

# THE VISITOR

Devoted to the Interests of Agricultural Education in Minnesota Schools

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## GEORGE RAY COCHRAN APPOINTED TO THE POSITION AS STATE SUPERVISOR FOR AGRICULTURE

G. R. Cochran, the newly appointed Supervisor of Agricultural Education, is a native Minnesotan. He was born and raised in Rice County and is a graduate of the Faribault High School. At the University of Minnesota, College of Agriculture, Mr. Cochran majored in Agricultural Education with a minor in Animal Husbandry. He was a member of the University Swine and General Livestock Judging Teams. He was an active member of the Agricultural Education Club, Block and Bridle, and Alpha Zeta.

After graduation from the University, Mr. Cochran taught agriculture for two and a half years at Sleepy Eye, Minnesota and two years at Lancaster, Wisconsin. In 1929 he returned to Minnesota to accept the position of agriculture teacher at New Richland. While at New Richland, Mr. Cochran developed a comprehensive educational program for the community which included from one to three evening or part-time classes each year.

New Richland has had an active chapter of Future Farmers of America since the organization of the state chapter. The F.F.A. members have consistently placed high in such events as the Northwest Marketing School, lamb feeding contests, and judging contests. Two state and one national team championships were won by teams from the New Richland chapter. In 1933 the New Richland team won the state championship in dairy judging and in 1937 they won the state and national team and individual poultry judging championships.

Of particular satisfaction to Mr. Cochran is the number of his vocational students, high school and part-time, who have become established as successful farmers in the community.

### Community Leader

Although busy with his work as a teacher, he has taken an active part in community affairs. He is a member of the Waseca County 4-H Club Leaders Council and served as president of that organization for one year. Recently he was presented with an award for 15 years of serving as adult leader. He served a number of years as Secretary-Treasurer of the Waseca County Livestock Breeders Association, was a charter member of the New Richland Sportsmen Club, and is an active member of the local



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Commercial Club and the County Crop Improvement Committee.

In 1945, Mr. Cochran was awarded the Master of Science degree from the University of Minnesota. His special problem dealt with the development of a course-of-study in Farm Mechanics for the New Richland School.

Mr. Cochran has been an enthusiastic worker for soil conservation activities in his community. In cooperation with County Agent Cletus Murphy, he has developed extensive soil conservation programs that are in operation on the farms of his students.

From the standpoint of scholastic ability, practical experience, and likeable personal qualities, Mr. Cochran is well qualified for the important and challenging work of the position he has accepted. The VISITOR joins his many friends in extending congratulations and best wishes for many years of interesting and valuable service and leadership to teachers of agriculture and to the entire program of education for better living in rural Minnesota.

## VISITOR

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## THE STAFF

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## Baby Days Are Over

This issue of the VISITOR begins the 35th year of continuous publication. The first sentence in the first issue, dated January 1914, states that "The teachers of agriculture in the public high schools of Minnesota have long wanted some means of intercommunication that each might know something of what the others are doing." The early years of the development of any program are crucial years. The VISITOR has served a useful role in the evolution of a sound philosophy of education for rural youth during the important *growing* years. Now agricultural education has reached some degree of maturity. It is a "big boy" in Education. Let us continue to think and do big things appropriate for our age.

## The Adaption of the Unit Method of Teaching to Vocational Agriculture

R. SELWYN COPELAND\*

## The Definition and Evaluation of the Unit

What is the unit? Until the teacher gains a meaningful understanding of the unit, he has no chance of successfully planning units which will be adapted to vocational agriculture.

According to Cameron, "Units are a succession of large topics within a course, each bound together by a unifying principle."<sup>1</sup> Hurd intimates that this is the smallest concept of the unit and that in a broader sense the course itself should be but a unit in a larger curriculum sequence.<sup>2</sup>

A less materialistic concept of the unit is expressed by Green who says that a unit is an experience which includes motivation of effort, establishment of purpose, participation in planning and execution, and participation in evaluation.<sup>3</sup> This idea is practically synonymous with the basic laws of learning which state that first, there must be readiness or motivation to stimulate active learning, second, the effect or degree of satisfaction attending the learning experience must be sufficient to maintain active learning, and third, there must be exercise through which the learning is perfected, fixed, and integrated.<sup>4</sup> None of these ideas of the unit

are contradictory; they are supplementary. Umstaddt further clarifies the concept of the unit when he says, "The central fact of the unit idea is that content should be studied as complete meaningful wholes rather than in isolated or unrelated lessons or bits."<sup>5</sup>

Why is the unit method of teaching exceptionally valuable? All major plans using the unit method emphasize some type of individualized instruction. The unit, by its very nature, is adapted to this idea for it permits the individual to progress by units rather than by daily assignment. Consequently, it solves the problem of individual differences better than the conventional method of daily lessons and classroom recitation. Those who use the unit method recognize that society depends upon the specialized abilities of its members for progress, and they feel that the unit method best provides the opportunity for development of the individual's abilities.<sup>6</sup> Furthermore the unit method makes allowance for the fact that it is not the group but, "it is only the individuals in the group who learn, and each by his own active experience."<sup>7</sup>

