West Virginia
AG ED NEWS and VIEWS

Published by
West Virginia University's Agricultural and Environmental Education Department

January - February 2005

Harry N. Boone, Jr., Ph.D., Editor

Transition from Teaching High School Agriculture to an Extension Agent

by David Seymour, WVU Extension Service, Pendleton County

After 16 years of teaching agricultural education in the high school arena, I felt it was time to make a change. An opportunity to become the Extension Agent in Pendleton County became available so I applied for the position. In February of 1995 I accepted a new challenge and started working primarily in Agriculture and Natural Resources.

Being an Extension Agent based in a rural county, just like teaching Agricultural Science, can lead to a variety of tasks. Agents deal with agricultural and environmental issues, economic and community development, family and youth concerns, and leadership development in 4-H programs. These are just a small part of an agent's job that makes it interesting and challenging from day-to-day. The Future Farmers of America (FFA) is to agricultural education as the 4-H Youth Development Program is to Extension. This program is one of its largest with the most name recognition. Just as FFA has changed from a strongly rural youth agriculture program, 4-H has taken youth development to a whole new level. It combines research and exponential education experiences to teach youth about life responsibilities and decision making. Most county Extension faculty, including myself, has responsibilities in this programming effort.

I gained personal qualifications from teaching that have helped me in my job as an Extension Agent. The most important was communication skills. This has allowed me to talk easily with people on a one-on-one basis or in a group situation. For those of us who have spent time in the classroom with adolescents we know the importance of trying to communicate with them effectively. Working in the educational arena teaches you: 1) every student learns at a different pace and has a different comprehension level and 2) everyone is important. Your job as an educator is to optimize the teaching situation. The qualities I acquired during my teaching career have made me more understanding of my clients needs.

Changing from the classroom teaching arena to the non-traditional educational environment of Extension was enjoyable. When teaching in the classroom you must live by the "bells"; your instruction, discussion or demonstrations are controlled by the length of the class periods. Instruction in my current job is less restrictive and not mandated by a pre-set schedule. Clients and youth in Extension programs attend because they want to be there. For example, when teaching an elective class like agriculture, in order to keep the number of students in your classes attentive you must be innovative, creative and an effective salesperson of your program.

Most agriculture teachers realize that there is no traditional work schedule. Also in the non-traditional education environment there are numerous situations where extended hours are worked outside the normal workday. Because most West Virginia farmers work off the farm during the day, meetings and educational programs are conducted during the evenings or on the weekends. The benefit I have now that I did not necessarily have when I taught school is I do not have to be in my office at a scheduled time for "homeroom" or "bus duty." Just like teaching, there are not many work weeks that end at 40 hours.

In both jobs I have experienced teaching agriculture in real-life situations. In the high school agriculture program it was the Supervised Agriculture Experience programs (SAEs). In Extension application is achieved through projects and producers adopting new practices. Effective teaching of agriculture requires the student to apply what they learned. This application phase is what makes the field of agricultural education different from general education and has made my career both in the classroom and in Extension enjoyable.

During both my tenure as a teacher and an Extension Agent, I have experienced changes in the field of agriculture and seen changes in both the FFA and 4-H programming. Some changes have been brought forth from within and others were forced upon us by external pressure. It is important that we only change to improve our profession and not to yield to external pressures. I hope the changes I brought to my students have been positive and based on sound agricultural principles.

In closing, my transition from "teacher educator" to "extension educator" has been easy and enjoyable because I have always considered myself an agricultural educator. The methods and principles between the two jobs are the same, only the application setting is different.

David Seymour earned Bachelor of Science (1978) and Master of Science (1986) degrees in agricultural education from West Virginia University.

Editorial : We're in the Same Profession

by Harry N. Boone, Jr.

As I reflect over the past two years I have served as editor of the *West Virginia Ag Ed News and Views*, I cannot help but note a number of major changes that have occurred in the publication. Perhaps the most important change was the expansion of our audience to include the Extension professional in West Virginia. The past two issues of *News and Views* are the capstone of our efforts to reach out and include this group of professionals into our audience. These two issues have featured articles that highlighted a few of the many successful programs delivered by the West Virginia University Extension Service. By featuring successful programs in both secondary agricultural education programs and the WVU Extension Service, I hope that *News and Views* will help foster and/or enhance a spirit of cooperation among the two groups of educators. We're in the same profession; we just have a slightly different audience.

