

AN IDENTIFICATION OF SUPERVISED PRACTICE  
PROGRAMS, PRINCIPLES, AND REVIEW  
OF CURRICULUM FOR VOCATIONAL  
AGRICULTURAL EDUCATION  
IN BURMA

By

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## CHAPTER I

### INTRODUCTION

The value of agricultural education is increasingly known to Burma. There is no exception to admit the importance of agriculture as a backbone of nation's economy. Therefore, the following major factors contribute the value of agricultural education in Burma. Agriculture is the leading industry and the country's major economic resource depends on it. It is a meaningful and realistic livelihood for seventy per cent of her population.

The various implementations of the governmental plans for agriculture, education, and community development programs will demand large number of skilled personnel and influence the present farming conditions.

To maintain the production, management, and marketing is the major role for the stabilization of rural community's socio-economic conditions. To have better understanding and to develop the ability to become a successful farm operator. The best vocational agricultural training is required to meet the needs of a successful farmer.

To train the youth to become a successful farmer is, of course, a narrow definition of agricultural education. To motivate the young people in the area of farming is necessary. By changing the techniques of father handing over to son the



cultural methods to modern practice in farming with full understanding of up-to-date information, will meet the needs of young people enrolled in vocational agriculture and will fulfill the gap of vocational educational program.

The aims of the new system of education in Burma was stated, that

Out of the present system of education, the pupils of today would emerge as worthy citizens of tomorrow to serve the country in whichever field they are trained. With this end in view, the new curricula have been provided with the various branches of education - General, Special, Technical, Agricultural and Academic; and streaming would be according to their interests, aptitudes, abilities, and capabilities.<sup>1</sup>

Agricultural education in Burma is imparted at various levels like elementary agriculture in the primary schools, vocational agriculture in the middle and high schools, special agricultural schools of middle and high, training institutions such as State Training College for teachers which trains for elementary and middle school agricultural teachers and the State Agricultural Institute which trains extension officers and vocational agricultural teachers for high school. To some extent informal classes for the young and adult farmers are given by the department of agriculture. Unfortunately, up to the present time, the agricultural education and extension education is still in need of a solution at the college level.

As every student is not fitted for higher academic studies because of difficulties of academic and economic

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<sup>1</sup>"The Present Educational System of Burma" (A Report), Rangoon (1965), p. 2.

conditions, the majority of people terminate their education after high school. Therefore, to give some type of vocational education to the ones who cannot pursue higher education would meet the policy on education proclaimed by the Revolutionary government on the 30th of August, 1962.

17(a) Education. The Revolutionary Council believes that the existing educational system unequated with livelihood will have to be transformed. An educational system equated with livelihood and based on socialistic moral values will be brought about. Science will be given precedence in education.

Our educational target is to bring basic education within the reach of all. As regards higher education, only those who have promise and enough potentialities and industriousness to benefit from it will be specially encouraged.

This is, indeed, a unique changeover, as a marked criticism of the old colonial education system was its neglect and lack of provision of technical and vocational instruction and the studies of the natural sciences. Moreover, the old system was highly academic. It led on to the universities with its single track curriculum and its pre-occupation with bookish learning and examinations.<sup>2</sup>

At present many high schools have agriculture as a vocational subject. The uniform syllabus was prescribed to teach and was recognized as an optional subject for the high school final and matriculation examinations. Therefore, more theoretical instructions are given and divorced from the natural environment.

The school farms are large enough; to conduct a supervised farming practice within the school is limited because of the great number of students. Besides there will be no sense if the supervised practices were conducted on school farms.

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<sup>2</sup>Ibid., p. 2.

Therefore, at present, the practical applications received by the student on school farms are exercises and not like the performance of the actual job.

The teacher has to follow the prescribed syllabus even though it might not be fitted to the community's agriculture. It seems the present course of study is general agriculture rather than vocational agriculture.

Being taught to every student as an optional subject, the objective of vocational agriculture does not meet the individual needs, interest, capabilities, and opportunities for the future.

To give the same instruction to the heterogeneous group is contrary to the objective of vocational agriculture. For the appropriate instruction to the different pupils, the consideration should be based on their interests, needs, capabilities, and future expectations for their career.

From the author's point of view, the following drawbacks are apparent. First, the agricultural education in high school is not vocational in nature. Second, the teachers are not using appropriate methods in teaching which may help in achieving the goals of student and teacher.

To eliminate these drawbacks, well trained personnel are needed in the field of agricultural education at the training institutions in Burma.

As an emerging nation, everything cannot be successful within a short period of time. To adopt an idea of supervised practice farming will, of course, take time to be incorporated in vocational agriculture.

Having accepted that the best procedure of learning in agricultural education is learning to do through doing. According to this universal concept of vocational agriculture, learning by doing and earning by farming, therefore, will be the major objective of vocational agriculture in Burma.

Therefore, by realizing the value and importance of supervised practice teaching in the total curriculum of vocational agriculture for the high school pupils, the pupils of Burma must be in conformity with the modern methods of supervised farming.

#### Statement of the Problem

To identify the supervised practice teaching, conducted by the teachers of vocational agriculture, and to study the effective projects managed by the pupils.

To propose some principles by reviewing the literatures which are related to supervised training programs and curriculum, which should be suitable to the conditions in Burma.

#### Definition of Terms

Supervised Farming Program: is the farming program carried out by a student, usually on the home farm under the supervision of the teacher with the cooperations of parents and neighbor farmers. The supervised farming programs for the high school boys and girls are designed to include:  
(1) productive enterprises, (2) improvement projects, and  
(3) supplementary practices.

Supervised Practice Teaching: refers to the teaching techniques and methods used by teachers in developing and supervising student farming programs according to the prescribed curriculum with the application of community resources.

Productive Enterprise: is a business venture for experience and profit involving the production of ornamentals, vegetables, fruits, crops, and livestock limited to a production cycle in a farm enterprise.

Major Project: is a production project which normally yields the major income in a pupil's farming program.

Minor Project: is a production project which ordinarily yields less income than major project. It may be established for major project.

Improvement Project: which increases appreciably the real estate value of the farm or improves the efficiency of the farm business.

Supplementary Practice: is jobs selected for the purpose of improvements and experience for the development of skills, which supplement what is done in the productive and improvement projects.

Vocational Agriculture: is systematic instruction in agriculture to secure proficiency in farming practice.

Related Subject: is differentiated from vocational subject; generally it is an academic subject and non-vocational.

School Laboratory Plot: is the systematic allocation of land area which presents a practical phase of training within the school to help the method of instruction for effectiveness.

## Purpose of the Study

The major purpose of this study is the identification of practices and techniques and in developing supervised practice teaching in vocational agriculture and to make some suggestions for the prescribed curriculum which might help in developing the agricultural education of vocational nature.

In order to accomplish these objectives major attentions are given to the following items:

A. To identify the types of supervised practices conducted by the students under the proper supervision of teachers.

B. Meaning and definition of supervised farming program, purposes, and nature.

C. To propose and supplement principles and methods for the curriculum of vocational agriculture.

D. To obtain findings and propose them for the application to the following benefits:

1. Directly, this study will be valuable for the Department of Education, Division of Technical and Vocational Education as a supplementary program instruction in vocational agriculture.

2. Indirectly, this study shall serve as a follow-up study program for the training institutions.

## Limitation of the Study

This study was written while the writer was away from native country. Direct observations and personal interviews with the teachers was not possible.

With the writer's experiences as a vocational agricultural teacher and data and informations obtained by correspondences, this study was completed.

#### Scope of the Study

In the preparation of this study two areas are included. First, the study was restricted to identify the types of supervised practices conducted by the senior agricultural teachers at the State High School, who were graduates from State Agricultural Institute, Pyinmana, Burma. Second, the curriculum for agriculture was extended to the fifth standard which is generally recognized as first year vocational agriculture.

Therefore, the study is restricted to the State High Schools and middle schools in the intensive research area.

