

INDIANA—
A Pioneer State in
Agricultural Education
and 4-H Club Work

Special Bulletin June 1944
PURDUE UNIVERSITY
Department of
Agricultural Extension
Lafayette, Indiana

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DR. Z. M. SMITH

FOREWORD

IT is appropriate that a publication of this kind be made available at this time as a tribute to the man who for approximately thirty years guided the 4-H Club and agricultural education programs in Indiana.

Dr. Z. M. Smith became the first State 4-H Club Leader in Indiana, September 1, 1912. In May 1913, he was requested to serve as State Supervisor of Agricultural Education. He accepted on condition that he continue as State 4-H Club Leader. He faithfully served in both positions until June 30, 1941.

At that time, he retired from active service but remained on the staff of Purdue University as a counselor and adviser in the department he created. He will continue to serve in this capacity until he reaches maximum retirement age, November 1, 1944.

Dr. Smith's philosophy of education for rural young people has been exemplified during the years in the coordinated program which has functioned in Indiana. His leadership has been an inspiration to all who have worked with him. He had a thorough knowledge of his job. He believed in serving others. He never worried about who would get credit for such a service. He distributed responsibilities to others and then trusted them. Dr. Smith always found time for those who sought his counsel. His judgment and decisions were respected. He has been an authority in the field of agricultural education and 4-H Club Work.

This booklet contains extracts from Dr. Smith's talks and other information which should inspire all those interested in the education of our rural young people. It contains facts and data which indicate that Indiana ranks second to none in this field.

Harry F. Ainsworth
State Supervisor of
Agricultural Education, and
State 4-H Club Leader

PREFACE

THE subject matter of this publication includes a brief statement on the origin and administration of 4-H Club Work in Indiana and records in part the participation of Purdue University, in cooperation with the state department of public instruction, in promoting and supervising the teaching of agriculture in the public schools. No attempt has been made to cover fully the development, administration, and results of 4-H Club Work and of agricultural education in the public schools.

The publication constitutes a brief chronological outline of events in the history and development of 4-H Club Work and the teaching of agriculture in the public schools of Indiana up to the enactment of the Indiana vocational education law in 1913 and the Federal Smith- Hughes law in 1917.

Information included herein was secured from annual reports of the agricultural experiment station and the department of agricultural extension, Purdue University; from annual and biennial reports of the United States Office of Education; from the 1940 United States Census and from Miscellaneous Circulars of the United States Department of Agriculture.

H. J. Reed
Dean, School of Agriculture,
and Director,
Agricultural Extension and
Experiment Station

INTRODUCTION

THIS is a timely publication, designed as it is to review the principal stages of the development of Indiana's plan for Agricultural Education—including the 4-H Club Work—and to recognize the dominant part played by Dr. Z. M. Smith in that development. It is, therefore, not only the record of an idea in action, but also of an individual in action.

As a Land Grant institution Purdue University always has been, and always will continue to be, under a definite obligation to use some of the best of its busyness for the betterment of all those forms of training and of education that are related, either directly or indirectly, to the welfare of agriculture. That this obligation has been met, within the limits of resources and circumstance, none will deny. Despite the obstacles that are to be found in any pioneering enterprise, substantial progress has been made. And the State has come to the place where the mutual dependence of education and agriculture is accepted as essential to present welfare and future improvement.

It was fortunate for the University that it has been able, for so many years, to depend upon Dr. Z. M. Smith as its connecting link with the State Superintendent of Public Instruction and the State Board of Education. Thorough training and long experience had made him wise as to the ways of the soil and the needs of rural youth. For thirty years the University and the State have garnered the fruits of this wisdom. What he has accomplished for the advancement of the cause of wider and better teaching of agriculture in the schools of the State, and for the inner and outward growth of the 4-H Clubs, constitutes a notable record of capable and devoted public service. "Z. M." has proved the worth of a man who has an undiminished faith in the worth of his own work; and who gives reality to that faith by determined industry.

Edward C. Elliott, President
Purdue University.
January 17, 1944.

PART I

Indiana a Pioneer State in Agricultural Education and
4-H Club Work

Indiana a Pioneer State in Agricultural Education and 4-H Club Work

Prepared and published by the Department of Agricultural Extension,
Purdue University

ON February 22, 1913, the Indiana State Legislature completed the passage of an act designated as the Indiana Vocational Education Law.

Indiana was one of the very few states that made provision for vocational education prior to and comparable with the Federal Vocational Education Law of 1917, known as the Smith- Hughes Act.

Other states that enacted legislation comparable with the subsequent Smith-Hughes Act were Massachusetts in 1906, New Jersey, New York, and Pennsylvania in 1913.

Pioneering in legislation for vocational education necessitated pioneering in determining standards, procedures, materials, and methods for inaugurating and conducting vocational instruction.

Recommendations regarding standards for vocational agriculture became the responsibility of the state supervisor of agricultural education. Under provisions of the Indiana Vocational Education Law, the person appointed as state supervisor of agricultural education would be the joint agent of the State Board of Education and the Agricultural Extension Service of Purdue University.

Mr. Z. M. Smith, who had been appointed on September 1, 1912, as the first state 4-H club leader in Indiana, was requested to accept the appointment as the first state supervisor of agricultural education. He agreed to accept the position on condition that he continue to serve as state 4-H club leader. His proposal that he serve in both positions was based upon fundamental principles which he stated as follows:

1. Agricultural extension education and vocational education in agriculture in a community or in a county are concerned with—
 - a. identical human resources, —the same families including children, youth, and adults.
 - b. identical natural resources, —farms and their crops, livestock, and equipment.
2. Sound agricultural education is based upon human and natural resources the needs, interests, and welfare of families and individuals and the means or resources available or to be made available for meeting these needs.

