationship	2.00	2.00	2.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.25	12	2.25	12	2.25	12
12. Maintaining Stabilization Planting	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	6	3.00	8	3.00	8

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

TABLE XV

JUDGEMENTS OF INSTRUCTORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT
ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS
OF AGRICULTURAL MECHANICS AND SOIL SCIENCE

Items	AAJC Instructors; N=10			JAFTC Instructors; N=8			MASJC* Instructors; N=0			YAJC Instructors; N=10			All School Instructors Combined Group; N=10+8+10=28					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Irrigation and Drainage	3.20	3.67	3.00	4.00	4.00	4.20	--	--	--	3.50	3.00	3.50	3.57	8	3.56	9	3.57	6
2. Irrigation Engineering	3.00	3.00	3.00	3.60	3.60	4.20	--	--	--	3.67	3.00	3.50	3.42	10	3.20	10	3.57	6
3. Surveying	2.75	2.50	1.67	3.67	3.80	4.00	--	--	--	3.00	5.00	5.00	3.14	11	3.77	6	3.56	8
4. Food Processing Engineering	2.50	2.25	2.33	3.40	3.33	3.33	--	--	--	5.00	3.00	4.00	3.63	6	2.86	12	3.22	10
5. Agricultural Machines and Workshop	3.33	3.00	3.00	4.33	4.40	4.67	--	--	--	5.00	4.50	4.50	4.22	2	3.97	5	4.06	3
6. Machine Maintenance and Safety	3.67	3.67	4.00	4.00	4.00	4.33	--	--	--	5.00	4.50	4.50	4.22	2	4.06	3	4.28	1
7. Soil Morphology and Erosion	3.67	4.00	4.00	3.60	4.00	3.60	--	--	--	4.00	4.00	4.00	3.76	5	4.00	4	3.87	3
8. Soil Chemistry	3.33	3.33	3.33	3.40	3.60	3.60	--	--	--	4.00	4.00	4.00	3.58	7	3.64	8	3.64	5
9. Soil Fertilization and Fertilizers	5.00	4.33	4.67	4.40	4.20	4.20	--	--	--	5.00	4.00	4.00	4.80	1	4.18	2	2.96	11
10. Soil Conservation	4.00	4.33	4.00	3.60	3.83	3.60	--	--	--	4.00	5.00	5.00	3.87	4	4.39	1	4.20	2
11. Soil-Water Relationship	2.67	4.00	3.67	3.00	3.00	3.00	--	--	--	5.00	4.00	5.00	3.56	9	3.67	7	3.41	9
12. Maintaining Stabilization Planting	2.67	3.33	3.00	2.60	2.67	2.60	--	--	--	4.00	3.00	4.00	3.09	12	3.00	11	2.53	12

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

*MASJC's Instructors did not return this part of the schedule.

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	= †
Little importance = 1.5-2.49	= †
No importance = 1.0-1.49	= Totally inadequate

instructors. Further the combined groups of instructors gave second ranking of importance to two items "Agricultural Machines and Workshop" and "Machine Maintenance and Safety." However, for future importance "Soil Fertilization and Fertilizers" was deemed of the most importance. Instructors felt that the item "Surveying" was deserving of last place ranking in terms of present importance and "Food Processing Engineering" in the terms of the future. The combined judgement of instructors gave highest adequacy for student job performance to the item "Soil Fertilization and Fertilizers" and second highest ranking to "Machine Maintenance and Workshop". However, the item "Food Processing Engineering" was felt to be the last ranking item in which students were deemed "slightly inadequate". Unfortunately, MASJC's instructors did not return this part of schedule.

With regard to judgements given by senior students, data presented in Table XVI show that the combined group gave the highest rating of present importance to "Irrigation and Drainage" and future importance to "Soil Fertilization and Fertilizers". Further, they gave as the second most important ranking the item "Surveying" for the present and for the item "Irrigation and Drainage" for the future. They also judge that the lowest rating item in terms of present importance was "Food Processing Engineering" for the present and "Maintaining Stabilization Planting" for the future. This ranking by the combined student group was slightly different from that of individual groups among the twelve

TABLE XVI

JUDGEMENTS OF SENIOR STUDENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL MECHANICS AND SOIL SCIENCE

Items	AAJC Students; N=30			JAFTC Students; N=29			MASJC* Students; N=30			YAJC Students; N=30			All School Senior Students Combined Group; N=30+29+30+30=119					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Irrigation and Drainage	4.25	4.25	4.71	3.94	4.12	4.13	5.00	--	--	4.43	4.38	4.13	4.41	1	4.25	2	4.32	1
2. Irrigation Engineering	4.00	4.22	4.17	3.72	3.71	3.81	--	4.00	--	3.86	3.63	3.75	3.86	4	3.89	5	3.91	6
3. Surveying	3.50	3.33	3.33	3.44	3.65	4.11	5.00	--	--	3.71	3.63	3.75	3.91	2	3.54	11	3.73	9
4. Food Processing Engineering	3.73	3.91	3.67	4.21	3.42	3.47	2.00	1.00	5.00	2.88	2.88	3.13	3.21	12	2.80	7	3.82	7
5. Agricultural Machines and Workshop	3.78	4.50	4.71	3.33	3.50	3.68	--	--	--	3.71	3.88	3.38	3.61	6	3.96	3	3.92	5
6. Machine Maintenance and Safety	4.22	4.75	4.67	3.24	3.52	3.74	3.00	--	--	3.86	3.50	3.63	3.58	7	3.92	4	4.01	2
7. Soil Morphology and Erosion	3.57	3.70	3.83	3.71	4.19	3.63	--	--	--	2.86	3.25	3.13	3.38	9	3.71	8	3.53	10
8. Soil Chemistry	4.00	3.83	3.75	3.78	3.82	3.72	2.00	--	--	3.14	3.00	3.00	3.23	11	3.55	10	3.49	11
9. Soil Fertilization and Fertilizers	3.67	4.00	3.67	4.16	4.24	3.82	3.75	5.00	4.50	4.00	4.00	3.89	3.90	3	4.31	1	3.97	4
10. Soil Conservation	3.75	3.67	4.25	3.81	3.71	3.56	--	--	--	3.43	3.50	3.56	3.66	5	3.63	9	3.79	8
11. Soil-Water Relationship	4.00	3.80	4.40	3.67	3.35	3.38	3.00	5.00	3.00	3.14	3.13	3.11	3.45	8	3.82	6	3.47	12
12. Maintaining Stabilization Planting	4.00	3.67	4.25	2.94	3.19	2.87	--	3.00	--	2.86	2.75	2.89	3.27	10	3.15	12	4.00	3

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

*MASJC's senior students did not respond to parts of items except items 4, 9, and 11.

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	= ‡
Little importance = 1.5-2.49	= §
No importance = 1.0-1.49	= Totally inadequate

items considered. The combined group of senior students also indicated highest adequacy for student job performance to be "Irrigation and Drainage", with the lowest ranking given to "Maintaining Stabilization Planting ". Student assessment of all items in this area revealed that they considered all as either "very important" or "important". Further, students felt that their adequacy was well within the top two of the five categories. MASJC's senior students did not respond to parts of several items.

Animal Production and Food Technology

With regard to the area "Animal Production and Food Technology", judgements given by administrators at the four schools are shown in Table XVII. Data indicate that the combined administrator group gave a relatively high rating both in terms of present and future importance to several items. A rating of "very important" was given to both "Food Processing and Preparation" and "Human Nutrition", which included responses from both AAJC and MASJC given as "extremely important". In terms of student adequacy, the three items "Dairy Product Processing", "Food Processing and Preparation", and "Human Nutrition" each received ratings at the second highest level by the combined administrator group. The item "Courses Related to Ocean Science" received the lowest rating, and consequent ranking, with regard to importance among fourteen items. This level of rating also prevailed in administrator judgements regarding student

TABLE XVII

JUDGEMENTS OF ADMINISTRATORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF ANIMAL PRODUCTION AND FOOD TECHNOLOGY

Items	AAJC Administrators; N=2			JAFTC Administrators; N=1			MASJC* Administrators; N=1			YAJC Administrators; N=1			All School Administrators Combined Group; N=2+1+1+1=5					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Animal Physiology	2.50	2.50	2.50	3.00	4.00	3.00	--	--	--	3.00	3.00	3.00	2.83	8	3.17	7	2.83	12
2. Animal Nutrition	2.50	2.50	2.50	3.00	4.00	3.00	--	--	--	3.00	3.00	3.00	2.83	8	3.17	7	2.83	12
3. Animal Breeding	2.50	2.50	2.50	3.00	5.00	5.00	--	--	--	3.00	3.00	3.00	2.83	8	3.50	5	3.50	5
4. Poultry (physiology, breeding, disease control, nutrition, etc.)	3.50	3.50	3.50	3.00	3.00	3.00	--	--	--	3.00	3.00	3.00	3.17	6	3.17	7	3.17	8
5. Livestock Management	2.50	3.50	3.50	3.00	4.00	4.00	--	--	--	3.00	3.00	3.00	2.83	8	2.83	11	3.50	5
6. Animal Health (disease parasite control)	2.50	2.50	2.50	3.00	4.00	4.00	--	--	--	3.00	3.00	3.00	2.83	8	2.83	11	3.17	8
7. Dairy Products Analysis	3.50	3.50	3.50	3.00	3.00	4.00	--	--	--	4.00	3.00	3.00	3.50	4	3.50	5	3.50	5
8. Dairy Product Processing	4.00	4.00	4.00	3.00	4.00	4.00	--	--	--	4.00	4.00	4.00	3.33	5	3.67	4	4.00	1
9. Food Processing and Preservation	5.00	5.00	5.00	3.00	3.00	3.00	5.00	5.00	4.00	4.00	4.00	4.00	4.25	1	4.25	1	4.00	1
10. Food Inspection	4.00	4.00	4.00	2.00	4.00	3.00	5.00	5.00	4.00	4.00	3.00	3.00	3.75	3	3.75	3	3.75	4
11. Human Nutrition	5.00	5.00	5.00	2.00	3.00	3.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	2	4.00	2	4.00	1
12. Seafood and Meat Technology	2.50	2.50	2.50	2.00	3.00	3.00	4.00	3.00	3.00	4.00	4.00	4.00	3.13	7	3.13	10	3.13	10
13. Courses Related to Ocean Science	2.00	2.00	2.00	1.00	2.00	2.00	--	--	--	2.00	2.00	2.00	1.67	14	1.67	14	2.00	14
14. Sericulture and Filature	3.00	3.00	3.00	2.00	3.00	3.00	--	--	--	3.00	3.00	3.00	2.67	13	2.67	13	3.00	11

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

*MASJC's administrators did not respond to items 1 through 8, 13, and 14.

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

adequacy. Again, MASJC's administrators did not respond to several items.