But for the formulation of agricultural education as a whole concept in the nation, the general curricular study was extended to higher training institutions.

#### Hypotheses to be Tested

The hypotheses tested in this study is formulated on the response of teachers of vocational agriculture of Burma as follows:

1. For the determination of supervised farming programs between two groups of teachers, one group who taught only vocational agriculture and the other group who taught vocational agriculture as well as regular subjects.

2. The variations of supervised farming programs, type of productive enterprises which is major and minor, improvement and supplementary practices which follow.

3. To find out the utilization of lands for the school laboratory plots.

4. To develop general survey of the effectiveness of community resources in developing the supervised farming programs.

#### Methods of Procedure

In obtaining the information and data needed to complete the study, the following procedure was pursued.

1. The information regarding the teaching loads of teachers, the allocation of lands for school laboratory plots, the types of supervised practice teaching programs, the enrollment including differentiated sexes, farm origins and community surveys were obtained by sending questionnaires to the teachers of vocational agriculture in Burma.

2. Regarding the necessary educational policy and information were obtained from the Director of Education, Rangoon, Burma.

3. The curriculum and other information of higher education in agriculture were obtained from Institute of Agriculture, University of Mandalay, and State Agricultural Institute, Pyinmana, Burma.

In obtaining data and testing the established hypotheses, the following steps were pursued:



1. First, schools were selected tentatively according to the educational divisions for the general survey.

2. Second, two groups of teachers were selected based on subject teaching loads.

3. Third, schools were selected based on the common productive enterprises for the formulation of the majority and minority enterprises.

4. Fourth, two groups of schools were selected based on the possessed land area in order to find the difference of the distribution of school laboratory plots. Then percentages were developed.

5. Fifth, thorough survey was made on the community importance concerning programs carried out by the pupils.

## CHAPTER II

### REVIEW OF LITERATURE

The unique feature of vocational agricultural education is the supervised practice farming program through which practical experiences were gained and abilities were developed.

The term "supervised practice farming" is an out-of-classroom individual activities, conducted by the pupil under the proper supervision and application of given instructions by the teacher at the student's home farm projects.

Beamer (1951) expressed his opinion concerning the purpose of supervised farming program that:

The central and main purpose of the supervised farming program is to provide the student with learning experiences which will enable him to develop many of the abilities and attitudes necessary for success in a given type of farming. It provides the students with real problems to solve in their instructional programs. It sets up the machinery for effective application of the scientific thinking process. It makes education functional.<sup>3</sup>

Deyoe (1953) defined supervised farming program as follows:

Farming program includes all activities of farming and farm living, together with related activities off the farm, conducted by persons enrolled for instruction in vocational agriculture, which have

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<sup>3</sup>Rufus W. Beamer, "Improving Instruction through Supervised Farming", Agricultural Education Magazine, March, 1951, p. 205.

educative value and for which a department of vocational agriculture provides organized instruction and supervision.<sup>4</sup>

Phipps (1959) defined the supervised farming program and gave his opinion for having the program as follows:

A farming program is defined as all the farming activities of educational value conducted by a boy enrolled in vocational agriculture course for which definite instruction is provided by his teacher and parents. A farming program is very important because it provides a high school boy with opportunities to apply the knowledge and skills he learns in the vocational agriculture classroom and the farm mechanic shop. A farming program provides a boy with problems which he can bring to the classroom for study and discussion. It provides opportunities for relating the classroom instruction to the activities in his farm, which makes the classroom work more meaningful and provides opportunities for learning by doing. Finally, it helps a boy become established as a farmer.<sup>5</sup>

In his article, Hill stated from the learning situation that:

The supervised farming program is a method of learning to perform skills and operative jobs and to make managerial decisions. It provides for the practical application of the instruction.<sup>6</sup>

From the teaching point of view Smith expressed that:

"Farming programs are an essential means of learning. Therefore, they are an essential means of teaching if instruction is to be vocational."<sup>7</sup>

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<sup>4</sup>George P. Deyoe, "Farming Programs in Vocational Agriculture", The Interstate, Danville, Illinois, 1953, p. 14-15.

<sup>5</sup>Lloyd J. Phipps, "Handbook on Teaching Vocational Agriculture", Interstate, Danville, Illinois, 1959, p. 265.

<sup>6</sup>C. W. Hill, "Farming Program for Learning" Agricultural Education Magazine, August - September, 1962, p. 47.

<sup>7</sup>W. A. Smith, "Why Have Farming Program?", Agricultural Education Magazine, October, 1957, p. 76.

From the doing level, various authors mentioned their opinion and emphasized as follows: Deyoe expressed that, "One of the most important values of farming programs is that these activities provide for learning through doing".<sup>8</sup> Smith considered also that,

The pupils' farming programs is the chief means by which learning is carried to the doing level and the ability to perform is brought about. Possession of knowledge is not enough in vocational education. The use of knowledge is an end which must be sought. Hence, the off-quoted expression: Learning through doing. The emphasis is in learning to do.<sup>9</sup>

Practice is necessary to learning. Thus a close relationship must exist between the farming programs of student and the course of studies. Hammonds stated his agreement that:

Vocational agriculture advances only as the people engaged in it, recognize the necessity for practice, relate the practice to the course of study, and are able and willing to supervise the practice.<sup>10</sup>

The previous statement was affirmed by the emphasizing of the educative value of practice by Hammonds that,

Improvement in a function may be expected only when one performs the function better. The wrong learning, spiritless, aimless activity is not effective in securing desirable learning. Motivated practice of the correct procedure on the other hand, with the student desiring to improve his performance may be expected to bring improvement.<sup>11</sup>

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<sup>8</sup> Ibid., p. 4.

<sup>9</sup> Ibid., p. 76.

<sup>10</sup> Carsie Hammonds, "Teaching Agriculture", New York, McGraw Hill Book Co., Inc., 1956, p. 171.

<sup>11</sup> Ibid., p. 164.

As a supplement, the value of having a supervised farming program was stated by Deyor from two different sides as follows:

From the pupil's side, he stated the purpose and value of having a farming program is this way:

1. Farming programs provide experiences which contribute to the development of abilities needed for proficiency in farming of the type in which the student is likely to engage.
2. Farming programs provide a means for earning money.
3. Farming programs aid in progressive establishment in farming.
4. Farming programs lead to improvements in the home farm business.
5. Farming programs lead to improved farming in the community.
6. Farming programs contribute to the attractiveness of farm homes and farm life.
7. Farming programs lead to increased interest in agriculture and in farming.
8. Farming programs aid in development of attitudes and abilities of cooperation.
9. Farming programs may provide 'try out' or exploratory experiences in certain phases of farming.
10. Farming programs provide experiences and relationships which contribute to the development of good farmer citizens.<sup>12</sup>

From the teacher's side, he stated the effectiveness of instruction by having supervised farming programs that:

1. Farming programs provide opportunities for adjusting instruction to differences in individual and their individual needs.
2. Farming programs provide contacts which bring about wholesome relationships between the school and the community.
3. Farming programs provide an important basis for evaluating the effectiveness of instruction in vocational agriculture.<sup>13</sup>

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<sup>12</sup>Ibid., p. 15-25.

<sup>13</sup>Ibid., p. 25-29.

The mutual values received by both the student and teacher, are stated by Phipps concerning the farming program that:

A farming program provides a boy with opportunities to plan his work, make budgets, develop financial agreements, form judgements and make decisions. It provides a boy with a meaning device for evaluating the instruction he is receiving.