This is probably the last time that an entire issue will be devoted to either profession. The goal will be to have sections in each issue that reflect the activities of both clientele groups. This will be accomplished in the same manner that we regularly incorporate research results and alumni profiles. The goal is to make every issue an informative publication for all target audiences.

I would like to hear from the readers concerning the changes that have occurred in *News and Views* over the past two years. What are your thoughts about the new format, content, pictures, and sectional themes? What additional items would you like to see included in the publication? If you have comments, both positive and constructive criticism, please send them to me at hnboone@wvu.edu.

The opinions expressed in the editorials are those of the editor and do not necessarily represent official positions and/or opinions of the Agricultural and Environmental Education program, the Davis College of Agriculture, Forestry, and Consumer Sciences, or West Virginia University.

Content Reading

This issue features a strategy for teaching content reading skills. Reading ability is a major concern in today's educational system. Very little attention is paid to reading in grades 4 through 12. It is often assumed that students receive adequate reading instruction in the primary grades. Literacy instruction, however, is just as important in the upper grades as it is in the primary grades. By making minor adjustments in our teaching procedures, we can improve reading skills and continue to teach the content area materials.

The ultimate goal of reading is comprehension. This is different from recognition level. Students must have a high degree of recognition level before they can focus on comprehension. For example, students must be able to readily recognize terms such as combustion, coil, crankshaft, connecting rod, etc., before they can start to comprehend how the items go together to produce power through a small engine.

Reading abilities are influenced by the reader, text, and context. Each reader brings a unique set of abilities. These abilities include; fluency, knowledge of word meanings, degree of interest in the topic and a specific mind-set. The nature and structure of the text can influence reading abilities. Font size, headings, and highlights factor into the process. The context where the reading will occur includes the physical setting, class environment, instructional task, and expected outcomes.

You as the instructor can promote a culture that encourages cognitive growth by:

1. Providing time for reading interesting varied materials,
2. Providing time to write about what was read,
3. Providing time to talk about students' responses to what was read,
4. Providing opportunities for collaborative learning,
5. Providing instruction that allows students to connect text with background knowledge, and
6. Instructing and modeling ways to comprehend the text

You can also make your classroom environment one that motivates students to read by:

1. Presenting people who talk about good books and the benefits of reading
2. Maintaining a book-rich environment
3. Providing opportunities for self-selected reading
4. Providing opportunities to socialize with other on the basis of reading
5. Keeping a wide variety of books, and
6. Providing appropriate incentives to read.

Every teacher should be providing contextual reading opportunities for his/her students.

WVU Officials to Break Ground on Davis College Expansion

West Virginia University officials will kick off a $9.5 million expansion of the Agricultural Sciences Complex with a groundbreaking ceremony at 10 a.m. Friday, Feb. 25. Construction will begin Monday, Feb. 28, with plans calling for completion of the project by December. The purpose of this project is to relocate faculty and staff in plant pathology and environmental microbiology program from Brooks Hall on the downtown campus to the Evansdale campus. The two-story, 37,500-square-foot building will contain research and teaching laboratories, a small greenhouse, office space for professors and graduate assistants, a state-of-the-art tiered lecture hall that will seat 250, ADA-accessible restrooms, and unfinished shell space on the first floor that will be used for future growth and expansion. The facility will be on the south side of the Agricultural Sciences Building and extend into the Area 43 parking lot.

Economics of Calf Pools in West Virginia

by Bruce M. Loyd, WVU Extension Service, Lewis County

The basic premise of the calf pool is to enable farmers of all herd sizes to enjoy the marketing advantages previously only available to very large producers. It allows producers to "market" their calves, rather than simply sell them. The marketing advantages the calf pool offers is that calves are offered for sale in trailer load lots (50,000 lbs.), all calves are the same sex, all are within a tight weight range (50 to 150 lb), all have similar genetics (example: all Angus sired), all calves are vaccinated with the same health program, and with most pools, all calves are weaned. In addition, steers are guaranteed to all be properly castrated and heifers are guaranteed to not be pregnant. All of these things are very attractive to buyers and have led to the success of the program. When you consider that it takes ninety 550 lb calves to make a load, you must split steers and heifers calves, and take in consideration the weight variation in calves on one farm, it is difficult for most producers to fill a trailer load by themselves.