Rating given by instructors from the four AJCs concerning the area of "Animal Production and Food Technology" are listed in Table XVIII. The item "Animal Nutrition" received the highest rating in terms of both present and future importance, this as judged by the combined instructor group. However, examination of responses as given by individual schools reveal that respondents at YAJC rated the item as "extremely important", both for present and future, while respondents at AAJC gave the highest rating to future importance. MASJC's instructors indicated a lower level of importance both for present and future. In terms of student adequacy, the combined group gave the highest rating to "Livestock Management". Likewise, the combined instructor group gave the lowest rating and ranking in terms of present and future importance and student adequacy to the items "Courses Related to Ocean Science" and "Sericulture and Filature". Almost all items related to specialized areas of agricultural production such as ocean farming or silk worm culture were given lower level ratings of only either "important" or of "little importance". Likewise, the middle level of student adequacy was judged to be more accurate by the combined group of instructors.

Of interest are the responses of instructors at a single school, YAJC. These instructors gave the lowest rating possible to both present and future importance of

TABLE XVIII

JUDGEMENTS OF INSTRUCTORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF ANIMAL PRODUCTION AND FOOD TECHNOLOGY

Items	AAJC Instructors; N=10			JAFTC Instructors; N=8			MASJC Instructors; N=0			YAJC Instructors; N=10			School Combined Group; N=10+8+7+10=35					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Animal Physiology	4.33	5.00	4.80	4.17	4.33	4.33	2.67	2.67	3.00	4.33	4.33	4.50	3.88	2	4.08	2	4.15	3
2. Animal Nutrition	4.33	4.75	5.00	3.83	4.33	4.17	2.67	3.00	3.00	5.00	4.67	4.00	3.96	1	4.19	1	4.04	4
3. Animal Breeding	4.33	4.25	4.00	4.17	4.50	4.50	2.33	2.67	2.67	4.00	4.50	4.50	3.71	4	3.98	3	3.92	9
4. Poultry (physiology, breeding, disease control, nutrition, etc.)	3.86	4.40	4.33	4.17	3.83	3.83	2.33	2.00	2.67	5.00	5.00	5.00	3.84	3	3.81	4	3.96	8
5. Livestock Management	4.00	4.50	5.00	3.83	3.83	3.67	2.67	2.33	3.00	4.33	4.33	5.00	3.71	4	3.75	6	4.17	2
6. Animal Health (disease parasite control)	4.00	4.50	4.40	3.83	4.17	3.83	2.67	2.67	3.00	3.67	3.67	4.67	3.54	8	3.75	6	3.98	6
7. Dairy Products Analysis	3.67	4.50	4.40	3.50	3.67	4.00	3.67	4.00	4.33	3.00	3.00	4.00	2.71	4	3.79	5	4.18	1
8. Dairy Product Processing	3.17	3.50	4.20	3.83	3.86	4.00	4.00	3.67	3.67	3.50	3.50	4.00	3.63	7	3.63	9	3.97	7
9. Food Processing and Preservation	3.50	4.00	4.00	4.00	4.14	4.33	4.67	4.67	4.67	2.00	2.00	3.00	3.54	8	3.70	8	4.00	5
10. Food Inspection	3.20	3.60	3.50	3.00	3.83	3.67	4.33	4.67	4.67	2.00	2.00	3.00	3.13	10	3.50	10	3.71	10
11. Human Nutrition	3.20	3.80	3.60	2.50	3.33	3.50	3.00	4.00	4.67	1.00	1.00	1.00	2.43	11	3.08	11	3.19	11
12. Seafood and Meat Technology	2.00	3.67	4.00	2.83	3.60	3.33	3.00	4.00	3.00	1.00	1.00	1.00	2.21	12	2.92	12	2.83	12
13. Courses Related to Ocean Science	2.00	3.00	3.67	2.00	2.67	2.83	3.00	3.67	2.67	1.00	1.00	1.00	2.00	14	2.59	13	2.54	14
14. Sericulture and Filature	1.67	1.67	2.67	2.50	2.40	2.40	3.00	3.25	3.25	1.00	1.00	2.00	2.04	13	2.08	14	2.58	13

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	Totally adequate
Very important = 3.5-4.49	↑
Important = 2.5-3.49	
Little importance = 1.5-2.49	↓
No importance = 1.0-1.49	Totally inadequate

items "Human Nutrition", "Seafood and Meat Technology", "Courses Related to Ocean Science", and "Sericulture and Filature". This judgement of the negligible importance of these four items, the lowest rating which could be given in the study, might be understood with regard to three items, but such a rating for the item, "Human Nutrition", is difficult to reconcile with responses given to an item in another area "Food Preparation and Nutrition" in which responses from the same school were to the effect that the item was "extremely important".

Concerning judgements given by senior students regarding this area, these data are presented in Table XIX. Findings show that the items "Animal Physiology" and "Livestock Management" received the high ratings of "very important" both with regard to importance at present and in the future. Judgements of the combined group of students varied little from that of individual schools. The item "Animal Physiology" also received as highly adequate for student job performance by the judgements of combined group and individual groups except slight differences in returns from JAFTC and MASJC. The lowest rating both in terms of importance and student adequacy given by the combined group and individual groups with the exception of AAJC and JAFTC was the item "Sericulture and Filature".

Agricultural Home Economics

With regard to items which might be included in the area, "Agricultural Home Economics", judgements given by

TABLE XIX

JUDGEMENTS OF SENIOR STUDENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF ANIMAL PRODUCTION AND FOOD TECHNOLOGY

Items	AAJC Students; N=30			JAFTC Students; N=29			MASJC* Students; N=30			YAJC Students; N=30			All School Senior Students Combined Group; N=30+29+30+30=119					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Animal Physiology	4.20	4.33	4.13	3.21	4.07	3.85	3.18	2.80	2.80	4.33	4.17	4.50	3.73	1	3.84	2	3.82	1
2. Animal Nutrition	3.22	3.27	3.38	3.47	3.79	3.92	3.00	2.90	2.60	4.20	3.83	4.00	3.47	7	3.45	7	3.48	7
3. Animal Breeding	3.22	3.55	3.00	3.47	3.79	3.92	2.64	3.27	2.60	4.17	4.17	3.67	3.38	8	3.70	3	3.30	9
4. Poultry (physiology, breeding, disease control, nutrition, etc.)	3.00	3.33	3.25	3.17	2.93	3.15	2.20	2.40	2.20	3.67	3.67	4.00	3.01	11	3.08	11	3.15	11
5. Livestock Management	4.00	4.00	4.13	3.56	3.87	3.50	3.11	3.64	3.09	4.00	4.17	4.00	3.67	2	3.92	1	3.68	3
6. Animal Health (disease parasite control)	4.00	3.36	3.75	3.58	3.36	4.08	3.00	3.09	3.00	3.40	3.50	3.67	3.50	6	3.33	8	3.63	4
7. Dairy Products Analysis	3.78	3.89	4.00	3.73	3.71	3.58	3.40	3.20	3.70	3.75	3.17	3.83	3.67	2	3.49	5	3.78	2
8. Dairy Product Processing	3.62	3.62	3.38	3.42	3.40	3.14	3.91	4.10	4.45	3.67	3.33	3.67	3.66	4	3.61	4	3.57	5
9. Food Processing and Preservation	3.36	3.55	3.40	3.75	3.87	3.39	4.00	3.70	4.00	3.00	2.83	3.17	3.53	5	3.49	5	3.49	6
10. Food Inspection	3.67	3.70	3.50	3.69	3.80	3.33	3.40	4.00	4.30	2.67	2.50	2.75	3.36	9	3.25	10	3.22	10
11. Human Nutrition	3.00	3.86	3.43	3.60	3.18	3.50	3.55	4.20	4.20	2.00	2.00	2.17	3.04	10	3.31	9	3.33	8
12. Seafood and Meat Technology	3.17	3.00	3.17	2.94	3.06	3.00	2.50	3.00	3.10	1.67	1.80	1.80	2.58	12	2.72	12	2.37	12
13. Courses Related to Ocean Science	3.00	3.17	3.17	2.43	2.50	2.42	2.20	2.10	2.10	1.00	1.60	1.80	2.11	13	2.34	13	2.37	12
14. Sericulture and Filature	2.80	3.57	3.20	2.25	2.69	2.85	1.20	1.40	1.30	1.00	1.60	1.80	1.81	14	2.07	14	2.29	14

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

<u>Importance</u>		<u>Adequacy</u>
Extremely important = 4.5-5.0	=	Totally adequate
Very important = 3.5-4.49	=	†
Important = 2.5-3.49	=	
Little importance = 1.5-2.49	=	‡
No importance = 1.0-1.49	=	Totally inadequate

administrators are shown in Table XX. Data show that the items "Food Preparation and Nutrition", "Home Nursing", "Cooking Science", "Home Economics for Men", and "Child Development and Guidance" received the unusually high rating of "extremely important" and likewise "totally adequate" in terms of student adequacy. Comparison of responses from the combined group with responses from individual groups revealed only slightly different judgements made, these largely confined to JAFTC and MASJC. An only slightly lower rating was given by administrators to the item "Agricultural Bookkeeping" which received a rating of "important" or "very important" and was likewise given rankings at the second or third levels when student adequacy was considered.

Instructors from each of the four schools gave judgements concerning the area "Agricultural Home Economics" as are listed in Table XXI. It would seem appropriate that the item "Home Management" be given the relatively high ranking of "very important" at present by the combined group; however, the items "Home Life and Family Living" and "Home Management" in terms of future importance and student adequacy received the highest rating, both to the extent of being perceived as being "extremely important" and "totally adequate". The above two items were slightly different ranking by individual groups except by YAJC in terms of both student adequacy and importance both at present and in the future.

It is obvious that instructors gave the lowest rating to the item "Agricultural Bookkeeping" both in terms of mean

TABLE XX

JUDGEMENTS OF ADMINISTRATORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL HOME ECONOMICS

Items	AAJC Administrators; N=2			JAFTC Administrators; N=1			MASJC Administrators; N=1			YAJC Administrators; N=1			All School Administrators Combined Group; N=2+1+1+1=5					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Home Management	3.00	3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.25	10	3.50	8	3.50	9
2. Home Life and Family Living	3.00	3.00	3.00	4.00	5.00	5.00	4.00	4.00	4.00	3.00	3.00	3.00	3.50	7	3.75	6	3.75	6
3. Clothing Selection and Construction	3.50	3.50	3.50	3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	3.63	6	3.63	7	3.63	8
4. Dressmaking	3.50	3.50	3.50	3.00	3.00	3.00	4.00	4.00	4.00	3.00	3.00	3.00	3.38	9	3.38	10	3.38	10
5. House Planning and Decoration	4.00	4.00	4.00	3.00	3.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.50	7	3.50	8	3.75	6
6. Food Preparation and Nutrition	5.00	5.00	5.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	4.75	1	4.75	3	4.75	3
7. Home Nursing	5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	4.50	3	4.50	4	4.50	4
8. Cooking Science	5.00	5.00	5.00	4.00	3.00	3.00	4.00	5.00	5.00	5.00	5.00	5.00	4.50	5	4.50	4	4.50	4
9. Home Economics for Men	5.00	5.00	5.00	3.00	3.00	3.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	3	5.00	1	5.00	1
10. Child Development and Guidance	5.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.75	1	5.00	1	5.00	1
11. Agricultural Bookkeeping	3.00	3.00	3.00	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	11	3.25	11	3.25	11

