In April, representatives from state and federal agencies and from educational institutions including the University of Arkansas System, the Arkansas Game and Fish Commission (AGFC), the Natural Resources Conservation Service (NRCS), and the Arkansas Natural Resources Commission (ANRC) gathered at the University of Arkansas-Monticello to learn more about a recently initiated stream restoration project. Two years ago, under the leadership of Dr. Kelly Bryant, Director of the Southeast Research and Extension Center in Monticello, a degraded stream channel located on research pastureland was selected to investigate and demonstrate restoration strategies for these types of eroded channels which are common on southeastern Arkansas pastureland. Personnel from various organizations were then invited in early 2011 to give the interdisciplinary team of scientists behind the project the chance to highlight their accomplishments and to provide feedback and recommendations for potential long-term partnerships.

Restoration strategies displayed include fencing treatments and the successful establishment of a stream buffer zone with several hundred tree and brush seedlings. A control treatment is also included for comparison purposes. The fencing treatments were implemented with help from NRCS and feature one- and two-sided poly-wire fencing. With either option, producers would not have to exclude cattle permanently from their creeks but would give livestock infrequent access to the forage growing along the stream banks. The one-sided fence setup is the most flexible approach. With rotating cattle frequently from one side of the stream to the other, animals still have access to stream water but are discouraged from climbing onto the opposite side through placement of a fence very close to the eroded stream bank face. With the two-sided fence option, a 50-feet-wide grassy buffer zone on each side of the stream is excluded from grazing for most of the year, but cattle are allowed to flash-graze this area at certain times when bank damage is not likely.

After visiting the stream project site and enjoying a sumptuous lunch buffet provided by the School of Agriculture at UA-Monticello, the field day participants came together to discuss future research directions, demonstration opportunities and possible outreach activities for this emerging project. Several attendees indicated that improved wildlife habitat is a major incentive for producers to establish buffer zones around degraded streams. These buffers would also serve as corridors connecting other habitat islands in the area, hence increasing the overall abundance of wildlife in the region. Wildlife is a major interest of landowners, but few realize how much help is available through state and federal programs, according to the field day attendees.

With simple stream bank protection measures, wildlife habitat and water quality can be improved simultaneously. The tree buffer zone, one of the treatments in this project, is certainly the most effective one from this perspective. Collaborating project scientists from the UA-Monticello School of Forest Resources established woody vegetation there along a 925-foot-long section including sycamore, green ash, water oak, mulberry and redbud, to name just a few. With six tree rows measuring 60 feet wide on each side of the stream, this treatment is exceptional for providing habitat for wildlife and limiting stream bank erosion. Moreover, within all treatment sections, including the tree buffer zone, transects were established in 2010 to measure and record soil and vegetation data. This was acknowledged as an important

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strategy by the attendees to help monitor changes related to species composition, plant and root density and soil texture. In addition, the stream project provides an excellent site for demonstrations that should draw in landowners who want to observe short- and long-term effects of the different steam protection strategies.

Although major steps have been made toward establishing the stream restoration site at the UA-Monticello, much work remains to be done to make this project a long-standing success. Based on recommendations by the field day attendees, additional supporting practices such as cattle crossings and mechanical treatments should be installed. In the future, off-campus demonstration sites should be established to include farms with different soil types and treatments. A major challenge for the project team will be keeping up with data collection. Fortunately, the team was granted financial support by the Arkansas Water Resources Center to begin assessing baseline data on soil and vegetation. More importantly, stream water sampling will start this fall and will ultimately help to make predictions about impacts of each treatment on stream health and water quality.

With this project, the Southeast Research and Extension Center in Monticello was placed at the forefront of water quality protection on pastureland in southeastern Arkansas. The stream restoration site is planned to function in the future as a one-stop location to demonstrate multiple alternatives for riparian zone management while keeping cattle production profitable.

Trichomoniasis in Cattle
Dr. Jeremy Powell, Associate Professor and Veterinarian
Dr. Tom Troxel, Professor

Introduction
Trichomoniasis, commonly referred to as “trich,” is a venereal disease of cattle caused by a protozoa organism, *Trichomonas foetus*. This small, motile organism is found only in the reproductive tract of infected bulls and cows. Infected cattle can lead to major economic losses due to infertility, low pregnancy rates, an extended calving season, diminished calf crops and occasional abortions in pregnant cows and heifers. It can also be very costly to eradicate from a herd. Trich is not a human health issue, but it is currently a reportable disease in Arkansas.