A farming program gives a teacher an insight into the problems of a boy and his parents and it makes it possible for him to be a better teacher.<sup>14</sup>

Phipps and Cook agreed that motivation is necessary in establishing a supervised farming program for pupils. They stated that:

Any conference on a farm to talk and the possibilities he has for the development of a desirable supervised farming program which will aid him in becoming established in farming and which will contribute to farm-family living, should include the father, mother, and son. There is no substitute for such a conference.<sup>15</sup>

For the supervision of farming programs of pupils, Phipps and Cook stated that:

Adequate supervision is essential in selecting, planning, and conducting supervised farming programs. Too frequently, instructors believe that parents and pupils know what is to be done and how to do it and that only a minimum number of home visits is necessary. The result of this attitude is narrow and poorly developed farming programs. The better teachers of vocational agriculture are cognizant of the need for many effective home visits.<sup>16</sup>

Knebel stated in an article that:

It has been assumed that a satisfactory supervised farm training program must be supervised and

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<sup>14</sup>Lloyd J. Phipps, "Your Opportunities in Vocational Agriculture", The Interstate, Danville, Illinois, 1957, p. 139.

<sup>15</sup>Ibid., p. 265.

<sup>16</sup>Ibid., p. 324.

encouraged by the teacher of vocational agriculture devoting a considerable amount of his time in supervising the farming programs of his students. This study supports this belief. Teachers from the fifty above-average departments averaged 547.5 supervisory farm visits per year in contrast to an average of 349.5 visits by teachers from the below-average departments. Students from above-average departments were visited 12.68 times during the year. This would be an average of approximately one visit per month. Students from the below-average departments were visited an average of 9.02 times annually.<sup>17</sup>

The Research Committee of a Southern Region Study in Vocational Agriculture stated their result that:

Regarding the time to be devoted to supervising farming programs of in-school and out-of-school students, 45.6 per cent of the respondents indicated that 20 to 40 per cent of the teacher's time should be devoted to supervising the students' farming programs, which shows the importance that they placed on this activity in the summer months.<sup>18</sup>

The importance of farm visitation stated by Bundy that:

It is assumed in many states that a minimum of six to eight visits per student must be made each year to maintain effective programs. To meet these standards it is necessary for a teacher of vocational agriculture to spend about 25 per cent of his time during the regular school year and about 75 per cent of his time during the summer months in farm visitation. Some of our most successful instructors are visiting their boys more than ten times each year.<sup>19</sup>

With relation for the decision making and responsibility or pupils on the farming program, Lattimer stated in the article that:

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<sup>17</sup> Earl H. Knebel, "Family Programs are a Factor", Agricultural Education Magazine, May, 1956, p. 244.

<sup>18</sup> The 1956 Research Committee of a Southern Region Study in Vocational Agriculture, p. 31.

<sup>19</sup> C. E. Bundy, "Developing Farming Programs of Vocational Agriculture Students", Agricultural Education Magazine, October, 1957, p. 79.

A good pupil's farming program provides for responsibility in making management decisions. While this varies from sole responsibility to only a share in making decisions which apply to some major jobs on the farm, such participation is to a large degree a measure of the training accomplishment. Certainly for enterprises conducted by the pupil the privilege of decision making is as valuable as it ever has been.<sup>20</sup>

Every teacher of vocational agriculture should consider the importance of the supervised farming practice program for the development of the pupil's education as well as his economic status. The concept of individual farming program stated by Smith is that:

In fact, it is being demonstrated that problems of pupil experiencing and responsibility can be arranged for with parents and cooperating farmers to include a much wider range of problems and a more practical farm-size experience in each than has been possible with projects in the past or ever can be with the individual ownership project. Furthermore, parents react more favorably to the idea of the individual project. They recognize that the boy is learning through experience in a real farming situation rather than a miniature of the real thing. This appeals to the farmer who has always been convinced that one learns to farm by farming.

If you doubt this, try it out on parents, or a cooperating farmer, and get their reaction. For example, if the boy needs experience in the care and management of calves on a dairy farm, ask Dad which would provide the more effective learning, for the boy to cooperate with him in solving the problems of rearing the calves on the farm or for the boy to have a calf of his own to be reared separately. The same idea can be applied to any other enterprise on the farm. The cooperation of the parents is required of course, but when obtained it has many advantages to the teacher.<sup>21</sup>

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<sup>20</sup>E. C. Lattimer, "Pupil Farming Programs", Agricultural Education Magazine, March, 1956, p. 195.

<sup>21</sup>Ibid., p. 76.



The characteristics of a desirable supervised farming program stated by Phipps and Cook were as follows:

1. It is of sufficient scope and difficulty to be challenging to the pupil.
2. It provides for the development of a large number of needed abilities to success in farming.
3. It contains production projects of a size that will provide opportunity for the pupil to make a satisfactory profit.
4. It contains production project, improvement projects and a number of supplementary farm practices.
5. It will result in the adoption by the pupil of a considerable number of approved practices.
6. It will lead toward establishment in farming through the accumulation of capital, land, livestock, farm equipment, and credit.
7. It will contribute to farm-family living.
8. It will demand the respect of the parents, the community, and the pupil.
9. It will provide opportunities for expansion each year.<sup>22</sup>

The characteristics of farming programs for high school pupils given by Deyoe were as follows:

1. Are sufficiently broad and comprehensive to contribute to the development of abilities important for success in farming and farm living.
2. Contribute to the accumulation of finances, foundation livestock, equipment, and other resources and to the development of arrangements which aid in establishment in farming.
3. Lead to improved attitudes and increased ability to work with others.
4. Provide for definite business agreements and sound financing of the activities.
5. Are adapted to needed improvements and to resources and facilities on the home farms.
6. Are adapted to the capacities, needs, and interests of the individual boys.
7. Provide for continuing and expanding activities in the farming of individual boys.
8. Provide orientation to broad responsibilities for the welfare of all.<sup>23</sup>

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<sup>22</sup>Ibid., p. 250.

<sup>23</sup>Ibid., p. 59.

Beamer (1951) gave the desirable characteristics of supervised farming program as follows:

1. It consists of productive projects, improvement projects, and supplementary farm practice jobs. The number, kind, and scope of the project should be sufficiently comprehensive to provide the student an opportunity to develop many of the abilities necessary for success in the type of farming he wishes to engage. It should be balanced, grow in scope, and improve in quality from year to year.
2. It is designed to lead the boys efficiently and effectively toward establishment in farming. It is difficult to justify taking six years to accomplish what you possibly could accomplish in four years by wise planning, careful guidance, and good teaching. This calls for a careful selection of farming activities. The student should select projects which would enable him to grow into a farming business.
3. It should usually be adapted to the home farm. Generally, the farming program should reflect the same farming type as that of the home farm.
4. It should include enterprises important in the community and lead to improved farming in the community.
5. It should lead to the improvement on the home farm.
6. It is the boy's program, one he is interested in and actively accepts.
7. The program must be designed to fit the individual. As a general rule, the boy should have simple enterprises in his first year, and the more complex enterprises his succeeding years. Some of the boys entering high school have had considerable farming experiences. This means we must start from where they are.
8. The program should be on a sound financial basis and the boy should own entirely or in part his productive enterprises. Business agreements with parents, or party concerned, should be in writing.
9. There should be written plans and an accurate set of records kept on the farming program. Records are necessary for determining progress.
10. The program should be evaluated primarily in terms of desired behavioral changes in the boys-- rather than the amount of money made.<sup>24</sup>

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<sup>24</sup>Ibid., p. 205.

## CHAPTER III

### APPLICABLE PRINCIPLES OF THE SUPERVISED FARMING PROGRAM TO THE CONDITIONS OF BURMA

The following principles were obtained from the review of literature in supervised farming programs which would be applicable to the conditions of Burma.

Education changes the human behavior. To teach a person means to change his behavior. Participation does not mean a mere repetition. It includes pupils' interest and desire to gain educative values. The primary aim of vocational agricultural education is to let the pupil to participate in activities. This means learning to do through doing. Therefore, to attain an educative goal and to adopt the agricultural education in vocational nature, the student should participate in activities.

Principle: The development of effective abilities are entirely dependent on the pupil's participation in the farming programs.

Supervised farming program does not mean exercises of classroom instruction. It has prospectives for the future career in agriculture. While the student is in school, he should have future aims and objectives. Today, to educate a farmer is an universal slogan in the developing nations. Therefore, we should not hesitate to guide a student in a

supervised farming program to be a prospective and able future farmer.

