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ABSTRACT

A study examined the status of hunter education in Georgia and the benefits of hunter education or "hunter safety" instruction as perceived by agricultural educators throughout the state. Surveys were mailed to a stratified random sample of 155 agricultural education teachers at middle, junior, and senior high schools throughout Georgia. According to the responses, 47.9% of agricultural programs in Georgia include hunter education in some fashion as part of their agricultural programs, 77% of the state's secondary agricultural programs incorporate instruction in natural resources, and 60% of agricultural education students are hunters. The vast majority (94.4%) of agricultural education teachers surveyed recommended that other interested agricultural educators utilize hunter education because of its benefits related to enhancing students' safety, providing them with greater knowledge of natural resources, and increasing students' motivation. Of the agricultural teachers surveyed 55.8% plan to expand the natural resources instruction they provide in areas such as marksmanship (40%), archery (28.3%), and compass skills (75%); 46.9% indicated that their students are involved in competitions related to hunter education. (The survey instrument is appended, and 23 references are listed.) (MN)

The Utilization of Hunter Education within the Agricultural Education Programs of Georgia

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Abstract

Agricultural education and hunter education are linked through their shared emphasis on natural resources, safety, and outdoor skills. The researcher theorized that hunter education, or "Hunter Safety" instruction, is used by agricultural educators to benefit the instruction of natural resources, the motivation of the students, and for other relevant reasons, to a significant extent.

The research investigated the scope of this usage of hunter education in the State of Georgia, as well as the perceived benefits by agricultural educators. The research for this study was conducted using a stratified random sample of the teachers of the agricultural education programs in Georgia.

This examination was conducted to benefit both hunter education and agricultural education. The research was funded through a grant from the National Rifle Association's Grants-In-Aid Committee. The research was for the partial completion of the requirements of the researcher's Educational Specialist Degree at the University of Georgia, Athens.

The research found that 47% of the agricultural education programs in Georgia utilize hunter education. 77% of the agricultural education

programs incorporate instruction in natural resources in their curriculum.

The agricultural educators estimate that 60% of their students are hunters. 95% of the agricultural educators recommend that other interested agricultural educators utilize hunter education. The foremost reason for use of hunter education among the agricultural educators is concern for student safety, with benefits to instruction of natural resources a close second, and student motivation as the third reason.

Chapter One

Introduction

Introduction and Problem Statement

Presently, there are numerous problems for youth in our American society. Among these concerns are lack of student interest in education; environmental concerns, violence, attacks on traditional values concerning firearms and hunting, confusion about personal identity, and a lack of role models for our youth.

Student apathy seems to be a major concern in all of education. It is particularly a problem in agricultural education. The agricultural education program is a diverse program taught in middle, junior high and high schools across the nation. The 450,000 agricultural education students are offered instruction in classroom, laboratory including shop, forestry plots, greenhouses, etc., and through supervised agricultural experience projects away from school; for example: landscaping, livestock, crops, agribusiness, etc. Incorporated into this instructional program are a myriad of topics from biotechnology to international marketing and beyond. It is a challenge to agricultural educators to be technically proficient in a number of these areas. Generally, an agricultural educator will develop his/her program according to the correlation of the needs of the community and to his/her areas of interest and proficiency.

It is confusing that students are not more interested in the agricultural

education program. There has been less interest in agricultural education, following the changes in agriculture production through the years. Agricultural education was stronger, in terms of student and community interest, when there were more people living and working on the farm. It behooved parents to allow children to enjoy themselves while learning and competing for recognition through agricultural education, especially since their children were often the primary labor on the farm.

Today, there are fewer children on the farm. This is representative in that rural families comprise less than 2% of the population of the state of Georgia (Bachtel, 1991). Likewise, students and the public at large are less interested in agricultural education. This is disappointing, because the program is diverse and interesting. Also, the program has changed through the years, as has the agriculture industry, from being production-based to reflect more off-farm occupations.

News of environmental problems are featured in our media constantly. Years of unsound practices have caused many of these problems. Like education, our environmental situation merits serious concern.

Another serious concern is the increase in violence. Many people believe that firearms control would curb this violence. However, numerous studies have proven that with firearms control follows increases in violent

crimes with other weapons (Swasey, 1993). Our founding fathers realized the importance of self- and country protection, that is the reason for the Second Amendment. This is still relevant today, with the increase in crime and our weak judicial system, as 95% of criminals are never prosecuted (Swasey, 1993). Likewise, in the recent riots in Los Angeles, armed citizens protected their homes, families, and businesses when the police refused.

Also, there is an increase in animal activism and thereby attacks on hunting. With these attacks on hunting and firearms, children and adults are confused about traditional values that they may hold dear. Many question if it is right and proper to possess firearms and hunt.

As with any activity, teenage and younger students who hunt often are ignorant of the laws and ethics that necessarily accompany the sport. As the breakdown of the home is evident in our classrooms and society as a whole, hunting, recreational uses of firearms, and outdoor activities are also often detrimentally affected. With a lack of proper role models and ignorance or unconcern about hunting laws, many of our youth are growing into hunting with a lack of ethics, unsafe handling skills, and little sense of fair play.

Justification

An answer to some of these social ills may be found through a combination of agricultural education and hunter education. Hunter education offers many benefits to students of agricultural education.

Hunter education is comprehensive instruction with a goal of having hunters taking responsibility for the sport. Hunter education is usually disseminated to the public in a unit of instruction delivered in split-sessions with a total length of 6 to 9 hours. The major emphasis of this program is to prevent accidents and thereby secure the future of the sport by making it safe. In order to accomplish this, students must be exposed to a diverse array of topics, including information on how to be good stewards of natural resources.

A primary area of instruction of agricultural education is that of natural resources. Agricultural educators are in a unique position to incorporate hunter education, given the flexible nature and content of their programs.

Also, agricultural education programs are usually designed according to the needs of the community and the concerns of the educator. Thus, agricultural educators interested in natural resources, hunting, or firearms as a hobby would be likely to have an interest in hunter education.