3. There is only one best way of using natural resources to meet human needs. There cannot be two best ways, for a given situation, of conserving soil fertility, of increasing soil fertility, of judging livestock, of marketing farm products, of financing the farm business, of providing social and educational opportunities, of supplying satisfactory recreational facilities, etc.
4. It is a responsibility of agricultural education to assist in making possible and in bringing into realization the discovery and daily application of the best way to utilize farm resources in meeting the economic and social needs of the family on the farm.
5. The responsibility for determining the program to be followed in discovering and applying the best way for satisfying human needs rests primarily with the folks whose own needs are to be met and whose resources are to be used.
6. Vocational and extension agents in agricultural education may and should assist in determining the program to be followed in each community or county. Certainly, they must supply educational leadership in carrying out effective instruction as an integral phase or unit of the program.
7. The program to be sufficient must meet the educational needs of children, youth, and adults. Furthermore, there is no stage in the life of an individual in which the educational process should terminate. Therefore, the application of the program for agricultural education continues throughout the life of an individual.
8. The program of organization and management for a given farm should require participation of all members of the family. Each should participate in accordance with the stage of his development, experience, and ability. For example, if the program provides for improvement of the dairy herd, the younger members of the family can participate through dairy calf 4-H work and seventh and eighth grade agriculture; the older youth, through dairy herd record 4-H work and all-day and part-time class instruction in vocational agriculture; and the parents, through dairy herd bull and cow testing association work and evening class instruction in vocational agriculture.

This principle applies to each farm enterprise, and its application is subject to modification to conform to the individual farm family situation, both at the initiation of the program and during the progress of its development.

9. Every individual and every family face the problem of making a living and of getting maximum enjoyment and satisfaction out of life. Attainment of these ends should be the mutual responsibility of each member of the family. Such participation should be on a basis that contributes directly and positively to the natural development and expression of each child, youth, and adult. It is the responsibility of vocational education and agricultural extension to assist the farm family in discovering the best way for attaining these results and for establishing habitual performance in accord with that way.

SOME OF THE STANDARDS RECOMMENDED

Standards for licensing vocational agriculture teachers. Dr. Smith recommended that a license to teach vocational agriculture be issued only on presentation of a certificate of graduation from a standard college of agriculture and evidence of practical experience in farming and teaching. This method of determining the qualifications of the candidate would take the place of the customary written examination.

This recommendation was opposed vigorously by some members of the state board of education and several local and county school administrators, who contended that experience in farming and teaching and written examination should constitute the criteria for determining eligibility for a license. However, following more than a year of consideration, the recommendation was approved by the state board of education.

In 1915, Dr. Smith prepared a proposed course for training vocational agriculture teachers. This course attracted national attention and interest. As a result of this interest, the Office of Agricultural Education of the United States Department of Agriculture arranged for a conference at Purdue University to study and discuss the proposed course. The conference was held on February 16, 1916, and was attended by representatives from several land grant colleges and a few teacher training colleges.

The basic provisions of this course with respect to technical agricultural subjects, related sciences and professional training are incorporated in vocational agriculture teacher training courses throughout the United States today.

An unusual item in this proposed course was the provision that the professional training includes observation of teaching vocational agriculture and practice teaching of vocational agriculture under supervision of the vocational agriculture teacher training staff. Observation of teaching was listed for the junior year and supervised practice teaching for the senior year of the course. This item was opposed, unsuccessfully, on the grounds that such practice was unheard of and would prove to be impractical.

On September 14, 1929, Dr. Smith recommended to the state board of education and Purdue University that only a provisional license for twelve months be granted upon completion of this teacher training course which had then been in operation 14 years, and that the license might be renewed at the end of the first twelve months of service and again at the end of the second twelve months.

A license might then be issued for a five-year period, at the termination of which the applicant might be eligible for a life license to teach vocational agriculture.

This recommendation was not put into effect.

On June 21, 1939, Dr. Smith recommended to the state board of education and to Purdue University, that five years of training, with a master's degree, be required for a life license to teach vocational agriculture, and that only a provisional license be issued upon completion of the requirements for the bachelor's degree.

This recommendation has been adopted in part by the state board of education. The first license issued upon completion of the requirements for the B. S. degree is a provisional certificate. This certificate or license is renewable on condition that, within four years from date of its issue, not less than 12 semester hours of graduate credit be secured in a Land Grant College. The graduate credits must include not less than 4 semester hours of agricultural education and not less than 6 semester hours of technical agriculture.

METHODS OF INSTRUCTION IN VOCATIONAL AGRICULTURE

As early as 1860, the teaching of agriculture in the public schools in the state had¹ been recommended by the Indiana State Department of Public Instruction. From 1889 until the passage of the Indiana Vocational Education Law in 1913, the state department of public instruction, farmers institutes, and Purdue University, encouraged the inclusion of agriculture in the public-school curricula. Courses of study in this subject were prepared and published for public school use, from time to time, by the state department of public instruction and by Purdue University. In the school year, 1911-1912, agriculture was taught in 3,713 elementary schools in 64 counties and in 366 high schools in 68 counties in Indiana.¹

One of the 366 high schools in which agriculture was taught in the school year, 1911- 1912, was located at Goldsmith, Indiana, and Z. M. Smith was the teacher of agriculture, and principal of the school. His methods in teaching agriculture differed from the common practice of recitations on textbook subject matter. He emphasized class discussion, school laboratory exercises, and individual pupil project performance and demonstration, twelve months annually, on the home farm, all of which were based upon the problem of improvement in home farm production and management practices.

Textbooks were used to represent their authors in person. These authors were not available for personal consultation, but they could be consulted personally through their textbooks. They were thus consulted by each pupil on specific home farm problems concerned with improvement in production and management practices.

¹An unpublished study by Homer L. Rogers. County Superintendent of Schools, Pulaski County, Indiana, and Z.M. Smith. Purdue University.

Dr. Smith explained to teachers that the home farm project or supervised farm practice work should be planned and undertaken by the pupil as a golden opportunity to acquire knowledge and skill for immediate and future use in profitable farming operation and management. This project or practice work should be based upon the dominant enterprises on the home farm and should be supplemented with projects in minor home farm enterprises. Each project should be of such scope and character as to give the boy practical managerial and production experience. The teacher must be on the job twelve months in the year and must maintain his means of conveyance so that he can visit each pupil and confer with him and his father at the most opportune times throughout the twelve months.

INDIANA A PIONEER STATE IN 4-H CLUB WORK

Farmers' institutes in Indiana were first organized and conducted from 1882-1889 under the auspices of the State Board of Agriculture. Members of the board and other public-spirited people donated their services as speakers.

In 1889 the Indiana Legislature passed the first Indiana Farmers' Institute Act. This law placed the administration of these institutes with Purdue University. Professor William Carroll Latta, who had been, since 1882, a member of the faculty of the School of Agriculture, was appointed by the University to superintend the farmers' institute work. He continued in charge of this work until June 30, 1923.