Principle: To become a prospective and a successful farm operator the pupil should practice supervised farming programs.

Supervision includes planning programs, solving problems, advising, guiding, and instruction. The pupils have difficulties in planning a program and in solving the problems. The teacher must supervise his farming program by assisting with possible ways and means. He should visit the pupil's home, meet his parents and neighbor farm operators, and observe the farm situations. He should encourage the parents and neighbor farm operators to cooperate in the student's farming program. Therefore, the motives of a student in developing his supervised farming program needs the motivation and cooperation of the teacher, parent, and neighbor farmers.

Principle: To establish a successful farm program, the teacher's supervision, cooperation, and encouragement of parents and neighbor farmers are necessary.

In establishing the supervised farming program, the management plays an important part. Choosing the sites for vegetable gardens or orchards and livestock places, financing the enterprises, collecting the necessary farm equipments and seeds, using adequate amount of fertilizer, and controlling weeds, pests, and diseases are included in the over-all management of skills. The student is the would-be successful farm manager by managing his own supervised farming project.

Principle: Supervised farming program aids the pupil in managing farm business practices.

Having supervised farming programs, the student will meet problems in every aspect such as to obtain seeds, fertilizer, financial problems, pests and diseases control, processing farm products, and marketing. When he encounters these problems, he would find out the possible solutions by experience and make decisions based upon the information he gained and by his own confidence developed.

Principle: Supervised farming program is a means of problem solving and decision making process.

The success and failure of farming programs will partly depend on the interest, activity and capability of the individual. Partly it depends on the natural unforeseen situations. From the farming program, we can obtain an evaluation by observing his interest in it, his activities he rendered, and his capabilities he attained. Besides this farming program might serve as an experimental step for his future living. Therefore, the supervised farming program shall serve as a determinant of his future career.

Principle: Supervised farming program measures the individual interest, activity, capability, and future career.

Being established in a supervised farming program, the student, of course, can render his labor and utilize his time. The pupil has increased his worth through vocational agricultural training. This includes on-the-farm experience. The farm products will assist in his financial problem as well as

pocket money for his time in school. He can save and learn to use money wisely.

Principle: Supervised farming program has educative and economical values.

The supervise farming program of the student will assist in introducing new methods of farming practices for his home, farm, and community. Having these farm projects, will make home beautification and community attractiveness. As an experimental program, he can contribute the results of new practices and ideas in improving the community.

Principle: Supervised farming program contribute to the welfare of the home and community.

It is necessary in the field of agricultural vocational education to evaluate. Through the activities such as the educative achievement of the student and in successful teaching of the teacher and in meeting the curriculum in the vocation in nature can be judged by evaluating the supervised farming program. Thus, the supervised farming program is the primary step in evaluating the vocational agricultural education.

Principle: Supervised farming program is a standard to evaluate the curriculum in the nature of vocation, the pupil's needs and satisfaction in the course of study, and the teacher's success in his job.

The beliefs of the teacher in the field of vocational agriculture are important in establishing the supervised farming programs for his pupils. Therefore, he motivates the student to carry out a farming program and encourages the

parents and neighbor farm operators to cooperate in it. Thus, the student starts his program and expands year after year as he grows older. He meets the problems and looks for solutions to solve the problems. He gets returns from his program which meets his needs and satisfactions. In this way, the supervised farming program motivates the student to rely on himself and stimulates him to be an independent business person.

Principle: Supervised farming program motivates and encourages the pupil to be self confident and develop an independent nature.

## CHAPTER IV

### REVIEW OF CURRICULUM

Today is the period of changing times. The curriculum which was developed in the past years would not be fit to the changing society. As long as the specialization in a particular area is more emphasized, the broader will be the high school curriculum, because of the enriching information and findings.

In the report of "Present Educational System of Burma" the curriculum was stated as:

THE CURRICULA: - Greater emphasis has been placed on the teaching of the natural science, the conscientious and thorough assimilation of the fundamentals of science and the promotion of more technical and vocational biased schools are being encouraged. Further revision of the syllabus is being contemplated also, so as to keep in line with the aims of the Revolutionary Government. The chief object of re-orientating the curriculum, is to inculcate in the pupils, a spirit of cooperative living, to practice the principles of democracy, to stress the importance of character-building and to appreciate the dignity of labor.<sup>25</sup>

To get in touch with the new information and findings, the curriculum should be flexible in nature in order to allow for practical applications. In developing the curriculum, attention should be paid to the pupils' needs, capabilities, and interests and changing society.

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<sup>25</sup>Ibid., p. 3.



Gamble considered the developing of an agricultural education curriculum for Burma that:

A real challenge for the Department of Education is to provide the education and training in the agricultural courses for the various types of personnel which are supposed to be prepared. The present system of uniform syllabus throughout the country is not consistent with the requirements of agriculture and of training various type personnel. Greater flexibility is needed in the instructional program.<sup>26</sup>

Besides relating the adoption of the uniform syllabus in agricultural education, Gamble expressed his opinion that: "Consideration needs to be given to more adoption of the study of agriculture to local or regional conditions".<sup>27</sup>

The curriculum reflected in every society is what the people think, how they feel, believe, and do. The teacher is entirely responsible for the developing of the curriculum which meets the needs, interests, and capabilities of the people.

Coster pointed out the following as the teacher's roll in planning the curriculum.

1. The teacher is responsible for bringing the potentiality of technical change to the attention of his students.
2. The teacher is responsible for assisting his students in defining the problem and analyzing the potentialities suggested by the problem.
3. The teacher is responsible for marshalling presenting, analyzing and clarifying data pertaining to the problem.

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<sup>26</sup>William K. Gamble, "An Analysis of Agricultural Education, Training and Personnel Requirements as a Basis for National Development in Burma", Cornell University, June, 1961, Unpublished Ph. D. Thesis, p. 205.

<sup>27</sup>Ibid., p. 216.

4. The teacher is responsible for guiding the thinking of his students as tentative decisions regarding the change are reached.<sup>28</sup>

Beamer stressed in his article that:

Learning activities which go to make up a curriculum must be based on the educational needs of people to be served.....The supervised farming programs of students studying vocational agriculture have been instrumental in preventing the curriculum in vocational agriculture from seriously neglecting individual needs.<sup>29</sup>

The various authors defined and stated the nature of curriculum and its value in many ways. One of them, Mursell, stated that "The content of the curriculum itself is full of potential life values and it is the business of teaching to realize their value".<sup>30</sup> As a continuation, he stressed his idea that, "The success of teaching is determined by the kind of people it tends to produce rather than by the amount of subject matter it manages to instill".<sup>31</sup>

Reviewing the curriculum for vocational agriculture was the goal of the author to develop the practical and beneficial programs in teaching vocational agriculture in the schools of Burma. Thus two major objectives were obtained: (1) To develop educative values by meeting the pupils' needs, and (2) To build strong practical units within the total curriculum in terms of supervised practice farming programs.

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<sup>28</sup> John K. Coster, "Curriculum Planning and Technical Development in Agriculture", Agricultural Education Magazine, October, 1961, p. 89.

<sup>29</sup> Ibid., p. 205.

<sup>30</sup> James L. Mursell, "Successful Teaching", New York, McGraw Hill Book Co., Inc., 1954, p. 4.

<sup>31</sup> Ibid., p. 3.

## Revised Curriculum of High School Vocational Agriculture

This revised vocational agriculture curriculum was developed from the previous-prescribed curriculum for the high schools in Burma. The previous curriculum was not formulated in the areas of instruction, course of study, units of instruction, and methods to be taught. Therefore, the previous curriculum for the high school vocational agriculture was revised and formulated as follows.