Agricultural education students have a natural interest and enthusiasm toward the environment and wildlife; and many also have quite an interest in hunting. Accordingly, many agricultural educators incorporate the best elements of these items into their curriculum as part of natural resources instruction for the benefit of their students. Incorporation of these motivational topics into the educational process can possibly tap into intrinsic drives to benefit students in numerous ways. Often, a person may hear of a single club or activity that encouraged a student to excel in and/or finish school. According to many agricultural educators, many times this is the FFA organization or the Agricultural Education program.

Agricultural/hunter educators that motivate students are often role models to these students. This is in part due to the rapport that they share through their common interests.

Man is responsible for his environment, including rain forest in South America and the ozone layer around the Earth. The environment also includes the corn crop in Kansas and the peanut crop of south Georgia, as well as the deer in swamps and the squirrels in trees. Agricultural/hunter educators use these topics on their courses and teach the student that man must conserve or wisely use the environment. It is taught that this should not only be done through sound agricultural practices, but also through ethical

hunting.

Agricultural educators are taking steps towards conservation including recycling, forest techniques, and soil conservation. Agricultural educators are following the path that hunter educators have blazed in the area of teaching responsibility to the environment. Through the mutual teaching of responsibility to the environment, agricultural education and hunter education are strengthening each other in the programs of many schools across the nation. This is appropriate because many agricultural education students are especially interested in natural resources, the environment, and hunting.

Violence plagues our society and causes many problems. A belief that firearms control can cure this violence is held by many people today. On the contrary, Wright (1988) reports that research has proven that a helpless populace is only easier prey due to the lack of available means of defense.

Agricultural/hunter education can help students to understand their rights on the issue of self-protection, according to our laws. Furthermore, some programs train students how to properly and safely use firearms with actual practice. Should these students ever be so unfortunate that they have to defend themselves or loved ones, they will be better prepared to do so.

Also, in the face of the anti-hunting issues, all of our youth are in need

of education concerning care for our natural resources, safety, and constitutional rights. The animal activists are in need of education concerning wildlife management. They aspire to a noble cause, that of aiding animals. However, it is impossible for them to aid animals as much as fee-paying, regulation- following hunters. It is solely because of sport hunting that we have rejuvenated and maintained our present wildlife populations. For instance, it is common knowledge among sport enthusiasts there are now more deer in America than when Columbus landed here.

It is vital that information regarding the positive reinforcement of healthy social values through objective knowledge be made readily available to students concerning the part of their lives that is directly affected by natural resources, firearms, and hunting. It is through the application of the knowledge that these students will be in a unique position to make more informed, reasonable choices concerning education, the environment, their rights of self-protection, as well as their personal values and beliefs.

An evaluation of the number and nature of the agricultural educators who utilize hunter education was needed to be conducted. This research provides the profession with valid reasons to begin using or expanding their current usage of hunter education programs. This also gives state hunter education agencies a professional body to approach concerning the

promulgation of their programs.

Objectives

The specific objectives of the study were to:

1. Identify the extent of hunter education within agricultural education in Georgia.
2. Ascertain the extent of the benefits of hunter education to agricultural education as perceived by teachers.
3. Determine the variations in usage of hunter education by agriculture educators.
4. Determine the demographics of the agricultural/hunter educators.
5. Develop a profile of agricultural/hunter education programs.

Chapter Two

Review of Literature

Literature Review Introduction

Agricultural educators are in a unique position to take advantage of the hunter education program. Hunter education is offered for volunteer instructional participation in all 50 states and impacts the lives of hundreds of thousands of students annually.

Hunter education offers many benefits to agricultural education. It will put agricultural educators in touch with the younger students in the community. Use of the hunter education program will allow recruitment for future agricultural education programs, while creating a rapport with parents and the community at large.

This effort, hunter education, can become one of the most effective public relations activities available, as it is now mandatory in all but 3 states. Utilizing this program will allow agricultural educators to gain the use of the local conservation ranger, as a resource person. One of the benefits is that this program can readily be incorporated into most existing natural resource curricula; the philosophy of this program is consistent with that of agricultural education. Additionally, most administrators are eager for their teachers to volunteer and utilize school facilities in this type of public service.

Importance of Natural Resources Instruction

The Hunter Education Program is based on natural resources. Indeed, the program materials are researched and written by various state natural resources departments. These materials should be of use to most agricultural educators as they incorporate natural resources instruction into their curricula. (Weber and Williams, 1990).

Natural resources instruction has been a standard of agricultural education for years and is currently expanding. Andrews, Weber, Whent, and Williams (1991) tell us that environmental conservation education should be included in educational systems. Additionally, their research indicates that conservation of natural resources is important and that more education is needed in this area.

The benefits of natural resource and environmental education are numerous for students and schools. Specifically, Schwartz (1987) reported that students developed a more positive academic attitude after experiencing environmental education instructional activities.

A national survey of fifth and sixth grade students (Llewellynn and Westervelt, 1985) revealed that these students, who obviously had not had the benefit of natural resources instruction through agricultural education, demonstrated limited knowledge about wildlife, and that wildlife oriented

materials should be infused into established school curricula.

Importance of Hunter Education

A legion of neophyte hunters takes to the field annually to enjoy the pleasing sights and sounds of our great American out-of-doors. These new hunters are eager to enjoy the excitement of hunting wild game with the same anticipation as generations of Americans in the past. However, hunters are beginning to realize that when one accepts the privilege of hunting that there is also an important responsibility which one must accept. This is the responsibility of being a safe, responsible, and ethical hunter (*Georgia Hunter Safety Instructor's Guide*, 1991).

The new Hunter Education Guide for the State of Georgia states that hunting accidents are usually the result of a lack of knowledge of the principles of safe handling of firearms and hunting behavior, or the failure of hunters to practice these principles. Hunter education programs are designed to teach these principles to inexperienced hunters, regardless of age; it is an excellent refresher course for all who enjoy hunting or handling firearms (*Georgia Hunter Safety Instructor's Guide*, 1991).

Elliott, (1991) states that there has been a dramatic decline in hunting accidents as hunter education has become widespread. His study goes further to suggest that, at least for the safety issue, hunter education and its

instructional methods have been very effective.

In 1989, 44 of the 50 states had legislation requiring hunters to pass a hunter education course. As of 1991 that has changed to 47 states. The three states not participating in mandatory hunter safety courses, Alaska, Massachusetts and South Carolina, have voluntary hunter education ("Hunter Education Program", 1990, 1992).