Exhibits of farm crops, canned, and baked products by adults were held as a part of township and county farmers' institutes programs as early as 1894. Indiana farmers' institute workers, in their annual conference in 1903, gave earnest consideration to the question of interesting and enlisting young folks of the farm in institute work. In his annual report for 1904, Professor Latta said that "One of the laudable undertakings in this line is the recent joint offer of the Tippecanoe County Fair Board and the county farmers' institute and home-makers association to award prizes to young people for exhibits of products grown by them".

Under the date of April 16, 1907, Purdue University published a four-page circular entitled "Concerning Boys' and Girls' Contests Contemplated in the Institute Act of 1907". The manuscript for this circular was prepared by Professor Latta. He recommended that farmers' institute associations foster contests in fields, garden, and fruit crops, and in poultry, butter making, and breadmaking for boys and girls from ten to twenty years of age. He suggested that each contest should include an exhibit of the product, judging by

the exhibitor of an article like the one shown, and a paper by the exhibitor describing the method of growing the crop or making the article exhibited.

Prior to and following the publication of this circular, farmers' institute speakers presented these recommendations to institutes and institute chairmen. The cooperation of school superintendents was solicited. Among those who responded were John Haines, superintendent of Hamilton County Schools, who organized a corn club in 1904; E. G. Bunnell, superintendent of LaPorte County Schools, and H. W. Henry, a LaPorte businessman, a corn club in 1905; J. Walter Dunn, superintendent of Starke County Schools, a corn club in 1906; H. L. Rogers, superintendent of Pulaski County Schools, corn, poultry and butter clubs in 1909; E. J. Black, superintendent of Delaware County Schools, a corn club in 1909.

By 1910, the state promotion and general supervision of agricultural and home economics contests for boys and girls had passed from the farmers' institute service to the agricultural extension service which was conducted at that time as a department of the agricultural experiment station.

On July 6, 1905, George Irving Christie was appointed assistant agriculturist or assistant in crop improvement in the agricultural experiment station. In the annual report of the Station for the year, July 1, 1905, to June 30, 1906, Mr. Christie called his department report "First Report of Agricultural Extension Work" and signed it with the title "Associate in Agricultural Extension". No mention is made in this report of work with young people. In the annual report of the agricultural experiment station for the year ended June 30, 1907, Mr. Christie included boys' and girls' club work as part of the responsibility of his department but gave no information regarding the work done or attempted.

On July 1, 1907, Mr. Christie was given the title of Head of the Department of Agricultural Extension in the Agricultural Experiment Station. In his report for the year ended June 30, 1908, he reported that corn clubs had been organized in 35 counties and that membership totaled 5,000. He reported that 47 counties had corn clubs for the year ended June 30, 1909. For the year ended June 30, 1910, he reported that there was an increase in membership in young people's contests but did not list the counties in which the work was conducted. For the year ended June 30, 1911, he said contests were conducted in corn growing, livestock judging, bread making, sewing, and fruit canning. He did not give statistical data. For the year ended June 30, 1912, his statement regarding young people's contests was very general. No data was given. Livestock judging contests were emphasized.

The report for the year July 1, 1911, to June 30, 1912, was included in the report of the agricultural experiment station but was published also in a

separate bulletin and titled "First Annual Report of the Department of Agricultural Extension". By act of the Indiana Legislature, generally known as the Clore Act, approved February 27, 1911, the Department of Agricultural Extension was established. The board of trustees of Purdue University designated Mr. Christie to be superintendent of the newly created department.

On September 1, 1912, Mr. Z. M. Smith was appointed State Leader of Boys' and Girls' Club Work. He suggested the following principles as basic in organizing and conducting club work:

1. There should be a local organization of club members. The township might be the logical unit for local organization.
2. There must be a local adult volunteer leader for each local club.
3. Teachers of agriculture and home economics should serve as local 4-H leaders.
4. Responsibility for organizing, supervising, and conducting club work must be carried primarily by local leaders, teachers of agriculture and home economics, parents, and public-school officials and administrators, serving under the supervision of county and state leaders.
5. Club projects should deal with actual farm and home problems and should contribute to their solution.

The club project subject matter instruction should be an important part of the public-school instruction in agriculture and home economics.

6. The club program should be in operation twelve months in the year.
By 1918, Mr. Smith had added to the above his recommendation that the club program for a county should be an integral part of the county agricultural extension program; that both should be planned and projected on a long-view basis; and that both the annual extension and the annual club program should be based upon the long-view programs. He recommended in this connection that all subject matter departments in agricultural and home economics extension cooperate very closely with each other and with the club department in the matter of assisting counties in planning and conducting adult and junior extension education.

PART II

Some Results of Cooperation between Purdue University and the
State Department of Public Instruction

AS early as 1898, Purdue University cooperated with the Indiana State Department of Public Instruction in promoting the teaching of agriculture in the public schools of the state. In 1898, Purdue University published, and, in cooperation with the State Department of Public Instruction, distributed for use in the public schools, 140,000 copies of nature study leaflets. In 1904, the University published a bulletin of 40 pages entitled "Practical Studies in Agriculture for Public Schools." In 1905 and 1907, the University assisted the State Superintendent of Public Instruction in the preparation of courses of study in agriculture for use in public schools. In 1909, the agricultural extension service of the University gave assistance to teachers in 17 counties in the teaching of agriculture. In his report for the year ended June 30, 1912, the director of the Department of Agricultural Extension, Purdue University, said, "Throughout the state there has been an active movement for the introduction of agriculture, domestic science, and manual training in the schools. This movement has resulted in a large demand for this department, from the teachers of the state, for assistance in the way of literature, exhibits, lectures, etc. In order that the teachers might be given some definite help along agricultural lines, instructors were sent to a large number of county teachers' institutes to give practical demonstrations in the methods of teaching agriculture." In his annual reports for the years ended June 30, 1913, 1914, and 1915, the director of the department of agricultural extension reported that practical demonstrations in teaching agriculture were given in 27 county teachers' institutes in 1913, 30 in 1914, and in 35 county and 76 township teachers' institutes in 1915.

The Indiana Vocational Education Act, approved February 22, 1913, specifically provides for cooperation between Purdue University and the State Department of Public Instruction in the appointment of a state supervisor of agricultural education and the payment of his salary. Some favorable results of this cooperative relationship are revealed in official statistical data on enrollments in vocational agriculture and in 4-H club work.

Data recorded in the following tables are for the year ended June 30, 1941, and were compiled in 1941, except those for Table 4, which were obtained in January 1942.

Before the end of the year July 1, 1941, to June 30, 1942, several teachers of vocational agriculture were called for military service, and consequently the year ended June 30, 1941, is the latest year in which the vocational agriculture and 4-H club programs operated under normal conditions.