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

TABLE XXI

JUDGEMENTS OF INSTRUCTORS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL HOME ECONOMICS

Items	AAJC Instructors; N=10			JAFTC Instructors; N=8			MASJC Instructors; N=0			YAJC Instructors; N=10			All School Instructors Combined Group; N=10+8+7+10=35					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Home Management	4.00	5.00	5.00	4.20	4.00	4.50	4.50	4.50	4.00	5.00	5.00	5.00	4.43	1	4.63	3	4.63	2
2. Home Life and Family Living	3.80	5.00	4.67	4.00	4.20	4.40	4.50	4.50	4.00	5.00	5.00	5.00	4.33	5	4.68	1	4.68	1
3. Clothing Selection and Construction	3.60	4.50	4.67	3.80	3.80	4.00	4.00	4.00	4.00	5.00	5.00	5.00	4.10	7	4.33	9	4.42	6
4. Dressmaking	4.00	5.00	5.00	4.00	3.60	4.00	4.50	4.50	4.50	5.00	5.00	5.00	4.38	3	4.53	6	4.63	2
5. House Planning and Decoration	3.60	4.50	4.33	4.20	4.20	4.46	4.50	4.50	4.00	5.00	5.00	4.00	4.33	5	4.55	4	3.95	9
6. Food Preparation and Nutrition	4.00	4.00	4.67	4.17	4.17	4.17	4.50	4.50	4.50	5.00	5.00	5.00	4.42	2	4.42	8	4.59	4
7. Home Nursing	3.17	5.00	4.00	3.60	4.20	3.60	4.50	4.50	4.00	4.00	4.00	4.00	3.82	9	4.43	7	3.90	10
8. Cooking Science	4.00	4.50	5.00	3.40	4.17	4.00	4.50	4.50	4.00	4.00	5.00	5.00	3.98	8	4.54	5	4.50	5
9. Home Economics for Men	3.25	4.00	4.50	3.20	3.83	3.67	4.00	4.50	4.00	4.00	5.00	5.00	3.61	10	4.33	9	4.29	8
10. Child Development and Guidance	3.80	4.50	4.33	4.20	4.60	4.00	4.50	4.50	4.00	5.00	5.00	5.00	4.38	3	4.65	2	4.33	7
11. Agricultural Bookkeeping	3.00	4.25	3.25	3.20	3.60	3.40	2.50	2.50	3.00	3.00	4.00	4.00	2.93	11	3.59	11	3.41	11

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

NOTE: Limits in mean scores:

<u>Importance</u>	<u>Adequacy</u>
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

scores for importance and student adequacy. Again, few differences appear between the combined group and individual groups, except that instructors at the AAJC tended to score "future importance" somewhat higher.

In general, all instructors from the four AJCs tended to give a judgement of "extremely important" or "very important" and "totally adequate" to most all items comprising the area of "Agricultural Home Economics".

A comparison of the judgements of senior students from the four AJCs with regard to "Agricultural Home Economics" appears in Table XXII. Data show that the relatively highest rating was given by the combined group to "Child Development and Guidance" in terms of present importance and to "Cooking Science" in terms of future importance. In terms of student adequacy, the combined group perceived the item "Child Development and Guidance" as also worthy of receiving the relative highest rating among 11 items. Receiving the lowest ranking in terms of student adequacy and importance both at present and in the future was given to the item "Agricultural Book-keeping" was also true for responses of the combined groups of administrators and instructors. However, the individual groups gave slightly different judgements of student adequacy and importance both at present and in the future. All the combined group of senior students from the four Agricultural Junior Colleges gave a judgement of "important" or "very important" to all items in this area of Agricultural Home Economics.

TABLE XXII

JUDGEMENTS OF SENIOR STUDENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT
ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS
OF AGRICULTURAL HOME ECONOMICS

Items	AAJC Students; N=30			JAFTC Students; N=29			MASJC* Students; N=30			YAJC Students; N=30			All School Senior Students Combined Group; N=30+29+30+30=119					
	PI ^a	FI ^b	SA ^c	PI	FI	SA	PI	FI	SA	PI	FI	SA	PI	Rank	FI	Rank	SA	Rank
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean		Mean		Mean	
1. Home Management	3.75	3.83	4.00	3.71	3.43	3.77	4.20	4.00	3.60	4.50	4.20	4.20	4.40	1	4.12	3	3.14	10
2. Home Life and Family Living	4.22	3.80	4.00	3.54	3.32	3.64	4.20	3.70	3.91	4.25	3.80	3.60	4.05	6	3.66	9	3.84	4
3. Clothing Selection and Construction	4.00	3.80	3.83	2.92	3.38	3.36	3.36	3.60	3.50	3.50	3.75	3.75	3.45	10	3.63	10	3.61	8
4. Dressmaking	4.50	4.20	4.00	3.80	3.93	3.69	3.50	3.70	3.50	3.67	3.67	3.33	3.87	8	3.88	5	3.63	6
5. House Planning and Decoration	4.50	4.00	4.25	3.60	3.93	3.92	4.36	4.40	3.64	4.00	4.33	3.67	4.12	4	4.17	1	3.62	7
6. Food Preparation and Nutrition	4.83	4.22	4.56	3.76	4.13	4.07	4.20	4.00	3.90	4.33	4.33	3.67	4.28	3	4.17	1	4.05	2
7. Home Nursing	4.78	3.67	4.25	3.64	3.54	3.92	3.80	4.30	3.82	4.00	4.00	3.33	4.06	5	3.88	5	3.83	5
8. Cooking Science	3.40	4.20	4.25	3.33	3.79	3.69	4.36	4.18	3.60	4.67	4.67	4.33	3.94	7	3.96	4	3.97	3
9. Home Economics for Men	3.33	3.60	4.00	3.67	3.79	3.92	3.80	3.90	3.27	3.33	3.00	3.00	3.53	9	3.82	7	3.57	9
10. Child Development and Guidance	4.78	3.83	4.25	3.56	3.00	4.00	3.82	3.18	4.30	5.00	5.00	4.67	4.40	1	3.75	8	4.28	1
11. Agricultural Bookkeeping	4.33	4.33	4.40	2.93	2.93	2.92	3.00	3.56	2.50	3.00	2.67	2.67	3.32	11	3.37	11	3.12	11

^aPI = Present importance^bFI = Future importance^cSA = Student adequacy

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

Importance of Selected Factors, Items, and
Procedures in Curriculum Development

Judgements were received by administrators from the four Agricultural Junior Colleges concerning the relative importance of selected factors, items, and procedures in the development and implementation of agricultural curricula for training agricultural specialists. Data pertaining to this objective is presented in Table XXIII. Data show that the highest emphasis in terms of importance was considered to be the second statement on the questionnaire schedule, "Securing Involvement of College of Agriculture and the Agricultural Institute Students in Determining Their Needs, Interests and Aspirations." This statement was ranked first by administrators in terms of relative importance among the six statements pertaining to the area of curriculum development. However, even though relatively high ratings were given to all six statements, slightly lower ratings were given to statements #5 and #6 by the combined group and individual groups except YAJC. In general, all administrators gave a judgement of either "extremely important" or "very important" to all statements in this area by the combined group.

Instructors from the four AJCs gave their rating concerning the relative importance of selected factors, items, and procedures in curriculum development. Data presented in Table XXIV show that the highest rating given by the instructor group was to the statement "Securing Involvement of Graduates

TABLE XXIII

JUDGEMENTS OF ADMINISTRATORS AS TO RELATIVE IMPORTANCE OF SELECTED FACTORS,
ITEMS AND PROCEDURES IN CURRICULUM DEVELOPMENT

Statements	AAJC	JAFTC	MASJC	YAJC	All School Administrators	
	Administrators; N=2	Administrators; N=1	Administrators; N=1	Administrators; N=1	Combined Group; N=2+1+1+1=5	Ranking
	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	
1. Assessment of performance of graduates on the job.	4.50	4.00	4.00	4.00	4.13	2
2. Securing involvement of Colleges of Agriculture and the Agricultural Institute students in determining their needs, interests and aspirations.	4.50	4.00	5.00	5.00	4.63	1
3. Securing involvement of graduate now serving in agricultural positions.	4.00	4.00	4.00	3.00	3.75	4
4. Securing involvement of selected farmers through agricultural offices.	4.50	4.00	4.00	3.00	3.88	3
5. Giving due study and consideration to culture and traditions as these have affected teaching, learning and adoption of agricultural practices.	4.00	3.00	4.00	3.00	3.50	5
6. Securing copies of and studying references to job descriptions and/or official regulations which affect the work of agriculturalists.	4.00	3.00	5.00	2.00	3.50	5

NOTE: Limits in mean scores of degree of importance:

Extremely important = 4.5-5.0
 Very important = 3.5-4.49
 Important = 2.5-3.49
 Little importance = 1.5-2.49
 No importance = 1.0-1.49

TABLE XXIV

JUDGEMENT OF INSTRUCTORS AS TO RELATIVE IMPORTANCE OF SELECTED FACTORS,
ITEMS AND PROCEDURES IN CURRICULUM DEVELOPMENT

Statements	AAJC	JAFTC	MASJC	YAJC	All School Instructors	Ranking
	Instructors; N=10	Instructors; N=8	Instructors; N=0	Instructors; N=10	Combined Group; N=10+8+7+10=35	
	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	
1. Assessment of performance of graduates on the job.	3.44	4.13	4.50	4.22	4.07	3
2. Securing involvement of Colleges of Agriculture and the Agricultural Institute students in determining their needs, interests and aspirations.	3.90	4.25	4.25	3.90	4.08	2
3. Securing involvement of graduate now serving in agricultural positions.	4.00	3.88	4.25	4.40	4.13	1
4. Securing involvement of selected farmers through agricultural offices.	3.80	3.50	3.50	3.10	3.48	6
5. Giving due study and consideration to culture and traditions as these have affected teaching, learning and adoption of agricultural practices.	4.22	3.71	3.50	3.60	3.77	4
6. Securing copies of and studying references to job descriptions and/or official regulations which affect the work of agriculturalists.	3.78	4.13	3.50	2.90	3.58	5

NOTE: Limits in mean scores of degree of importance:

Extremely important = 4.5-5.0
 Very important = 3.5-4.49
 Important = 2.5-3.49
 Little importance = 1.5-2.49
 No importance = 1.0-1.49

Now Serving in Agricultural Positions" with the combined group mean of 4.14 which was little different from the rating of individual groups, but instructors judged the statement as "very important" by both individual groups and the combined groups. However, it is clear that the statement "Securing Involvement of Selected Farmers Through Agricultural Offices" received the lowest ranking among the five statements with a mean of 3.39, it must be pointed out that according to the Table of absolute limits such a score is accepted as "important". Generally, all instructor groups gave ratings of either "extremely important" or "very important" to all other factors, items, and procedures in this area.