Calf pools enable small and medium size producers to participate. Ideally, producers in a close geographic area that have similar genetics, management philosophy, and marketing goals will work together to pool their calves. In most cases, the calves are not actually co-mingled until the day they are shipped, which means they remain on the farm until shipping. This requires agreement among producers regarding the health program, weaning date, shipping date, weight ranges for the final loads, and acceptable genetics, grades, and hide colors. This can be a lot to ask of farmers, who are typically fairly independent minded. Those involved, however, recognize they may have to compromise for the good of the pool because they can not participate in a marketing program like this by themselves.

In 2004, 230 producers sold 7,875 calves through 18 different pools.[1] Comparison of prices with calves that were sold in traditional graded feeder calf sales indicate that calf pools had a price advantage of $61.29 per head or $482,620.40 across all pools. In addition, average calf pool weights were heavier than the average calf in the graded barn sales (steers + 76 lbs, heifers + 53 lbs). This extra weight resulted in an additional $59.97 per head or $615,978.70 across all pool calves. A third advantage is reduced marketing costs charged by the livestock auction yard representing the cattle for sale. The pools generally have fewer labor and facilities needs, thus marketing fees are less. Statewide, the savings in sale barn commissions are approximately $26,000.00. Adding the price advantage, heavier weight, and commissions savings together, the value added to pool calves in 2004, was an estimated $142.90 per head or a combined $1,125,324.10 statewide.

A hidden benefit to participation in a calf pool is the condition of the cows. Due to earlier weaning (around September 1, about a month earlier than most other calves are weaned), cows in these herds go into winter in better condition since they have more time to improve condition on fall pasture. Cows that go into winter in poor condition and are not able to put on the needed weight with the winter feeding program often result in lower conception rates the following year or delayed conception that results in later calving the following year. The other option is for the producer to incur higher expenses during the winter to improve the body condition of the cows.

There are costs associated with preconditioning calves for a calf pool. Cash costs for vaccinations and post-weaning feeding are approximately $38.00/head. Depending on local feed markets and availability of high quality pasture, it may run as high as $50.00/head. Other costs include time and labor for vaccinations and feeding calves.

Based on the numbers presented, a conclusion might be that all producers should be involved in a calf pool. This is not the case. First, the numbers presented are on the average calf. Just look at the price difference between calf pool calves and graded barn sale calves. A breakdown of the data shows the price advantage is much stronger at heavier weights. The average calf pool steer weighed 605 lbs. and had a price advantage of $65.93 per head. However, the price advantage for four-weight steers was only $19.21 per head, meaning the price advantage by itself did not cover cash weaning costs. On the other hand, the advantage for seven-weight steers was $94.23 per head. It has been a trend since calf pools began, and continuing in 2004, that heavier calves are more profitable compared to graded barn sales. The four-weight calves (or lighter) were borderline or unprofitable. If most of a producers calves fall in this category, the calf pool may not be the best option.

Second, marketing with a calf pool requires each producer to have a basic understanding of the goals and philosophy of the pool and be comfortable with these goals. For example, if a producer has a calf (or calves) that do not "fit" with the pool for whatever reason, they must be willing to market them elsewhere. If they are not willing to do this, they will be disillusioned and frustrated by the pool concept.

Third, producers must have the facilities to be able to vaccinate calves and manage weaned calves. Many that are new to calf pools see this as a large stumbling block. This can be accomplished on most farms but some would have to upgrade their handling facilities (which provides other long term management benefits to the farm).

Producers will not continue to participate in calf pools if they can not justify it economically. There have been some years, however, that unweaned, unvaccinated, graded calves sold for about the same dollars per hundred weight as calf pool calves. Some producers dropped out at this time, but those that stayed in were not just looking for a place to sell their calves. They were developing a marketing program that would reap long-term benefits. Recent years have provided an economic return that validates marketing in a calf pool as an alternative to just selling feeder calves.