Table 1. 1940 Rural Population, 10-20 Years of Age, and 1941 4-H Enrollment.

Rural-Farm Population Ages 10-20 Years

States	Boys	Girls
Indiana	95,469	82,984
Illinois	112,168	96,992
Iowa	105,858	93,769
Kentucky	165,000	150,868
Michigan	104,928	88,340
Ohio	127,704	11,260

Rural-Farm Population Ages 10-20 years

States	Boys	Girls
Indiana	67,771	67,912
Illinois	107,926	99,603
Iowa	47,556	48,959
Kentucky	80,703	82,878
Michigan	89,277	88,161
Ohio	121,636	117,920

Total Rural Population 10-20 years of age

States	Boys	Girls
Indiana	165,240	150,896
Illinois	220,094	196,595
Iowa	153,414	142,728
Kentucky	245,703	223,746
Michigan	194,205	176,501
Ohio	249,340	228,180

4-H Enrollment 10-20 years of age

States	Boys	Girls	Total 4-h Enrollment
Indiana	20,505	30,341	50,936
Illinois	16,191	19,162	35,270
Iowa	14,801	13,270	28,071
Kentucky	19,711	23,476	43,187
Michigan	24,001	27,332	51,333
Ohio	18,646	33,262	51,908

Population data taken from 1940 U.S. Census Reports. 4-H Enrollment data taken from 1941 report of Federal Extension Service

Percent of Rural Population 10-20 years of age Enrolled in 4-h Club Work

States	Boys	Girls	Total
Indiana	12.40	20.16	16.11
Illinois	7.31	9.74	8.48
Iowa	9.64	9.29	9.47
Kentucky	8.02	10.04	9.00
Michigan	12.35	15.48	13.84
Ohio	7.47	14.57	10.87

Population data taken from 1940 U.S. Census Reports. 4-H Enrollment data taken from 1941 report of Federal Extension Service

Table 2. Percent of Boys, 14-18 Years of Age, Rural-Farm and Total Rural, Enrolled in High School Vocational Agriculture For the Year Ended June 30, 1941

STATES	Enrollment in high school vocational agriculture	Percent of males 14-18 enrolled in high school vocational agriculture. (Rural farm only ¹)	Percent of males 14-18 enrolled in high school vocational agriculture. (Rural farm & rural-nonfarm ²) Total
Indiana	13,546	29.37	17.30
Illinois	13,645	25.48	13.17
Iowa	7,703	15.62	10.75
Kentucky	9,143	11.73	7.98
Michigan	7,169	14.20	7.92
Ohio	12,827	20.89	10.90

For the year ended June 30, 1941

STATES	Population Rural-Farm Male 14-18 Yrs. of age	Population Rural Non-Farm Male 14-18 Yrs. of age	Population Total Rural Male 14-18 Yrs. of age
Indiana	46,114	32,156	78,270
Illinois	53,547	49,936	103,483
Iowa	49,315	22,316	71,631
Kentucky	77,933	36,514	114,447
Michigan	50,464	39,855	90,480
Ohio	61,388	56,276	117,614

For the year 1940

Population data for the year 1940 taken from the US Census Report. Enrollment data for high school vocational agriculture taken from the Digest of Annual Reports, Federal Security Agency, U.S. Office of Education, Vocational Division, for the year ended June 30, 1941. Table 5.

¹If enrollment is from rural farm only.

²If enrollment is from both rural farm and rural-nonfarm.

Table 3. Departments, Classes and Enrollments in Vocational Agriculture for the Year Ended June 30, 1941¹

STATES	Enrollment in Voc. Agriculture Part- Time Classes	Enrollment in Voc. Agriculture Evening Classes	Total Enrollment in Voc. Agriculture	Percent of Rural Males 14-54 Enrolled	Total Rural males Population Farm and Non-Farm 14-54
Indiana	2,579	17,333	17,333	3.82	453,352
Illinois	7,438	22,451	22,451	3.46	648,310
Iowa	11,245	20,159	20,159	4.62	435,958
Kentucky	3,357	14,868	14,868	2.59	572,743
Michigan	2,645	10,668	10,668	1.95	548,106
Ohio	1,710	19,078	19,078	2.78	686,490

STATES	No. of Voc. Agr. Depts. in High School	No. of Part- Time Classes	No. of Evening Classes	Total No. of the 3 Types of Classes	High School Depts. Enrollment in Voc. Agriculture
Indiana	408	107	176	691	13,546
Illinois	400	54	171	625	13,645
Iowa	190	50	175	415	7,703
Kentucky	266	132	191	589	9,143
Michigan	239	32	109	380	7,169
Ohio	411	230	230	718	12,827

¹ Data taken from the Digest of Annual Reports, Federal Security Agency, U.S. Office of Education, Vocational Division, for the year ended June 30, 1941. Tables 1 and 5. Population data taken from U.S. Census Report for 1940

Table 4. Vocational Agriculture Departments for the Year July 1, 1941, to June 30, 1942¹

STATES	Number of High Schools in State	Number of High Schools that have a Dept. of Vocational Agriculture	Percent of High Schools that have Voc. that have Voc. Agr. Depts.
INDIANA	807 ²	414	51.3
ILLINOIS	934 ³	415	44.4
IOWA	918	203	203
KENTUCKY	738	269	269
MICHIGAN	500 ⁴	235	235
OHIO	1,252	418	418

¹Indiana data for columns 1 and 2 supplied by the State Department of Public Instruction. Illinois data supplied, Jan. 31, 1942, by J.E. Hill, State Supervisor of Agricultural Education. Iowa data supplied, Jan. 9, 1942, by H.T. Hall, State Supervisor of Agricultural Education. Kentucky data supplied, Jan. 18, 1942, by Ralph Woods, State Supervisor of Agricultural Education. Michigan data supplied, Jan. 2, 1942, by H.E. Nesman, State Supervisor of Agricultural Education. Ohio data supplied Jan 6, 1942, by Ralph Howard, State Supervisor of Agricultural Education.

²631 Township, 176 City and Town. Ninth Grade Junior High Schools included. Seventh and Eighth Grade Junior High Schools not included.

³Outside of Chicago.

⁴Approximately.

The data in Table 1 reveal the fact that for the year ended June 30, 1941, Indiana surpassed her neighboring states and Iowa² in the percent of rural boys and girls 10 to 20 years of age enrolled in 4-H club work.