Judgements secured from senior students with regard to the relative importance of selected factors, items, and procedures in curriculum development are presented in Table XXV and show that in the minds of senior students the most importance should be given to the statement "Assessment of Performance of Graduates on the Job", with the combined group mean of 3.88, "very important". However, examination of data from individual schools show that senior students from AAJC and JAFTC gave the highest rating to the second statement "Securing Involvement of College Agriculture and Agricultural Institute Students in Determining Their Needs, Interests, and Aspirations" which was also selected for first place by the combined administrator group.

The lowest ranking of sixth place, but with a mean of 3.35, "important" was given by the combined student groups

TABLE XXV

JUDGEMENTS OF SENIOR STUDENTS AS TO RELATIVE IMPORTANCE OF SELECTED FACTORS,
ITEMS AND PROCEDURES IN CURRICULUM DEVELOPMENT

Statements	AAJC	JAFTC	MASJC	YAJC	All School Senior Students	
	Students; N=30	Students; N=29	Students; N=30	Students; N=30	Combined Group; N=30+29+30+30=119	
	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Degree of Importance Mean	Ranking
1. Assessment of performance of graduates on the job.	4.13	3.79	3.80	3.80	3.88	1
2. Securing involvement of Colleges of Agriculture and the Agricultural Institute students in determining their needs, interests and aspirations.	4.39	4.17	3.06	3.80	3.86	2
3. Securing involvement of graduates now serving in agricultural positions.	4.30	3.79	3.47	3.10	3.67	3
4. Securing involvement of selected farmers through agricultural offices.	3.96	3.50	3.13	2.80	3.35	6
5. Giving due study and consideration to culture and tradition as these have affected teaching, learning and adoption of agricultural practices.	4.05	3.96	3.57	2.50	3.52	5
6. Securing copies of and studying references to job descriptions and/or official regulations which affect the work of agriculturalists.	4.19	3.83	3.27	3.05	3.59	4

NOTE: Limits in mean scores of degree of importance:

Extremely important = 4.5-5.0
 Very important = 3.5-4.49
 Important = 2.5-3.49
 Little importance = 1.5-2.49
 No importance = 1.0-1.49

and individual groups except YAJC to the statement "Securing Involvement of Selected Farmers Through Agricultural Offices" which again reflects the same judgement as that received from administrators. All respondents of each of the three groups judged all items in the curriculum developed area as either "extremely important" or "very important" in this area except statement #4 "Securing Involvement of Selected Farmers Through Agricultural Offices" which still was rated as "important".

Differences Among Respondent Groups And Among Schools

In general, administrators, as a group, tended to be lower in judgements regarding student adequacy than were respondents in the other two groups. This was especially true for items more directly related to skills and performance. Perhaps the administrators have not been in a position to observe student performance to the extent that they can truly recognize student attainment. On the other hand, students themselves often had a slightly higher rating for adequacy of attainment than even that expressed by their instructors. However, in general it can be said that student and instructor ratings and rankings tend to be similar.

Among schools responses tended to be more different in items encompassing the area of "General Studies" and "Animal Production and Food Technology". It can also be noted that

judgements of respondents from YAJC often tended to be lower for many items than those made by other schools. The researcher was rather disappointed that responses from MASJC were more often incomplete than those from the other schools.

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Introduction

This final chapter seeks to present summary, conclusion and recommendations based on the analysis and findings of the data collected. In presenting the aim, it is deemed appropriate to restate the specific objectives of this study, which were:

1. To determine curriculum concensus as to the most effective design and development patterns for curriculum in Junior Colleges both in the United States and selected developing countries.
2. To describe the agricultural curricula presently used in four Agricultural Junior Colleges in Korea.
3. To obtain perceptions as to the extent of present emphasis:
 - (a) given to each of the major study areas,
 - (b) the extent of emphasis which should be given in the future, and
 - (c) the degree of student adequacy in fields of study, as perceived by each of three groups.
4. To determine perceptions from the three groups as

to the importance of selected factors, items and procedures in curriculum development.

5. To discover any noticeable response differences occurring among the three groups.
6. On the basis of (1) research and literature reviewed and (2) findings of the study, make suggestions and recommendations for possible changes in both content and emphasis given to curricula in the future.

The most important objectives of this study is to suggest and recommend changes or revisions which may make the curriculum and training program more effective in meeting the needs for preparing agricultural specialists based upon findings in the review of literature and analysis of the data from the three groups stated above.

Summary of Findings From Review of Literature

Findings from review of literature were seen to include the following points and basic concepts concerning curriculum development and design, which were:

1. The Ministry of Education in Korea has attempted to better plan for curriculum and implement improved instruction at the Agricultural Junior Colleges.
2. No further study has specially been attempted concerning agricultural curricula in Korea.

3. Any type of curricula development and design should be considered the following fundamental questions described by Tyler (23), which were:
 - a. What should be the educational objectives of curriculum?
 - b. What learning experience should be developed to enable students to achieve the objective?
 - c. How should the learning experience be organized to be more effective?
 - d. How should the effectiveness to the curriculum be evaluated?
4. The curriculum design and substructure should be developed with great sensitivity to internal and environmental needs described by Manning (16).
5. In developing curriculum, the need of the students contemporary life outside the school, and the subject matter specialist should be considered (13).
6. Curriculum design should be geared to social changes and needs affecting situations that actually exist within the society.
7. Curriculum revision should be planned and involved all agencies or people who apply and use the revision and then be reviewed before implementing the suggestion of change and revision for the future development.

Summary of Findings from Analyses of Data

General Courses

A review and summary of findings presented in Tables V through XXV is to be found in Tables XXVI through XXXII. Briefly, a summary of findings regarding respondents' ratings of items pertaining to the area "General Courses" are presented in Table XXVI. Data judged by all combined groups show that (1) the most emphasis in terms of importance both at present and in the future and in terms of student adequacy for job performance was given to the item "Korean Language", (2) the item "History and Culture" was also given a "very important" and highly adequate rating, and (3) the item "Calculus" was given the lowest rating and ranking in terms of importance and student adequacy as a "little important" and "totally inadequate".

Agricultural Economics, Rural Sociology, and Agricultural Extension

A summary of findings regarding respondents' rating of items in the area "Agricultural Economics, Rural Sociology, and Agricultural Extension" are presented in Table XXVII. Data given by all combined groups show that (1) a decidedly higher rating and ranking, in terms of importance both at present and in the future, was given to the item "Farm Management" with a "very important" rating, (2) the item "Statistics and Research Methods" was judged as being a somewhat low rating in terms of present importance, and the item

TABLE XXVI

SUMMARY OF COMBINED GROUPS' JUDGMENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF GENERAL COURSES MAKING UP CURRICULA

	Administrators Combined Group; N=3						Instructors Combined Group; N=35						Senior Students Combined Group N=119						All Respondents Combined Group; N=5+28+119=152					
	PI ^a		FI ^b		SA ^c		PI		FI		SA		PI		FI		SA		PI		FI		SA	
	M ^d	R ^e	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R
1. Organic Chemistry	4.00	4	4.00	4	3.50	8	3.35	4	3.36	8	3.16	8	3.37	6	3.65	4	3.40	7	3.57	3	3.67	5	3.39	8
2. Geology	2.50	10	2.50	10	2.50	10	2.22	12	2.63	11	2.75	11	2.94	11	3.15	11	2.87	12	2.55	11	2.76	11	2.71	11
3. Physics	2.67	9	3.00	9	3.00	9	2.93	8	2.96	10	3.04	10	3.16	10	3.21	10	3.12	9	3.25	8	3.06	10	3.05	9
4. General Chemistry	3.00	8	3.33	8	3.33	7	3.56	3	3.76	5	3.47	6	3.29	8	3.26	9	3.42	6	3.28	6	3.45	7	3.41	6
5. Korean Language	5.00	1	4.67	1	5.00	1	4.67	1	4.44	1	4.56	1	4.11	2	4.21	1	4.09	1	4.59	1	4.44	1	4.55	1
6. History & Culture	4.50	2	4.50	2	5.00	1	4.34	2	4.29	2	4.14	2	4.17	1	4.08	2	4.01	2	4.34	2	4.29	2	4.38	2
7. Mathematics	2.50	10	2.50	10	2.00	11	2.87	10	3.88	3	3.60	5	3.24	9	3.35	7	3.36	8	2.87	10	3.24	9	2.99	10
8. Calculus	2.00	12	2.00	12	2.00	11	2.29	11	2.08	12	2.08	12	2.71	12	2.82	12	2.89	11	2.33	12	2.30	12	2.32	12
9. Biochemistry	3.50	4	3.50	6	4.00	4	3.39	5	3.12	9	3.08	9	3.35	7	3.31	8	3.12	9	3.41	4	3.31	8	3.40	7
10. General Plant	4.00	3	4.00	3	4.50	3	3.16	6	3.63	6	3.88	3	3.42	4	3.44	6	3.51	4	3.09	9	3.69	4	3.96	3
11. General Zoology	3.50	4	3.50	6	4.00	4	2.90	9	3.58	7	3.45	7	3.38	5	3.51	5	3.47	5	3.26	7	3.53	6	3.64	5
12. General Agriculture	3.33	7	3.67	5	4.00	4	3.01	7	3.81	4	3.81	4	3.60	3	3.71	3	3.72	3	3.31	5	3.73	3	3.84	4

^aPI = Present importance^bFI = Future importance^cSA = Student adequacy^dM = Mean^e = Ranking

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	Totally adequate
Very important = 3.5-4.49	†
Important = 2.5-3.49	
Little importance = 1.5-2.49	+
No importance = 1.0-1.49	Totally inadequate

TABLE XXVII

SUMMARY OF COMBINED GROUPS' JUDGEMENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL ECONOMICS, RURAL SOCIOLOGY AND AGRICULTURAL EXTENSION

	Administrators Combined Group; N=5						Instructors Combined Group; N=28						Senior Students Combined Group N=119						All Respondents Combined Group; N=5+28+119=152					
	PI ^a		FI ^b		SA ^c		PI		FI		SA		PI		FI		SA		PI		FI		SA	
	M ^d	R ^e	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R
1. Rural Social Development & Leadership	3.50	5	4.00	3	3.75	4	4.23	2	4.33	2	4.34	1	3.49	5	3.93	3	4.13	1	3.74	4	4.09	3	4.10	1
2. Korean Agricultural Economics	3.50	5	4.00	3	3.75	4	4.17	3	4.39	1	3.93	2	3.89	2	4.10	1	3.97	2	3.85	2	4.16	1	3.83	5
3. Marketing & Agricultural Accounting	3.75	2	4.25	1	4.25	1	3.69	6	3.97	4	3.88	5	3.81	3	3.91	4	3.50	9	3.75	3	4.04	4	3.88	3
4. Farm Management	3.50	5	4.00	3	3.75	4	4.34	1	4.22	3	3.92	3	4.13	1	4.10	1	3.91	3	3.99	1	4.11	2	3.86	4
5. Agricultural Cooperatives	3.63	4	3.88	7	3.63	8	4.00	4	3.63	6	3.47	8	3.56	4	3.86	5	3.87	4	3.73	5	3.79	6	3.66	8
6. Statistic & Research Methods	3.13	9	3.63	9	3.38	9	3.15	8	3.58	8	2.98	9	3.23	8	3.70	6	3.52	7	3.17	8	3.64	8	3.49	9
7. Using Computer in Agriculture	3.50	5	4.25	1	4.25	1	2.42	5	3.81	5	3.90	4	3.47	6	3.65	8	3.77	6	3.13	9	3.90	5	3.97	2
8. Agriculture Extension Planning	4.00	1	4.00	3	4.00	3	3.73	7	3.61	7	3.48	7	3.46	7	3.66	7	3.52	7	3.73	5	3.76	7	3.67	7
9. Extension Teaching & Demonstration	3.75	2	3.75	8	3.75	4	3.64	9	3.48	9	3.79	6	3.14	9	3.63	9	3.79	5	3.51	7	3.62	9	3.78	6

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

^dM = Mean

^e = Ranking

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

"Extension Teaching and Demonstration" was considered to be of lesser importance in the future than were other items, (3) the item "Rural Development and Leadership" was judged as higher than was other items in terms of adequacy for student job performance, and (4) the item "Statistic and Research Methods" received the lowest rating of student adequacy by all combined groups.