[1] West Virginia Feeder Cattle Marketing Pools, 2004 Summary. J.Y. Pritchard, WVU Pocahontas County Extension Agent (All statistics are from this source)

Master Gardener Program...Helping to Fulfill the Extension Service Mission

by Larry G. Campbell, WVU Extension Service, Harrison County

It is the mission of the WVU Extension Service (WVUES) to meet the changing lifelong learning needs of individuals and communities and to improve the economic status and quality of life of the citizens of West Virginia through the application of research based knowledge. WVU Extension Agents use many programs to address that mission, but one program that has been highly successful in fulfilling the mission is the Master Gardener Program.

The Master Gardener Program is a volunteer, personal growth program that enables participants to increase their knowledge of horticulture while developing leadership, communication, and service skills. It is a national program that is conducted under the direction of the WVUES in West Virginia.

The Master Gardener Program is rooted in our nation's rich gardening heritage. For example it is estimated that the Victory Gardens of WWII involved 20 million gardeners and produced 40 percent of the country's produce. The program also is a response to an inherent human need known as "Biophilia". According to Harvard Zoologist, Edward O. Wilson, "Biophilia" is the partly genetic tendency by humans to respond positively to nature. This concept suggests that our ancient ancestors were "hardwired" to be able to deal with the stress of daily life in a dangerous environment by responding positively to the beauty of their natural surroundings. This has carried over through time in our subconscious attraction to nature through activities such as gardening. The Master Gardener Program helps to satisfy this basic human need.

Nationally, the Master Gardener Program was developed by Extension in 1972 in Seattle, Washington in response to intense local interest in horticultural programming. The goal of the program was to develop a trained cadre of volunteers who would be able to assist the Extension Service in responding to the myriad of requests for horticultural programming and support. The program began in West Virginia in 1993 under the leadership of Cathy Brown, WVU/ Marshal County Extension Agent. It currently is being conducted in 33 WV counties.

In order to become a certified Master Gardener an individual must participate in a 30 hour horticulture training program. Classes cover a multitude of topics as botany, entomology, and plant diseases to name a few. The classes are presented by Extension Agents and Specialists, WVU faculty, horticulture industry professionals, and certified Master Gardeners. At the conclusion of the training, participants are required to take a final exam.

A service component is also an integral part of the Master Gardener Program. Participants must complete 30 hours of volunteer service within a year of completing their training. This service involves a variety of horticultural activities with a primary emphasis on education. The primary goal of the service is not "slave labor" but service which helps to educate the community through horticultural activities. A typical service program might be teaching gardening and environmental classes to youth in schools or conducting programs such as "Plant-A-Row for the Hungry" to donate excess produce to food banks.

Upon completion of the 30 hours of training and 30 hours of service, the participant becomes a certified Master Gardener. Master Gardeners are required to be recertified each year by attending six hours of training and doing 12 additional hours of community service.

Often a certified Master Gardener will join a local Master Gardener Association. This becomes their primary outlet for recertification training, service, and fellowship. The local WVU Extension Agent serves as advisor to the county Master Gardener Association and works with them to develop their training and service program. This trained cadre of volunteers serves as an invaluable tool for Extension outreach.

An example of the type of creative and effective service that is conducted by Master Gardeners can be seen in some of the programs done in Harrison County by the local Master Gardener Association. Each year they conduct a Spring Gardening Clinic. Vendors who market horticulture related products are invited to display their products at the local 4-H Center. In addition, four to six gardening classes are conducted for the general public during the clinic. Participants are able to see the latest in plants and products in one convenient location and learn new skills through participation in the gardening classes. This program is always well attended and is a much appreciated service in the community.

Another example of a unique program was developed by a Harrison County Master Gardener and the local Extension Office. Together we conducted a modified Master Gardener Program for inmates in the substance abuse unit of the WV Industrial Home for Youth in Salem, WV. The program incorporated classroom instruction, an onsite vegetable garden, and a landscaping project. This activity provided both vocational training and therapeutic support of the participants. The impact of the program was described by one WVIHY staff who stated, "The program provided an opportunity for learning new skills and many therapeutic interventions as well as community service. The project fostered clean and sober leisure activity for youth with severe addiction issues."

Across the state the county Master Gardener associations are organized under the auspices of the state WV Master Gardener Association (WVMGA). Dr. John Jett, WVU Extension Horticulture Specialist, serves as advisor to this group as well as being the state Master Gardener Coordinator. The WVMGA helps to provide leadership and direction to the many statewide Master Gardener activities. One highlight of this organization's yearly activities is the money that it raises at its annual con-

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The KWL Teaching Strategy

by Harry N. Boone, Jr.

