

Agricultural Teacher Education Preceding the Smith-Hughes Act

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Many teacher educators in agricultural education believe their profession virtually started when the Smith-Hughes Act was passed in 1917. However, it was the years, from the turn of the century on, leading up to the passage of the law that set many forces in motion which influenced agricultural teacher education programs.

The Setting

The 16-year time period from 1900 to 1916 laid the groundwork for professional agricultural teacher education. During this time, several questions had to be answered for the first time: What should be the source of teachers? Should college graduation be a requirement for teaching agriculture or should some other source of teachers be found? What preservice activities should be part of the program? Should preservice include separate teaching methods and student teaching? Who should provide the inservice activities and what should be taught? Should agriculture teachers be prepared by normal schools or land-grant colleges?

In the field of education, many important changes were occurring during this time period. The last decade of the 19th century had seen the report of the National Education Association's "Committee of Ten." This report recommended that seven secondary courses could be the equivalent of Latin and Greek for college admission. The courses were: English, modern foreign languages, history, mathematics, physical science, natural history and geography (Wirth, 1980). This recognition of the importance of courses other than Latin and Greek was a significant change in secondary education curriculum. As part of a continuing democratic trend in public education, it was the time for a major change in the clientele of the schools and the curriculum taught to that clientele. The demise of social Darwinism, a popular concept in the last half of the 19th century which placed emphasis on educating the gifted and the talented (Hofstadler, 1959), and the rising influence of the progressives resulted in a series of changes at both the elementary and secondary levels and in the way agriculture was taught in the schools.

Elementary Education

Bricker (1914) noted that enthusiasm for the study and teaching of elementary agriculture began early in the 20th century: "From 1900 to 1905, the tide rose very rapidly, and during the following half-dozen years a veritable flood of public sentiment for the teaching of this branch in the schools swept the country" (p. 8).

One popular way to teach agriculture in elementary schools was through nature study. True (1897) predicted that "nature teaching," as taught at Cornell, would soon become a great success. He noted:

The ordinary child, whether on the farm or in town, actually sees comparatively little in the world about him. The wonders of the trees and plants in park or meadow, of birds and insects flying about the house, float like shadowy visions before his eyes. "Seeing, he sees not." (p. 286)

This prediction of the popularity of nature study in the elementary schools proved to be accurate. Overall, it was a practical and interesting way to teach agriculture to both rural and urban children enrolled in common schools. It was so popular that by 1905 the United States Department of Agriculture issued an Experiment Station Circular entitled A Few Good Books and Bulletins on Nature Study, School Gardening, and Elementary Agriculture for Common Schools (Crosby, 1905) that listed over 100 books, periodicals and other references as possible sources of information for the elementary agriculture teacher.

The nature study program and elementary agriculture did have their critics, especially from the establishment-oriented agriculture people. One of those was Eugene Davenport, Dean of the College of Agriculture at the University of Illinois. In 1908, while he was encouraging the development of secondary agricultural education, he emphasized this point by saying:

. . . When I speak of teaching agriculture in our high schools, I mean agriculture. I do not mean nature study, nor do I mean that some sort of pedagogical kink should be given to chemistry or botany or even geography and arithmetic. Let these arts and sciences be taught from their own standpoint, with as direct application to as many affairs of real life as possible; but let chemistry continue to be chemistry; let agriculture introduce new matter into the schools and with it a new point of view. Nor should this new matter be "elementary agriculture." In some ways I could wish the phrase had never been coined. What is wanted in our high schools is not elementary agriculture, but elemental, fundamental agriculture. (Davenport, 1908, p. 17)

Secondary Education

During the early years of the 20th century, agricultural education also grew rapidly in popularity at the secondary level. Robinson and Jenks (1913) reported that in school year 1906-07 less than 100 public secondary schools offered instruction in agriculture. They reported that for year 1907-08 the number had changed to 250 schools and by 1908-09 the number had doubled to 500. For school year 1909-10, Robinson and Jenks (1913) reported 1,800 schools had been identified by the Bureau of Education as offering agriculture as a separate study. They noted an error in the 1901-1910 data where some officials reported sixth, seventh and eighth grade agriculture due to local terminology where "high school" meant graded school or eighth grade was included in the high school. True (1929) reported a dramatic trend for school year 1915-16 with 3,675 secondary schools offering agricultural instruction to more than 73,000 students.