Plant Production and Protection

Summary of responses made in the area "Plant Production and Protection" can be seen in Table XXVIII; (1) the two items "Plant Nutrition" and "Plant Physiology" both received some of the highest mean scores in terms of importance both at present and in the future, this by a combined institutional grouping, (2) the two items "Forage and Forestry" and "Nematology" were each considered to be of lesser importance both at present and in the future than the other fifteen items, and (3) in terms of student adequacy for successful job performance, all respondents of the combined grouping gave some of the highest ratings to the item "Fruit Production"; however, the lowest rating in terms of recognition of student adequacy was also revealed as "Forage and Forestry" and "Nematology" as both slightly higher than midpoint on the adequacy scale.

In general, all items in the area of "Plant Production and Protection" were judged as "very important" or "important", thereby showing this area to be considered as one of the most important in agricultural curriculum.

TABLE XXVIII

SUMMARY OF COMBINED GROUPS' JUDGEMENTS AS TO PRESENT AND FUTURE IMPORTANCE
AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED
ITEMS OF PLANT PRODUCTION AND PROTECTION

	Administrators Combined Group; N=5						Instructors Combined Group; N=28						Senior Students Combined Group N=119						All Respondents Combined Group; N=5+28+119=152								
	PI ^a		FI ^b		SA ^c		PI		FI		SA		PI		FI		SA		PI		FI		SA				
	M ^d	R ^e	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R			
1. Nurseries & Floriculture	3.62	2	4.00	3	4.00	1		4.04	6	4.04	6	4.16	3		3.62	10	3.91	3	3.60	7		3.76	7	3.98	4	3.92	4
2. Plant Nutrition	3.63	2	4.13	1	3.75	4		3.89	8	4.39	4	4.22	2		4.23	1	4.12	2	3.94	2		3.92	3	4.21	2	3.97	2
3. Plant Physiology	3.63	2	4.13	1	4.00	1		4.07	4	4.56	2	4.04	6		4.12	2	4.16	1	3.43	9		3.94	2	4.28	1	3.82	5
4. Plant Pathology	3.63	2	3.63	5	3.63	7		4.16	3	4.40	3	4.53	1		3.69	7	3.85	5	3.90	3		3.83	6	3.96	5	4.02	1
5. Field Crops	3.13	9	3.13	14	3.25	12		4.07	4	3.93	8	3.93	7		3.91	4	3.91	3	3.62	6		3.70	8	3.66	9	3.27	12
6. Vegetables	3.50	6	3.50	6	3.50	9		4.41	1	3.96	7	4.13	4		3.71	6	3.71	9	3.58	8		3.87	4	3.72	8	3.74	7
7. Fruit Production	3.50	6	3.50	6	3.50	9		4.41	1	3.91	9	4.09	5		4.06	3	3.78	8	4.25	1		3.99	1	3.73	7	3.95	3
8. Plant Breeding & Genetics	3.75	1	4.00	3	4.00	1		4.04	6	4.64	1	3.60	10		3.83	5	3.81	6	3.77	4		3.87	4	4.15	3	3.79	6
9. Insect Physiology	3.00	12	3.00	15	2.89	13		3.00	13	3.52	10	3.20	11		3.07	11	3.16	14	2.92	14		3.02	12	3.23	13	2.67	8
10. Agricultural Microbiology	3.00	12	3.38	10	3.50	9		3.29	11	3.22	13	3.17	12		2.94	14	3.43	12	3.32	10		3.08	11	3.34	10	3.33	11
11. Insects and Pest Control	3.50	6	3.50	6	3.67	6		3.58	9	4.07	5	3.69	9		3.68	8	3.61	10	3.30	11		3.59	9	3.86	6	3.55	9
12. Forage and Forestry	2.25	17	2.75	17	2.50	17		2.56	10	3.27	12	2.52	15		2.79	6	3.23	13	2.90	15		2.53	17	2.94	15	2.64	17
13. Useful Insects	2.75	14	3.38	10	2.75	14		2.73	14	3.47	11	3.74	8		2.88	15	3.09	15	3.06	13		2.79	13	3.31	11	3.18	13
14. Toxicology	2.38	16	3.25	13	2.75	14		2.36	15	2.36	16	2.78	14		2.98	12	3.05	16	2.90	15		2.57	16	2.89	16	2.86	16
15. Nematology	2.63	15	3.00	15	2.75	14		2.12	17	2.48	15	2.48	16		2.78	17	3.00	17	2.83	17		2.63	15	2.83	17	2.87	15
16. Landscape Architecture	3.13	9	3.38	10	3.63	7		3.01	12	2.70	14	3.16	13		3.68	8	3.80	7	3.66	5		3.27	10	3.29	12	3.48	10
17. Agricultural Architecture	3.13	9	3.50	6	3.75	4		2.13	16	2.11	17	2.02	17		2.95	13	3.54	11	3.14	12		2.74	14	3.05	14	2.97	14

^aPI = Present importance^bFI = Future importance^cSA = Student adequacy^dM = Mean^e = Ranking

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	Totally adequate
Very important = 3.5-4.49	+
Important = 2.5-3.49	
Little importance = 1.5-2.49	-
No importance = 1.0-1.49	Totally inadequate

Agricultural Mechanics and Soil Science

A summary of responses pertaining to the area of "Agricultural Mechanics and Soil Science" are presented in Table XXIX. Respondents of a combined grouping expressed the highest rating of importance both at present and in the future to the items "Irrigation and Drainage" and "Soil Fertilization and Fertilizers". Nevertheless, a relatively low emphasis of importance at present was given by all groups to two items, "Maintaining Stabilization Planting" and "Food Processing Engineering" in the future.

Student adequacy for job performance received a relatively high rating in the item "Irrigation and Drainage" which was followed by the item "Machine Maintenance and Safety"; however, the lowest ranking of the student adequacy was shown in the items "Maintaining Stabilization Planting".

Generally, all items in this area received either "very important" or "important" ratings and either the second or third level of student adequacy by the combined grouping.

Animal Production and Food Technology

Data depicting responses regarding importance and student adequacy are summarized in Table XXX. The items "Animal Physiology" and "Livestock Management" were rated by a combined grouping as most important, both at present and in the future, since they received a "very important" rating. However, a relatively low emphasis of importance both at present and in the future by the combined institutional

TABLE XXIX

SUMMARY OF COMBINED GROUPS' JUDGEMENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL MECHANICS AND SOIL SCIENCE

	Administrators Combined Group; N=5						Instructors Combined Group; N=28						Senior Students Combined Group N=119						All Respondents Combined Group; N=5+28+119=152					
	PI ^a		FI ^b		SA ^c		PI		FI		SA		PI		FI		SA		PI		FI		SA	
	M ^d	R ^e	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R
1. Irrigation and Drainage	3.00	6	3.00	8	3.00	8	3.57	8	3.56	9	3.57	6	4.41	1	4.25	2	4.32	1	3.66	2	3.64	5	3.63	4
2. Irrigation Engineering	3.13	2	3.13	5	3.38	2	3.42	10	3.20	10	3.57	6	3.86	4	3.89	5	3.91	6	3.47	6	3.41	8	3.62	5
3. Surveying	2.38	11	2.63	11	2.63	11	3.14	11	3.77	6	3.56	8	3.91	2	3.54	11	3.73	9	3.14	10	3.31	9	3.31	9
4. Food Processing Engineering	3.38	1	3.63	1	3.88	1	3.63	6	2.86	12	3.22	10	3.21	12	2.80	7	3.82	7	3.41	7	3.10	11	3.64	3
5. Agricultural Machines and Workshop	3.13	2	3.38	2	3.38	2	4.22	2	3.97	5	4.06	3	3.61	6	3.96	3	3.92	5	3.65	3	3.74	2	3.79	2
6. Machine Maintenance and Safety	3.00	6	3.25	4	3.25	5	4.22	2	4.06	3	4.28	1	3.58	7	3.92	4	4.01	2	3.60	4	3.74	2	3.85	1
7. Soil Morphology and Erosion	2.88	9	2.88	10	2.88	10	3.76	5	4.00	4	3.87	3	3.38	9	3.71	8	3.53	10	3.34	8	3.53	6	3.43	7
8. Soil Chemistry	2.88	9	3.13	5	3.13	6	3.58	7	3.64	8	3.64	5	3.23	11	3.55	10	3.49	11	3.23	9	3.44	7	3.42	8
9. Soil Fertilization and Fertilizers	3.13	2	3.38	2	3.38	2	4.80	1	4.18	2	2.96	11	3.90	3	4.31	1	3.97	4	3.71	1	3.96	1	3.44	6
10. Soil Conservation	3.13	2	3.13	5	3.13	6	3.87	4	4.39	1	4.20	2	3.66	5	3.63	9	3.79	8	3.55	5	3.72	4	3.04	11
11. Soil-Water Relationship	2.25	12	2.25	12	2.25	12	3.56	9	3.67	7	3.41	9	3.45	8	3.82	6	3.47	12	3.09	12	3.25	10	3.04	11
12. Maintaining Stabilization Planting	3.00	6	3.00	8	3.00	8	3.09	12	3.00	11	2.53	12	3.27	10	3.15	12	4.00	3	3.12	11	3.05	12	3.18	10

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

^dM = Mean

^e = Ranking

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

TABLE XXX

SUMMARY OF COMBINED GROUPS' JUDGEMENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF ANIMAL PRODUCTION AND FOOD TECHNOLOGY