As teachers, we are always looking for new and interesting strategies to try in the classroom. In the next few paragraphs I would like to share with you the KWL teaching strategy. The KWL approach is a teaching strategy that builds on the students' prior knowledge and natural curiosity to learn. The students start by identifying what they know about a subject (K). The discussion then focuses on what they want to know about the particular topic (W). The "L" is the key facts the students learned from the classroom activities.

To prepare for the lesson the teacher must select an informational passage of text or article that is appropriate to the grade level and reading ability of the students. Each student should receive a copy of the KWL worksheet (see Figure1). The teacher should also prepare a similar grid on an overhead or on the chalkboard.

Figure 1

K What We Know	W What We Want to Learn	L What We Learned

The teaching strategy incorporates the following instructional procedures.

1. Introduce the topic to the students through an interesting and creative interest approach.

2. List the main topic (lesson title) at the top of the KWL grid.

3. Brainstorm with your students to determine what they know about the topic. List the "things" they know about the topic in the "K" column of the KWL grid.

4. Guide the students in grouping this information into categories. This enhances awareness of the content they may encounter and how it may be organized.

5. Guide students in generating questions they want answered as they read. Record these items in the "W" column of the KWL grid. This process helps students define the objectives for the learning activities.

6. Give the students a "manageable" section of the text or article to read. "Manageable" will be determined by the abilities of your students. Have the students pause periodically to check for answers to the questions in the "W" column. This will make students aware of what they have learned.

7. New information should be noted in the "L" column (see Figure 2). This provides a basis for future reference and review.

8. After the reading, students should discuss what they learned from the passage. Review the questions from the "W" column. If all questions were not answered, the students may be directed to other sources of information.

Figure 2

K What We Know	W What We Want to Learn	L What We Learned
• SAEs are a part of Ag Ed program • SAEs are required for class. • FFA membership is required for class. • Ag Ed students take interesting field trips. • FFA members compete in many contests.	• What are the types of SAEs? • How will an SAE benefit me? • How do I select an SAE? • Will I have to sell my SAE? • What SAE opportunities do I have if I don't live on a farm?	• FFA degrees are partially based on SAEs • SAEs allow students to put into practice skills learned in the classroom • SAE concept began around 1900. • Early SAEs were all farm (production) related. • SAEs can include production agriculture, off-farm (agribusiness), exploratory, improvement, and research activities

9. Guide the students through the process of categorizing the information in the "L" column.

10. Use the information learned and the categories to "map" the information learned (see Figure 3). Use lines to show relationships to the main topic.

Figure 3

11. Guide the students in writing a summary of the material. Use the map to assist in the summary.

Stop and reflect on what just occurred. While you were teaching agricultural subject matter, you were also teaching reading and writing. You just used a content literacy teaching strategy. Many of you will argue that it is not your place to teach reading and writing. The ability to read and comprehend is critical in the educational setting. We as agricultural education teachers must do our part to improve the reading of our students. With the KWL and other reading strategies is is possible to teach content, reading, and writing skills at the same time.

(The materials in this article were based upon information found in *Strategic Teaching and Learning* (2000) published by the California Department of Education.)

Master Gardener Program... (Continued)

ference to provide a scholarship to a WVU student enrolled in a horticulture program. The first $1,000.00 scholarship was presented in 2003.

Without question the Master Gardener Program is having a significant impact throughout the state. This fact was acknowledged when the program received the Governor's Service Award and the WVUES Outstanding Partner Award in 2001. In 2004 over 1,000 active Master Gardeners contributed approximately 28,000 hours of volunteer service by conducting over 85 service projects.

The WVUES Master Gardener Program is a premier education and service program that is most definitely helping Extension to meet the lifelong learning needs of individuals and to enhance the quality of life in West Virginia communities.