The last phrase cites another important emphasis of the unit method. Learning is not complete until it results in a new behavior pattern. The idea of the past that learning, "is the process of making changes in neural patterns," is now considered to represent only partial learning.<sup>8</sup> The unit method of teaching in "meaningful wholes" emphasizes the exercising of what has been learned. Furthermore the student learns not

\* Mr. Copeland is a Senior in the College of Agriculture, and is majoring in Agricultural Education. The material presented is a term paper prepared as a part of the requirement for Rhetoric 51, Exposition. (Editor).

<sup>1</sup> Dr. M. A. Cameron, "The Unit Method of Teaching in the Secondary School," *The School*, secondary ed. :114, October 1943.

<sup>2</sup> Archer Willis Hurd, "What Do You Mean By the Unit-Problem-Project Plan of Instruction?" *School and Society*, 62:300, November 10, 1945.

<sup>3</sup> Ivah Green, "Successful Unit Teaching—I," *The Instructor*, 56:25, April 1947.

<sup>4</sup> Arthur J. Jones, E. D. Grizzell, and Wren Jones Grinstead, *Principles of Unit Construction*

(first edition; New York: McGraw-Hill Book Co., 1939), pp. 48-49.

<sup>5</sup> J. G. Umstaddt, *Secondary School Teaching* (second edition; Boston: Ginn and Co., 1944), p. 136.

<sup>6</sup> Jones, Grizzell, and Grinstead, p. 34.

<sup>7</sup> *Ibid.*, p. 39.

<sup>8</sup> *Ibid.*, pp. 36-37.

only how to meet a *given* situation but he also learns how to meet a *type* of life situation.<sup>9</sup> This results in an improved adjustment to life which is after all the fundamental purpose of learning.

The value of the unit method will vary with the teacher's concept of what unit methods of teaching involve and how learning is accomplished. After the teacher has integrated this conception of the unit and its value into his educational philosophy, he is still faced with a fundamental requirement that must be met before units can be successfully planned. The teacher must have a thorough knowledge of his student's resources, interests, and activities.<sup>10</sup> It is only through such a knowledge that he can plan units which will satisfy the modern concepts of the psychology of learning.

### The Unit Method Adapted to Agriculture

**Basis for approach.** A study of previous methods of unit planning reveals that they are usually based either upon the workbook method, the problem method, or a combination of these methods. Furthermore, several plans, including the Winnetka and Dalton plans, establish two types or levels of material—that material which is required and that material which is selected by the student according to his progress, ability, and interest.<sup>11</sup>

An adaptation of these principles provides the basic structure for a unit method of teaching vocational agriculture. It seems logical to divide the content of a course of study in vocational agriculture into three types: fundamental or background material which requires explanation by the teacher for simplification and understanding; cultural material to which the student should be exposed through the medium of study materials for personality development; and economic material, usually thought of as approved farming practices, which should be presented by the problem-project method.

**Foundation material.** A single unit of work in agriculture may involve one of these methods or any combination of the three. Background or foundation material would include information such as how plants make food, how soil minerals relate to plant needs, principles of animal nutrition, and principles of genetics. Some of these topics might serve as units in themselves; others would be only parts of units. For instance, the study of animal nutrition would be a part of the unit on planning rations, and the study of genetics would be part of the unit on improving the dairy herd through breeding. A guidebook,

in presenting this phase of the material, would be used only to state the goal or purpose of the unit and to make the reading assignments, except as it might further be used by the student in the preparation of diagrams or charts and notes. Basically, however, the teacher would be conducting a group explanation of the fundamental information of the unit or that portion of the unit composed of this type of information.

**Cultural material.** Cultural material, the mass of interesting, factual material that usually is memorized—and forgotten, would be presented in the guidebook in specially prepared copy which would be supplemented with required and elective references. Combined with this material would be a series of questions, not blanks, which the student would be required to answer. It would be the goal to state these questions in such a way that the student must translate his reading into his own conclusions, thereby eliminating the danger of a mechanical transfer of facts from references to notebooks without actually exposing the student's mind to the information in the assignment.

This method of study would seldom constitute a unit in itself. Instead, it would be that part of a unit which would permit the individual to see the core material as a part of a larger cultural surrounding. This work would be conducted entirely on an independent and individualized basis with an effort made to restrict group work so that the answers of one student do not become the answers of another, thereby defeating the purpose of the assignment, which is the effective exposure of each student's mind to a broader, cultural background.

**Core material.** The third method, the use of the problem-project method, would most often be the basis of the unit's size and scope. This is the core material around which the unit in most cases would be built, because the discovery of farm problems and the development of the scientific answer to these problems are two of the primary goals of the high school course in vocational agriculture.

