

NATURAL RESOURCE CURRICULA IN VOCATIONAL EDUCATION PROGRAMS THROUGHOUT SOUTHEASTERN U. S. AND THEIR POTENTIAL FOR WILDLIFE MANAGEMENT

by

GERALD H. CROSS

Department of Fisheries and Wildlife Sciences
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061

and

DANIEL D. DeJARNETTE

Teacher of Agricultural Education
William Campbell High School
Naurna, Virginia 24576

ABSTRACT

Programs in Agriculture (Natural) Resources designed to provide vocational education for the total agribusiness and natural resource industry are being implemented through agricultural education curricula in a number of southeastern states. Vocational training programs for occupations related to fish and wildlife management exist in 8 states and will likely spread to others. These programs, if planned and implemented properly, can benefit the fish and wildlife resource. Those in the wildlife profession must be aware of developments in their state and provide leadership and expertise for directing programs toward the fulfillment of valid goals and objectives. Members in the profession cannot afford to ignore educational programs disseminating information on the fish and wildlife resources, especially those which are designed to provide vocational education.

INTRODUCTION

Education is one of the major concerns of The Wildlife Society and The American Fisheries Society, the two professional organizations dedicated to fish and wildlife management. Both societies accept responsibility for promoting high professional standards for those entering their profession, including administration, management, public relations, law enforcement and education. The Wildlife Society Policy on Conservation Education is to "Encourage and assist educational efforts to disseminate knowledge of the facts and principles underlying wise use of wildlife and other natural resources through meaningful programs of conservation education for all ages in all lands and at all levels of education, and through various media of communications" (The Wildlife Society, No Date). The American Fisheries Society gives as some of its objectives ". . . to promote and evaluate the educational, scientific, and technological developments of all branches of fisheries science . . . to encourage the teaching of all phases of fisheries science, and to promote the conservation, development, and wise utilization of the fisheries" (American Fisheries Society 1975).

To carry out the objectives and responsibilities of their profession, fish and wildlife managers need to become aware of new opportunities for educational programs. They must not only recognize new opportunities, but they must seize the initiative and become actively involved in implementing educational programs that will benefit fish and wildlife resources. The expertise of professional fish and wildlife resource managers, together with the expertise of professional educators, is needed to develop the type of educational programs that will result in meaningful learning experiences.

In recent years vocational training programs in natural resource management have been added to agricultural education curricula at the secondary school level. The purpose of this paper is to (1) briefly describe natural resource education in agricultural education programs, (2) identify the goals and objectives of existing programs which emphasize fish and wildlife management, and (3) discuss some implications of these programs for fish and wildlife management.

NATURAL RESOURCE EDUCATION IN AGRICULTURAL EDUCATION PROGRAMS

Traditional agricultural education programs were directed almost entirely toward production agriculture or training for on-farm employment. However, the number of people engaged in production agriculture has been decreasing while employment in the agribusiness and natural resource, or off-farm, occupations has increased. Agricultural education programs are responding to these trends by placing greater emphasis on training individuals for employment throughout the total

agribusiness and natural resource occupational area. However, production agriculture still receives considerable educational emphasis.

The National Vocational Education Act of 1963, as amended, focused attention on the need for school programs that provide appropriate training for youth who desire employment in off-farm agriculture. The U. S. Office of Education lists "Agriculture (Natural) Resources" as one of eight major program areas or occupation groupings in agribusiness and natural resource education. Agriculture (Natural) Resources includes the principles and processes involved in the conservation and/or improvement of natural resources such as air, forest, water, fish, plants and wildlife.

VOCATIONAL TRAINING PROGRAMS EMPHASIZING FISH AND WILDLIFE MANAGEMENT IN SOUTHEASTERN U. S.

A letter was sent in the spring of 1975 to the director of agricultural education in each of 16 southeastern states requesting information on vocational training programs which include instruction in Fish and Wildlife Management. Replies were received from all but three states (Table 1). Five states did not have a structured program in fish and wildlife management although several indicated that they did include some instruction in their production agriculture classes. One state indicated that a program would be started in FY 1976.

Half of the southeastern states have vocational training programs which include an emphasis on fish and wildlife management. Individual schools in Kentucky and West Virginia have developed programs without the benefit of state curriculum guides. Six states have developed state curriculum guides which place varying degrees of emphasis on fish and wildlife management. The length of time spent on fish and wildlife instruction ranges from 20 hours to a full year.

The most comprehensive programs are in Louisiana and Virginia. Louisiana has a 2-year program in wildlife and recreation. Virginia has a 3-year natural resource program which includes 1 year in fish and wildlife management.

GOALS AND MAJOR OBJECTIVES OF FOUR STATE AGRICULTURE (NATURAL) RESOURCE PROGRAMS

Curriculum materials received from vocational education departments of four states contained statements of program goals for Agriculture (Natural) Resource programs which place an emphasis on fish and wildlife management. The goals of three states stressed preparation for job entry in semi-skilled and technical occupations, although career exploration and preparation for study beyond high school were also mentioned. The goal of one state was to teach environmental and ecological awareness and appreciation and did not stress job preparation.