Transmission and Clinical Signs
Trich is transmitted from an infected bull to the cow’s reproductive tract during breeding and then migrates to the uterus. Infected cows will experience infertility and early embryonic death, causing the cow to return to estrus (heat) and subsequently leading to poor pregnancy rates and an extended breeding season. This disease causes very few outward signs in infected cows or bulls.

An infected cow may show a very subtle, mild vaginal discharge 1 to 3 weeks after becoming infected, but in many cases no outward signs are apparent. Obviously, these signs can easily go unnoticed; therefore, trich can be present in a herd for a considerable time before it is suspected and diagnosed. Repeat breeding or infertility of individual cows can last up to 5 months. The reason for the open or late cows is the organism causes the loss of the calf a few weeks into the pregnancy. The majority of infected cows will clear the infection if given 120 to 150 days of sexual rest. Most cows will eventually settle, if given enough time, but their immunity to the disease is weak; therefore, they can be reinfected the next season.

An infected bull has virtually no outward signs of infection, but the bull is the main source of transmission for the herd. In bulls, the organism lives on the tissue lining of the penis and preputial sheath. Once infected, bulls (especially bulls over 4 years of age) often stay infected for life. Trich typically gets introduced into a herd by the introduction of one infected animal, an infected bull.

Diagnosis
In spite of the fact that bulls do not show clinical signs of infection, the organism is easier to find in bulls than in cows. This is because bulls become long-term “carriers” of the disease while cows eventually shed the infection. Two weeks of sexual rest is recommended before a bull is tested. This allows organisms time to build up to a detectable level. A wash and scrapings from inside the preputial sheath are collected and placed into special growth media. This sample can be used for two types of test: a culture test or a polymerase chain reaction (PCR). Confirmation of infection can be identified by three separate culture tests (weekly intervals) or one PCR test. For more information about testing, contact your local veterinarian.

Treatment and Prevention
Currently, there is no approved treatment for cattle infected with trichomoniasis. However, cattle producers can do a lot to protect their herds from a trichomoniasis outbreak.

- When purchasing bulls, purchase virgin bulls if possible.
- If purchasing a bull that has prior breeding experience, or if you are renting or borrowing a bull for breeding, then isolate the bull and have it tested for trich before turning the bull out with the cows.
- If you suspect a problem in your herd, test your current bull battery. Any positive bulls should be culled and sold for slaughter only.
- Keep the neighbor’s bull out of your cow pasture. You don’t know if he may be a carrier of the disease.
- Pregnancy check cows in a timely manner after the breeding season to identify a potential problem early.
- When purchasing females, purchase virgin heifers and/or cows from a reputable source.
- Keep fences in good repair to prevent accidental contact with potentially infected cattle. Monitor traffic in and out of the herd.
- Keep good records of a herd’s reproductive efficiency. The records can help identify a possible problem.
- Maintain a defined breeding season, perform pregnancy exams and cull open cows.

A vaccine is available to aid the control and prevention of this disease.
The vaccine can be useful in cows but does not protect bulls from becoming infected. Vaccination requires two injections, typically administered 2 to 4 weeks apart. Consult with your veterinarian when starting a trichomoniasis vaccination program for your herd.

**Breeding Bull Shipment Regulations**

Cattle producers should be aware of trichomoniasis testing requirements prior to movement. The Arkansas Livestock and Poultry Commission is the governing body that sets and enforces such requirements. For the current trichomoniasis testing movement requirements, contact the Arkansas Livestock and Poultry Commission (www.arlpc.org) or your local veterinarian.

**Emergency Movement Requirements for Trichomoniasis in Cattle**

**Dr. Tom Troxel, Professor**

On June 2 the Livestock and Poultry Commission passed an emergency regulation for testing bulls for trichomoniasis prior to intrastate movement. The regulation reads as follows.

**Intrastate Change of Ownership Requirements for Bulls**

A. Any bull changing ownership within the state of Arkansas shall have a negative official *T. foetus* test within thirty (30) days prior to change of ownership with no exposure to females from seven (7) days prior to the test at the time of change of ownership.

B. Exceptions to this rule shall include the following:
   1. A bull accompanied by an Arkansas Virgin Bull Affidavit;
   2. A bull sold directly to slaughter; or
   3. A bull sold for feeding and slaughter that will be castrated within seven (7) days of change of ownership.