In this phase of the unit, the student would be permitted to select and develop his own problems within an assigned area. To illustrate: If the general unit were on pasture improvement, then the student would be permitted to select his own problem, whether it were the reconversion of a bluegrass pasture, the conversion of a swamp area to reed canary pasture, the establishment of a temporary summer pasture, or whatever other need might be imminent in this area of study on the student's home farm.

Furthermore, this part of the unit would include all the phases of problem solving and project development.<sup>12</sup> It would begin

<sup>9</sup> *Ibid.*, p. 52.

<sup>10</sup> Ruth G. Strickland, *How To Build A Unit of Work*, U. S. Office of Education, Bulletin 5, 1946, p. 1.

<sup>11</sup> Umstattedt, p. 154-173.

<sup>12</sup> *Ibid.*, pp. 154-161.

with an awakening of the student to the natural, problematic situation on his home farm. The teacher would lead the class in the development of the general problems that might be present in the unit being studied. The student would complete the development of the problem according to his specific circumstance. As an individual he would then develop the plan for meeting his problem, and in conference with the teacher and his parents, he would determine the completeness of his plan. Next the student would prepare a contract or agreement with his parents for exercising the corrective processes of the problem. He would then execute the problem, and finally, he would prepare a statement of conclusions in which he would judge the adequacy of the plan he had developed for the project he had completed.

Here again the work would be on an individual basis. Students who completed the minimum requirements of the problem portion of the unit, or of the entire unit, in less than the allotted time would be permitted to prepare other problems or engage in other activities jointly selected by the student and the teacher. Students who do not achieve the minimum requirements of the unit in the allotted time would be graded on the amount of work completed and on the level of the work produced. Because of the individual nature of much of the work under the unit plan, students could readily engage in the routine laboratory activities such as testing

milk, testing soil, and testing seed germination without disrupting the class progress.

### The General Principles of Unit Planning

There are several general principles of unit construction which should be recognized in planning and presenting the unit. The size and scope of the unit will be affected by the maturity of the student.<sup>13</sup> This phase of unit planning will usually be partially adjusted in the integration of the subject matter within the larger unit, the annual course of study, as well as in the planning of the individual lesson unit.

Likewise the problem of how large a share the student shall have in planning the order of the units must be solved. I prefer the suggestion<sup>14</sup> that the teacher should arrange the material in a logical manner; then to prevent the student from feeling that this is, "just the logical thing to do next," the teacher should present the material from an interest viewpoint. Finally when the work is completed, the logical arrangement of the unit may be explained so that the student sees the purpose of such an organization of the material in relation to life patterns.

Finally, in unit planning it must be remembered that the unit actually includes only those activities in which each student engages. It does not include what he might have done or even all that he was assigned to do.<sup>15</sup>

### Glenn Scott Becomes Member of Agricultural Education Staff

Realizing that now, more than ever before, teachers of agriculture must be well informed on the latest and most valuable scientific facts and methods in agriculture, Glenn Scott is taking time off to attend the University of Minnesota and complete the work, started some time ago, for a Master of Science Degree in Agricultural Education. In addition to enrollment in the Graduate School, Mr. Scott is employed on a part-time basis as an Instructor in the Department of Agricultural Education.

Born on a farm in Illinois, reared on a farm in eastern North Dakota, and educated in Illinois, North Dakota, and Minnesota, all served to lay a broad foundation for an active and varied life in both education and business. Mr. Scott's teaching began in 1923 as a principal and teacher of a consolidated school in North Dakota. Since then he has taught in Cathy, Fargo, and Bottineau, North Dakota; Neponset and Ottawa, Illinois; and Pelican Rapids and New Ulm, Minnesota. His most recent educational experience was to serve a year with the War Department in Japan, first as a Director and Agriculture Teacher in the Army Educational Program and then as an Education Officer in a Mili-

tary Government Team near Tokyo.

Mr. Scott has taken an active part in community activities as evidenced by the following: twelve years as Scoutmaster, Scouter, and other Scouting jobs; life member of Otter Tail County Fair Board; Sunday School superintendent of the Methodist Church; member and officer in Masonic organizations; member of the Chamber of Commerce wherever located; active supporter of 4-H and Rural Youth; member of Farm Bureau and other professional organizations; operated successful adult education programs; promoted first adult class radio program; helped train boys for dairy herd improvement work; and worked zealously in the interests of soil conservation as a permanent farm program.

Every agricultural department he has been in always had a strong chapter of the Future Farmers of America in which 100 per cent of the agriculture students were members and each one took an active part.

<sup>13</sup> *Ibid.*, p. 138.

<sup>14</sup> Jones, Grizzell, and Grinstead, p. 26.

<sup>15</sup> *Ibid.*, p. 55.