Assessment of Tractor Safety Programs Available to Youth

by R. D. Chambers, H. N. Boone, K. S. Odell & P. Miller

Introduction

America's 2.1 million farms and ranches are home and workplace to approximately 3.2 million men and women (U.S. Department of Labor, 1995). According to statistics reported by the National Safety Council, when compared to all other industries, the agricultural industry has the highest incidence of occupational illness and injury (U.S. Department of Labor, 1995). The New York Center for Agricultural Medicine and Health (2002) considers farming to be the most dangerous industry in the United States. Farm accidents and other agricultural-related health problems claim as many as 1400 lives and contribute to 140,000 injuries per year as indicated in Accident Facts published by the National Safety Council (1992). The injury rate is highest among children age 15 and under and adults over 65. The majority of farming accidents involve machinery (U.S. Department of Labor, 1995). Studies show that the farm machinery death rate increased by 44% between the years 1930 and 1980 (Stoskopf & Venn, 1985). The tractor is directly related to over half of reported farm fatalities (New York Center for Agricultural Medicine & Health, 2002).

The agricultural industry is unique in that the farm is not only workplace, but also home to many families. Farm accidents claim the lives of as many as 300 children per year (U.S. Department of Labor, 1995). Equipment, animals, chemicals, pesticides, and feed storage tanks have the potential to harm children if they are not stored or handled properly. Many accidents involve children as bystanders or passengers on equipment. On many farms it is a common practice for children to operate farm machinery. A survey conducted in Indiana reported that the age when tractor operation was first allowed ranged from 4 to 16 years of age, with the average being 11 years of age (Carrabba, Talbert, Field, & Tormoehlen, 2001). According to farm facts, published by the United States Department of Labor (1995), farm machinery, including tractors accounts for 36% of all fatalities and is the leading cause of death to youth less than 20 years of age.

Purpose of the Study. The purpose of this research was to identify the number and types of tractor safety programs available to youth through the Extension Service and secondary agricultural education programs. This information will be useful to safety professionals and educators in planning additional safety programs for youth.

Objectives of the Study. The primary objective of the research was to identify tractor safety programs available to youth through the Extension service and secondary agricultural education programs. Secondary objectives included:

1. Identify the number of tractor safety programs available to youth through the Extension Service and secondary agricultural education programs.
2. Determine the types of safety programs available to youth through the Extension Service and secondary agricultural education programs.
3. Determine how often these programs were offered.
4. Determine the perceptions of Extension Agents and secondary agricultural teachers toward these programs.

Research Design. This study utilized descriptive survey research to obtain data on tractor safety programs available to youth. A survey was designed by the researcher along with the help of the research committee and survey specialists at the Center for Rural and Emergency Medicine (CREM).

Findings

Population. The target population for this study consisted of 98 secondary agricultural educators and 89 Extension agents employed in the selected state during the winter of 2003-2004. One hundred and twenty-three surveys were returned with usable data resulting in a 66% response rate. Of the total 123 respondents, 62 (50.4%) were secondary agricultural educators and 61 (49.6%) were Extension agents.

Tractor Educational Activities. Twenty-one Extension agents (35%) and 40 agricultural educators (64.5%) offered educational activities to youth that included tractor safety. Overall 61 of the respondents (50.0%) offered tractor safety educational activities to youth in their jurisdiction.

Target Ages of Tractor Educational Activities. Individuals who offered tractor safety activities were asked to identify all age group(s) that was targeted. Two Extension agents (9.5%) targeted youth less than eight years of age, 15 (71.4%) targeted youth eight -11 years of age, 14 (66.7%) targeted youth 12-14 years of age, 12 (57.1%) targeted youth 15-17 years of age, and eight (38.1%) targeted persons 18 years of age and older. Four agricultural educators (10.0%) targeted youth eight -11 years of age, 17 (42.5%) targeted youth 12-14 years of age, 37 (92.5) targeted youth 15-17 years of age, and 11 (27.5%) targeted persons 18 years of age and older.

Individuals Who Conducted Tractor Safety Educational Activities. Participants were asked to identify the individuals/groups who conducted the tractor safety educational activities. Fifteen Extension agents (83.3%) responded that tractor safety educational activities were conducted by Extension agents, and two agents (11.1 %) responded that an Extension agent and agricultural education teacher conducted the activities. The agriculture education teachers responded that 35 (87.5%) tractor safety educational activities were conducted by a secondary agricultural education teacher and five (12.5%) responded that both an agricultural education teacher and an Extension agent conducted the activities. In an open-ended other category, 14 respondents (11.4%) indicated others conducted the activities. These include Farm Bureau, Progressive Farmer, FFA students, FFA Alumni, 4-H leaders, teen leaders, fire department, and volunteers.