C. Any bull presented for sale at a livestock auction market without a virgin bull affidavit or verification of a negative official *T. foetus* test:
   1. Shall be tagged for slaughter only and sold for slaughter on a VS 1-27 form;
   2. May go to the purchaser’s destination so long as the market veterinarian takes a sample for an official *T. foetus* test and the purchaser agrees to keep the bull under quarantine at the destination until receipt of negative test results.

D. A livestock auction market shall not be liable for a virgin bull affidavit verifying no sexual contact with females within seven (7) days prior to arrival at the livestock auction market, and shall not be liable for the results of a market veterinarian’s sampling and results for an official *T. foetus* test.

E. The above requirements shall become effective June 15, 2011, as an emergency regulation.

F. All bulls found to be positive for *T. foetus* must be taken to slaughter within two weeks on a VS-127. The Arkansas Livestock and Poultry Commission must be notified of all positive bulls and the disposition of these bulls.

In May 2009, Livestock and Poultry passed trichomoniasis testing requirements for bulls moving into Arkansas.

**Import Requirements for Bulls**

A. No bull that has tested positive for trichomoniasis shall be brought into this state for any purpose whatsoever.

B. No bull may be brought into this state without being accompanied by a negative test for trichomoniasis except for the following animals:
   1. Exhibition and rodeo bulls that are temporarily in the state only for the purpose of the event and will be leaving the state after the event;
   2. Bulls consigned to go directly to slaughter; and
   3. Virgin bulls (under twenty-four (24) months of age).

C. A bull that is brought into this state without being accompanied by a negative test for trichomoniasis shall not be comngled with any cow unless the bull is tested and found to be negative for trichomoniasis prior to comingling.

D. All bulls, except exhibition and rodeo bulls, brought into this state shall be identified by one or more of the following means prior to importation:
   1. Brucellosis ear tag;
   2. Official 840 radio frequency identification device (RFID);
   3. Official 840 flap or bangle tag;
   4. Official individual animal breed registry brand.

E. Virgin bulls, other than exhibition and rodeo bulls, brought into this state shall, in addition to any other required documentation, be accompanied by a certification of virgin status signed by the owner of the bull, or the owner’s representative or a duly authorized veterinarian. The certification shall include the bull’s individual identification. If the owner seeking to import the virgin bull into this state acquired the bull from a breeder or another owner, a certification of virgin status signed by the breeder and each prior owner of the bull, or their representative, must also accompany the bull. The use of the Arkansas Virgin Bull Status form is required.

F. The requirements for trichomoniasis testing shall be three separate culture tests, each conducted not less than one week apart, or one (1) polymerase chain reaction (PCR) test no more than thirty (30) days prior to entry of the bull into this state. All sample collections and inspection of bulls must be performed by a licensed and accredited veterinarian. Testing for trichomoniasis must be performed at/by an accredited/approved laboratory.

G. All bulls found to be positive for *T. foetus* must be taken to slaughter within two weeks on a VS-127. The Arkansas Livestock and Poultry Commission must be notified of all positive bulls and the disposition of these bulls.
An exciting agenda has been set for an upcoming beef cattle conference focusing on Simmental genetics. The meeting will take place at the Pauline Whitaker Animal Science Arena in Fayetteville, Arkansas, on August 23 with free registration at the door beginning at 5:30 p.m.

This conference will be sponsored by the American Simmental Association, the University of Arkansas Cooperative Extension Service and Farm Credit Services of Western Arkansas. The meeting will kick off at 6 p.m. with a welcome from Washington County Extension agent Johnny Gunsaulis.

Topics for the program include:

- Dr. Brett Barham, associate professor of animal science with the University of Arkansas Division of Agriculture, will describe the importance of crossbreeding to take advantage of heterosis and how to achieve desirable breed complementarity.
- Dr. Jerry Lipsey, executive vice president of the American Simmental Association, will discuss utilizing composite seedstock to provide improved performance in your herd.
- Dr. Wade Shafer, director of performance programs with the American Simmental Association, will cover genetic selection for profit and improving the bottom line for your cattle operation.
- Dr. Jeremy Powell, associate professor and veterinarian with the University of Arkansas Division of Agriculture, will give an update on new regulations concerning trichomoniasis in beef cattle.

All interested cattle producers are welcome to attend. A complimentary dinner will be provided at the onset of the program, and the meeting will conclude around 8:30 p.m. For more information, contact the Washington County Extension office at 479-444-1755.

