

# The Visitor

Devoted to the Interests of Agricultural Education in Minnesota Schools

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## Harry W. Kitts 1914-1971

Public education, agricultural education in particular has suffered a grievous loss with the passing of Harry W. Kitts. A master teacher and teacher of teachers, the death of Dr. Kitts leaves the profession with a sense of loss not yet fully realized. His boundless energy, sense of humor, and his capacity for productive endeavor made it inevitable that he would become a respected force in his chosen field. As we mourn his passing, we give thanks for his contributions.

A man of many talents, Harry Kitts was an organizer *par excellence*. He was an outstanding speaker, incisive writer, civic and professional leader, craftsman, family man and an asset to every community in which he lived and worked.

Courageous and fearless in pursuit of improved education in agriculture, Harry Kitts never dissembled. His word was his bond. Harry Kitts was an honest man and a gentle man. We will miss him.



Harry W. Kitts

## AT THE TURN OF THE WHEEL

Harry W. Kitts  
University of Minnesota

### PART I

Today people are talking about bringing sharply into focus problems that we have not faced in the past, and problems of the future brought about by social and technological developments. This new era in vocational education has been ushered in by requirements of business and industry and the economic and social needs of people. But are we entering a new era? The definition of vocational education has not changed. We allowed ourselves to become too complacent. Too much of our teaching was not vocational. The point was reached where the ultimate consumer of our product — the entrepreneur, employer and taxpayer — had come to expect more from vocational agriculture at the secondary level.

The term "vocational education", as defined in the 1963 Vocational Education Act, means vocational or technical training or retraining designed to fit individuals for gainful employment as skilled or semi-skilled workers or technicians in recognized occupations but excludes programs requiring a baccalaureate degree or of the professional classification. For vocational agriculture this included the self-employed, the operators of agricultural businesses. There is nothing new or startling in that language. The part that is annoying is that we have gone all these years and given too little attention to that phrase "training to fit individuals for gainful employment" that was in the Smith-Hughes Act of 1917.

As we study the changes in organization and curriculum, the extent to which we improve vocational education in agriculture will depend to a large degree on: (1) our *vision* and imagination in designing programs for *all* persons of all ages in all communities of the state, (2) our *attitude* toward change and our *willingness* to consider ideas, concepts and techniques which may alter the present selection of subject matter and methods of instruction, (3) our ability to *redesign* the vocational agriculture curriculum and individual student programs of work experience, (4) our ability to secure the *cooperation* of the school administration, the teaching staff and business and industry of the community in presenting the proposed program, and (5) our ability to *present* the concept of our program to school officials, guidance counselors, and that vast array of educational experts who appear to be on the outside looking in at our educational system.

Vocational education is riding the crest of a popularity wave today. Think back to those parts of our educational program which have come under attack. With the detonation of the first atomic bomb, schools received a verbal blast that our students needed more mathematics and science. Then there was the era of "Why Johnny Can't Read?" We've had Conant urging for school district consolidations, Rickover promoting broad general educational programs, others, the humanities, the new math, the exceptional child. Today the focus is on vocational education. We have captured the thinking of the people of this nation as never before. How far we will go or where we will be when the pendulum starts to swing back is anybody's guess.

Significantly changing the curriculum is like moving the engine from the front to the rear of an automobile. It may be a drastic change, not gradual. Unfortunately, too many people visualize our educational system as 12 years of intake and then all output for the rest of the individual's life in the employment world. Such is not true. Some authorities predict the average individual will change jobs at least 3 times during his lifetime and need retraining each time. Other writers have stated that 50 per cent of what we teach today in vocational agriculture will be outdated and should be abandoned in 10 years. It will be replaced by information not yet discovered.

The Smith-Hughes Act, passed in 1917 had a statement of objectives "to train present and prospective farmers." Our concept today has broadened to include preparation in all fields requiring knowledge of agriculture. But what is considered by many as a new approach may be a repetition of history!

Hummel, writing before the passage of the Smith-Hughes Act, stated, "The work of the secondary schools lies between that of the colleges and the elementary schools. Its purpose differs from that of either of these. High school agriculture should be practical agriculture, educating students for the business of farming. And yet it should not be narrowly vocational, but should be cultural and disciplinary as well. It should not only prepare students to be good farmers, but should fit

them for life as broad-minded, intelligent, progressive citizens."<sup>1</sup> Hummel also advocated what many teachers repeat today. "In planning the four years' agricultural work of the high school, it is evident that the study of the plant furnishes probably the best first or beginning year. All agricultural occupations are based on plant productions. Animal production may follow in the second year, or, if horticultural interests are paramount, horticulture may follow an introductory course in plant production. In the last high school years, should come the study of agricultural machinery, rural engineering, rural economics, and general farm management."<sup>2</sup>