Duration of Tractor Safety Education Activities. Fifteen (75.0%) Extension agents reported tractor safety educational activities were conducted for half a day or less. Four (20.0%) Extension agents reported that the activities were conducted for one to two days. One Extension agent (5.0%) reported other as the duration for the tractor safety activities. Seven (17.5%) agricultural educators reported tractor safety activities were conducted for half a day or less. Seventeen (42.5%) reported the activities were conducted for one to two days. Thirteen (32.5%) reported the activities were conducted for three to four days. Three agricultural educators (7.5%) reported other as the duration

of the activities. When both groups were combined, 22 respondents (36.7%) reported the activities were conducted for half a day or less, and 21 (35.0%) reported the activities were conducted for one to two days. Thirteen respondents (21.7%) reported the activities were conducted for three to four days, and four (6.6%) reported other as the duration.

How Often Were Tractor Safety Activities Presented? Participants were asked how often the tractor safety educational activities were presented to youth. Seventeen (85.0%) Extension agents reported offering the educational activities once a year. Three (15.0%) reported offering the activities two to three times a year. Twenty-seven (67.5%) agricultural educators reported offering the activities once a year and 13 (32.5%) reported offering them two to three times a year. When both groups were combined, 44 respondents (73.3%) offered activities once a year and 16 (26.7%) offered activities two to three times a year.

Methods of Instruction for Tractor Safety Educational Activities. The three most frequently occurring methods of instruction reported by Extension agents were demonstration (85.7%), lecture (76.2%), and use of a real tractor (47.6%). The three most frequently occurring methods of instruction by agricultural educators were lecture (85.0%), use of a real tractor (77.5%) and video (77.5%). Over half (67.5%) of the agricultural educators reported demonstration as a method of instruction .

Number of Youth Participants in the Tractor Safety Educational Activities. The respondents were asked to identify the number of youth participating in the tractor safety educational activities in the last year. Of the Extension agents five (25.0 %) reported that between one and ten youth participated in the activities. Four (20.0%) Extension agents reported that 11-20 youth participated in the activities. Four (20.0%) Extension agents reported that 21 -30 youth participated in the activities. Two (10.0%) Extension agents reported that 31-40 youth participated and five (25.0%) reported that 50 or more youth participated in the activities. Two (5.3%) agricultural educators reported that between one and ten youth participated in the activities and six (15.8%) reported 11-20 youth participants. Ten (26.3) agricultural educators reported 21-30 youth participants and four (10.5%) reported 31-40 youth participants. Sixteen (42.1%) agricultural educators reported 50 or more youth participated in the tractor safety educational activities in the past year.

Topics Covered in Tractor Educational Activities. Participants were asked to identify all topics covered during the tractor safety educational activities. The choices provided in the survey included tractor rollovers, passengers, seat belts, PTO, maintenance, and other. The number and percentage of Extension agents covering each of these topics were as follows: 19 (90.5%) tractor rollovers, 17 (81.0%) passengers, 18 (85.7 %) seat belts, 20 (95.2%) PTO, nine (42.9%) maintenance, and 2 (10.0%) other topics. The number and percentage of agricultural educators covering each of these topics are as follows: 37 (94.9%) tractor rollover, 37 (94.9%) passengers, 38 (97.4%) seat belts, 33 (84.6%) maintenance, and 11 (28.2%) other topics.

Perceived Problem of Tractor Accidents. Thirty-three (55.9%) Extension agents believed that tractor accidents were a problem in their county, and one (1.7%) believed tractor accidents to be somewhat of a problem. Twenty-three agents (39.0%) did not think that tractor accidents were a problem, and two (3.4%) were unsure. Twenty-six (42.6%) agricultural educators believed tractor accidents were a problem in their county, 34 (55.7%) did not think tractor accidents were a problem, and one (1.7%) was unsure. When both groups were combined, 67 respondents (55.8%) believed tractor accidents were a problem and 49 (40.8%) did not believe tractor accidents were a problem. Three (2.5%) were unsure, and one (0.9%) believed tractor accidents were somewhat of a problem in their county.