The data in Table 2 show that in Indiana a larger percentage of rural boys 14 to 18 years of age are enrolled in high school vocational agriculture than in the states listed in the tables.

Table 3 data show that in Indiana a larger percent of rural males 14 to 54 years of age is enrolled in vocational agriculture than in either of the neighboring states. The percentage of enrollment for this classification in Iowa is only eight-tenths of one percent greater than for Indiana, and this small margin of difference is due to the large enrollment in evening classes in Iowa.

Table 4 reveals that a larger percentage of high schools in Indiana, than in the states listed in the tables, have departments of vocational agriculture.

²Iowa is included in this study because Iowa and Indiana established cooperative relations in 4-H Club Work with the United States Department of Agriculture at approximately the same time in 1912.

PART III
Interpretations of 4-H Club Work

As expressed by Dr. Z. M. Smith

Space permits the inclusion of only a few of his numerous statements on the objectives and values of 4-H Club work.

SOME PRINCIPLES GOVERNING 4-H CLUB WORK IN INDIANA

(Welcome Address at 1934 4-H Annual Round-Up)

1. EACH of you is intensely interested in getting thorough enjoyment out of life. You like to start each morning with eager anticipation of the events of the day. With zest, enthusiasm, courage, and confidence you meet opportunity and responsibility daily. You covet the closing of each evening with pleasant reflections on your experiences of the day. You desire to be able to assure yourselves in the quiet of the evening hours that you would gladly live forever, if every waking hour could be as full of achievement and satisfaction as the day then ending. Too frequently you find yourselves thinking that such satisfaction lies in events beyond your experience. You forget that for most people abiding satisfaction is found in meeting each obligation, however small, as it comes in the natural course of daily experience.
2. Participation in 4-H Club Work as a club member or as a leader enables one to get a full rounded experience in all phases of personal and group responsibilities.
The 4-H Club projects in Indiana are graded in ascending order of scope and managerial responsibility. Under this plan, it is possible for each person enrolled in 4-H Club Work to carry out the full round of activities for each to the extent and with the intensity that his or her ability, interest and will-to-do will permit.
As a natural result of this plan of 4-H Club organization and development, the club member may progress without interruption from lower to higher levels of responsibility and achievement. The transition from activities for the later years of adolescence to those for the earlier years of adulthood can be made without interruption.
3. The 4-H Club activities are based upon the actual everyday problems of the farm, the home, and the community. The club member, under this plan of development, cooperates with his parents in meeting in the best way possible the problems that confront the family and the community day by day and year by year. Each year as the club member develops personally, his responsibility in 4-H Club activities increases in scope and intensity in keeping with his ability and his determination to achieve. The unfolding and development of the 4-H Club member under this plan permits no break in the process but requires continuous growth through daily participation, on the level of his ability and experience in meeting the issues of the hour and day.

A TRIBUTE TO LOCAL 4-H LEADERS

(Introduction to Annual Report on 4-H Club Work for 1940)

In 1914, Purdue University published my first statement of principles that should govern the organization and supervision of 4-H Club work. In that publication are the following statements: "In order to secure good results, a thorough organization must be made under the direction of a local leader"; "The work will not meet with success unless the leaders are interested in it"; "Each township leader should have a committee of energetic men and women to assist him"; "Without local interest, organization, and supervision, good results will not be attained."

With thirty-one years of 4-H Club experience in Indiana, we are sure that the principles basic to successful club work in the pioneer years are fully applicable to effective organization and supervision today.

Those of us who carry state 4-H leadership responsibilities acknowledge without any hesitation or reluctance and with deep satisfaction the indispensable and invaluable contribution of county and local leaders to 4-H activities that motivate the thinking and mold the character of Indiana youth. It is a difficult task to bear the brunt by day, week, month, and year of leading youth to desire to achieve and to attain coveted goals.

Meeting one's daily needs, whether physical, social, intellectual, or spiritual is a nerve grinding and blood draining experience for most of us. Consequently, we are inclined to follow the line of least resistance. Club work deals with our actual daily needs of one kind or another. Real physical and mental labor are required for satisfactory club work. The club member is likely to follow his natural inclination to delay performance until the last minute or to become hopelessly discouraged and forsake his tasks. The club leader has the responsibility of inspiring the club members to overcome this lethargy and discouragement, of assisting him in acquiring necessary information, and of directing him in acceptable performance.

The club leader is an inspirer. He instills into his club members confidence, courage, and the will to achieve. The eager, enthusiastic, aggressive club member is encouraged to perform to the limit of his ability. The less interested members are assisted in acquiring a better understanding of the objectives and value of club work to the end that they become more interested and willingly perform 4-H activities for their own improvement and for their contribution to the welfare of their club and their community.

The club leader is a teacher. He instructs the more capable and enthusiastic members so that they excel their own records of performance from time to time and the less capable and enthusiastic so that they overcome discouragement and eventually surprise and delight themselves with their achievements.

What is the club leader's reward? It is that inner sense of satisfaction that results from meritorious service to youth. It is the realization that his ideals and way of living are patterns accepted and aspired to by his club members. It is being able to say sincerely—"I have given myself that others may enjoy richer life experience and that the priceless heritage of our democracy may continue imperishable."

4-H CLUB WORK AND OUR AMERICAN INHERITANCE

(Excerpt from 4-H plan of work for 1943)

In June 1928, Dr. Smith, in his address of welcome to delegates to the annual 4-H Club Round-Up at Purdue University, said "Indiana is too prosperous to reach the peak of proficiency in farming or in any other productive vocation. Dire necessity will be the condition necessary to force the youth of Indiana to aspire seriously to reach maximum proficiency in farming and farm home life." On a like occasion in June 1932, he referred to the above statement and pointed out that "The condition of necessity for proficiency was then at hand."

These quotations are apropos to the situation now confronting Indiana youth. Human nature inhibits intense struggle for either individual or group survival except as impelled by force of conditions. A significant corollary to this truth is the fact that survival and deeply abiding satisfactions are valued in proportion to the price paid for them in toil and sacrifice. The present generation is now beginning to place appropriate value on the rich social inheritance of which youth is the beneficiary. Regardless of its deficiencies, American democracy is a priceless heritage. Indiana 4-H youth appreciate deeply this rich inheritance and, if necessary, will pay the supreme price to preserve it. Some will engage in armed combat. Others will support the combat forces by producing and preserving food. All will endeavor to be physically vigorous, mentally healthy, and spiritually strong.