There are other mandatory programs for all types of hunters. Bowhunting education courses are mandatory programs in 8 states and are voluntary programs in 1 state and is a voluntary program in 15 states. Trappers are required to take a course is voluntary in 10 states ("Hunter Education Program", 1991).

An example of these programs becoming mandatory was the Georgia General Assembly passing legislation in 1977 mandating hunter safety training for all hunters born on or after January 1, 1961. This law dictates that each hunter complete an approved course of instruction and be certified before he or she could legally purchase a hunting license. The law further dictates that while children under 12 years of age are not required to have completed the course, hunters aged 12 to 16 must have a hunter safety certification card on their person while hunting, and they must have hunter safety certification to receive their honorary big game tags (*1991-92 Hunting*

Seasons and Regulations).

Availability of Hunter Education Programs

Hunter education began formally in 1946. Kentucky, with its statewide youth camp program, was the first state to initiate a formal firearms education course. Hunter education has expanded and progressed steadily the past 45 years. Every state now has an agency responsible for instructing safe hunting behavior and important conservation practices. These agencies are working toward a nationally standardized and improved Hunter Education Program. To date, over 16 million persons have been certified in the various hunter education programs. ("1989 Hunter Education Profile", 1990). Annually, over 700,000 hunters complete hunter education courses.

These programs are supported through the revenue raised from the taxes levied on the sale of sporting arms, ammunition, and archery equipment. As the revenue increases annually, these courses are able to expand in support of the American tradition of hunting. ("1989 Hunter Education Profile", 1990).

Leadership in hunter education is readily available to agricultural educators. In 1989 volunteers taught hunter education in 49 states, and all 50 states have hunter education in various school programs. Now volunteers

may teach in all 50 states. In 1991 that has progressed to educators teaching the program in 33 states. In 1989 educators taught the hunter education program in 28 of the 50 states. ("1989 Hunter Education Profile", 1990).

Elliott, (1991) tells us that there are an estimated 50,000 volunteer hunter education instructors. Furthermore, he states that hunter education in its present form would not be possible without this extensive network of volunteers. There was strong support in his study for these statements. Approximately 3/4ths of the Hunter Education Coordinators participating in this study reported 95% or more of their instructors were volunteers.

All states include wildlife management and hunter responsibility to natural resources in their hunter education programs. Additionally, in 1989, 43 of the programs taught wildlife identification. In 1991, 47 of the programs included this subject, wildlife identification, which may also benefit natural resources instruction ("1989 Hunter Education Profile", 1990, 1992).

Satisfaction with Hunter Education

A recent report (Jackson, 1990) indicates that the Hunter Education program in the State of Georgia is quite effective. Among the responses gathered were these concerning natural resources: The majority of the respondents indicated that they hunt for appreciation of nature. 78.1% of students said that they were eager to enroll in hunter education, and were

motivated to study and learn about wildlife, safety, and hunting skills. The participants ranked these items on a scale of 1 to 5, pertaining to effectiveness of hunter education:

Wildlife identification - 3. 21
Knowledge of the principles of wildlife - 3.58
Nature appreciation - 4.17
Outdoor activity - 3.85

In the area of related natural resources instruction, it was shown that the program augmented the student's own inclinations toward wildlife and nature appreciation. (Jackson, 1990). The student's positive motivation toward hunter education may benefit natural resources instruction, thus allowing teachers to incorporate parts of this instruction, as applicable.

Spencer (1991) profiled a set of Northwest Arkansas deer hunters. His findings indicate that the vast majority of deer hunters were closely aligned with the principles of hunter education programs. Of the areas examined, hunter education was the most positively accepted area. This was indicated by data such as:

90.4% of Northwest Arkansas hunters felt that hunter education helped promote ethical behavior.

95.6% indicated that hunter education should be continued for safety's sake.

86.6% indicated satisfaction with the existing Arkansas hunter education program.

Steve Dakai, the Arizona Hunter Education Coordinator, (1992) relates that in Arizona in 1990, there were only four reported hunting accidents in which only five hunters were injured. Of the five injuries there were no fatalities and only one that was more than a minor injury. This may seem to be an incorrectly small number, but with 1989's report of only four accidents, it seems to be accurate and typical.

Upon examining the evidence statistically these numbers are quite amazing. In Arizona, more than 315,000 hunters spend over 1,360,000 days in the field. Comparing the five injuries to that number yields only one injury every 272,000 days! One could compare this ratio to auto accident rates or the number of accidents that occur in and around the home from any state in the country.

Nationwide, over the past 20 years accidents with firearms involvement have decreased by half. Robert Delfay, executive director of the National Shooting Sports Foundation, states the following reason, "The dramatic decline in firearms related accidents over the last two decades is in good part attributable to nationwide hunter safety training, the almost

universal use of hunter orange safety clothing and industry-sponsored educational programs" (Shooting Sports are Safe and Getting Even Safer", 1992).

Accredited state and provincial hunter education programs have contributed immensely to safety in shooting sports. Over 100 million firearms safety booklets, filmstrips, videos and posters have been distributed through these programs since 1970. Safety instruction courses are also an integral part of the campaign for safety in shooting sports. To date, over 20 million hunters and shooters have participated in various safety instruction courses ("Shooting Sports are Safe and Getting Even Safer", 1992).

The National Safety Council's 1991 report of accidents states that of the 93,500 accidental deaths in 1991, motor vehicle accidents rated number one with a total of 46,300; falls accounted for 12,400; poisoning, 6,500; drowning, 5,700; fires, 4,300; and choking, 3,200. The lowest number of accidental deaths were firearms-related with a total of 1,400; less than two percent of the national total of 93,500 accidental deaths. Only 146 hunters were involved in the 1,400 firearms-related accidental deaths. Overall, hunters accounted for only .015% of the total accidental deaths ("Hunting is Safer than Ever", 1992).

Overall, hunting is safer than ever. Increased mandatory hunter

education programs, as well as growing safety awareness on the part of hunters worldwide, is keeping accidents to a minimum.