Additional Tractor Safety Program. Participants were asked if they felt additional tractor safety programs were needed in their county. Forty-five (77.6%) Extension agents thought additional tractor safety programs were needed and one (1.7%) was unsure. Twelve (20.7%) Extension agents thought additional tractor safety programs were not needed. Forty-seven (78.3%) agricultural educators thought additional tractor safety programs were needed and one (1.7%) was unsure. Twelve (20.0%) agricultural educators thought tractor safety programs were not needed. When both groups were combined, 92 respondents (78.0%) thought additional tractor safety programs were needed in their county and two (1.7%) were unsure. Twenty-four (20.3%) did not think that additional safety programs were needed.

Conclusions, and Recommendations

Conclusions. Based upon the results of the study the following conclusions were drawn:

1. The majority of Extension agents and agricultural educators felt tractor accidents were a problem in their county.

2. Approximately one half of agricultural teachers and Extension agents offered tractor safety educational activities to youth in the selected state. Instructors used a variety of techniques, including demonstration, lecture, video, and the use of a real tractor to educate youth about tractor safety.

4. Instructors routinely included topics such as PTOs, tractor rollovers, seat belts, and passengers in their instructional program.

5. An overwhelming majority of the respondents thought additional tractor safety educational activities were needed.

Recommendations. Based upon the review of literature and results of the study the following recommendations are proposed by the researcher:

1. Further research should be conducted to determine if individuals or groups other than Extension agents and agricultural educators offer tractor safety programs to youth in the selected state.

2. Further research should be conducted to determine the effectiveness of the tractor safety programs that have been offered to youth in the selected state.

3. Extension agents and agricultural educators should be aware of and implement the resources available (existing programs, training materials, safety specialists).

Renee Gough Chambers earned a Master of Science (2004) degree in agricultural education from West Virginia University.

Important Dates

Mar 11-13	State Ham, Bacon, and Egg Show & Sale	Charleston
Apr 8	Stockman's Contest at WV Beef Expo	Jackson's Mill
Apr 15	State FFA Governing Body Meeting	Cedar Lakes
Apr 23	State FFA and 4-H Equine Judging Contest	Salem
Apr 28	WV Envirothon	Jackson's Mill
Jun 15-16	WV Agricultural Education Teachers Conference	Beckley
Jul 6-9	WV State FFA Convention	Cedar Lakes

Email Addresses and Phone Numbers

WVU		
Dr. Stacy A. Gartin	sgartin@wvu.edu	(304) 293-4832 ext. 4480
Dr. Harry N. Boone, Jr.	hnboone@wvu.edu	(304) 293-4832 ext. 4481
Dr. Deborah A. Boone	debby.boone@mail.wvu.edu	(304) 293-4832 ext. 4482
Daniel Shockey	dan.shockey@mail.wvu.edu	(304) 293-5190
Dr. Graeme Donovan	graeme.donovan@mail.wvu.edu	(304) 293-4832 ext. 4477
Seth Gartin	seth.gartin@mail.wvu.edu	(304) 293-4832 ext. 4477
Alice Compton	alice.compton@mail.wvu.edu	(304) 293-4832 ext. 4484
Office Fax		(304) 293-3752
Website	http://www.caf.wvu.edu/resm/aee	
WVDE		
Donald L. Michael	dmichael@access.k12.wv.us	(304) 558-2347
Keith Burdette	kburdett@access.k12.wv.us	(304) 558-2347
Kelly Turley	kturley@access.k12.wv.us	(304) 558-2347
Office Fax		(304) 558-1055
Website	http://www.wvffa.org	

Published by:

West Virginia University
Davis College of Agriculture, Forestry, and Consumer Sciences
Division of Resource Management
Agricultural & Environmental Education
Morgantown, WV 26506-6108

in cooperation with

West Virginia Department of Education
Division of Technical & Adult Education Services
Office of Program Services
Agricultural Education
Charleston, WV 25305

and

West Virginia Association of Agricultural Educators

Volume LV No. 1

Agricultural & Environmental Education
Davis College of Agriculture, Forestry, and Consumer Sciences
P.O. Box 6108, Room 2056 Ag. Sciences Bldg.
West Virginia University
Morgantown, WV 26506-6108

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