DEMOCRACY EXEMPLIFIED IN 4-H CLUB WORK

(Introduction to Annual Report on 4-H Club Work for 1941)

4-H Club Work is one prime example of democracy in action.

Membership is voluntary. The opportunity to join is extended freely to youth from 10 to 20 years of age. Each determines for himself or herself whether to take advantage of the opportunity. The privilege of making a choice is so common in our daily experience that we are in danger of undervaluing its importance. If one should be forced to join a 4-H Club against his will, or if he should be refused the privilege of becoming a member, such an experience would be in direct opposition to one of the priceless rights guaranteed in the United States Constitution.

This same principle of choosing to be a member or not applies to political parties, to religious organizations, to fraternal societies, to educational associations, —in short to any kind of federation of individuals for any purpose.

Membership in a 4-H Club gives each member the privilege of helping make plans for the activities of the club. Each member has a voice in determining when meetings will be held, the items to be given consideration in these meetings, the things to be accomplished by the club, the plan for getting the program of work carried through to completion, the things to be done by each member, and any other items necessary for the successful management of the club. This privilege of freedom in expressing one's views is guaranteed not only in 4-H Club work but in the whole range of one's daily life.

A true democracy is permeated and controlled by the ideal of the greatest good for every individual. This result is achieved only through the cooperative efforts of all. Unless there is conjoint activity for the promotion of common interests, unless these interests constitute a central and fundamental directing force, unless these interests are the warp and the woof of the thought and spirit of families and individuals bound together in daily living, unless there is common possession of spirit, of ideals, of aspirations, of helpful service, there is no democracy. Four-H Club work is the working embodiment of these democratic principles.

Four-H Club work has large significance when conceived as an integral part of the efforts of a community to transmit to its youth "the priceless heritage of hopes, aspirations, and ideals born of the age-old struggles of mankind. Clothed with such meaning, club work cannot be thought of as transitory in aim or effect. The ends to be attained are far-reaching and of permanent significance. At the same time the objectives have immediate application. Young people are given direction in finding themselves and experience in working together here and now. Their controlling interests of the present are respected and are used in attaining power and in acquiring skills that will serve as foundation stones upon which to build an enduring, living democracy.

4-H SPIRITUAL MILLIONAIRES

(Broadcast over WBAA, July 13, 1942)

A 4-H Club member in the United States can be a spiritual millionaire without possessing material wealth. Fortunately, one does not acquire spiritual riches by payment in cash or its equivalent in goods.

Spiritual wealth is imperishable. It cannot be stolen, but it can be lost. Once possessed it can be kept and increased through the same process by which it was attained. By neglecting to continue to meet the conditions necessary

for acquiring spiritual assets, one may, and probably will, lose the store of such wealth he now possesses.

One means of acquiring spiritual wealth is being a sincere friend to co-workers. If your fellow club members can rely upon your friendship, it is because you show an unselfish interest in their welfare. You are not jealous of them if they excel in competition with you. You do not envy them the recognition and praise they receive. It makes you happy to know that they are happy. They do not expect you to do their work for them, but your genuine interest in their success encourages them to put their best efforts into whatever they must do.

Your 4-H Club provides you with an excellent opportunity to make friends. There are common interests among 4-H Club members. There are common responsibilities. Each member helps in determining the program for the year and for each event during the year. Each strives to bring success and honor to the club through the excellence of individual member project work and through cooperative activities by committees, team, and officers.

Friendship among 4-H Club members is like that among members of a family. It is genuine, unselfish, tolerant, stimulating, and inspiring.

It rules out the idea of sacrifice. Being fully helpful to each other without limitation is a privilege, not a sacrifice. Self-denial for the purpose of giving a deserved and necessary opportunity to one of your family or your 4-H Club is not sacrifice. It is one fruit of wholesomely nourished friendship.

Through 4-H Club work, you can accumulate reservoirs of certain attitudes and habits that are sources of spiritual wealth. For example, a favorable attitude toward work and the habit of useful work are sources of abundant spiritual riches. Planning for and carrying through to completion 4-H project work establishes respect for the use of your hands in productive effort. Mental ability and manual skill are essential to the activities of food production and preservation, the designing and construction of clothing, the artistic and economical furnishing of a home.

The mental and physical activities necessary for the accomplishment of 4-H project work justly are accorded the attributes of dignity and refinement. Performance of work that produces things necessary to the well-being and happiness of your neighbors and friends and to mankind in general, increases your store of spiritual wealth. Such work eliminates from your thinking the error of attaching inferiority and grossness to physical effort. It is a crucible for burning out baseness in motive and desire. It preserves and expands your capacity for refinement and goodwill. It keeps you so busy with constructive and wholesome activities that you do not have time or inclination for selfish and unworthy aims.

Through 4-H Club work you keep in immediate personal touch with the original and imperishable source of spiritual wealth. Your production of plants and animals is a constant reminder of creative design and power. Through your partnership in creative effort with Divine intelligence and beneficence you are elevated above the mere physical level of life processes. Your partnership with the Omnipotent in maintaining plant and animal life deals with crass realities to be sure, but because of the necessity for your participating in this partnership your day-by-day work is accorded priceless spiritual value.

You draw freely and abundantly from the inexhaustible source of spiritual wealth in sustaining your contribution to the physical needs and well-being of mankind. But your greatest reserves of spiritual riches are accumulated by what you do, say, and think during your periods of relaxation and leisure. If during those periods your soul is kept tuned delicately in harmony with impulses stimulated by sunrise, by sunset, by the texture, perfume and color of flowers, by the nesting, colorful plumage and singing of birds, by the fields carpeted with green or covered with ripened grain, by the music of soft winds swaying the forests, by the pervasive, awful quiet portending a storm, by the sense of refreshment after rain,—if your soul is kept attuned to such impulses, your store of spiritual wealth will exceed your fondest dreams.

Your 4-H Club is unexcelled as an organization that provides opportunity for becoming spiritually rich through friendship ties, through useful work, and through communion with the Infinite.

PROCLAMATION

(Written by Z. M. Smith)

WHEREAS members of 4-H Clubs in Indiana are demonstrating the spirit of daring and adventure characteristic of youth. They do not acknowledge that there are insuperable difficulties. They face the future with confident assurance that they are masters of their destinies, knowing full well that they must earn with sweat, tears, and blood the deep and abiding satisfactions they hope to possess; and

WHEREAS, more than three thousand years ago a wise man gave to the world a challenging statement, "Where there is no vision, the people perish". We have today abundant evidence of the truth of this declaration. Unless leaders with economic, social, and spiritual vision are produced, the peoples of the earth will continue to flounder in their efforts to extricate themselves from the economic, social, and material bondage that now enthralles them; and

WHEREAS, in youth of today, with your record of achievement and demonstrated ability, rests the leadership that must supply the vision for the way out of present world difficulties.