Sample Hunter Education Curriculum

The new Georgia curriculum for hunter education is divided into 6 sections. Instructors are to spend the required 6 hours divided among the sections as need is indicated by the students. The sections are as follows with highlights of each listed:

1) Introduction to Hunter Education
Firearm accidents
Basic Safety Rules

2) Hunter Responsibility
Hunter-Landowner Relations
Public View of Hunting
Irresponsible Hunting

3) Wildlife Conservation & Management
History & Principles of Wildlife Management
Habitat & Carrying Capacity

4) Firearms & Firearm Safety
10 Commandments of Firearm Safety
Accident Prevention
Safety at Home

5) Survival & First Aid
Survival & First Aid Kits
Food & Water
Wilderness First Aid

6) Topics of Special Concerns
Turkey Hunting
Tree Stands
Blinds

All sections include goals and objectives, materials needed, and lesson outlines. These items are the required components of most lesson plans which would be a benefit to agricultural educators (*Georgia Hunter Safety Instructor's Guide*, 1991).

According to Elliott (1991), Hunter Education Coordinators in both the U.S. and Canada expressed overwhelming support (87.5 %) for the concept that ethics/responsibility should be emphasized as much as safety. There was less, but strong, support for the statement, "Ethical/responsible behavior should be the main theme in hunter education".

Outdoor Education Programs

Agricultural education incorporates natural resources instruction in the curriculum. Likewise, many agricultural educators expand natural resources instruction into outdoor education. These programs often include activities that also can be an extension of hunter education curriculum. Texas is blazing the trail in this area with secondary agricultural education courses which incorporate hunter education. Recently, at their state agricultural education convention, a certification course in hunter education for

agricultural educators was held to strengthen this program. Some states and provinces are seeing the need for such expansion of their hunter education programs, also.

The Canadian province of Quebec, has an expansive hunter education program. Quebec's Hunter Education program consists of three main programs that is available to the hunters that are English and French speaking. The three main programs are firearm safety, bowhunting, and trapping. The live firing part of the program is voluntary. However, a practical exercise is mandatory in bowhunting. In this bowhunting exercise, each candidate must shoot one arrow on five different targets at five different ranges. Each of the 3-D targets represents a different big game including moose, caribou, bear, male deer, doe. It is mandatory that all participants pass the test by hitting three of these five targets in the vital zones ("Quebec Hunter Education Program Profile", 1992).

Quebec started a new program on trapping and managing of furbearers in 1988. This program was made mandatory in October of 1991. This program is a 35 hour course including an entire day in the field. In three years, more than 9,000 candidates were certified. In 1990, minority interest began with a small number of Indian natives adopting the program. Ludger Lavoie, Quebec Hunter Education coordinator, believes that in the next five

years the majority of the natives will incorporate the trapping course on a voluntary basis ("Quebec Hunter Education Program Profile", 1992).

Quebec has experienced other areas of growth in hunter education. Their advanced hunter education programs are offered on a voluntary basis and include rifle testing and sighting-in, care and conservation of venison and fish, survival in the forest, maps and compass, field first aid, boat safety and cold water survival, rifle and shotgun firing techniques, wildlife conservation week, and a wildlife youth summer camp. Various hunter associations and the Quebec Wildlife Federation offer other activities including clinics competitions and conferences (Quebec Hunter Education Program Profile, 1992).

There is a similar program to that of Quebec's in the United States. Massachusetts began a similar program in the fall of 1991. After two years of training and preparation, the Massachusetts Hunter Education started its Live Fire Program on a voluntary basis. The program has been added to the basic Hunter Education course and teaches the skills needed by the student to be able to fire the shot correctly ("Massachusetts Hunter Education Starts Live Fire Program", 1992).

The practical hunting course is a laboratory course in which the students are separated into groups of three and put through a simulated

hunting course with real firearms and blank ammunition. The second part of the practical hunting includes a simulated waterfowl hunt from a unstable boat over decoys. This part of the program tests the skill of the student on a variety of topics including steel shot, boating safety, survival, and waterfowl hunting laws (Massachusetts Hunter Education Starts Live Fire Program, 1992).

Distance estimation and hunter color recognition is another part of their practical hunting course. Next is the Live Fire exercise as the students try their skill on clay targets ("Massachusetts Hunter Education Starts Live Fire Program", 1992).

The last stage of the program is conducted in the training classroom where advanced hunter education films and videos are shown. Students later provide feedback as they discuss the program with instructors in an evaluative capacity ("Massachusetts Hunter Education Starts Live Fire Program", 1992).

Natural Resources/Hunter Education Competitions

The National Rifle Association Youth Hunter Challenge ("the Challenge") is a program for graduates of hunter education students from the United States and Canada. The Challenge was instituted as a means of testing knowledge and skills relating to hunter education.

The Challenge builds on the knowledge and ethics taught in traditional hunter safety classes, expanding on classroom knowledge with outdoor activities. Instructors can reinforce classroom knowledge with practical applications in shooting and outdoor skills, with emphasis placed on responsible hunting behavior. The Challenge is carried on at local, state, and North American levels. The Challenge events are sponsored by the NRA with local youth and conservation groups providing much needed support and help. Also necessary to the success of the Challenge are state sponsors, firearms and shooting industry contributors, and volunteer instructors.

The 1991 Challenge began with 14,000 youngsters nationwide participating in elimination rounds designed to test their skills and knowledge in hunter education. Two hundred forty-one excited finalists arrived at the NRA Whittington Center near Raton, New Mexico for the national finals. The Challenge is a summer event massing young hunter education graduates from all 50 states for the purpose of demonstrating their proficiency in eight events: rifle, shotgun, archery, muzzle loading, wildlife identification, orienteering (map and compass), hunter safety trail, and hunter responsibility. This program was specifically designed to bring increased safety and responsibility to shooting sports (Newsome, 1991).

There are a total of 8 events in the Challenge, excluding the exam. All

portions of the Challenge are conducted under simulated hunting conditions, designed to provide the most realistic situations for accurate testing (Dalessandro, 1991).

The following is a list of the events in the Challenge, including the classroom examination.

RIFLE-Fired at ranges of 15 to 25 yards, is restricted to .22-caliber rimfire rifles and scopes of 4X or less. Each participant fires 30 shots at life-size squirrel, rabbit, and groundhog targets.