### Areas of Instruction

- A. Orientation and Guidance
- B. Plant Science
- C. Soil Science
- D. Animal Science
- E. Farm Management
- F. Farm Mechanic
- G. Supervised Farm Practices

### Course of Study

- A. Orientation and Guidance
  - 1. Description of agriculture, objectives, and opportunities
  - 2. Survey of communities
  - 3. Study of agricultural agencies
  - 4. Discuss supervised farming program
- B. Plant Science
  - 1. Principles of plant growth

2. Vegetable growing
  3. Fruit growing
  4. Crop production.
- C. Soil Science
1. Nature of soil
  2. Soil fertility
  3. Commercial fertilizer
  4. Soil conservation
- D. Animal Science
1. Poultry production
  2. Swine production
  3. Duck production
  4. Sheep and goat production
  5. Cattle management
- E. Farm Management
1. Production
  2. Processing
  3. Distributing (Marketing)
  4. Management (Record keeping)
- F. Farm Mechanic
1. Equipments
  2. Bamboo and woodwork
  3. Concrete and metalwork
  4. Farm sanitation and building
- G. Supervised Farm Practices
1. Establish productive project
    - a. Major
    - b. Minor

2. Follow-up improvement projects
3. Follow-up supplementary practices

### Units of Instruction

#### 5th Standard (First Year)

Units to be Taught	Methods to be Used
A. 1. Description of agriculture course, objectives, opportunities, and careers.	Discussion
2. Survey the community farms, vegetables, fruits, flowers, crops, and livestock.	Field Trip Study
3. Discuss supervised farming objectives and values.	Discussion
B. 1. Principles of plant growth	
a. Study the parts of a seed, germination and identification of seeds.	Lecture and Laboratory exercise
b. Study parts of plants, roots, stems, leaves, and flowers.	_____ do _____
c. Study the conditions for plant growth, soils, essential elements, climate conditions.	_____ do _____
C. 1. Nature of Soil	
a. Study types of soil in the community.	Field trip. Take samples to the laboratory class for identification practice
b. Clay, loam, and sand.	
D. 1. Poultry Production	
a. Breed selection	Supervised production major project
b. Incubation	
c. Brooding and feeding	
d. Care and management	

## 5th Standard (First Year), Cont'd.

Units to be Taught	Methods to be Used
3. Duck Production <ul style="list-style-type: none"> <li>a. Breed selection</li> <li>b. Incubation</li> <li>c. Brooding and feeding</li> <li>d. Care and management</li> </ul>	do follow as an alternate after poultry
F. 1. Farm use equipments <ul style="list-style-type: none"> <li>a. Identify tools</li> <li>b. Care and use</li> </ul>	Demonstration

## 6th Standard (Second Year)

Units to be Taught	Methods to be Used
A. 2. Survey the community farms, vegetables, fruits, flowers, crops, and livestocks.	Field trip study
B. 2. Vegetable growing <ul style="list-style-type: none"> <li>a. Preparing seed bed</li> <li>b. Cultural practice, transplantation, fertilization, and weed control.</li> <li>c. Pest and disease control</li> </ul>	Supervised Productive major or minor project Improvement practice follow
3. Fruit growing <ul style="list-style-type: none"> <li>a. Nursery practice</li> <li>b. Planting and care</li> <li>c. Fertilization</li> <li>d. Weed control</li> </ul>	Supervised Productive major project Improvement practice follow
C. 1. Nature of soil <ul style="list-style-type: none"> <li>a. Essential elements NPK</li> <li>b. Review types of soil</li> </ul>	Discussion Laboratory study
2. Soil fertility <ul style="list-style-type: none"> <li>a. manures, animal and plant</li> </ul>	Discussion

## 6th Standard (Second Year), Cont'd.

Units to be Taught	Methods to be Used
D. 2. Swine production a. Study breeds in community b. Start keeping sow and breeding c. Care, feeding d. Pest and disease control	Supervised Productive major project
E. 1. Production a. Study community produces 2. Processing a. Study the processing areas 3. Distributing a. Study the markets in community	Educational tours  ____ do ____  ____ do ____
F. 2. Bamboo and woodwork a. Start making waterers and feeders with bamboo. b. Stand feeders with woods	Supervised

## 7th Standard (Third Year)

Units to be Taught	Methods to be Used
A. 2. Survey the Community a. Study student projects b. Meeting with community growers and raisers	Field trip  Discuss the problems
B. 2. Vegetable growing  3. Fruit growing a. Care, fertilization b. Weed and disease control c. Propagation methods	Supervised Major or minor productive projects  Supervised

## 7th Standard (Third Year), Cont'd.

Units to be Taught	Methods to be Used
C. 3. Commercial fertilizers a. Methods of application b. Mixing	Supervised
D. 4. Sheep and goat production a. Study breeds b. Selection and breeding c. Care and management d. Judging livestock (1) Poultry (2) Duck (3) Swine	Supervised Productive major project  Principles and practice
E. 1. Production 2. Procession 3. Distribution	Study tour to community areas
F. 2. Bamboo and woodwork a. Make fence b. build chicken and duck house	Supervised Supplementary practice

## 8th Standard (Fourth Year)

Units to be Taught	Methods to be Used
A. 3. Study agricultural agencies a. Department of agriculture b. Experiment farms	Educational tours, invite the department agents, and discuss
B. 2. Vegetable growing 3. Fruit growing 4. Crop production	Supervised Productive continuation projects
a. Study major crops such as rice, sugar cane, jute,	Discussion, Field trips, Crop



## 8th Standard (Fourth Year), Cont'd.

Units to be Taught	Methods to be Used
ground nut varieties, cultural practice, common pests and disease, and harvesting	identification, laboratory exercise, and supervised productive projects
D. Animal Science	Supervised Continue practice
a. Culling	
b. Feeding	
c. Incubation	
d. Brooding	
e. Pest and disease control	
f. Judging practice	
(1) Cattle - breeds characteristics	Discussion Arrange to meet personnel from agricultural economics or marketing agencies
E. 3. Study marketing conditions in community for crops and live- stocks.	
a. Supply and demand	
b. Farm records	
c. Budgeting	
d. Cooperatives	Supplementary practice, laboratory exercise
F. 3. Concrete and metalwork	
a. Mix concrete - methods and practice	
b. Soldering sheet metal	
c. Make feeders and water cans	

## 9th Standard (Fifth Year)

Units to be Taught	Methods to be Used
A. 3. Study agricultural agencies <ul style="list-style-type: none"> <li>a. State Agricultural Marketing Board</li> <li>b. Veterinary Department</li> <li>c. Agricultural and Rural Develop Corporation</li> <li>d. Study government community development programs</li> <li>e. State Agricultural Bank</li> </ul>	Discussion Educational tours Invite the persons and conference
B. 2. Vegetable growing 3. Fruit growing 4. Crop production <ul style="list-style-type: none"> <li>a. Study major crops, continue; cotton, tobacco, corn, etc.</li> </ul>	Supervised productive continuation projects
C. 4. Soil Conservation <ul style="list-style-type: none"> <li>a. Irrigation</li> <li>b. Drainage</li> </ul>	Discussion Improvement practices
D. Animal Science <ul style="list-style-type: none"> <li>a. Care, feeding</li> <li>b. Breeding</li> <li>c. Pest and disease control</li> <li>d. Marketing practice for products such as egg and meat</li> <li>e. Common cattle disease</li> </ul>	Supervised continuation projects     Discussion
E. 4. Management <ul style="list-style-type: none"> <li>a. Problems in community</li> <li>b. Farm records</li> </ul>	Supplementary practice
F. 4. Farm sanitation and building <ul style="list-style-type: none"> <li>a. Study sanitation in community</li> </ul>	Supplementary _____ do _____

## 9th Standard (Fifth Year), Cont'd.

Units to be Taught	Methods to be Used
b. Farm building designs	Improvement
c. Determine the materials for building	Discussion
d. Basic electrification	Discussion

## CHAPTER V

### PROPOSED AGRICULTURAL EDUCATION CORE CURRICULUM FOR HIGH SCHOOL

To create the core curriculum, optional and vocational, for the agricultural education is necessary. The optional curriculum should be designed for those who wish to study scientific agriculture which includes theory and laboratory exercises for the intension of an optional subject for the high school final and matriculation examinations. The vocational curriculum should be designed for those who wish to learn the agriculture in an area of production by establishing supervised farming programs with the intension of a future living.