NOW, THEREFORE, I, Henry F. Schricker, Governor of Indiana, do hereby call upon all youth of Indiana in so far as possible to enroll and participate in the 4-H activities for food production and conservation, for nutrition and health, and for building and strengthening morale. In keeping with the National program for youth to pledge allegiance to their country and to join in the food, nutrition, health, and morale for Victory Program, I proclaim,

APRIL 5-11, 1942,

as

4-H MOBILIZATION WEEK IN INDIANA

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Indiana, at the Capitol in Indianapolis, this 30th day of March, in the year of our Lord, 1942.

(signed) Henry F. Schricker,

ATTEST: Governor
(signed) James M. Tucker
Secretary of State

PROCLAMATION

(Written by Z. M. Smith)

WHEREAS, to continue to possess the rich inheritance of individual liberty we sincerely treasure, we must continue to treasure the liberty we possess; and

WHEREAS the depth of our appreciation of this priceless heritage must be verified by deeds, not by mere verbal declaration; and

WHEREAS we must pay the price in terms of toil, privation, and real sacrifice to preserve for present and future generations the privileges and opportunities which only citizens of the United States possess; and

WHEREAS Indiana 4-H Club members are demonstrating to the world that they are worthy legatees of the rights of self-determination which the emblem "Old Glory" represents; and

WHEREAS these youthful citizens of Indiana are devoting their talents and energy to the serious responsibility of providing necessary food and fighting equipment for their chums, sweethearts, and brothers who are defending, in life and death combat, the principles of freedom and liberty upon which American homes and American citizenship are founded.

NOW, THEREFORE, I, Henry F. Schricker, Governor of Indiana, in cooperation with the National 4-H Club Program and in recognition of the valuable and glorious contribution of Indiana 4-H Club members to the world-wide struggle to preserve and extend recognition of the rights of individuals and the sacredness of human life, do proclaim.

NOVEMBER 6-14, 1943,

as

4-H ACHIEVEMENT WEEK IN INDIANA

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Indiana, at the Capitol in Indianapolis, this day of October, in the year of our Lord, 1943.

ATTEST:

Governor

Secretary of State

PART IV
Chronology of Significant Events in the Life of Dr. Z. M. Smith

BORN in Tipton County, Indiana, October 14, 1874. Reared on farm and worked as hand on his father's farm until twenty-two years of age.

Education:

Elementary grades, country school, Jefferson Township, Tipton County.
Entered the Academy, DePauw University, 1896. Graduated in June 1898.
Entered DePauw University, September 1898. Graduated with an A. B. degree, June 1901.
Received: —M. A. Degree, DePauw University, June 1905. B. S. A. Degree, Purdue University, June 1919. Ph.D. Degree, Indiana University, June 1929.

Experience:

1. Taught one room country school, six months term, \$2.00 per day, Jefferson Township, Tipton County, Indiana, 1895-1896.
2. Principal, Jefferson Township Schools, Kempton, Indiana, 1901-1903.
3. Head, English department, high school, Rockford, Illinois, 1903-1905.
4. Principal, high school, Danville, Illinois, 1905-1909.
5. Secretary, Fairweight Scale Company, Danville, Illinois, 1909-1910.
6. Principal, Jefferson Township Schools, Goldsmith, Indiana, 1910-1912.
7. State 4-H Club Leader, Purdue University, September 1, 1912, to June 30, 1941. Associate State 4-H Club Leader, June 30, 1941, to November 1, 1944. Retired under provisions for retirement at 70 years of age.
8. State Supervisor of Agricultural Education, June 4, 1913, to June 30, 1941. Retired under provisions of Indiana State Teachers Retirement Law.
9. State Director of Vocational Education, July 1, 1923, to December 1936.
10. Professor of Vocational Education, Purdue University, July 1, 1923, to November 1, 1944.
11. Executive Secretary, American Vocational Association, December 1923, to December 1931. During this period membership of the association increased from 1,100 to 13,000, and the State Vocational Education Associations increased in number from five to forty-five. In December 1923, the association had an indebtedness of \$3,500. In December 1931, the association had resources of over \$20,000.00, consisting of cash in the bank and United States Treasury Bonds. Dr. Smith originated a Quarterly News Bulletin for the association and edited it from 1925 to 1929. Publication of this bulletin has continued under the original plan for financing it.

12. The "Agricultural Education Magazine", for teachers, supervisors, and teacher trainers in the field of vocational education, was originated in 1927 under a plan proposed by Dr. Smith, serving as chairman of a committee to devise a plan for financing, managing, and editing a publication of this character. He served as managing editor of the publication from 1927 to July 1929. Publication of this magazine has continued under the original plan.
13. Served as special agent in agricultural education for the New York State Board of Regents, Character, and Cost Study of Education, 1936-1937. Visited State Schools of Agriculture and high school departments of vocational agriculture, participated with the survey staff in discussion of the survey problems, and wrote a report covering findings and recommendations.
14. Member of the Indiana State Advisory Committee for the Farm Security Administration, 1937-1941.
15. Member of U. S. Committee on Survey of Teacher Training in the United States, 1929- 1930.
16. Treasurer and member of board of directors, Wesley Foundation, Purdue University, 1921-1941. Resigned in 1941, as treasurer, but continues as member of board of directors.

Honors:

1. Member of national honorary fraternities: Alpha Zeta, Phi Delta Kappa, Epsilon Sigma Phi, Epsilon Pi Tau, Pi Gamma Mu.
2. November 13, 1939, was awarded, by Epsilon Sigma Phi, National Honorary Extension Fraternity, a certificate of recognition for distinguished service in agricultural extension. This award may be made to only one person in Indiana every fourth year.
3. January 16, 1941, the teachers of vocational agriculture in Indiana presented to Purdue University an oil portrait of Dr. Smith.
4. On August 28, 1943, the Farm Heroes program, broadcast over WHAS, Louisville, Kentucky, devoted 15 minutes to the life and work of Dr. Smith.
5. Fee of \$100.00, for life membership in the American Vocational Association, paid by the vocational agricultural teachers of Indiana.
6. Member of the Phi Delta Theta social fraternity.
7. Member of the Lafayette Rotary Club.
8. Charter member of the West Lafayette Country Club.