	Administrators Combined Group; N=5						Instructors Combined Group; N=35						Senior Students Combined Group N=119						All Respondents Combined Group; N=5+35+119=159					
	PI ^a		FI ^b		SA ^c		PI		FI		SA		PI		FI		SA		PI		FI		SA	
	M ^d	R ^e	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R
1. Animal Physiology	2.83	8	3.17	7	2.83	12	3.88	2	4.08	2	4.15	3	3.73	1	3.84	2	3.82	1	3.48	3	3.70	3	3.59	5
2. Animal Nutrition	2.83	8	3.17	7	2.83	12	3.96	1	4.19	1	4.04	4	3.47	7	3.45	7	3.48	7	3.42	4	3.60	5	3.45	10
3. Animal Breeding	2.83	8	3.50	5	3.50	5	3.71	4	3.98	3	3.92	9	3.38	8	3.70	3	3.30	9	3.31	8	3.73	2	3.57	7
4. Poultry (physiology, breeding, disease control, nutrition, etc.)	3.17	6	3.17	7	3.17	8	3.84	3	3.81	4	3.96	8	3.01	11	3.08	11	3.15	11	3.34	7	3.35	10	3.43	11
5. Livestock Management	2.83	8	2.83	11	3.50	5	3.71	4	3.75	6	4.17	2	3.67	2	3.92	1	3.68	3	3.40	6	3.50	7	3.78	4
6. Animal Health (disease parasite control)	2.83	8	2.83	11	3.17	8	3.54	8	3.75	6	3.98	6	3.50	6	3.33	8	3.63	4	3.29	9	3.30	11	3.59	5
7. Dairy Products Analysis	3.50	4	3.50	5	3.50	5	2.71	4	3.79	5	4.18	1	3.67	2	3.49	5	3.78	2	3.29	9	3.59	6	3.82	3
8. Dairy Product Processing	3.33	5	3.67	4	4.00	1	3.63	7	3.63	9	3.97	7	3.66	4	3.61	4	3.57	5	3.54	2	3.64	4	3.85	1
9. Food Processing and Preservation	4.25	1	4.25	1	4.00	1	3.54	8	3.70	8	4.00	5	3.53	5	3.49	5	3.49	6	3.77	1	3.81	1	3.83	2
10. Food Inspection	3.75	3	3.75	3	3.75	4	3.13	10	3.50	10	3.71	10	3.36	9	3.25	10	3.22	10	3.41	5	3.50	7	3.56	8
11. Human Nutrition	4.00	2	4.00	2	4.00	1	2.43	11	3.08	11	3.19	11	3.04	10	3.31	9	3.33	8	3.16	11	3.46	9	3.51	9
12. Seafood and Meat Technology	3.13	7	3.13	10	3.13	10	2.21	12	2.92	12	2.83	12	2.58	12	2.72	12	2.37	12	2.64	12	2.92	12	2.78	12
13. Courses Related to Ocean Science	1.67	14	1.67	14	2.00	14	2.00	14	2.59	13	2.54	14	2.11	13	2.34	13	2.37	12	1.93	14	2.20	14	2.30	14
14. Sericulture and Filature	2.67	13	2.67	13	3.00	11	2.04	13	2.08	14	2.58	13	1.81	14	2.07	14	2.29	14	2.17	13	2.27	13	2.62	13

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

^dM = Mean

^e = Ranking

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

grouping was given to the items "Courses Related to Ocean Science", "Sericulture and Filature", and "Seafood and Meat Technology" as well as in terms of student inadequacy. A relatively high rating of student adequacy by the combined grouping was also shown for the item "Animal Physiology" with a second level of rating. Likewise, the lowest ranking of student adequacy was also given to "Sericulture and Filature" as slightly inadequate among 14 items.

Agricultural Home Economics

A summary of the responses of a combined institutional grouping to the importance and student adequacy of the area "Agricultural Home Economics" can be seen through data presented in Table XXXI. It is obvious that the grouping largely agreed as to the most important both at present and in the future and as the highest student adequacy to the items "Child Development and Guidance", "Food Preparation and Nutrition" and "Cooking Science" except in terms of present importance. Relatively the lowest rating in terms of both importance at present and in the future and student adequacy was given to the item "Agricultural Bookkeeping" as "important" and the third level of adequacy for student job performance.

When responses secured in the area of "Agricultural Home Economics" are compared to those of other areas, it can be concluded that all respondent groups are cognizant of the importance and student adequacy of the area as one of essential areas to the preparation of specialists.

TABLE XXXI

SUMMARY OF COMBINED GROUPS' JUDGEMENTS AS TO PRESENT AND FUTURE IMPORTANCE AND STUDENT ADEQUACY OF COURSES MAKING UP CURRICULA IN SELECTED ITEMS OF AGRICULTURAL HOME ECONOMICS

	Administrators Combined Group; N=5						Instructors Combined Group; N=35						Senior Students Combined Group N=119						All Respondents Combined Group; N=5+35+119=159					
	PI ^a		FI ^b		SA ^c		PI		FI		SA		PI		FI		SA		PI		FI		SA	
	M ^d	R ^e	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R	M	R
1. Home Management	3.25	10	3.50	8	3.50	9	4.43	1	4.63	3	4.63	2	4.40	1	4.12	3	3.14	10	4.03	5	4.08	6	3.76	10
2. Home Life and Family Living	3.50	7	3.75	6	3.75	6	4.33	5	4.68	1	4.68	1	4.05	6	3.66	9	3.84	4	3.96	7	4.03	8	4.09	5
3. Clothing Selection and Construction	3.63	6	3.63	7	3.63	8	4.10	7	4.33	9	4.42	6	3.45	10	3.63	10	3.61	8	3.73	10	3.86	10	3.88	7
4. Dressmaking	3.38	9	3.38	10	3.38	10	4.38	3	4.53	6	4.63	2	3.87	8	3.88	5	3.63	6	3.88	8	3.93	9	3.88	7
5. House Planning and Decoration	3.50	7	3.50	8	3.75	6	4.33	5	4.55	4	3.95	9	4.12	4	4.17	1	3.62	7	3.98	6	4.07	7	3.77	9
6. Food Preparation and Nutrition	4.75	1	4.75	3	4.75	3	4.42	2	4.42	8	4.59	4	4.28	3	4.17	1	4.05	2	4.48	2	4.45	2	4.46	2
7. Home Nursing	4.50	3	4.50	4	4.50	4	3.82	9	4.43	7	3.90	10	4.06	5	3.88	5	3.83	5	4.13	4	4.27	5	4.08	6
8. Cooking Science	4.50	3	4.50	4	4.50	4	3.98	8	4.54	5	4.50	5	3.94	7	3.96	4	3.97	3	4.14	3	4.33	4	4.32	3
9. Home Economics for Men	4.50	3	5.00	1	5.00	1	3.61	10	4.33	9	4.29	8	3.53	9	3.82	7	3.57	9	3.88	8	4.38	3	4.29	4
10. Child Development and Guidance	4.75	1	5.00	1	5.00	1	4.38	3	4.65	2	4.33	7	4.40	1	3.75	8	4.28	1	4.51	1	4.47	1	4.54	1
11. Agricultural Bookkeeping	3.00	11	3.25	11	3.25	11	2.93	11	3.59	11	3.41	11	3.32	11	3.37	11	3.12	11	3.08	11	3.40	11	3.26	11

^aPI = Present importance

^bFI = Future importance

^cSA = Student adequacy

^dM = Mean

^e = Ranking

NOTE: Limits in mean scores:

Importance	Adequacy
Extremely important = 4.5-5.0	= Totally adequate
Very important = 3.5-4.49	= †
Important = 2.5-3.49	=
Little importance = 1.5-2.49	= ‡
No importance = 1.0-1.49	= Totally inadequate

Summary of Findings Regarding Selected
Factors, Items, and Procedures in
Curriculum Development

A summary of responses of groups regarding the importance of selected factors, items, and procedures in curriculum development are to be found by reviewing data presented in Table XXXII. The most important item in the judgement of respondents in a combined grouping was the two statements "Securing Involvement of College of Agriculture and the Agricultural Institute Students in Determining Their Needs, Interests, and Aspirations" and "Assessment of Performance of Graduates on the Job". However, emphasis was noticeably low in terms of "Securing Involvement of Selected Farmers Through Agricultural Offices" as judgements of the combined grouping with instructors and senior students groups; however the group of administrators judged slightly different rating on that statement.

Conclusions

The following conclusions were reached:

1. From review of literature, the statistical and descriptive analyses of findings, and the experiences of the researcher, an outstanding conclusion which can be drawn is that a large portion of the components of present curriculum in agriculture at four Agricultural Junior Colleges in Korea are considered to be either "very important"

TABLE XXXII

SUMMARY OF COMBINED GROUPS' JUDGEMENTS AS TO RELATIVE IMPORTANCE OF SELECTED FACTORS, ITEMS AND PROCEDURES IN CURRICULUM DEVELOPMENT

Statements	Administrators Combined Group; N=5		Instructors Combined Group; N=35		Senior Students Combined Group N=119		All Respondents Combined Group; N=5+35+119=159	
	Degree of Importance Mean	Ranking	Degree of Importance Mean	Ranking	Degree of Importance Mean	Ranking	Degree of Importance Mean	Ranking
1. Assessment of performance of graduates on the job.	4.13	2	4.07	3	3.88	1	4.03	2
2. Securing involvement of Colleges of Agriculture and the Agricultural Institute students in determining their needs, interests and aspirations.	4.63	1	4.08	2	3.86	2	4.19	1
3. Securing involvement of graduate now serving in agricultural positions.	3.75	4	4.13	1	3.67	3	3.85	3
4. Securing involvement of selected farmers through agricultural offices.	3.88	3	3.48	6	3.35	6	3.57	5
5. Giving due study and consideration to culture and traditions as these have affected teaching, learning and adoption of agricultural practices.	3.50	5	3.77	4	3.52	5	3.60	4
6. Securing copies of and studying references to job descriptions and/or official regulations which affect the work of agriculturalists.	3.50	5	3.58	5	3.59	4	3.56	6

NOTE: Limits in mean scores:

Extremely important = 4.5-5.0
 Very important = 3.5-4.49
 Important = 2.5-3.49
 Little importance = 1.5-2.49
 No importance = 1.0-1.49

or "important", and in terms of adequacy of student performance, combined groups of respondents feel that students are generally at the second or their level of adequacy among the five levels considered.

2. Since all groups rated the two items, "Agricultural Extension" and "Extension Teaching and Demonstration" as either "important" or "very important" and "highly adequate" in terms of student job performance, it would seem well to further strengthen these two areas of teaching.
3. In the survey schedule in the "General" area, "Korean Language" was ranked first and rated as "extremely important" and "totally adequate" in terms of importance both at present and in the future and student adequacy by the combined grouping. It is of special note that responses to that portion of the survey schedule designated as "General Studies" and "Korean Language" was ranked first and rated as "very important", both at present and in the future, and that student adequacy was reviewed as "highly adequate", as perceived by the combined grouping. It was followed by "History and Culture". It must be concluded that Koreans are strong in their beliefs in the importance of language and history with culture.
4. In the "General" area, "Calculus" received a

relatively low rating and ranking in terms of both importance and student adequacy by the combined grouping; it can be concluded that either in the past teachers have not taught the course as well as might be needed or that they have failed to integrate mathematics into the content of other courses.

5. Among all agricultural areas and items considered in the entire study some of the highest ratings with regard to both importance and student adequacy were given to the items "Food Preparation and Nutrition", "Child Development and Guidance" and "Cooking Science" thus strengthening the conclusion that home and family are valued highly in the Korean culture. This further leads to the conclusion that in the college curriculum particular emphasis should be given to instruction and skills development in the several items related to home and family.
6. Because of the relatively low rating and ranking in terms of importance both at present and in the future as well as student adequacy given by the combined groupings to the item "Courses Related to Ocean Science" and "Sericulture and Filature" which was the lowest rating only in terms of present importance, it can be concluded that few respondents were very well informed about the potential for the ocean science and sericultural science in agriculture in the future.