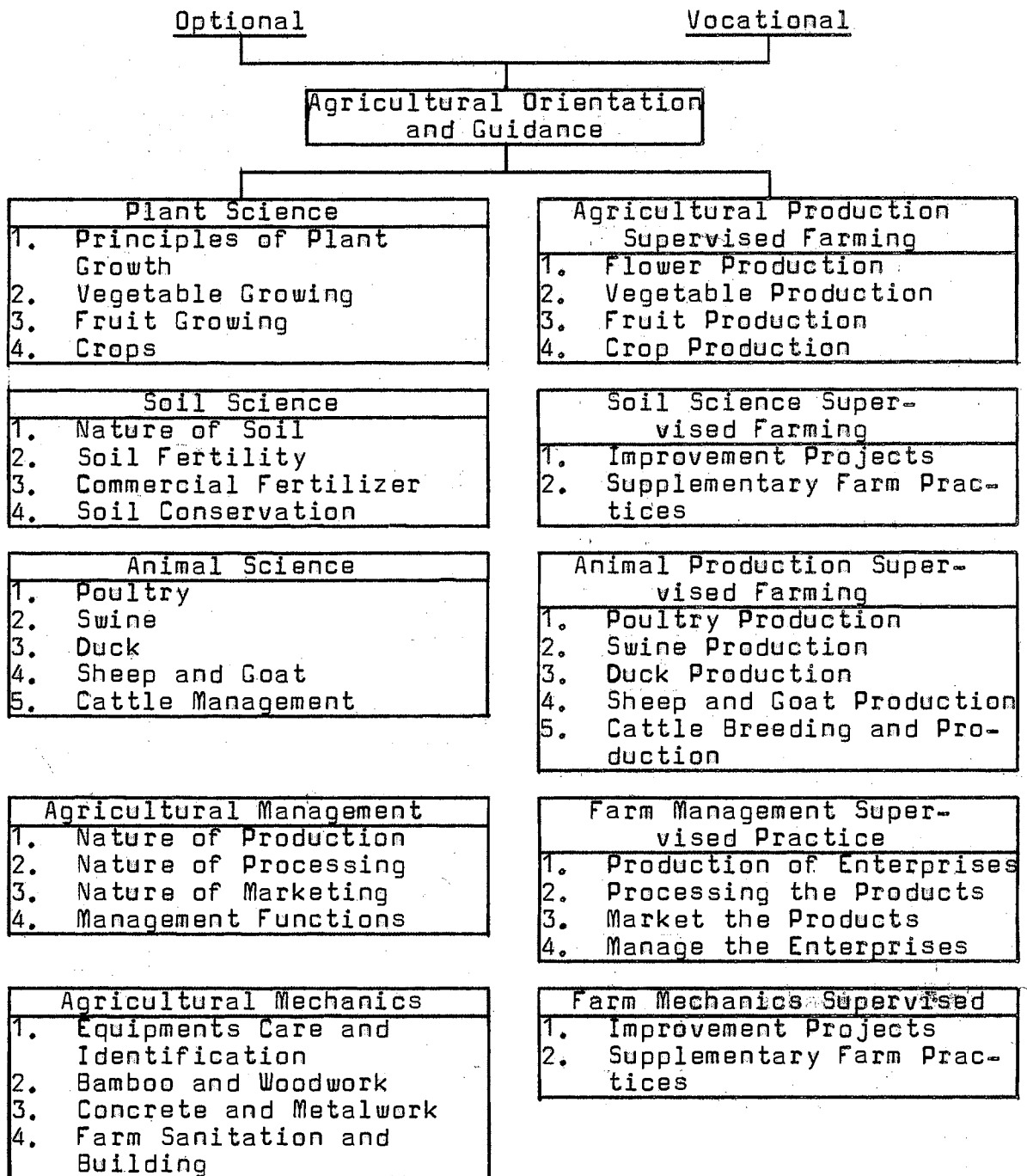
Both optional and vocational students must have theory and laboratory exercises in school.

Thus, the total agricultural curriculum may be divided into two areas such as science and production. The science area shall include the course of study and the applications such as laboratory exercises in classroom, in school laboratory plots, field trips, and educational tours.

The production area shall include all types of supervised farming such as productive major and minor enterprises, improvement projects, and supplementary farm practices.

TABLE I

DIAGRAM OF PROPOSED AGRICULTURAL EDUCATION  
CORE CURRICULUM FOR HIGH SCHOOL



## Reasons for the Formulation of Core Curriculum

The reasons to develop and to propose this core curriculum in agricultural education is as follows:

First, agriculture as a school subject was prescribed as a nature of vocational subject.

Second, agriculture as a school subject was recognized as optional for the high school final and matriculation examinations, which emphasize the theories.

Third, not all schools which have agriculture are in rural areas. Some of them are located in urban areas. There will be those who are in urban schools who might fail to pursue this vocational program not because of lack of interest but because of the scarcity of land.

Fourth, some students are farm oriented and are ready to provide their home farms for supervised farming programs.

Fifth, the majority of students who are in school, although they enroll in vocational agriculture, they have no intension to go back to the farms.

Sixth, there are intermediate training schools for agriculture such as farm schools and agricultural high schools which demand and prefer the trainees with farming experiences.

Seventh, this program (core curriculum), would meet the implementations of the government's community agricultural development programs.

Eighth, this core curriculum could serve as a forerunner for the creation of classes on farm education for the young and adult farmers.

CHAPTER VI  
AGRICULTURAL CURRICULUM OF  
HIGHER INSTITUTIONS

This chapter will cover briefly the nature of the curriculum developed in two higher institutions.

University of Mandalay, Institute  
of Agriculture

This institution is the highest academic agricultural institution in Burma, formerly known as Faculty of Agriculture, University of Rangoon. The highest degree which is conferred by this institution is Bachelor of Science in Agriculture. The length of the study period is developed for five years. There are no elective courses; they mostly emphasize academic and technical courses. The curriculum has excluded agricultural education up to this time. The following departments exist and the courses are numbered by the departments and are divided into two terms (1st Term and 2nd Term) in a year.

- |                             |                    |
|-----------------------------|--------------------|
| 1. Agricultural Chemistry   | 7. Plant Pathology |
| 2. Agricultural Botany      | 8. Physics         |
| 3. Agricultural Economic    | 9. Mathematics     |
| 4. Agricultural Engineering | 10. English        |
| 5. Agronomy                 | 11. Burmese        |
| 6. Entomology and Zoology   | 12. Horticulture   |

## State Agricultural Institute

This institution was established in the year 1954 to train the agricultural extension personnel for the township level and agricultural teachers for the high schools. This institute offers a diploma after the completion of a three-year study. The following curriculum was adopted for three-year study:

<u>First Year</u>	<u>Second Year</u>
Agronomy	Agronomy
Botany	Administration
Chemistry	Entomology
English	Chemistry
Farm Mechanics	Dairy
Animal Husbandery	Education
Horticulture	Farm Mechanics
Poultry and Swine	Farm Management
Physical Education	Botany
	Plant Protection
	Horticulture
	Physical Education
	<u>Third Year</u>
Agronomy	Extension
Farm Mechanics	Horticulture
Dairy	Plant Protection
Economic	Poultry and Swine
Education	Physical Education



TABLE II  
TWO TYPES OF GRADUATES FROM STATE  
AGRICULTURAL INSTITUTE

Year	Extension Personnel	Voc. Agri. Teachers
1954	41	23
1955	47	24
1956	45	0
1957	46	18
1958	51	18
1959	60	20
1960	72	7
1961	62	0
1962	49	7
1963	56	8
1964	<u>49</u>	<u>0</u>
Total	<u>578</u>	<u>125</u>

The 125 teachers of vocational agriculture were selected from the schools by the Department of Education and sent for undertraining as an in-service teacher. Most of the teachers were two-year teacher training certificate holders and some of them had teaching experience at the state schools. The whole curriculum is emphasized and developed in extension education in order to prepare the personnel to serve in agricultural departments and agencies. The teachers of vocational agriculture had less training in agricultural education and more in technical agricultural fields. There is no doubt about the necessity of agricultural education for them.