Publications:

1906 The Favorite Teacher, Educator Journal, Vol. VII, No. 3, November.

1913 The Value of Boys' and Girls' Club Work. Educator-Journal, Vol. XIII, No. 8, April.
Courses in Pre-Vocational Agriculture, Bulletin No. 2, 136 pages. State Department of Public Instruction, Indianapolis. Prepared in cooperation with the departments of School of Agriculture, Purdue University.

Industrial Clubs and Contests. Purdue University, Experiment Station Circular No. 38, 24 pages.
Prepared in cooperation with specialists on the staff of the Experiment Station and the Department of Agricultural Extension, Purdue University.

Agriculture in the Schools. A Word of Encouragement. Proceedings of the Indiana State Teachers' Association.

1914 Boys' Corn Growing Contest. Fourteenth Annual Report of the Indiana Corn Growers' Association.

Educational Resources of Villages and Rural Communities—Hart. A series of articles prepared for the Indiana Teachers' Reading Circle. Educator-Journal, Vol. XIV, No. 12, August; Vol. XV, No. 1, September; Vol. XV, No. 2, October; Vol. XV, No. 3, November; Vol. XV, No. 4, December.

Suggestions on Organizing Boys' and Girls' Clubs. Purdue University, Department of Agricultural Extension. Leaflet 47, four pages.

Regulations Governing Vocational Agricultural Schools and Departments in Indiana. State Department of Public Instruction, Bulletin No. 7, 15 pages.

Pre-Vocational Agricultural Work in the Public Schools of Indiana. State Department of Public Instruction, Bulletin No. 8, 31 pages.

1915 Educational Resources of Village and Rural Communities—Hart. Continuing the series of articles for the Indiana Teachers' Reading Circle. Educator-Journal, Vol. XV, No. 5, January; Vol. XV, No. 6, February.

Pre-Vocational Agriculture Courses for Public Schools. State Department of Public Instruction, Bulletin No. 15. 233 pages. Prepared in cooperation with the Departments of the School of Agriculture, Purdue University.

What the Public Schools of Indiana are Doing in Pre-Vocational Agriculture Work. State Department of Public Instruction, Bulletin No. 16, 30 pages.

One Phase of Agricultural Education in Indiana—Supervision of Home Project Work. State Department of Public Instruction. Bulletin No. 22, 28 pages.

1916 Supervised Home Project Work. State Department of Public Instruction. Bulletin No. 19, 44 pages. Agricultural Education in Indiana. The Farmers Guide, August 17.

Indiana Junior Farmers. Sixteenth Annual Report of the Indiana Corn Growers' Association.

1917 Supervised Home Project Work. State Department of Public Instruction. Bulletin No. 32, 44 pages. Courses in Agriculture on a Home Project Basis. State Department of Public Instruction. Bulletin No. 27, 395 pp., 10,000 copies. Popular throughout the United States.

Plans for Vocational Agriculture Education in Indiana. Indiana State Board for Vocational Education. Bulletin No. 34.

1918 Supervised Home Project and Club Work. State Department of Public Instruction. Bulletin No. 39, 32 pages. Assisted by F. L. Kern, Assistant State Club Leader.

State Supervision of Training Teachers of Agriculture Under the Smith-Hughes Act. National Society for Vocational Education. Bulletin No. 26, May.

1919 Supervised Home Project and Club Work. State Department of Public Instruction. Bulletin No. 41, 56 pages. Assisted by F. L. Kern.

Purpose and Methods of Supervision in a State System of Agricultural Education. Proceedings, National Society for Vocational Education.

1920 Vocational Agriculture. The Purdue Agriculturist. September.

1921 State Plans for Vocational Agriculture Education. Bulletin No. 42. State Department of Public Instruction.

1922 Club and Vocational Training in Farming and Home Making in Fountain County, Indiana. State Department of Public Instruction. Bulletin No. 54, 31 pages.

Junior Extension Work as Developed Through the Public Schools. Proceedings of the National Education Association. Vol. LX.

Agricultural Education in Indiana. Feature Article in the Sunday Edition of the Indianapolis Star, February 11.

Some Results of Eight Years of Vocational Agriculture Education in Indiana. State Department of Public Instruction. Bulletin No. 61.

1923 Club Members Win High Honors. The Educator-Journal, January 1924.

The Department of Vocational Agriculture; Its Relation to the High School. National Society for Vocational Education. Bulletin No. 35.

Vocational Education in Indiana. State Department of Public Instruction. Bulletin No. 67, 12 pages.

1924 Boys' and Girls' Club Work. Purdue University, Department of Agricultural Extension. Bulletin No. 126.

1925 Geography of Indiana—A Supplement. Joint Author with E.E. Ramsy; The John C. Winston Company. Philadelphia.

1926 A Test in Animal Husbandry. Bulletin of the School of Education, Indiana University, Volume II, No. 5, pages 90 to 103; April.

1927 Chapter on "Grasses" and Chapter on "Clovers" for Farm Crops textbook edited by Dr. Kary C. Davis and published by J. P. Lippincott Company. Revised 1937. Chapter on "Trends in Secondary Agricultural Education" for "Objectives and Problems in Vocational Education", a textbook edited by Dr. Edwin A. Lee and published by McGraw-Hill Book Company. Revised 1937.

1928 Why Home Economics Clubs Should Support 4-H Club Work. Woman's Farm Journal. February. The Ninth 4-H Club Round-Up. Bulletin No. 151, 32 pages. Purdue University, Department of Agricultural Extension.

1929 Contributions of Vocational Guidance Programs to Individual Preparation and Adjustment. American Vocational Association NEWS BULLETIN, Vol. IV, No. 1, February. Pages 18 and 19. The Work of the Teacher of Vocational Agriculture. Ph.D. dissertation. 254 pages. Published by the author.

A Score Card for Evaluating the Services of an Architect in Planning and Constructing School Buildings. Published by the author.

1930 Some Objectives in Agricultural Education. Proceedings National Education Association. Some Objectives in Agricultural Education. United States Daily, Saturday, June 21. History of the American Vocational Association. Published by the association. Bulletin No. 5, 16 pages. Evening Marketing Schools. Hoosier Farmer, July 15.

1932 Measuring Results of Instruction in Vocational Agriculture. Proceedings National Education Association.