Supply and Demand of Agriculture Teachers

With so much interest and such a dramatic increase in teaching agriculture in one form or another, finding adequately prepared teachers in sufficient quantity became a major problem. As E. C. Bishop (1912) noted while addressing the National Education Association convention, "Better teachers with better training in agriculture is the crying need just now which must be met if the work is to be advanced, or even saved from disastrous affliction" (p. 477).

Crosby (1907) reported a serious shortage of both elementary and secondary agriculture teachers.

Hundreds of public high schools and thousands of grammar schools in the several states and territories where agriculture is beginning to be recognized as a subject of study can never hope to secure teachers who have graduated from agricultural colleges, and yet they want "teachers who know agriculture and know how to teach it." What is being done to meet this urgent demand for trained teachers of agriculture? (Crosby, 1907, p. 208)

With the dramatic growth in demand for agriculture teachers, a logical question became where to find them. Garland Bricker, in his book Agricultural Education for Teachers (1914), suggested four sources of agriculture teachers during that time: (a) nature-study teachers; (b) agricultural college graduates; (c) high school science teachers; and (d) people raised on farms.

Nature-Study Teachers

Bricker (1914) considered using nature-study teachers as agriculture teachers to be a grave error. He noted that nature-study teachers instructed with no idea of building lessons into parts of a great science. He believed the teacher of agriculture should do this conscientiously. He further noted that agriculture had an economic base and nature-study did not.

Bailey (1908) also criticized nature-study, saying it was not a study, a subject or even a method. It was, he said, a fundamental educational intention which emphasized living in harmony with surrounding conditions. He saw nature-study as teaching what was close at hand as a part of the child's environment. Its purpose was for the child's sake, not to promulgate knowledge of any subject matter.

Agricultural College Graduates

Bricker (1914) also did not like the idea of using agricultural college graduates. He identified three problems with them. The first was a lack of understanding concerning children. "He needs to realize that the pupils in the elementary and high schools are immature, untrained and inexperienced" (p. 118). His second identified problem was that the agricultural college graduate knows little about teaching methods. Bricker (1914) stated it, "The abundance of knowledge that he emits falls like a cataract over the heads and lives of the children, who emerge with the realization that there has been a flood, but show scarcely any evidence of moisture" (p. 118). Another problem with the agricultural college graduate, according to Bricker, was that of not knowing what to teach the student: ". . . While the agricultural college graduate may know his subject thoroughly, he rarely knows what to omit or what to include in teaching it to the pupils of the public schools" (1914, p. 119).

High School Science Teachers

Bricker (1914) was also critical of high school science teachers making the move to teaching agriculture. He noted that the background science teachers had was pure science, while agriculture represented applied science. He further noted:

. . . Agriculture is more than a science. It is an art and a business. The science graduate will probably not have had any

training in the art of business of agriculture; therefore, he cannot be regarded as having had adequate preparation to teach a subject two-thirds of which he knows little or nothing about. (p. 120)

Bailey (1908), on the other hand, indicated that the field of agriculture was essentially a natural science field. He believed that the high school teacher of agriculture should be well grounded in the science and practice of the subjects of physics, chemistry and botany because the teacher used the knowledge of the subjects every day. He predicted that natural science teachers would be a most important source of high school agriculture teachers.

People Raised on Farms

Bricker saved his greatest criticism for using as agriculture teachers people who only had the qualification of being raised on a farm. "They are persons who have been 'raised on the farm,' and who therefore think themselves amply qualified to teach agriculture. If this is their only qualification there is certainly no excuse for their employment" (Bricker, 1914, p. 121).