SHOTGUN-Following a six-station "sporting clay" course, the shooter encounters a total of 30 claybirds thrown at varying angles against various backgrounds. The shooter has his choice of a 20- or 12- ga. shotgun.

MUZZLELOADING-Participants fire Thompson/Center White Mountain Carbines at life-size big game targets at ranges of 25 to 75 yards. There are 15 stations included in the course-of-fire.

ARCHERY-A total of 15 stations all utilizing 3-D archery targets of different big game animals, comprise the walk through course. Participants shoot two shots at two stations for a total of 30 shots.

HUNTER SAFETY TRAIL-The primary emphasis is on ethics and responsibility as participants walk through a marked course and are confronted with shoot/don't shoot safe/ unsafe situations. A few small surprises are throw in to encourage the youngsters to think.

ORIENTEERING- A 10- station course, along with a written test, makes a tough event! Each participant is given map coordinates, and, using a compass must locate a predetermined spot. Going around ravines, trees, up and down hills, and around staked off "refuges" adds up to the youngsters' "thought process".

WILDLIFE IDENTIFICATION-Walking through a course the participants must locate and identify different animals and birds. The youngsters happen upon actual mounted animals and birds, as well as pelts, skulls, wings, tracks, and sign.

HUNTER RESPONSIBILITY EXAM-A total of 60 questions test the students knowledge of hunter safety, responsibility, ethics and game care. All of the questions are taken from the NRA Hunter's Guide. This event is similar to the standard hunter education course examination given in many states, but more in-depth (Newsome, 1990).

In order to provide well-rounded activities, as well as providing some fun, the NRA provides participants with special events. One such event is the Cherokee Run. The Cherokee run has been patterned similarly to century-old contests held at the annual fur trappers rendezvous. Basic survival skills are tested as participants make their way through courses that consist of five stations. Knife or tomahawk throwing, bare bow and muzzleloader shooting, are followed by flint and steel fire building at the various stations (Youth Hunter Education Challenge Sponsor's Kit).

Robert Davis, director of YHEC, had the following to say about the Challenge. "There is the competitive part of the activities, but the main purpose is to build up the skill these kids learned their hunter education courses. They are given more opportunities for marksmanship training, safety, and hunter responsibility. They get to meet a lot of other kids with the same interest-the outdoors" (Dalessandro, 1991).

A youngster who had never hunted big game before, was awarded a guided pronghorn hunt by two seasoned hunters, Jon Anderson and Bob "Buff" Terrill of Bolten Ranch Outfitters, Carbon County, Wyoming. The young hunter was Richie Fisher, 18, of Midlothian, Maryland. Richie was the individual senior champion at the 1990 Challenge. (Davis, 1992).

Robert Davis (1992) says about Richie's winning performance:

> "Although Richie missed that pronghorn buck, I was well aware of his marksmanship skill, as well as his knowledge of hunter safety and ethics. Through his participation in NRA's Youth Hunter Education Challenge program, he had demonstrated his skills and responsibility, and had excelled. Richie and his teammates from the Cumberland (Maryland) Outdoor Club had practiced hard and worked from January to August. They were instructed by an adult team leaders and hunter education instructors in preparation for the state YHEC conducted by Maryland Natural Resources Police Outdoor Education Division. Richie's team won that state-level event, making them eligible to participate in the NRA North American program."

Benefits to Agricultural Education

Agricultural education can benefit from hunter education. At the base of the benefits is the philosophy of conservation that is shared by both programs. Both agricultural and hunter educators stress the wise use of natural resources for maximum benefit.

The curriculum of agricultural and hunter education complement each other. The curriculum of hunter education includes importance of habitat, wildlife management, hunter responsibility to natural resources, and wildlife identification. (*Georgia Hunter Safety Instructor's Guide, 1991*).

Many agricultural educators teach hunter education as a part of their Natural Resources Instruction. Others often use hunter education materials as a supplement to Natural Resources instruction.

The agricultural educator who chooses to utilize the hunter education program will receive a large amount of teaching materials. These include lesson plans, textbooks, films/videos, teaching aids, and tests. (*Georgia Hunter Safety Instructor's Guide*, 1991).

Elliott's study (1991) reviews the written course materials sent in by the participating Hunter Education Coordinators. This study determined that all U.S. programs use the Hunter Education Manual published by Outdoor Empire.

In Quebec for each of the three programs, visual aids, charts, videotapes, (mainly for trapping), film, acetates, in both English and French have been developed and are utilized. In 1989, their safety booklet was completed by adding a chapter on "Knowledge of wildlife." At the end of the same year the "Code of Ethics for Hunting and Trapping in Semi-Urban Areas" was produced ("Quebec Hunter Education Program Profile", 1992).

In addition to the benefit of teaching materials the agricultural/hunter educator will benefit by developing a working relationship with the local conservation ranger. As a result of the relationship that develops, the agricultural/hunter educator will have available the conservation ranger as a resource person. Conservation rangers are respected and knowledgeable resource people that agricultural educators can utilize.

Agricultural educators should consider hunter education for many reasons, with good will ranking among the primary benefits. As it naturally follows, hunter education students are beginning hunters, usually 10 to 13 years of age, the agricultural/hunter educator has a golden opportunity to develop a rapport with these students. Early exposure to the agricultural education programs can be a valuable means of early recruitment.

Recruitment is important because agricultural education courses are electives in most school systems. Furthermore, the parents and members of

the community respect the hunter educator not only for the volunteer service that he/she provides, but also for the expertise that the public associates with the position.

Furthermore, Elliot (1991) recommends that adult hunters must be targeted for hunter education and/or outreach. Such an outreach could provide programs for adult and young farmer education within agricultural education.

Literature Review Conclusion

Agricultural education programs will ultimately reap the benefits from hunter education. Each year there are over 700,000 reasons to commit to such a program, those reasons being the student body of hunter education. Agricultural educators should take advantage of the outstanding opportunities of this individual/community service program.

Chapter Three

The Research Methods

Population, Sample, & Design

The population that served as the focus of this research were the teachers of agricultural education in Georgia's Middle, Junior and Senior High Schools for 1991-92. A stratified random sample, using the Georgia Department of Education Districts as the strata with proportional sampling per district, was drawn to survey.