7. The conclusion must be reached that the more important factors in developing agricultural curriculum are expressed in the statement "Assessment of Performance of Graduates on the Job". Likewise, a statement rated quite high by all combined grouping was "Securing Involvement of College of Agricultural Institute Students in Determining Their Needs, Interests, and Aspirations". Perhaps the fact that relatively, the lowest rating given was to the item "Securing Involvement of Selected Farmers Through Agricultural Offices", by both students and teachers should prompt some immediate study of the processes involved in curriculum development, especially among teachers. It would seem obvious that relationships between Agricultural Educators and their constituency may very well need examination.
8. It would seem noteworthy to recognize that among those items more directly related to Agricultural Production, some of the relatively higher ratings in terms of importance and student adequacy were given by the combined grouping to the items "Plant Nutrition", "Plant Physiology", "Fruit Production", "Farm Management", "Soil Fertilization and Fertilizers" and "Irrigation and Drainage", among all items in all areas. It can be further concluded that particular emphasis should be given to instruction and skills development to these items.

9. Recognizing a number of inconsistencies in the nature and extent of certain data secured, it must be concluded that many respondents, particularly among students and sometimes instructors, failed to grasp the relationship between both areas and items. Particularly the example can be given of the findings related to the responses gathered from YAJC as are told on page 65.

Recommendations

The findings of the review of literature and findings secured through data analysis clearly provided knowledge and information upon which was based formulation of the following recommendations:

1. It is recommended that this study be replicated with the research being carried out in Korea.
2. A combined committee from Agricultural Junior Colleges, Ministry of Agriculture, and Ministry of Education should be selected and charged with the responsibility involving present curriculum specialists in planning, developing, and evaluating agricultural curriculum for Korean Junior Colleges.
3. Through combined efforts of the groups mentioned above, attention should be given to development of a program of seminars and conferences involving students of the four colleges in determining their needs, interests, and aspirations.

4. Further, it is to be strongly recommended that a program be developed particularly involving staff or the Ministry of Agriculture in assessing the performance of the graduates on the job. This program should be directly tied to a periodic evaluation at each of the Agricultural Junior Colleges.
5. Provide means to insure the involvement of graduates, selected knowledgeable farmers, and staff from the Ministry of Agriculture in developing and revision of agricultural curriculum to be more effective based upon the local and regional needs and the changing in the agricultural situation.
6. Develop a seminar to explore the values of strong emphasis upon the "Korean Language" and "History and Culture" for those engaged in agricultural jobs.
7. Further research should be encouraged and carried out in the area of curriculum revision and development, teaching methods best suited for extension education, and institutional management and organization as related to professional training of agriculturalists.
8. Prepare an institutional seminar specially directed toward students designed to explore and show both methods and the importance of research in all areas in agricultural activity. Particular attention

should be given to presentation in a simple way which can be more understandable by students.

9. It is recommended that educational specialists with particular expertise in areas of "Food Preparation and Nutrition", "Child Development and Guidance" and "Cooking Science" be employed to conduct training seminars for college instructors with teaching assignments in these areas.
10. In view of the possible future potential of the computer as an important tool in agriculture, particularly management, it is further recommended that persons with expertise in computer technology and particularly its application in agriculture be brought from developed countries to assist administrators, instructors to become more knowledgeable about the use of computer in agriculture.
11. Because of low importance and student adequacy which was given to the items "Courses Related to Ocean Science", "Sericulture and Filature", "Forage and Forestry", and "Nematology" by instructors from all colleges, it is strongly recommended that instructors knowledge and skills be updated and that these items be given emphasis in the training program in agriculture.
12. To promote achievement to higher level of agricultural production, it is recommended that emphasis

should be placed upon the teaching of agricultural economics in Korea, stressing solving of problems which might arise from local and environmental situations.

13. In view of the fact that responses of administrators tended, in many cases, to differ considerably from responses given by students and instructors, it is strongly recommended that seminars be developed primarily for the purpose of acquainting administrators with the nature and extent of changes in agriculture which are now taking place and which may be anticipated as taking place in the future.

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APPENDICES

APPENDIX A

QUESTIONNAIRE (ENGLISH LANGUAGE)

Dear Respondent,

May I please introduce myself as Young Kim, a graduate student from Korea presently in the United States of America working toward achievement of the masters' degree in Agricultural Education at Oklahoma State University. I am now at the stage of gathering research data for my dissertation thesis. This thesis is an attempt to assess adequacy of the curriculum and training programs as provided by selected agricultural junior colleges in Korea. You will please understand how important it is to Korea to obtain reliable information about programs now training future professional agricultural workers for our country. Your cooperation in completing the accompanying questionnaires is very essential and will be greatly appreciated.

Our request is that you please distribute and obtain responses from selected people serving in your institution. Please complete one yourself as chief administrator and give another to your vice-president or Dean. From a list of your faculty members please request each seventh person listed to complete the questionnaire. If needed, others may be selected to make a total of ten. Please ask your vice-president or Dean to select from the senior students enrolled this semester, approximately 30 respondents. Please have at least one student from each department with additional students as needed selected from those departments with the higher enrollments.

Upon completion of this thesis, I will be glad to send you a copy of findings if you so desire.

Thank you,



Young Joo Kim
Agricultural Education
Oklahoma State University

PERCEPTIONS OF ADMINISTRATION, FACULTY AND STUDENTS
CONCERNING THE CURRICULUM OF FOUR AGRICULTURAL
JUNIOR COLLEGES IN KOREA

OBJECTIVES: The purpose of this study is to gain from three groups of respondents: administrators, faculty and students, their perceptions of the importance, present and future, of course areas making up the curricula. Also requested is a response concerning how adequate students may be who graduate from the school (s).

Study Schedule
Questionnaire for Respondents

Part I.

A. General Information:

1. Check - Administrator
- Instructor
- Senior Student
2. Check:
 - (1) Ansung agricultural Junior College
 - (2) Jinju Agricultural and Forestry
Technical College
 - (3) Milyang Agricultural and Sericultural
Junior College
 - (4) Yesan Agricultural Junior College

B. Personal Information:

1. Check:

Place of Birth Rural Village Urban

Place presently living Rural Urban

Fathers position at the present time
 Farmer Other

Was he a farmer Yes No

Does your father own a farm Yes No
2. Administrators and Instructors (please check)

Degree Held: Doctoral Master

Bachelor

Institution _____

Major _____

Part II.

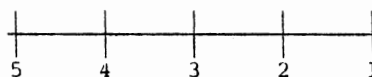
- A. Evaluate each of the following in terms of its present and future importance in the curriculum according to the following scale:

EI = Extremely Important
VI = Very Important
I = Important
LI = Little Importance
NI = No Importance

- B. On the scale provided, check the extent you perceive the training received will prove adequate for the job anticipated.

Totally Adequate

Totally Inadequate



- C. Instructors and/or students mark "X" in the major field(s) of teaching or study. If students have had four or more courses in any other area mark "V" by that area.

Please check the appropriate answer

Area	Present Importance In Curricula (A)					Importance Recommended For The Future Curriculum					Extent Students Adequately Prepared For Jobs (B)					Major Fields Of Teaching Or Study (C)	Completed 4 or More Courses In Any Other Area (D)
	EI	VI	I	LI	NI	EI	VI	I	LI	NI	5	4	3	2	1		
A. General Courses:																	
1. Organic chemistry.																	
2. Geology.																	
3. Physics.																	
4. General chemistry.																	
5. Korean Language.																	
6. History and culture.																	
7. Mathematics.																	
8. Calculus.																	
9. Biochemistry.																	
10. General plant.																	
11. General zoology.																	
12. General Agriculture.																	
B. Agricultural Economic, Rural Sociology and Agricultural Extension:																	
Courses taught in area																	
1. Rural social development and leadership.																	
2. Korean Agricultural economics.																	
3. Marketing and Agricultural Accounting.																	
4. Farm management.																	
5. Agricultural Cooperatives.																	
6. Statistic and Research Methods.																	
7. Using computer in Agriculture.																	
8. Agricultural Extension planning.																	
9. Extension teaching and demonstration.																	
C. Plant Production and Protection:																	
Courses taught in area of:																	
1. Nurseries and floriculture.																	
2. Plant nutrition.																	
3. Plant physiology.																	

Area	Present Importance In Curricula (A)					Importance Recommended For The Future Curriculum					Extent Students Adequately Prepared For Jobs (B)					Major Fields Of Teaching Or Study (C)	Completed 4 or More Courses In Any Other Area (D)
	EI	VI	I	LI	NI	EI	VI	I	LI	NI	5	4	3	2	1		
4. Plant pathology. (bacterial & fungi diseases)																	
5. Field crops.																	
6. Vegetables.																	
7. Fruit production.																	
8. Plant breeding & genetics.																	
9. Insect physiology.																	
10. Agricultural microbiology.																	
11. Insects and pests control.																	
12. Forage and forestry.																	
13. Useful insects. (Example: Bees)																	
14. Toxicology.																	
15. Nematology.																	
16. Landscape Architecture.																	
17. Agricultural Architecture.																	
D. Agricultural Mechanics & Soil Science:																	
Courses taught in areas of:																	
1. Irrigation and drainage.																	
2. Irrigation engineering.																	
3. Surveying.																	
4. Food processing engineering.																	
5. Agricultural machines and workshop.																	
6. Machine maintenance and safety.																	
7. Soil morphology & erosion.																	
8. Soil chemistry.																	
9. Soil fertilization and fertilizers.																	
10. Soil conservation.																	
11. Soil-water relationship.																	
12. Maintaining stabilization planting.																	
E. Animal Production and Food Technology:																	
Courses taught in areas of:																	
1. Animal physiology.																	

Area	Present Importance In Curricula (A)					Importance Recommended For The Future Curriculum					Extent Students Adequately Prepared For Jobs (B)					Major Fields Of Teaching Or Study (C)	Completed 4 or More Courses In Any Other Area (D)
	EI	VI	I	LI	NI	EI	VI	I	LI	NI	5	4	3	2	1		
2. Animal nutrition.																Mark "X"	Mark "V"
3. Animal breeding.																	
4. Poultry science. (Physiology, breeding, disease, control, nutrition, etc.)																	
5. Livestock management.																	
6. Animal health. (Disease and parasite control)																	
7. Dairy products analysis.																	
8. Dairy product processing.																	
9. Food processing & preservation.																	
10. Food inspection.																	
11. Human nutrition.																	
12. Seafood & meat technology.																	
13. Courses related to ocean science.																	
14. Sericulture and Filature.																	
F. Agricultural Home Economics:																	
Courses taught in area of:																	
1. Home management.																	
2. Home life and family living.																	
3. Clothing selection and construction.																	
4. Dress making.																	
5. House planning and decoration.																	
6. Food preparation and nutrition.																	
7. Home nursing.																	
8. Cooking science.																	
9. Home economics for men.																	
10. Child development and guidance.																	
11. Agricultural bookkeeping.																	

