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WHAT'S NEW IN TEACHER EDUCATION IN AGRICULTURE*

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The many and varied articles, books, and other publications recently written about teacher education in agriculture indicate change in the subdiscipline. The section entitled "teacher education" in the index of the Agricultural Education Magazine began with volume thirty-two in 1962 and has been an important section of the magazine since that time. During the past five years an average of better than thirteen articles per volume was written on topics about teacher education in agriculture.

Two new text or reference books were published in the past few months which provide refreshingly new insights into agricultural education and teacher education in agriculture. Agricultural Education authored by Stevens (1967) and Teacher Education in Agriculture edited by Cardozier (1967) with chapters by Martin, Bail and Cardozier, and Krebs, all from Region II, point direction for teacher education in agriculture in the years ahead.

Examples of other recent publications which illustrate the efforts being made to organize research, innovative ideas, and instructional materials in vocational-technical education, vocational agriculture, and teacher education in agriculture are Abstracts of Research and Related Materials in Vocational and Technical Education and Abstracts of Instructional Materials in Vocational and Technical Education, both prepared by ERIC Clearinghouse (1967); Review and Synthesis of Research in Agricultural Education by Warmbrod (1966); and Innovative Programs in Agricultural Education by the Publications Committee of the Agricultural Division, American Vocational Association (1967). The organization and dissemination of written materials in teacher education in agriculture, it appears reached a new level in both quality and quantity.

Teacher Education Programs in Agriculture

A review of articles in the various professional magazines revealed that teacher education programs were in the process of expansion and adjustment. New undergraduate teaching options in Vocational-Technical Education in Environmental Science and Agricultural Business

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were added to the program in teacher education at Rutgers during the past summer. Other than Environmental Science and Agricultural Business, a teaching option is offered in Ornamental Horticulture. Fifteen undergraduates are enrolled in the three teaching options.

The Enviromental Science teaching option, an offering believed to be unique in agricultural education, has as its objectives the fulfillment of certification requirements and the technical subject-matter thought to be important to teachers of vocational agriculture and secondary school science. Simultaneously, it fulfills the requirements for the Bachelor of Science degree in the College of Agriculture and Environmental Science. A minimum of 139 Credits is required for graduation; eighty-one credits are allotted to basic sciences, social sciences, language and communications, humanities, and free electives; twenty-six credits in professional education courses are necessary for certification; and thirty-two credits are provided for specialization in enviromental science. Students select from such courses as Introduction to Air and Water Environment, Aquatic Biology, Water Resources, Dendrology, Forest Use and Policy, Meteorology, Climatology, Environmental and Mechanical Systems, Soils and their Management, Land Planning and Utilization, Ecology, Economic Entomology, Agricultural Geology, Landscape Appreciation, and Landscape Architecture.

The teacher of agriculture in environmental science will be qualified to prepare students for occupations related to air and water pollution, conservation of natural resources, land use and planning, public recreation, highway and park beautification, and others Should the graduate from the option elect to teach science in a vocational school, he should be equipped to teach a live, viable kind of course. The Environmental Science teaching option seems to attract the academic-type of agricultural students

While there may be a limited demand for environmental science teachers in agriculture because it is a departure from the conventional program, there is much assurance that general educators will be quick to employ this kind of science teacher.

Program and Certification Requirements for Teachers

The teacher shortage in agricultural education is highly critical in many states of this region and especially so in the State of New Jersey Approximately one-fourth of the teachers of agriculture employed in New Jersey are teaching on emergency certificates. The continued issuance of emergency certificates to less-than-qualified teachers is significant in that it reflects a demand for teachers greater than the supply In a study of teacher supply in New Jersey conducted by the Department of Education (1966), agriculture was ranked eighteenth

among sixty-one categories of teachers by school superintendents in degree of difficulty to obtain for filling positions. Such a shortage of teachers as exists at this time precludes any possibility of selecting the most able candidates for the classroom. It also limits the development of new and needed local programs in agriculture. An answer seems to be that of making preparation for teaching more attractive.

Teacher shortages coupled with program expansion has prompted teacher educators in agriculture to review certification and program requirements. Three articles in the September, 1967 issue, The Journal of the American Association of Teacher Educators in Agriculture, were addressed to certification and program requirements for teachers of agriculture. There seems to be agreement that requirements must be changed to meet present needs. Unless concessions are made, students will not readily elect teacher training options in agriculture. As a result, teaching positions will either go unfilled or they will be filled with less than qualified teachers.

Efforts are being made to attract students into teaching programs and teachers into classrooms. Bail (1967) reported major changes in teacher preparation at Cornell University to tailor the program to meet the needs of students as well as those of the State of New York. Barwick (1967) attempted to encourage prospective students to elect agricultural education by increasing the number of unrestricted courses in the teacher training program. Rutgers reduced the number of semester credit hours required for graduation from 142 to 139 to be a bit more competitive with other Colleges on the Campus.

Two years of farm experience required for certification of vocational agricultural teachers in New Jersey is not presently a realistic requirement. A request that the requirement be reduced to two summers of agricultural experience was introduced to the Department of Education. The word "agricultural" was accepted in place of the word "farm"; the time requirement is still being studied.

One way to become a teacher of agriculture in New Jersey is through the trade. After working in a special area of agriculture for five years with the benefit of wages, a person can obtain a limited teaching certificate (vocational-technical subject teacher). With eighteen credits in professional education courses, supervised teaching, and three years of successful teaching, the limited teaching certificate can be made permanent.

In summary, three aspects of teacher education in agriculture in Region II and across the Nation recently had considerable attention: (1) Many and varied publications were utilized to organize and disseminate recent thinking of the sub-discipline, (2) New programs in teacher education were written, publicized, staffed, and put into operation, and (3) Some requirements for teaching were reappraised and changed in an effort to attract and hold students in agricultural teacher education programs.

During the past year teacher education in agriculture at Rutgers, among other activities, offered new state-certified teaching options in Environmental Science and Agricultural Business, observed change in number of credit hours required for graduation, and initiated action which resulted in more flexible certification requirements.

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