Since he opposed all of the sources suggested, Bricker suggested something relatively new:

They will come from agricultural education departments of our normal schools and agricultural colleges; and by the words in italics are meant those departments that give definite training in the theory and practice of teaching the subject in all grades of educational institutions including the elementary school and the college. (Bricker, 1914, p. 121)

Preservice Programs

Garland Bricker's idea of establishing agricultural education departments was not immediately realized. Several perspectives must be examined before agricultural education was recognized as worthy for departmental status. Among these are the Nelson Amendment, the role of normal schools, the role of land-grant colleges and universities, and other teacher training possibilities considered at the time for the preparation of agriculture teachers.

Nelson Amendment

The Nelson Amendment was approved March 4, 1907, as an amendment to the Agricultural Appropriations Bill (Robinson & Jenks, 1913). It permitted federal funds to be used by colleges of agriculture to provide courses for the preparation of instructors to teach the elements of agriculture and mechanics arts. In 1908, \$25,000 was appropriated annually to each state for this purpose (Wheeler, 1948) though the total annual appropriation could have gone to \$50,000 per state. Stimson (1913) reported that, seven years after passage of the Nelson Amendment, 60 or more professors of agricultural education, charged with the duty of training teachers of agriculture, should be in position.

Normal Schools

During the years described in this article, normal schools functioned primarily as post elementary institutions. Robinson and Jenks (1913) described normal schools as ". . . graduating their students in four years beyond the eighth grade, or in one or two years after the high school . . ." (p. 45). They continued by noting that for schools

in general, normal school products ". . . have been the chief dependence in many states for the supply of teachers" (p. 45).

Because of their traditional role as the major source of teachers for public schools, especially at the common or elementary level, it was not usual for normal schools to become involved with agriculture teacher preparation. A bill facilitating this involvement--The Bill to Provide for the Advancement of Instruction in Agriculture, Manual Training and Home Economics in the State Normal Schools of the United States--was introduced by Senator Burkett of Nebraska. Testimony was given concerning the bill (S 3392) before the Senate Committee on Agriculture and Forestry on February 26, 1908 (Hearings, 1908).

While S 3392 had provisions for teacher preparation in manual arts and home economics, it was obvious from the committee hearing testimony that the major interest was agriculture. There were also concerns because the federal government had provided financial assistance to agricultural colleges through the land-grant acts. Examples of testimony (Hearings, 1908) fully illustrate these concerns. For example, Homer H. Seely, Esq., President of the State Normal School of Iowa, Cedar Falls, Iowa, testified:

Take my own state, for example--I am more familiar with that. We have about 1,500 young men and women that come to us each year from the farms and study with us a number of months (a good many of them a year) and go back to teach in the county schools.

This bill receives our support as members of the National Educational Association from different States of the Union, first, because it does not mean any extraordinary expenditure in any State; second, because we have today the actual students that the National Government and the State government want to reach. (pp. 2-3)

We have hoped that the National Government would do for the normal schools in small measure what they have attempted to do for other institutions of learning, like the mechanic arts colleges and the agricultural colleges, in order that we may carry this encouragement and this instruction to the county schools; and by means of the normal schools we feel that this problem can be very much better solved than by any other agency with which we are acquainted. (p. 3)

While the bill was not passed by Congress, normal schools did receive a lot of attention as a possible source of agriculture teachers.

Bailey (1908) noted problems with state normal schools preparing agriculture teachers, especially in eastern states. Such schools were close to cities, where schools paid good wages. He believed graduates would be more likely to return to the cities to teach. On the other hand, he believed local normal schools such as those in Wisconsin contributed to the training of rural teachers. In 1908, 16 county normal schools had as their sole purpose the training of teachers "for the rural communities" (p. 31).

Crosby (1907) noted that of a total of 182 state normal schools in the United States, 64 taught agriculture. He further indicated that "in 11 of the normal schools, agriculture is taught by teachers of agriculture, in 11 by teachers of science and agriculture, in 35 by those designated teachers of science, and in the remaining 7 by other teachers--principals, teachers of pedagogy, economics, etc." (p. 212). He went on

to indicate that this was better than one would expect with such a new movement (Crosby, 1907).

Balcomb (1912) was quite critical of using normal schools to prepare agriculture teachers.