Part III.

Please check the extent of your agreement with the importance of the following factors, items or procedures which should be given consideration when developing and implementing curricula for the preparation of Professionals in Agriculture.

EI = Extremely Important
VI = Very Important
I = Important
LI = Little Importance
NI = Of No Importance

Factors, Items or Procedures	EI	VI	I	LI	NI
(1) Assessment of performance of graduates on the job.					
(2) Securing involvement of College of Agriculture and the Agricultural Institute students in determining their needs, interests and aspirations.					
(3) Securing involvement of graduates now serving in agricultural positions.					
(4) Securing involvement of selected farmers through agricultural offices.					
(5) Giving due study and consideration to culture and tradition as these have affected teaching, learning and adoption of agricultural practices.					
(6) Securing copies of and studying references to job descriptions and/or official regulations which affect the work of agriculturalists.					
(7) Other (list)					
(a)					
(b)					
(c)					

APPENDIX B

QUESTIONNAIRE (KOREAN LANGUAGE)

조 사 서

연구제목 : 한국의 네 국립농업전문대학의 교육과정에 관한 연구

연구목적 : 이 연구는 한국의 네 국립농업 전문대학의 행정관, 교수단과 상급학생들로부터 교과과정의 중요성에 대한 그들의 인식을 조사하는데 목적이 있다.

제 I부. A. 일반적 사항 (응답자는 해당란에 표시 또는 기입 하시오)

1. 귀하의 직업 : 행정관 교수단 상급학생

2. 귀하의 학교명 : 안성농전대 전주농업전대 밀양농업전대 예산농전대

B. 1. 상급 학생의 개인사항 : 출생지는 시골 도시 . 현 거주지는 시골 도시 .

부모의 직업은 농업 다른직업

귀하의 부모께서 전에 농업에 종사 하신적이 있습니까? 예 아니오

귀하의 부모께서 현재 농업에 종사 하십니까? 예 아니오

2. 행정관과 교수단의 개인사항 : 최종 학위는 박사 석사 학사

최종 학교명 _____ 전공분야 _____

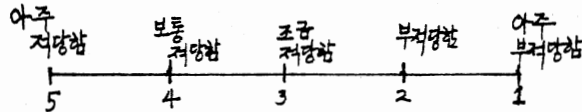
제 II부. 다음 페이지에 나온 질문의 응답란 (A) (B) (C) (D) 에 관한 설명.

(A) 교과과정의 중요성의 정도를 각 해당란에 "V"로 표시.

중요성의 정도

5 = 극도로 중요함
4 = 매우 중요함
3 = 보통 중요함
2 = 조금 중요함
1 = 중요하지 않음

(B) 학교에서 받은 교육과 학생들의 졸업후 직무수행과의 연관성에 대한 정도를 "V"로 표시.



(C) 교수단과 상급학생은 지도하거나 배운 있는 전공분야에 "X"를 표시.

(D) 만일 교수단과 학생이 다른분야에 4 과목 또는 그 이상을 지도했거나 배웠다면 그 분야에 "V"를 표시.

각 해당란에 적당한 응답을 하시오. →

(D) 교수단과 학
4과목이상을 지
또는 바는 전공
학과

(C) 교수단과
학생의
전공분야

(B) 학생의 장래
직무수행을 위한
교과과정의
적합성

장래 교과과정을
위해 추천할만한
중요성

(A) 현재
교과과정의
중요성

학과명	5					4					3					2					1					"X"로 표시하면 "V"로 표시 하시오					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5						
A. 교양과목:																															
1. 유기화학																															
2. 지질학																															
3. 물리학																															
4. 일반화학																															
5. 국어																															
6. 국사																															
7. 수학																															
8. 비적분																															
9. 생화학																															
10. 일반생물학																															
11. 일반동물학																															
12. 일반농학																															

B. 농업경제 와 농촌 지도학과:

1. 농촌사회개론과 지도론																															
2. 한국 농업 경제																															
3. 농업회계와 마케팅																															
4. 농업 경영																															
5. 농업 협동조합																															
6. 실원통계																															
7. 농업 컴퓨터 사용법																															
8. 농촌 지도 계획																															
9. 농촌 지도 연습																															

C. 식량생산과 보호학과:

1.	온상 화체
2.	식품 영양
3.	식품 생리
4.	식품 병리
5.	작물
6.	채소
7.	과수
8.	식품 위생 및 유전
9.	곤충 생리
10.	농업 미생물
11.	곤충 방제
12.	마포 및 임학
13.	유물 곤충
14.	독물학
15.	선충학
16.	조경
17.	농업 건축

D. 농업 기계 및 토양학과:

1.	농업 수리
2.	수리 공학
3.	측량
4.	식물 사육학
5.	농업 기계 공작
6.	기계 보존과 안전
7.	토양 형태와 침식
8.	토양 화학
9.	토양 및 비료
10.	토양 보존 과 보호
11.	토양과 물의 상호작용
12.	식물 안전 유지

나. 축산 및 식품제조과:

1. 가축 생리																				
2. 가축 영양																				
3. 가축 육종 및 유전																				
4. 가금학																				
5. 축산 경영																				
6. 가축 전갈 및 병 방지																				
7. 낙농 생산 및 분석																				
8. 낙농 가공																				
9. 식품 가공 및 보존																				
10. 식품 검사																				
11. 인간 영양																				
12. 해산 식품학																				
13. 해양학 (수산물포함)																				
14. 잡업 및 제사																				

F. 농가정학과:

1. 가정 관리																				
2. 가정 생활 및 가족 관계																				
3. 피복 재료 및 관리																				
4. 의생활																				
5. 주택 및 장식																				
6. 식품 영양																				
7. 가정 간호																				
8. 조리학																				
9. 가정 경제																				
10. 육아 및 육아 발달																				
11. 농업 부기																				

제 3부. 농업 전문가 양성을 위한 교육과정을 개발시키고 이행할 때 고려해야 할 중요성의 정도를 해당란에 "V"로 표시 하시오

5 = 극히 중요함

4 = 매우 중요함
 3 = 보통 중요함
 2 = 조금 중요함
 1 = 중요하지 않음

중요성의 정도

사	항	5	4	3	2	1
(1)	졸업생들의 직무수행에 대한 평가					
(2)	학생들의 필요, 관심, 또는 장래 희망을 결정하기 위한 도움					
(3)	현재 농업 분야에 종사하는 졸업생들의 기여					
(4)	농업 기관을 통해서 선발된 농업 종사자들의 기여					
(5)	농업 기술의 지도, 연수, 채택이 문화와 전통에 미치는 점에 대한 연구					
(6)	농업 공무원들의 업무에 영향을 끼치는 업무내용과 규정에 대한 참고사항					
(7)	기타 사항					
	a.					
	b.					
	c.					

APPENDIX C

SUPPORTING INFORMATION

TABLE XXXIV

NUMBER OF SENIOR STUDENTS AS TO MAJOR FIELDS OF STUDY AND COMPLETED
FOUR OR MORE COURSES IN ANY OTHER AREA ("V")

Fields	AAJC Students; N=30		JAFTC Students; N=29		MASJC Students; N=30		YAJC Students; N=30		All School Instructors Combined Group; N=30+29+30+30=159			
	# of "x"*	# of "v"***	# of "x"*	# of "v"***	# of "x"*	# of "v"***	# of "x"*	# of "v"***	Total # of "x"*	Ranking	Total # of "v"***	Ranking
A. General Fields (Organic chemistry, geology, physics, general chemistry, Korean language, History & culture, mathematics, cal- culus, biochem- istry, general plant, general zoology, general agriculture).	6	4	5	11	--	19	3	7	14	4	41	1
B. Agricultural Economics, Rural Sociology & Agricultural Extension	2	3	7	4	5	3	7	3	21	1	13	2
C. Plant Production & Protection	2	1	6	5	--	--	10	3	18	2	9	4
D. Agricultural Mechanics & Soil Science	3	3	9	3	--	--	4	--	16	3	6	5
E. Animal Production & Food Technology	3	3	1	2	8	--	3	1	15	5	6	5
F. Agricultural Home Economics	2	--	1	2	10	9	--	--	13	6	11	3

*Major fields of teaching

**Completed four or more courses in any other area.

TABLE XXXIII

NUMBER OF INSTRUCTORS AS TO MAJOR FIELDS OF TEACHING AND COMPLETED FOUR
OR MORE COURSES IN ANY OTHER AREA

Fields	AAJC Instructors; N=10		JAFTC Instructors; N=8		MASJC Instructors; N=7		YAJC Instructors; N=10		All School Instructors Combined Group; N=10+8+7+10=35			
	# of "x"*	# of "v"**	# of "x"*	# of "v"**	# of "x"*	# of "v"**	# of "x"*	# of "v"**	Total # of "x"*	Ranking	Total # of "v"**	Ranking
A. General Fields (Organic chemistry, geology, physics, general chemistry, Korean language, History & culture, mathematics, cal- culus, biochem- istry, general plant, general zoology, general agriculture).	--	--	4	6	3	2	1	2	8	3	10	1
B. Agricultural Economics, Rural Sociology & Agricultural Extension	3	--	1	3	--	--	2	1	6	4	4	3
C. Plant Production & Protection	3	--	2	2	--	--	5	1	10	2	3	6
D. Agricultural Mechanics & Soil Science	1	--	3	4	--	--	2	2	6	4	6	2
E. Animal Production & Food Technology	2	--	3	2	4	--	3	2	12	1	4	3
F. Agricultural Home Economics	1	--	1	2	2	1	1	1	5	6	4	3

*Major fields of teaching

**Completed four or more courses in any other area.

VITA

Young Joo Kim

Candidate for the Degree of
Master of Science

Thesis: PERCEPTIONS OF ADMINISTRATORS, FACULTY, AND SENIOR STUDENTS CONCERNING THE CURRICULUM OF FOUR AGRICULTURAL JUNIOR COLLEGES IN KOREA

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Junnam, Korea, January 9, 1947, the daughter of Mr. Min Koo Kim and Mrs. Young Ae Kim.

Education: Graduated from Jinmyung Girl's High School, Seoul, Korea, in February, 1965; received Certificate from City College of Seoul, Seoul, Korea in February, 1969; studied Master's program of Horticulture in Korea University, Seoul, Korea, from September of 1974 until August of 1975; received Master of Science Degree in Natural Science from Oklahoma State University in December, 1981; completed requirements for the Master of Science Degree in Agricultural Education from Oklahoma State University, Stillwater, Oklahoma, May, 1983.

Professional Experience: President's secretary, The National Textbook Co., Ltd., is a government-operated enterprise, 1969-1970, 1972-1973, Seoul, Korea; Horticulture Specialist for vocational adult women in the National Textbook Co., Ltd., Seoul, Korea, from May, 1969 until April, 1973; A curriculum developer in the National Textbook Co., Ltd., 1970-1972, Seoul, Korea; member of American Phytopathological Society, 1979-1981; member of Phi Delta Kappa Educational Foundation in U.S.A.