In order to set the needed accuracy rate of the instrument, the UGA handbook of Survey Research was used. A reliability rate of $\pm 5\%$ balanced a suitable rate of accuracy with an economy of expense. Using a list compiled by the Agricultural Education Office of the Georgia Department of Education, it was determined that there were 261 agricultural educators in our state. According to the *UGA Handbook of Survey Research*, 155 subjects would be needed to generate a reliability of $\pm 5\%$. The subjects were stratified according to the district in which they were located. It was determined that 35.6% needed to come from District I; 26.4% from District II; 19.2% from District III; and 18.8% from District IV. Then 4 sets of random numbers were drawn using the random number list in the *UGA Handbook of Survey Research*; 1 for each district.

The subjects from each district were numbered as they occurred on the Georgia Department of Education list. The order of occurrence was

specified by the alphabetical order of the counties. Once the needed number per district were determined and numbered, the subjects were numbered 1-155. Later, the subjects were keyed into a database form, Appendix A, to generate labels and track responses.

This survey research was designed to gather a sample of agricultural educators perceptions of the benefits of hunter education as well as to survey the educational experiences of agricultural educators in hunter education. This research was an attempt to determine how agricultural educators perceive and utilize hunter education for the furtherance of the goals of agricultural education.

Instrumentation and Data

The survey, Appendix B, had minimized questions to increase response rate. The types of data that were gathered and analyzed included binary data (yes/no), ranking of attributes, ordinal data, nominal data, and likert scales. In all instances the data collected was capable of being summarized with descriptive statistics.

After return of the survey, the subject's responses were keyed into the database as having answered and then the contents of the responses were entered into a spreadsheet to analyze and summarize the data. Each subject's responses constituted a row. The database allowed for easy tracking of

respondents and the spreadsheet stored and allowed analysis of the data.

Sample Procurement

The questionnaire was trial tested and reduced to essential items so as to limit postage expenses and completion time. Questionnaires were mailed and had a postage-paid return envelope enclosed. Each subject had a control number assigned to check return mailings and make necessary follow-up contacts.

Analysis of Data

The data was summarized at the state statistic level. The statistics describe the experience and preparations of a typical agricultural education teacher in Georgia; as well as represent extrapolations of sample results to estimate what appears to occur across the state as a whole. As previously mentioned, a sample size to generate a confidence interval of 95% was utilized for state wide estimates.

The research was designed to produce the following summary statistics of these types: frequencies, counts, proportions, and descriptive statistics; medians, means. and standard deviations. A few examples of these are as follows:

- Frequencies: The number of students trained annually by a typical agricultural/hunter educator.

- Proportions: Proportions of total respondents that are hunters.
- Descriptive Statistics: This estimated importance rankings of hunter education by agricultural educators.

Publication of Data

This research and its results will have several means of being disseminated. It would be of interest to attendees of the Southern Regional meeting of Agricultural Education, the National Rifle Association Annual Meeting, the Hunter Education Association Institute, as well as various other conservation organizations and Game and Fish/Department of Natural Resources Meetings.

The publication with the readers which the research of this would be most important to are *The Journal of Agricultural Education*, the research forum of agricultural educators, *The Agricultural Education Magazine*, the national magazine of Agricultural Educators, as well as *The Hunter Educator Instructor*, the official journal of the Hunter Education Association. It is hoped that the findings of this research will result in popular articles for publication in either *The American Hunter* or *The American Rifleman*, as well as other conservation and outdoor magazines.

Chapter Four

The Findings

Results

The first objective of this study was to identify the extent of hunter education in agricultural education in Georgia. Question 10 from the survey identified the extent of this usage. The respondents indicated that 47.9% of agricultural educators utilize hunter education in some fashion as part of their hunter education program.

The second objective of this research was to ascertain the extent of the benefits of hunter education to agricultural education as perceived by teachers. This was answered by a section of questions on the survey: 19, and 20 through 27.

These questions required that on a scale of 1 to 5, with 1 representing strongly disagree and 5 representing strongly agree, agricultural educators that utilize hunter education rate the following statements.

> 3.38 - Because of hunter education, enrollment in my agricultural education program has increased.
>
> 3.67 - Because of hunter education, the motivation of my students is greater.
>
> 3.5 - Because of hunter education, my agricultural education program has received more positive publicity.
>
> 3.96 - The local conservation ranger is helpful with my hunter education sessions/classes.

3.46 - The ranger helps provide the public with information about my agricultural/hunter education program.

3.84 - Because of hunter education, my instruction in natural resources is more effective.

3.39 - Administrative support for my agricultural education program is greater due to hunter education.

4.29 - Hunter education benefits my entire agricultural education program.

The agricultural educators of Georgia believe so strongly in this program that 94.4% of them recommend that other agricultural educators utilize hunter education.

The third objective of this research was to determine the variations in usage of hunter education by agriculture educators. This was determined by questions 17, 18, and the final question from the survey.

55.8% plans to expand natural resources instruction. They plan to do this in the following areas:

40% - Marksmanship

28.3% - Archery

75% - Compass Skills

28.3% - Other

46.9% indicate that their students are involved in competitions related to hunter education. The competitions that they were involved in are

represented as follows:

38.2% - Trap and Skeet

3.64% - National Rifle Association's Hunter Education Youth Challenge

20% - Orienteering

72.7% - Forestry & Natural Resources Contest

The agricultural educators that utilize hunter education ranked the reasons why they use hunter education in the following order:

1 - Concern for student safety

2 - Natural resources instruction

3 - Student motivation

4 - Recruitment

5 - Public relations

6 - Concern for anti-hunting issues

7 - Concern for anti-firearms issues

8 - Administrative support

The fourth objective of this research was to determine the demographics of the agricultural/hunter educators. The questions on survey that aided in determining these demographics were 8, 9, 14, 19, 28, 29, 30, 31, and 32.