. . . but behold the lack of equipment and the infantile efforts of the vast majority of the normal schools they have four brick walls, the common desks, children saturated with the old ideas of education, a textbook written by a college professor who never taught a day in the rural schools, and a teacher who does not know a Duroc from a Plymouth Rock. (p. 828)

The place of the normal school for the preparation of agriculture teachers became primarily one of emphasizing elementary teachers. A. C. True, Director of the Office of Experiment Stations, USDA, agreed with this point of view (Report, 1914). A. B. Graham, in charge of College Extension Work, The Ohio State University, also agreed that land-grant universities such as Ohio State were not in the business of training elementary agriculture teachers (Hearings, 1908).

Land-Grant Institutions

Generally, the land-grant colleges and universities assumed the role of preparing secondary agriculture teachers. The involvement was a gradual process attempting to meet the need as it developed. By 1907, for example, 26 state agricultural colleges offered training courses of some type for the training of teachers (Crosby, 1907). The courses ranged ". . . from summer courses of a few weeks to regular four-year courses with additional graduate work" (p. 208). Crosby further indicated that four year courses for teachers were offered by colleges in Arkansas, Illinois, Maine, Mississippi, Missouri and Rhode Island for whites and in Missouri, South Carolina, Texas and Virginia for Negroes.

In 1912, True reported the results of a survey sent to presidents or deans of agriculture colleges, to professors of agricultural education and to state superintendents of public institutions. He did not indicate the sample size of the study. He did indicate receipt of 38 responses from agricultural college representatives and 16 state superintendents of public institutions. In response to the question, "What should the colleges do for the teacher not in service who wants to prepare himself for efficient work in agriculture?", 32 who expressed an opinion recommended holding summer schools. Twelve had the opinion that teachers should be reached through extension work (True, 1912).

In response to the question, "What should the colleges do to prepare those who have had no experience in teaching?", hints at more use of an agricultural education major could be found:

Several of the committee's correspondents and some of those interviewed were of the opinion that young men preparing to teach agriculture in high schools should complete courses of a general nature in all of the principal branches of agriculture but should not specialize in that subject. The time usually devoted to specializing in some phase of agriculture would in this case be devoted to courses in education. (True, 1912, p. 2)

For the question, "What should be the technical and professional content, respectively, of the training course for teachers of agriculture?", a great deal of variety was found in answers. The one point of

agreement was that both technical and professional training were necessary for the preparation of high school agriculture teachers (True, 1912).

True also indicated what agricultural colleges in all 48 states were doing to meet inservice needs and preservice needs for agriculture teachers at that time. The results of his survey are reported in Table 1. The major emphasis is clearly on secondary teachers of agriculture. However, 31 colleges of agriculture did offer summer school classes for elementary agriculture teachers.

Table 1

Courses for Teachers in the Agricultural Colleges

| Course | n |
|--|----|
| Agricultural students may elect courses in education | 33 |
| Educational students may elect courses in agriculture | 13 |
| Courses offered in agricultural pedagogy | 20 |
| Prescribed four year courses for agricultural teachers | 15 |
| Prescribed two year courses for agricultural teachers | 2 |
| Prescribed one year courses for agricultural teachers | 3 |
| Special courses for college graduates preparing to teach agriculture | 4 |
| Summer courses for secondary teachers | 24 |
| Summer courses for elementary teachers | 31 |

Note. Source: The Work of the Agricultural College in Training Teachers of Agriculture for Secondary Schools by A. C. True (1912).

Other Teacher Training Possibilities

In addition to normal schools and land-grant schools, other approaches for preparing agriculture teachers included such suggestions as home study, correspondence work and teachers' institutes.

Home study. Bricker (1914) suggested home study for the persistent person, who could use self-denial, as a way to prepare for teaching agriculture. He suggested reading good elementary or secondary textbooks, bulletins from colleges of agriculture, agricultural experiment stations and the United States Department of Agriculture. He further recommended observing the objectives and practices used by a good farmer in managing a farm.

Correspondence work. Bailey (1908) recognized the possibility of correspondence work on the part of the individual who would like to become a proficient agriculture teacher. He recommended observing organized clubs with crop growing and exhibition contests as part of the correspondence approach. Overall, it appears that the correspondence part of Bailey's recommendation emphasized writing for leaflets and other published material on agriculture, making it similar to the home study approach.