Only one state listed major objectives along with a statement of goals. The objectives were (1) to develop competencies needed to engage in natural resource related occupations, (2) to develop an understanding and appreciation for career occupations, (3) to develop the ability to secure placement in an occupation through continuous education, (4) and to develop the ability to follow effective leadership.

DISCUSSION

Traditional agricultural education programs in secondary schools are being expanded to meet anticipated employment requirements of the total agribusiness and natural resource industry. Fish and wildlife management is one area or occupational grouping for which instructional programs are being developed. For these programs to be successful, they must be designed to meet existing and anticipated needs. The need for vocational education programs in natural resource areas is based on predictions that career opportunities in this area will increase in the future. The reasons most often cited to support these predictions are (1) an increase in environmental awareness in our society and (2) an increase in leisure time which may be spent in natural resource based recreation.

Employment opportunities in fish and wildlife management are limited at all levels of employment. The total number of people employed is relatively small and even with the predicted increases, there will be few vacancies at any one time. The number of men and women preparing for careers in fish and wildlife management far exceeds the demand and, as a result, competition among well-qualified applicants for jobs is keen.

Table 1. Survey results of vocational education program in 16 southeastern states.

State	States W/O Vocation Educ. Programs		States with Vocational Education Programs Emphasizing Fish & Wildlife	
	No Reply	Emphasizing Fish & Wildlife	No State Curriculum	State Curriculum
Alabama		x		
Arkansas		x		
Florida				x
Georgia	x			
Kentucky			x	
Louisiana				x ^b
Maryland		x		
Mississippi		x ^a		
Missouri		x		
North Carolina				x ^c
Oklahoma	x			
South Carolina				x ^d
Tennessee	x			
Texas				x ^e
Virginia				x
West Virginia			x	

^a Expected to start one in FY 1976.

^b Program in Wildlife and Recreation.

^c Program in Outdoor Recreation and Applied Ecology.

^d Program in Environment and Natural Resources.

^e Program in Pre-employment Laboratory Training.

Goals and objectives for agricultural education in natural resource management must be educationally sound and have valid content. The need and justification for agricultural education programs at the secondary school level aimed at preparing individuals for jobs in fish and wildlife related occupations is highly questionable. Such a goal may be based on the faulty assumption that adequate employment opportunities exist. The desirability of using these types of programs for college preparation is also questionable. Career information available through professional fish and wildlife societies and agencies encourages college-bound high school students to place an emphasis on mathematics, biology, chemistry, physics, social sciences and a foreign language. The need for state programs stressing job preparation in fish and wildlife occupations is not supported by fact.

Ample justification for instructional programs emphasizing fish and wildlife management can be made on other grounds. An understanding and appreciation of basic knowledge and application of fish and wildlife principles should be of value to all students, especially those preparing for careers in agribusiness and natural resource management. Farming, forestry, and soil and water conservation are examples of occupations where a knowledge and understanding of fish and wildlife management could benefit fish and wildlife resources. Instructional programs in fish and wildlife management at the secondary level can be highly beneficial and should be encouraged.

Most agricultural education departments in secondary schools have the flexibility and facilities to provide the types of learning experiences desirable for fish and wildlife management. However, other factors essential for a successful program are of equal importance. High quality teaching materials suitable for high school students are not readily available. Unless adequate materials are developed by competent educators and resource specialists, new programs will suffer. The agriculture teacher must have knowledge and skills needed to teach fish and wildlife management. The development of suitable instructional materials and the training of qualified instructors must involve professional fish and wildlife managers.

New programs related to natural resource management and agricultural education programs should be of concern to everyone in the fish and wildlife profession. Professionals are responsible for the standards of these programs at all levels of education. They also are responsible for pursuing and evaluating the results of all opportunities to improve management through education.

All students have a right to seek a career in the field of fish and wildlife management, but they must be made fully aware of the facts and circumstances surrounding employment. The provision of this information is the responsibility of those in the fish and wildlife profession.

State game and fish agencies and universities with fish and wildlife curricula should become active in vocational education programs in natural resources. The Information and Education Sections of State Game and Fish Departments can serve as an effective liaison among members of the profession and the state vocational education departments. For example, the Information and Education Division of the Virginia Commission of Game and Inland Fisheries is serving in this capacity in Virginia.

Involvement of universities in the planning and development of vocational education programs in natural resources is desirable. Teachers trained to teach production agriculture curricula do not have the necessary skills and knowledge to teach even the basic understandings of fish and wildlife management. An adequate background in natural resources programs should be the responsibility of the university. Extension specialists in wildlife can evaluate the need of vocational agriculture teachers and help coordinate in-service education. The Department of Fisheries and Wildlife Sciences at V.P.I. & S.U. offered an in-service course in game management to vocational agriculture teachers which was enthusiastically received.

In conclusion, fish and wildlife management has been integrated into vocational training programs in agricultural education in half the southeastern states. If guided by valid goals and objectives and given proper planning and materials, these programs can be of great benefit to the fish and wildlife resource. Those in the fish and wildlife professions should become aware of these programs and get involved in determining goals and objectives and developing course content.

LITERATURE CITED

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The Wildlife Society. No Date. The role of The Wildlife Society. Loose-leaf Publication. N.P.