According to the survey:

74.4% of agricultural educators hunt. The types of hunting that they engage in are the following:

Waterfowl	35.9
Upland Bird	61
Small Game	76.6
Predator	19.5
Big Game	76.9

91.5% of agricultural educators own firearms. The average agricultural educator owns 6.32 firearms. The uses that the educators indicated for these firearms are as follows:

84% - hunting

37.4% - target shooting

67.7% - personal protection

37.4% - target shooting

27.3% - trap & skeet shooting

24.2% - collection

20.7% are certified Volunteer Hunter Education Instructors.

The agricultural educators whose programs utilize hunter education were surveyed and indicate that the average agricultural/hunter educator is 36.1 years of age and has 12.3 years of experience as an educator. 95.5% of the agricultural/hunter educators were male and 4.5% were female.

The response of the subjects were distributed over the state as 41.1% were from District I, 32.1% were from District II, 17.9% were from District III, and 8.93% were from District IV. These are the districts as specified by the Georgia Department of Education.

There was variance in the levels of education of the agricultural/hunter educator respondents, also. 40.4% held a Bachelor of Science degree, 50.9% held a Master of Education or Science degree, and 8.77% held an Educational Specialist degree.

The fifth objective of the research was to develop a profile of agricultural/hunter education programs. The profile was developed from questions 1 through 16, and 27 through 37 of the survey.

94.9% percent of agricultural educators in the state are aware that there is a hunter education program as conducted by the Department of Natural Resources and taught largely by volunteers.

93.2% percent of agricultural educators in the state are aware that Georgia law mandates that hunters born after January 1, 1961 complete a

hunter safety course in order to hunt.

77.8% of the agricultural education programs in the state incorporate natural resources instruction in their curriculum.

59.5% of the agricultural education programs in the state utilize outdoor education as a part of their program.

61.5% of the programs in the state utilize instruction in outdoor skills and safety.

78.6% offer instruction in orienteering.

Agricultural educators estimate that 59.4% of their students hunt.

20.4% of the agricultural educators indicate that other educators in their schools instruct hunter education on a volunteer basis.

82.6% indicate that others in their communities instruct hunter education on a volunteer basis.

92.2% report that their county has a conservation ranger.

57.9% report that the local conservation ranger has served as a speaker in their FFA meetings.

55.8% report that the ranger has assisted with their natural resources instruction.

The agricultural educators which utilize hunter education indicate that the following also indicate the following about the usage of hunter education

within agricultural education.

The average number of total students trained per agricultural/hunter education program is 244. The average number of students that are trained annually per agricultural/hunter education program is 48.5. The average number of students per agricultural/hunter education program with hunter education related Supervised Agriculture Experience projects are 8.04.

The average number of students per agricultural/hunter education program that pursue hunter education related post-secondary degrees is 4.74.

Agricultural educators that teach hunter education reach students of the following grade levels:

1.92% - Elementary

13.5% - Middle School

21.2% - Junior High

86.5% - High School

9.62% - Post-secondary/Adult

Chapter Five

Summary, Conclusions, and Recommendations

Summary

The research of this study was detailed specifically in the previous chapter. In general, the highlights of the results are as follows:

The agricultural educators are quite aware of the legal mandates concerning hunter education.

Agricultural educators are employing instruction in hunter education related topics including natural resources, outdoor education, orienteering, and outdoor safety and skills.

A large percentage of the students of agricultural education hunt. Most agricultural educators hunt, with an unusually high number of them hunting small game, almost equal to the number that hunt big game. In our state, most hunters are big game hunters alone (Hunter Safety Newsletter, 1991).

Most agricultural educators own firearms, the number one usage for these firearms is hunting and personal protection is a strong second usage.

Almost half of the agricultural education programs utilize hunter education in some fashion. Of agricultural educators, almost one-fourth are volunteer hunter safety instructors.

Over half of the agricultural education programs have utilized the local department of natural resources conservation ranger in some fashion,

either to assist in FFA meetings or natural resources instruction.

The majority of the agricultural education programs utilize or plan to utilize instruction in compass skills.

Very few programs compete in the NRA Hunter Education Youth Challenge, but a significant number, almost half, compete in trap and skeet competitions. The majority of the programs do compete in the FFA sponsored Forestry and Natural Resources Contests. These contests include wildlife identification, forestry management, and other hunter education related areas.

Almost all agricultural educators recommend that other agricultural educators utilize hunter education.

The agricultural/hunter educator's ratings of the benefits of hunter education that were examined by the survey; enrollment, student motivation, publicity, assistance from the conservation ranger, effectiveness of natural resources instruction, and administrative support indicated mild agreement. However, they rated that hunter education strongly benefits the entire agricultural education program.

The average agricultural/hunter educational respondent is young, 36 years of age, but has 12 years experience as an educator, and over half hold a Master's degree in Education.

The agricultural/hunter educators indicate that on average 244 students have been trained per program. This may seem low when compared to other hunter education instructors who may well exceed that number of students trained in one year. However, this number is significant if one considers that most agricultural education programs teach less than half of that number of students a year.

The number required by the state of Georgia's Quality Basic Education Act for full funding of an agricultural education program is 108 students.

Using the number of students that are trained in hunter education annually per agricultural education program, 48.5 students, one may extrapolate that agricultural educators in Georgia reach a significant number of hunter education students each year. There are 150 agricultural education programs in the state of Georgia, when multiplied by the number of programs which utilize hunter education programs, 47.9 per cent, the number yielded is 71.85. Seventy one point eight five multiplied by the number of students, 48.5, yields that almost 3,500 students are trained in hunter education by agricultural educators each year.

The total number of students that have been trained through hunter education in the state of Georgia is significant, also. Using the same method

of extrapolation, one finds that over 18,000 students in Georgia's public schools have been trained in hunter education through the efforts of agricultural educators.

The majority of these students are trained in high schools.

Hunter Education makes a lasting impact on some of these students as agricultural educators indicated that almost five students per program have pursued related post-secondary degrees.

Conclusions and Recommendations

This research indicates that many agricultural education programs are involved in hunter education. Support is needed due to the usage of hunter education by agricultural education. This support should come from several sources.

Teacher training institutions should begin this support by emphasizing this in the curriculum. The most sensible manner to incorporate hunter education would probably be to invite a Department of Natural Resources hunter education coordinator/facilitator to train the student/teachers as hunter education instructors.