Teachers' Institute. The teachers' institute as suggested by Bricker (1914) was a useful system for upgrading teachers who wanted to

teach agriculture or for those agriculture teachers who wanted to become more proficient. He indicated that it would become more important as institute instructors with sufficient background became more available.

Teacher Education for Minorities

The majority of information available for this period of time discusses teacher education for white males. However, in a society with segregated school systems, there were some teacher education programs available for minority students.

One of the earliest institutions providing teacher education in agriculture for blacks and women was Hampton Institute. Crosby (1907) thought the training courses for teachers as being thoroughly effective. Quoting from the Hampton Institute catalogue, Crosby wrote:

The young women, almost without exception, and most of the young men who graduate, engage in some form of teaching. The course of study therefore provides that all members of the senior class shall receive such preparation for teaching as can be gained during the year from one hour a day spent in observation and a study of principles based upon this observation. (pp. 210-211)

A graduate of Hampton Institute, Booker T. Washington, established Tuskegee Institute in 1881 (Stimson & Lathrop, 1942). By 1916 (Negro Education, 1916), the U.S. Bureau of Education recognized Hampton Institute and Tuskegee Institute as "The only institutions for colored people at present equipped with teachers and plant to offer a complete agricultural course" (p. 111). Earlier, Crosby (1907) had recognized Lincoln Institute at Jefferson City, Missouri, Prairie View, Texas, and the school for Negroes at Orangeburg, South Carolina, as offering four year normal courses.

Practice Teaching

One remaining issue for this era concerned practice teaching. Specifics to be determined included the amount of time involved, how to administer it and what to call this practical experience.

From the True survey of 1912, the representatives of the colleges of agriculture and the state superintendents of schools, in general, supported the idea of practice teaching. True (1912) suggested cooperation between the colleges of agriculture and nearby normal schools. With that approach, practice teaching could be obtained under the same provisions as teachers preparing for other fields. Other suggestions were for the practice teachers to work under supervision in the secondary schools of agriculture or the preparatory schools connected with the colleges of agriculture, to practice teach with neighboring high schools, to practice teach in a model secondary agricultural school on campus, to practice teach in short courses, and to use a fellowship approach where the practice teachers would be paid by both the college and the school employing them.

Works (1916) wrote an in-depth description of apprentice teacher training in New York, noting that it was generally accepted as a highly desirable experience.

The Department of Rural Education of the New York College of Agriculture has made cooperative arrangements with the Division of Agricultural and Industrial Education of the State Department of Education, by which such experience will be

obtained by placing seniors in high schools of the state where vocational agriculture is being taught by a teacher who is devoting his entire time to the work. Five schools were selected, and one senior placed in each school as assistant for the first semester. Each assistant will be followed by another senior the second semester so that the schools may plan on continuous assistance throughout the year. (p. 291)

Works (1916) reported that students received one semester of residence and three hours of credit toward graduation. In addition, the apprentice teachers received \$30 a month for their services. The Department of Rural Education paid the local school board \$20 per month for furnishing the teaching facilities and supervising the apprentice teacher.

Works also pointed out some of the problems of working as a pioneer in an emerging field: "No one knows just what we can teach to the best advantage, and we are far from knowing how we can teach to the best advantage the study material we are now using" (p. 295). He suggested that a school under the control of an agricultural education department could serve as a laboratory to help solve both problems.

Conclusion

The early years of this century were very important to the development of teacher education in agriculture. The topic was being implemented for the first time as the result of a great demand for both elementary and secondary agriculture teachers. Many decisions had to be made as to sources of teachers and what type of training to give them. Other fundamental questions also had to be answered such as who should provide the training: normal schools or land-grant institutions. These formative years even saw the beginnings of student teaching as a part of the teacher preparation program. The 1900-1916 era laid a strong foundation for what was to follow in teacher education. Passage of the Smith-Hughes Act in 1917 would see a continuation and increase of federal funding for teacher education in agriculture.

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