Vocational agriculture instruction has been identified from its inception with the 'learning by doing' concept. It did not begin with the Smith-Hughes Act. Hummel wrote: "The high school agricultural work should give pupils information, the ability to do certain things, and practice in doing them."<sup>3</sup>

In earlier writing, Bricker stressed the need for instruction that would leave the student with right points of view as to agricultural facts, principles, and the occupation itself, and high ideals of accuracy, order, persistence, investigation.<sup>4</sup> It should be based on the actual agricultural operations of the local community.<sup>5</sup>

The teacher should familiarize himself with those resources of the community which can be profitably utilized by him in his teaching and should select from the wealth of material offered such as will be most helpful to provide opportunity for field trips or application of the teachings of the classroom in an actual work situation.<sup>6</sup>

Instruction in agriculture was offered in many states several years before the passage of the Smith-Hughes Act in 1917. True reports<sup>7</sup> many agricultural societies for the advancement of agriculture in the colonies of U.S. as early as 1744. The Boston Farm School was established in 1832. An agricultural school was incorporated in New York in 1836. From such early beginnings, and after considerable upgrading, some of our existing land grant colleges emerged. An agricultural school at the secondary level was developed in connection with the Department of Agriculture at the University of Minnesota in 1888 and functioned until the early 50's. In 1901, the Minnesota State Legislature appropriated \$4000 for the University to prepare, print and distribute leaflets, charts and lessons to aid and encourage teachers and pupils in rural schools to study agriculture, domestic economy and rural life.

Albert Lea was the first recorded school to offer agriculture at the high school level beginning in 1908. There were 22 boys and girls enrolled in the class and each had a 5'x10' plot of land on the school grounds for garden plots.

In 1909, the Putnam Law provided a maximum of \$2,500 for each of 10 high or consolidated rural schools which maintained agricultural and industrial departments, with teachers trained in agriculture, manual training, and domestic science and not less than 5 acres of land. The 10 schools approved were: Albert

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Lea, Alexandria, Canby, Cokato, Glencoe, Hinckley, Lewiston, McIntosh, Red Wing and Wells. This program expanded to 30 schools in 1911. The same year the Benson-Lee Act gave \$1000 annually to each of 50 high schools maintaining a course in agriculture and a course in home economics or manual training. The State high school board, charged with the administration of the program, required that a trained agriculture teacher be employed and give not less than a continuous half day for agricultural work, with a room exclusively for his use.

The first summer session to train rural teachers in agriculture was conducted in St. Anthony Park in 1910.

By 1913, the trend was away from school plots to projects on the home farms. The State of Massachusetts was a pioneer in the home project. In a 1911 publication one reads, "One of the best methods that has been devised for working out the economic aspects of the instruction is the project plan carried out on the farm under average conditions."<sup>8</sup> Leake stated, "The proper use of the home farm for purposes of practical work and instruction can be made to yield results superior to any that can be obtained on school property."<sup>9</sup>

### THE CURRICULUM

Many of these early courses were developed on a two-year basis with one year devoted to crops and soils, the other to livestock production. Eaton reported the common divisions of agriculture in a four-year high school course, based on a study of 60 schools in 16 states in 1915-16 as:<sup>10</sup>

Year I	Year III
Soils	Animal Husbandry
Vegetable Gardening	Dairying
	Poultry
Year II	Year IV
Farm Crops	Farm Management
Fruit Growing	Farm Mechanics

Pollution and ecology are receiving emphasis today. They did not go unrecognized 50 years ago. Nolan wrote, "The specific aims of vocational agriculture education for the individual student are, (1) to give the pupil who intends to become a farmer preparation for wholesome farming and country life; (2) to give the skill and knowledge necessary to the control of plant and animal production, and (3) to articulate such education with other education so as to produce an educated country gentleman who works with his hands and gathers about him all the best things which civilization affords."

"Some modern demands would have our natural resources conserved, rural life vocations made more efficient, the health of the country folks conserved and improved, a greater appreciation of all art, a permanent and persistent moral growth, a closer and more efficient rural organization, and a more liberal education among the whole rural population."<sup>11</sup>

He advocated prevocational agriculture and considered it an easy and proper step from nature study in the lower grades to exploratory agriculture in the 7th and 8th grades. A year of general science may well precede any high school course in agriculture. Botany should precede, or parallel, farm crops; zoology with animal husbandry; chemistry with soil fertility; and physics with farm mechanics.