In the state of Georgia there are area adult teachers that specialize in various agricultural fields. The specialist are also responsible for assisting their area agricultural educators with problems pertaining to these fields.

One of these specialists should have expertise or experience in hunter education, to assist agricultural educators in this area of instruction as needed.

The Department of Natural Resources should sponsor clinics for agricultural educators to be trained in hunter education. Staff development and other in-service courses would be profitable for both organizations also. A coordination of the DNR and agricultural educators in the state of Georgia would not only benefit both groups, but be beneficial to the citizens of our state in providing that the dollars involved are used efficiently.

On a national level agricultural education and the National Rifle Association should be of mutual service to one another. The NRA offers a wide array of services that include hunter education, safety, and special clinics. These services can provide agricultural educators with much needed classroom materials that would bolster instruction in natural resources.

Aside from the hunter education services, according to the research, most agricultural educators hunt and even more own firearms. Therefore, the majority of agricultural educators should naturally be interested in NRA membership which provides generous hunting and firearms insurance, services, and literature, all for a modest fee. More importantly, the educators should be interested in the protection of hunting and firearms rights which

the NRA is constantly battling to maintain.

Agricultural educators can benefit the NRA by: 1) supporting the Association through membership, 2) informing the agricultural/hunter education students about the NRA in a positive manner, and 3) providing a list for contact of potential members.

This study should be conducted on a natio. al level, as a precursor to the development of a package of materials and services which will be a benefit to both the NRA and Agricultural Education. Should the national study provide results similar to this study, it would be of mutual benefit to both groups to form such an alliance. The NRA would also need to agree to sponsor the development of a package and services, possibly through the Hunter Services Division, needed to benefit agricultural education.

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Appendices

Appendix A

Control Number: ? Survey Returned?: Hand Delivered?:
Name:
First Name:
School:
Address:
City: State: Zip:
Phone:
County:
District:

Appendix B

Hunter Education Survey

Control # _____

Please indicate your response by circling either yes or no.

Yes *No* 1) Prior to this survey were you aware that there is a Hunter Education program in Georgia, that is coordinated by the Department of Natural Resources and taught largely by volunteers?

Yes *No* 2) Prior to this survey were you aware that Georgia law mandates that all hunters born after January 1, 1961 must complete a hunter safety course in order to hunt?

Yes *No* 3) Is instruction in natural resources a part of the curriculum of your program?

Yes *No* 4) Is Outdoor Education a part of your program?

Yes *No* 5) Is instruction in outdoor skills and safety a part of your program?

Yes *No* 6) Is instruction in orienteering (compass reading, etc.) part of your program?

Yes *No* 7) Do any of your students hunt?
*If yes, what percent hunt?*_____

Yes *No* 8) Do you hunt?
If yes, please indicate type of hunting (Circle all that apply).

Waterfowl *Upland Bird* *Small Game* *Predator* *Big Game*

Yes *No* 9) Do you own any firearms?
If yes, please indicate number _____ *and use (Circle all that apply)*

Hunting *Personal Protection* *Target Shooting*
Trap & Skeet Shooting *Collection Purposes*

Yes *No* 10) Do you use hunter education in any fashion as a part of your agricultural education program?

Yes *No* 11) Do any other educators in your school provide instruction in hunter education on a volunteer basis?

Yes *No* 12) Does anyone in your community provide instruction in hunter education on a volunteer basis?

Yes *No* 13) Does your county or area have a conservation ranger (game warden)?

Yes *No* 14) Are you a volunteer hunter education instructor?

Yes *No* 15) Have you used the ranger (Game Warden) as a speaker or for other assistance with Chapter FFA meetings?

Yes *No* 16) Has the ranger (Game Warden) assisted the agricultural education program in the area of natural resources instruction?

Yes *No* 17) Do you plan to expand Natural Resources instruction into Outdoor Educational activities?

If yes, please indicate educational activities included *(circle all that apply):*

marksmanship *archery* *compass skills* *other*

Yes *No* 18) Do students of your agricultural/hunter education program compete, intramural and otherwise, in competitions related to hunter education?

If yes, please indicate type of competition *(Circle all that apply)*

Trap & Skeet *NRA Youth Hunter Education Challenge*

Orienteering *Forestry & Natural Resources Contest* *Other.*

Yes *No* 19) I would recommend that interested agricultural educators begin the utilizing the Hunter Education Program.

Please indicate the degree of your agreement or disagreement with the following statements. Use the following scale:

1 = Strongly Disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly Agree

1 2 3 4 5 20) Because of hunter education, enrollment in my agricultural education program has increased.

1 2 3 4 5 21) Because of hunter education the motivation of my students is greater.

1 2 3 4 5 22) Because of hunter education my agricultural education program has received more positive publicity

1 2 3 4 5 23) The conservation ranger (Game Warden) is helpful with my hunter education classes/sessions.

1 2 3 4 5 24) The ranger (Game Warden) helps provide the public with information about my agricultural/hunter education program.

1 2 3 4 5 25) Because of hunter education my instruction in natural resources is more effective.

1 2 3 4 5 26) Administrative support for my agricultural education program is greater due to hunter education.

1 2 3 4 5 27) Hunter education benefits my entire agricultural education program.

Please answer the following questions in the blank provided.

28) Your age: _____

29) Years of service in education_____

30) Your gender: Male Female

31) The District in which you work:

I II III IV

32) Your level of education:

B.S.A. M.Ed. Ed.S. Ph.D/Ed.D.

33) The number of students that have been taught hunter education through your Agricultural Education program since you began teaching hunter education.

34) The approximate number of students that are trained annually in hunter education through your program._____

35) The number of your current agricultural education students that have supervised agricultural experience projects that are an extension of, or are related to hunter education. _____

36) Please circle the grade levels of students taught hunter education through Agricultural Education programs.

Elementary *Middle School* *Jr. High School*

High School *Post Secondary/Adult*

37) The number of students taught hunter education through agricultural education programs that have pursued post-secondary degrees related to hunter education._____

Please rank in order of importance these reasons why you utilize hunter education:

Recruitment

Student Motivation

Administrative Support

Concern for Anti-hunting Issues

Concern for Anti-firearms Issues

Public Relations

Natural Resources Instruction

Concern for Students Safety

Other: