

*Dept. of Edu.  
Div. of Agr. Edu.*

STATE OF INDIANA  
DEPARTMENT OF PUBLIC INSTRUCTION  
DIVISION OF VOCATIONAL EDUCATION

BULLETIN No. 100 G-2

Courses In Agriculture for High Schools

ROY P. WISEHART  
State Superintendent of Public Instruction

September, 1928

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## Courses for Agriculture in High Schools

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Prepared under the Direction of the  
INSPECTION DIVISION  
and  
ROY P. WISEHART  
State Superintendent of Public Instruction

Reprinted November, 1930

1928

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### Foreword

These Courses in High School Agriculture represent the product in part of a seminar conducted at Purdue University under the direction of S. S. Cromer, Professor of Agricultural Education, assisted by Professor R. W. Gregory and Mr. W. A. Smith, Itinerant Teacher Trainers in Vocational Agriculture. The following agriculture teachers in Indiana high schools enrolled in the seminar and completed the course:

P. S. Lowe, Frankfort, Indiana  
P. J. Davis, Elwood, Indiana  
F. S. Gayley, Fairmount, Indiana  
A. A. Dull, Stockwell, Indiana  
J. R. Rees, Battle Ground, Indiana  
E. L. Hartman, Medaryville, Indiana

Z. M. SMITH,  
State Director of Vocational Education.

**Statement of Guiding Principles and Objectives in Curriculum  
Construction for the State of Indiana.**

1. The Committee reaffirms the Cardinal Principles of Secondary Education as its base of departure for guiding the Subject-Matter Committees in reorganizing their courses of study and in determining the curriculum reorganization. These are Health, Command of Fundamental Processes, Worthy Home Membership, Vocation, Civic Education, Worthy Use of Leisure and Ethical Character.

2. The Committee further believes that the subjects contributing to social, moral and civic life should receive the major emphasis in the revision of the curriculum. In emphasizing these particular phases the Committee feels that it is not only content but actual participation which is most likely to achieve the desired results. Such participation implies the use of the more socialized methods of teaching Social Science, and further activity in the type of school life that is usually designated student participation. This belief is based on the generally accepted theory that generalized learning takes place as the result of such previous experiences as have comparable content, procedure, and ideals. The program of studies should, therefore, provide an outline of desirable experiences and activities on the proper pupil level. The objectives which should be especially emphasized here are those of Home Membership, Citizenship and Moral Training.

3. Objectives of equal importance are those dealing with Health and Vocation.

a. According to the organization of the Physical Education program in the Indiana High Schools, attention has been paid in only a few cases to administering a health program which aims to assist in improving the physical efficiency of all the boys and girls concerned. A worth-while health program should aim at the establishment of individual health information and habits, and a desirable attitude toward the larger problems of social sanitation and hygiene. Such a program should not be confined to the high school alone, but should be developed from the first grade up. Much of the desirable information can be imparted in many of the subject-matter courses.

b. The Committee believes that the vocational function of the secondary school can best be served by providing each individual with such a background of occupational information and experience as is adapted to the particular aptitudes and interests today recognized in the theory of individual differences in order that a sound foundation may be laid for such future work as the individual may do.

In order to accomplish this type of vocational training the Committee suggests: (1) That the ninth grade be regarded especially as a finding and exploratory year, which would be the same whether in a junior high school organization or in a four-year high school. (2) That the program of studies in the tenth, eleventh and twelfth years be organ-

ized on a curricular basis, each curriculum being so organized as to lead to some definite goal.

4. The remaining objectives are those dealing with the Worthy Use of Leisure and the Command of Fundamental Processes.

a. So far as leisure is concerned there are two phases. The first is to receive consideration in connection with the citizenship and health objectives, and the second with the aesthetic and appreciative side of life. On the side of citizenship, worthy use of leisure will be concerned with such civic and social enterprises as those dealing, for example, with libraries, public places of amusement, parks, memorials, places of public entertainment, pageantry. On the health side this objective will find expression in all forms of physical recreation; not only from the participating but from the spectator point of view. On the aesthetic and appreciative side, the worthy use of leisure as an objective should aim to give such information and practice as will establish desirable standards of tastes, attitudes and ideals in all fields of human activity. Any subject may assist in the attainment of this objective whenever and wherever emphasis is placed upon such elements as contribute to the permanent and abiding interests of individuals apart from any vocational application.

b. In the interpretation of the other objective, the Command of Fundamental Processes, the Committee believes that there are certain desirable standards of information, habits, skills, and attitudes, the proper attainment of which cannot always be fully achieved in the pre-high school period, and that wherever individuals do not come up to these standards it is the duty of the high school to give instruction and practice until such achievement has been approximated.