The high school curriculum offered *Agronomy* the first year including farm crops and elements of soil physics and soil fertility the first semester, *General Horticulture* the second; for the second year, *Animal Husbandry*; the third year, *The Farmstead*, including farm mechanics, engineering and management; and the fourth year, semester units in *Horticulture, Improvement of Plants and Animals*, or other special phases of agriculture as best suited to the community and school needs.<sup>12</sup>

The National Education Association Commission on Reorganization of Secondary Education described an arrangement of:

Agronomy, one year; Animal Husbandry, one year; Horticulture, Soils, Farm Engineering and Farm Management, one-half year each with sequence and time allotment adapted to local needs. In making such modifications, attention should be given to the type of local agriculture, natural interests of the students, the pedagogical sequence of subjects, correlation with other portions of the curriculum, relative administrative adaptability of the subjects to the conditions at the school, and, if necessary, to the teacher's preparation in the different topics.<sup>13</sup>

Early course offerings in Minnesota were developed around separate units on Soils, Farm Crops, Horticulture, Animal Husbandry, Farm Management and Dairying. The curriculum recommended in 1911 was:

1st year — Crops  
2nd year — Animal Husbandry  
3rd year — Farm Mechanics  
4th year — 1 semester Soils, 1 semester Horticulture

There was a gradual transition from a purely textbook course of study to the selection of subject-matter based on local agriculture, increasing use of bulletins, magazines, field trips and laboratory exercises.

Federal policy bulletins made reference to curriculums adapted to local conditions and to students.<sup>14</sup> In one bulletin was one of the first references to giving school credit for project work.<sup>15</sup>

Schmidt indicated the prevailing practice was to devote the first two years to animal and crop enterprises . . . the third and fourth years to productive enterprises of special importance in the community. However, Schmidt was among the first to indicate the importance of seasonal sequence in teaching the various jobs. He described the *horizontal* layout by listing the names of each enterprise in a vertical column, and the jobs in a horizontal column indicating the month in which the job was to be taught.<sup>16</sup>

Stewart and Getman introduced the term *cross-section*. They indicated, that whereas all dairy was taught in a single block, under the earlier programs, they favored dairy cattle feeding be taught the same year and associated with corn silage and alfalfa production since these two units supplemented the other and more nearly approached a normal farming operation.<sup>17</sup>

Hammonds, writing in 1950, deplored a course of study which did not meet the needs of the individual student. Needs and desires are not the same things. The needs of the individual are governed by the situation and should be of benefit to him, and to society. His desires may not be the same. If not, one of the challenges to the teacher is to motivate and direct the student in the desired direction. Hammonds identified the *cross-section* and the *modified cross-section* as the two most common types of curricular organization. He stated, "There have been many developments since the early 20's that have a bearing on arranging the courses by years. New categories have been developed . . . such as land use, farm forestry, farm-home beautification . . . farm finance, farm organization and agricultural exploration and guidance. These developments tend to lessen the time that can be given to the enterprises as such and made extremely unwise the use of teaching time in any unnecessary repetition."<sup>18</sup>

Garris<sup>19</sup> referred to the enterprise, semester or year offering as the *traditional* type of organization. He identified the next modification as *Major Enterprise* when units of several enterprises were taught each year with the emphasis on the major enterprises of the community the first year, those enterprises such as crops and mechanics as contributory and taught the second year; minor enterprises such as forestry, garden, some of the small grains etc., the third year and farm management the fourth. His classification of a *modified cross-sectional* plan used dairy, farm crops, beef or swine as the central phase supplemented by current problems and supporting activities such as selection of the type of silo or grain storage bin and the harvesting of the corn as related to furnishing feed for the livestock. His description of the cross-sectional plan of curriculum

organization extended instructional jobs of one enterprise over a number of years. For example, in the swine enterprise, the first year might include such jobs as selecting a breed, purchasing foundation stock, providing housing and equipment, and feeding young animals. The second year of instruction includes jobs on breeding animals, caring for the sow at farrowing, registering pigs, and castrating pigs. The third year might include jobs on butchering, marketing, and curing meat. The fourth year involved jobs such as organizing a cooperative breeders association, holding an FFA chapter sale of breeding swine. The boy grows swine all four years of his agricultural studies. Since each boy might have a different farming situation and objective, the plan provides opportunity for considerable individualized and small-group instruction.

Garris' writings followed the philosophy presented by Field in his series of books suggested as texts for the four years.<sup>20</sup> Agriculture I was intended to give students an overview of the business of farming with a survey of the agricultural industry, the characteristic plants and animals with which the farmer deals and principles of their production. Agriculture II encouraged the farm-as-a-whole approach and factors influencing production. Agriculture III treated the farm operation and the analysis of operations to improve efficiency. Agriculture IV gave emphasis to the inter-relationships of the technical and complex problems of management, and improvement. Field pointed out that a student studying under the vertical, or enterprise, organization of the curriculum emerged at the end of the four years with several compartmentalized farming activities. He warned that farmers did not operate this way so it would be more appropriate to approach the study of the farm business as it is conducted in real life. The student would study agriculture on the farm-as-a-whole basis. This *integrated* course, as Field identified it, guided a student progressively through a series of learning and doing experiences designed to integrate him with the total environment of the farmer. The student was being integrated, not the material which was the medium through which the student's integration was achieved.