## CHAPTER VII

### PRESENTATION AND ANALYSIS OF DATA

The data presented in this chapter was secured from seventy-six vocational agricultural instructors of Burma. For the determination between two groups of teachers, who taught only vocational agriculture and the ones teaching vocational agriculture as well as regular subjects, the returned questionnaires were divided into two groups according to the teaching loads as they have stated. It was found out that the fifty-one teachers who taught both vocational agriculture and regular subjects had 23.40 average teaching hours per week. The twenty-five teachers who taught only vocational agriculture had 17.60 average teaching hours per week. It was assumed that the teachers of first group who taught both vocational and regular subjects might have assistant teacher to teach vocational agriculture for the junior classes such as 5th, 6th, and 7th Standards. For those who are in the second group, teaching only vocational agriculture, have no assistants and take teaching responsibilities for juniors and seniors. But on the other hand, it can be assumed that, in general, the teachers who are in group one are helping for the welfare of school by assisting the regular teachers. The second group does not assist the school because of a sufficient number of regular teachers. It was found out that

there was slight variations in conducting the school laboratory plots and in individual projects between the two groups of teachers.

All of the teachers of all of the schools mentioned their activities for productive enterprises consisting of ornamental, vegetable, field crops, orchard, and livestock. A majority of them conducted supplementary practices and were less active for the improvement projects. Most of the enterprises were related to the community's dominant interests according to the result of analysis.

TABLE III

DISTRIBUTION OF MAJOR ENTERPRISES AS EXPRESSED  
BY THE TEACHERS OF VOCATIONAL AGRICULTURE

Productive Enterprise	Majority	Minority
Ornamental	Craton	Sunflower
	Rose	Cosmos
Vegetable	Cabbage	Onion
	Tomato	Cauliflower
	Paddy	Sugarcane
Field Crops	Field Peas	Corn
	Banana	Papaya
Orchard	Mango	Citrus
	Poultry	Duck
Livestock	Swine	Cattle

Leading Enterprises as Expressed  
by the Teachers

In reference to Table III, the enterprises are divided into two groups, majority and minority. The distribution was selected with the most common enterprises as the majority and the less common ones as the minority. Variations were not found in other enterprises except field crops. Especially field crop enterprises were based on the community economic importances. It was found out that, the crops such as ground nut, cotton, and jute were not in the majority of the enterprises but they were conducted in certain communities that specialized in the particular crop. Ornamentals, vegetables, orchards, and livestock enterprises were very common in all of the schools.

TABLE IV

ALLOCATION OF THE LAND FORMULATED INTO  
ABOVE AND BELOW FIVE ACRES BASIC

Laboratory Plots	Above		Below	
	Acres	Per Cent	Acres	Per Cent
Ornamental	0.50	5.00	0.50	12.50
Vegetable	0.50	5.00	0.50	12.50
Orchard	1.00	10.00	0.50	12.50
Field Crop	5.00	50.00	1.50	37.50
Livestock	1.00	10.00	0.75	18.75
Pasture and Waste	<u>2.00</u>	<u>20.00</u>	<u>0.25</u>	<u>6.25</u>
Total	<u>10.00</u>	<u>100.00</u>	<u>4.00</u>	<u>100.00</u>

## The Allocation of Lands for School Laboratory Plots

In reference to Table IV, two groups of schools were selected on a five-acre basis. Group one consisted of forty-five schools with a possessed land area of above five acres. Group two consisted of thirty-one schools with land area below five acres. The average land area was calculated for each group so that the percentage of land allocation can be found for each enterprise.

Vegetable and ornamental areas are the same (.50 acres) in each group. All of schools allocated land for the field crops in large portion. The area for livestock is slightly different between each group. There is a wide variation between the two groups for the allocation of the pasture and waste land.

It was found out that, the group above five acres utilized more per cent of land in field crops, pasture, and waste. The group below five acres utilized the land widely in vegetable, ornamental, orchard, and livestock enterprises. This group had a very low percentage of pasture and waste land.

## CHAPTER VIII

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

As was stated at the onset, the primary purpose of this study was to identify the practices and techniques used in developing supervised practice teaching in vocational agriculture and to make some suggestions for the prescribed curriculum which might help in developing the vocational agricultural education in Burma.

#### Summary

The variations in accomplishments in supervised practice teaching programs in vocational agriculture in Burma, response of seventy-six teachers of vocational agriculture, indicate slight differences in the practices and techniques which they used in developing supervised programs.

In general, all of the teachers emphasized using school laboratory plots, as teaching techniques. This is a satisfactory group teaching technique. The development of the individuals according to their interests, abilities, and capabilities, with the relationship to their enterprises guided by the supervised farming programs, should be considered by the teachers.

By analyzing two types of pupils from farm and non farm oriented, it was found out that there was a difference in the

conducting of individual enterprises. It was shown in the returned questionnaires that the girls who enrolled in agriculture have shown an interest, ability, and capability in conducting individual projects with about the same enthusiasm as boys. All of the teachers of vocational agriculture have cooperation with other school personnel.

### Conclusions

This research study in the area of supervised practice teaching program and of the curriculum in agricultural education in the schools of Burma is the first and foremost one. Similar research study in this area is necessary. The development of agricultural education and the field of agriculture as a school subject occurred within a decade. As an emerging nation in the field of vocational agriculture, Burma needs more personnel in this area of specialization. The outcomes of this study revealed the gap of well trained personnel at the training institutions.

The author developed different approach in the teaching of vocational agriculture. This approach introduced teaching by units and methods which are outlined in the chapter of Review of Curriculum. The proposed core agricultural education curriculum would just meet the needs of demanding youngsters and would also serve as an instrument in problem solving for the inadequate pupil teacher ratio.

The obtained principles from the review of literature in supervised farming programs, which are assumed to be applicable to the conditions of Burma, shall serve as the major

objectives and hand and glove principles in the curriculum for teaching vocational agriculture.

The author assumes that the goals that he has pursued in this study will initiate improvements in teaching vocational agriculture in Burma. Directly this study will be valuable for the department of vocational education in agriculture and indirectly this study shall serve as a follow-up program at the training institutions in Burma.

### Recommendations

The findings of this study suggest several recommendations for the developing supervised practice teaching in vocational agriculture.

Based from the results of this study, the following is recommended:

1. The supervised practice farming program should be emphasized in the training program for the teachers of vocational agriculture.
2. The teachers should emphasize supervised practice farming in orientation programs.
3. The admissions in the department of vocational agriculture should be selective in nature based on the student's interest.
4. The agricultural core curriculum should be introduced and be applied in the schools.
5. The pupil-teacher ratio should be adequate in order to develop supervised farming programs.



6. The administrators of schools should not ask that regular subjects be taught other than vocational agriculture because it hinders pursuit of strong agricultural programs for the students.

7. In program planning for the supervised farming, the teacher should pay attention to the community conditions.

8. In order to develop strong supervised teaching programs, the curriculum should be flexible.

9. To get an understanding of the advantages of supervised farming programs, the curriculum should aim to the co-education for boys and girls.

10. The Department of Education should provide traveling allowances for the teachers to supervise the student projects.

11. The Department of Education should make an appraisal and reward program for the superior supervised farming programs.

12. The Department of Education should create the extension of supervisory staff at the divisional and district levels.

13. The Department of Education should establish vocational agriculture departments at all rural high and middle schools.