It should be understood that such information, habits, and skills are of the type generally classed as integrating.

5. The Committee believes that the subject-matter taught in the various courses has a very vital influence in developing fundamental attitudes in the lives of those who study any subject, and that the feeling attitude is the most lasting of any of the experiences that one realizes in the school, and the most potent in shaping one's future career and activity. Consequently, the Committee believes that each Subject-Matter Committee should so far as possible select and organize the content as to provide for the encouragement and development of such desirable attitudes as may appropriately be derived from it.

Program of Studies in Agriculture

*b. Agriculture Subject	Year	Periods Per Week	Semester	Credit
†Animal Husbandry.....	—	7	1 or 2	.5 or 1 unit
†Soils and Crops.....	—	7	1 or 2	.5 or 1 unit
Dairying.....	—	7	1 or 2	.5 or 1 unit
Poultry.....	—	7	1 or 2	.5 or 1 unit
Horticulture.....	—	7	1 or 2	.5 or 1 unit
Farm Mechanics.....	—	7	1 or 2	.5 or 1 unit

\*NOTE—The particular courses and the amount of work that shall be offered in each school shall be determined by (a) the needs and interests of the community, (b) the training of the teacher, (c) the adequacy of equipment and building facilities, and (d) the provision for proper supervision of the home projects.

†NOTE—These courses are recommended if only one unit of work in Agriculture is offered. If two units of work in Agriculture are offered the teacher must have the twenty semester hours of credit required for the Regular Agriculture License, and in addition the teacher must have six semester hours of credit in each course offered for one semester or twelve semester hours of credit in each course offered the entire year. Any of the above courses may be offered if the teacher is a graduate of an approved four year Agriculture course.

Courses of Study In Agriculture for High Schools in Indiana

Introduction

“The term agricultural education, even when qualified by the word secondary, is still so broad and inclusive in meaning that its use frequently leads to confusion. In reality there are three forms of instruction in agriculture below the usual college level. One form is called pre-vocational agriculture. It aims to introduce the youth to labor and science as applied in the outdoor world and to give him experiences which are truly representative of an agricultural vocation. Probably the best examples of pre-vocational agriculture which we have at this time are in so-called seventh and eighth grade agriculture, and, in organized club work.

A second type of agricultural education may be designated as non-vocational or general in its training. The chief aim of agricultural instruction in this form is to contribute to a liberal education and to develop understanding and appreciation of this basic industry called agriculture. Though courses of study in non-vocational agriculture, or general agriculture, as it is sometimes called, are not so numerous as some other types, they do appear in some form in high schools for both boys and girls.

The third form in which instruction in agriculture appears is called secondary vocational agricultural education. This type of agricultural instruction emphasizes the developing of abilities which will enable one to produce economically, and market profitably plant and animal products. It may be defined as that form of instruction in secondary agriculture organized especially for, and pursued by, those who are now engaged in, or intend to engage in, an agricultural pursuit.”\*

General Objectives for Teaching Agriculture

The purpose of all agricultural training is to prepare for adult country life as an ultimate goal as well as to develop an appreciation and a knowledge of the problems of successful farm life.

In general the agricultural instruction in the school should supplement the instruction given the child by the parents in the home in the actual daily life and should teach the facts and principles of scientific agriculture in such manner that farming practices will be improved.

Inasmuch as agriculture as an occupation engages more people than any other single industry, it should be given sufficient attention in the public schools to arouse the interest of the pupil and command the respect of the public. The school's influence on the life of the individual and the nation is clearly recognized. Therefore when agricultural instruction is made a part of the organized work of the school we may expect a beneficial effect.

When the subject of agriculture is well organized and properly taught it should accomplish the following educational aims:

\* Quoted from report of Sub-Committee on Agriculture of North Central Association Committee on Standards for Use in the Re-organization of Secondary School Curricula—March, 1927.

- (a) Develop habits of purposive thinking.
- (b) Develop habits of investigation.
- (c) Encourage worthy home membership by creating an interest in the solution of home problems.
- (d) Afford an opportunity for decision-making and furnish the basis for the exercise of judgment.
- (e) Motivate the pupil to use his leisure time profitably.
- (f) Build character by developing habits of self-reliance and honesty.
- (g) Cultivate a sense of responsibility.
- (h) Create an appreciation and an understanding of economic relationships early in life.

The agricultural instruction to be offered in the seventh and eighth grades and in the high school is to be regarded as prevocational in the same sense that general biological science is taught as prevocational to the study of medicine. It should provide for acquaintance with the world of nature, with manual labor, and with the field of science; furnish the experience essential to the wise choice of an occupation; and give the beginnings of a preparation for farming should the pupil choose that vocation.

#### General Subject Matter Objectives

The course in general agriculture should deal with problems of animal production, plant production, farm management and farm mechanics. Suggested divisions of these problems for teaching purposes in the Indiana schools are animal husbandry, soils and crops, horticulture, farm mechanics, poultry and dairying.

The aims to be sought in each of the foregoing divisions may be expressed as follows:

**Animal Husbandry.** "The specific aim of the work in animal husbandry is to enable young people to obtain such a knowledge of the characteristics of feeding, breeding, care and management and marketing of domestic animals commonly raised for profit in that region as will prepare them for success in livestock farming."\*

**Soils and Crops.** "The specific aim of the work in soils and crops is to enable young people to obtain such a knowledge of the most important principles of the formation, properties and management of soils applicable primarily to their own vicinity as will prepare them for the successful production of maximum crops and the maintenance of soil fertility. They should also gain such knowledge of the characteristics, propagation, culture, improvement, storage, marketing and use of the principal local field crops as will prepare them for success in field crop farming."\*

**Horticulture.** "The specific aim of the work in horticulture is to enable young people to obtain such a knowledge of the characteristics, propagation, culture, improvement, harvesting, storage and marketing and use of the principal local vegetable and fruit crops as will prepare them for success in vegetable and fruit raising."\*

**Farm Mechanics.** "The specific aim of the work in farm mechanics is to prepare young people so to plan, locate, construct and maintain farm buildings, fences, roads and drainage systems and so to select, operate and maintain farm machinery and the mechanical equipment as to contribute most highly to the profit and pleasure of farming."\*

**Poultry.** "The specific aim of the work in poultry is to enable young people to obtain such a knowledge of the characteristics, breeding, feeding, care and management and marketing of farm poultry as will prepare them for successful poultry raising."\*

**Dairying.** "The specific aim of the work in dairying is to enable young people to obtain such a knowledge of the characteristics, care, management, breeding, improvement and sale of the dairy breeds of cattle and the handling, manufacture, use and marketing of their products as will prepare them for success in special dairy farming."†

\* Report of Committee on Agriculture of the N. E. A. Commission on Re-organization of Secondary Education. † Storm and Davis—How to Teach Agriculture.

### Problems Courses In High School Agriculture

The productive farm enterprises have been subjected to a problems analysis to determine the content essential to courses of study in High School Agriculture for Indiana, as follows:

1. A Problems Course in Crops Production and Soil Management.
2. A Problems Course in Animal Production.
3. A Problems Course in Dairy Production.
4. A Problems Course in Poultry Production.

Immediately preceding the courses of study will be found a problem outline in which the problems essential to production and management of the respective enterprises are set up. An attempt has been made to organize these problems upon an effective teaching basis.

#### Suggestions to the Teacher

Before selecting the courses for the high school the teacher should make a careful and detailed analysis of the farming business of the school community. He should determine the relative importance of the various farm enterprises and attempt to teach first those enterprises that are dominant in the community. After having selected the enterprises for his course, the teacher should make a careful analysis of these enterprises and determine the problems most important. The course should be so organized as to allow adequate time for consideration of the major problems.

The courses in animal production have been outlined to make it possible for the teacher to include dairy production and poultry production in the general animal production course; or if these enterprises are of enough importance in the community to make it possible to administer these courses separately.

References which have been included in the course outlines should be found in the libraries of the schools offering these courses. Special lists have been prepared and may be found elsewhere in this bulletin. Also a sending list for worthwhile illustrative materials has been included and it is recommended that the teacher select from this list those materials which are essential to the administration of the courses taught.