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## APPENDIX

- A. REPLY OF INSTITUTE OF AGRICULTURE  
UNIVERSITY OF MANDALAY
- B. QUESTIONNAIRES FOR TEACHERS
- C. SCHOOLS USED IN THIS STUDY

APPENDIX A

REPLY OF INSTITUTE OF AGRICULTURE  
UNIVERSITY OF MANDALAY

Study Question: If the students can major in particular field, please mention the following: Number of Students, Major Field, Minor Study.

Reply: At present there is no program for students to major in a particular field. Under the New System of Education, however, students of the final year class (of 1968) will be required to specialize in a subject of their own choice, besides taking some minor courses.

Study Question: Do you have extension program for the future in your institution? Please mention the educational programs.

Reply: Arrangements are being made for offering graduate courses in 1968.

APPENDIX B

QUESTIONNAIRES FOR TEACHERS

I. Name \_\_\_\_\_

II. School \_\_\_\_\_  
 Address \_\_\_\_\_  
 \_\_\_\_\_  
 (Village, Town, and District)

III. Present teaching load:  
 Vocational Agriculture \_\_\_\_\_ hrs. per week  
 Related Subject \_\_\_\_\_ hrs. per week

IV. Area of land for vocational agriculture in the school:  
 \_\_\_\_\_ acres

V. Allocation of the land:

Laboratory plots:		Area	Area
a. Ornamental	_____	d. Field crop	_____
b. Vegetable	_____	e. Livestock	_____
c. Orchard	_____	f. Pasture	_____

VI. Supervised enterprises:

<u>Productive enterprise:</u>	<u>Number of Projects</u>
Ornamental (a) Major project	boys girls
_____	_____
_____	_____
(b) Minor project	
_____	_____
_____	_____

Vegetable	(a) Major project	boys	girls
	_____	_____	_____
	_____	_____	_____
	(b) Minor project		
	_____	_____	_____
	_____	_____	_____
Field Crop	(a) Major project		
	_____	_____	_____
	_____	_____	_____
	(b) Minor project		
	_____	_____	_____
	_____	_____	_____
Orchard	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
Livestock	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

<u>Supplementary Practices:</u>	Number of Individuals
1. Repairing and improving fences	_____
2. Repairing and sharpening tools and equipments	_____
3. Constructing poultry equipment	_____
4. Building hog-lot equipment	_____
5. Constructing cattle equipment	_____
6. Culling poultry	_____
7. Pruning, fertilizing, and spraying fruit trees	_____

	Number of Individuals
8. Propagating fruit trees, ornamentals and plants	_____
9. Conserving farm manure	_____
10. Treatment of illness for the animals	_____
11. Improve feeding of livestock	_____
12. Controlling insects and diseases on crop	_____
13. Marketing of farm products	_____
<u>Improvement Projects:</u>	<u>Number of Projects</u>
1. Breed improvement of livestock including poultry	_____
2. Draining land	_____
3. Growing feed crops	_____
4. Irrigating land	_____
5. Planting soil improvement crops	_____
6. Crop rotation	_____
7. Conserving soil, water, and control erosion	_____
8. Keep farm records	_____
VII. Number of boys enrolled in agriculture	_____
VIII. Number of girls enrolled in agriculture	_____
IX. Number of boys of the farm enrolled in agriculture	_____
X. Number of girls of the farm enrolled in agriculture	_____
XI. Total number of students enrolled in agriculture	_____
XII. Cooperation of other teachers: Yes _____ No _____	



XIII. General survey:	In school	In community (check one)
A. General type of soil		
1. Clay	_____	_____
2. Loam	_____	_____
3. Sand	_____	_____
B. Irrigation		
1. Necessary	_____	_____
C. Drainage		
1. Excellent	_____	_____
2. Good	_____	_____
3. Bad	_____	_____
D. Type of erosion		
1. Water	_____	_____
2. Wind	_____	_____
E. Climate conditions		
1. Rainfall	_____	inches per year
2. Average temperature	_____	F.
XIV. Economic importance in your community		
A. Two major vegetables	1.	_____
	2.	_____
B. Two major flowers	1.	_____
	2.	_____
C. Two major fruits	1.	_____
	2.	_____
D. Two major crops	1.	_____
	2.	_____
E. Two major live stocks	1.	_____
	2.	_____

- XV. Market conditions: Excellent \_\_\_\_\_, Good \_\_\_\_\_,  
Bad \_\_\_\_\_
- XVI. Farm mechanization in your community: Yes \_\_\_\_\_  
No \_\_\_\_\_

APPENDIX C

SCHOOLS USED IN THIS STUDY

Division	High School	Middle School
Arakan	Kinmaw	
	Ponnagyun	
Falam	Haka	
Irrawaddy I	Kyangin	Chaungwa
	Lemyethna	Hleseik
	Ngathainggyaung	Natmaw
Irrawaddy II	Einme	Kyungone
	Kyaiklat	Nyaungngu
	Pantanaw	Sangin
	Pyapon	Wakema
Magwe	Minbu	
	Pwinbyu	
	Sinbaungwai	
	Sinbyngyun	
	Taungdwingyi	
	Thayetmyo	
Mandalay I	Madaya	Nandwin
	Myittha	
Mandalay II	Mahlaing	Myawyoegyí
	Pyinmana	Popa
	Sameikkon	Sulegon

<u>Division</u>	<u>High School</u>	<u>Middle School</u>
	Tatkon	Ywadun
	Yindaw	
	Ywathit	
Pegu I	Daiku	
	Kayan	
	Pyu	
	Tantabin	
Pegu II	Insein	
	Tantabin	
Pegu III	Gyobingauk	Inbinhla
	Laymyethna	Leikin
	Letpadan	Mahabaung
	Monyo	Thitnapha
	Padigon	Wetpoke
	Paukkaung	
	Taungup	
	Tharrawaddy	
	Tharrawaw	
Sagaing I	Kanbalu	
	Kawlin	
	Myinmu	
	Ngazun	
	Pinlebu	
	Shwebo	
Sagaing II	Kalemyo	Ahmyint
		Natchaung
		Saton
		Yamadein

<u>Division</u>	<u>High School</u>	<u>Middle School</u>
Tenasserim	Bilin	Kamyaing
	Muritkalay	Naunglan
	Palaw	Thayetchaung
	Paung	
	Ywalut	

VITA

U Soe Maung

Candidate for the Degree of  
Master of Science

Thesis: AN IDENTIFICATION OF SUPERVISED PRACTICE PROGRAMS,  
PRINCIPLES, AND REVIEW OF CURRICULUM FOR VOCATIONAL  
AGRICULTURAL EDUCATION IN BURMA

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Thayetpinseik Village, Okpo Town-  
ship, Burma, November 13, 1934, the son of U Gaw  
Yar and Daw Pu Hla

Education: Attended State High School, Okpo, passed  
Government High School Final Examination in March,  
1951, and Matriculation Examination in December,  
1954; received Diploma in Agriculture in March,  
1956, from State Agricultural Institute, Pyinmana;  
passed the Intermediate of Arts Examination in  
September, 1961, from the University of Rangoon,  
Burma; received Bachelor of Science in Agriculture  
from University of Florida, with a major in Agricul-  
tural Education in December, 1963; continued gradu-  
ate study at University of Florida and transferred  
to Oklahoma State University in the spring of 1965;  
completed requirements for the Master of Science  
degree in August, 1965.

Experiences: Served as secretary and junior teacher at  
State High School, Okpo, from 1952 to 1954; taught  
vocational agriculture as a senior teacher at State  
High School, Tharrawaw from June, 1956, to March,  
1959; transferred to the Union High School, Rangoon,  
and taught agriculture from June, 1959, to January,  
1962; selected to study for agricultural education  
in the United States in January, 1962. Member of  
Alpha Tau Alpha, Agricultural Education Fraternity  
and Phi Delta Kappa, International Professional  
Fraternity for men in Education.