Decades of research on youth development indicate that young people need appropriate adult mentorship to guide decisions, establish goals and develop positive behavior patterns. Through youth livestock projects, youth have the opportunity to develop many life skills such as responsibility, time management and self-discipline. However, adults need to be involved with livestock projects to provide proper mentorship, guidance and counsel for the process to be a success. Livestock industry knowledge is important, but genuine concern for youth and the commitment to provide a structure for learning and character development may be of more importance. Raising animals for a 4-H or an FFA livestock project gives young people an excellent opportunity to gain life skills and build good character traits. But raising an animal alone is difficult for most young people. They need coaching from parents, grandparents, adult volunteers, county Extension agents and agricultural science teachers.

Historically, youth livestock shows have been considered valuable for several reasons. From an animal agriculture perspective, youth livestock shows allow for recognition of superior animals and breeding/production efforts. Through the raising and exhibition of livestock, youth are exposed to the animal agriculture industry, and many are motivated to pursue further education and related careers. Competition can be a great motivator, and livestock projects afford youth opportunities to develop important life skills.

Youth as livestock producers are in a unique position. While 4-H and FFA livestock projects are a small part of the livestock industry, as a whole they often are the “window” through which the public sees animal agriculture. It is essential that the view seen by the general public as consumers is a positive one. The ethical treatment of animals and the elimination of unethical practices in the show ring are important to our youth programs and the entire livestock industry.

Livestock mentors should be adults who have a clear interest in helping youth and families with their livestock projects. One item that needs to be heavily emphasized is the role of the adult volunteer as a mentor or coach to youth. Becoming a successful coach takes practice and patience from adult leaders. Adults who are successful coaches/mentors:

- Have a defined coaching philosophy and objectives
- Understand the importance of effective communication
- Provide positive reinforcement, and
- Motivate youth.

We have found that adults involved with 4-H and FFA activities truly have the best interests of youth at heart. As we head into the summer fair and show season, it is important to understand the ways parents and other volunteers can make livestock and horse projects a positive youth development experience.

As youth increase their skills, the role of parents and volunteers must change. In the field of sports psychology, this role is termed “optimal parent push.”

When a child is new to showing livestock or horses, the adult will need to help with basic skills. It is important to remember it is the child’s project and he or she should be the one doing the work whenever it is safe to do so. In this stage, adults must seek opportunities to make an activity fun and give little attention to winning or placing.

It is important in the early stages to avoid pressuring the child, but the adult must stay active in a supporting and encouraging role. After the show or event, the parent or leader should avoid rehashing the situation but instead focus on skills the child gained and the joy he or she experienced.

After the child learns the foundation skills of fitting and showing, the adult should motivate him or her to learn more.
Studies suggest that youth lose interest in activities as their ability to advance their skills dwindles. Adults should never force young people to participate in a project. But after a project is begun, adults should instill in the youth the importance of completing the work. For youths who have a strong competitive drive, it is important for the adult to ensure that the activity remains fun and to insist on good sportsmanship.

Good sportsmanship is best taught by example. Adults should not make negative comments about other youths (or adults) and their animals or projects. Youth should be encouraged to help others with their projects and to participate in team activities. Adults need to stay unemotional when youths lose or make mistakes as well as when they win. Adults need to celebrate success with youth, but they must keep in mind that success does not always mean winning a blue ribbon.

Appropriate adult and family involvement is important in youth development through mentoring, coaching, demonstrating and teaching – but not DOING! We often lose valuable knowledge and skill sets when parents’ 4-H’ers “graduate” from the program. If you have a skill set or knowledge about livestock projects, why not volunteer for a few hours a month to have a positive influence on our youth. Contact your local county Extension office about ways you can assist.

Another Look at Production Records
Brett Barham, Associate Professor

Many articles have been written about the importance of keeping production and financial records in a beef cattle operation. I usually encourage record keeping to help increase production efficiency, but records have other uses also. In case you have not heard, Arkansas has had an increase in prevalence of trichomoniasis in beef cattle. Trichomoniasis, commonly referred to as “trich,” is a venereal disease of cattle caused by a protozoa organism, *Trichomonas foetus*. This small, motile organism is found only in the reproductive tract of infected bulls and cows. Infected cattle can lead to major economic losses due to infertility, low pregnancy rates, an extended calving season, diminished calf crops and occasional abortions in pregnant cows and heifers. Trich can also be very costly to eradicate from a herd.

The recent attention that has been placed on this disease has many producers wondering about the possibility of their herd being affected. The most definitive way to determine if this disease affects you is to have your bull tested, and it is highly recommended if your herd exhibits outward signs of infection.

An infected bull has virtually no outward signs of infection, but any drastic decrease in cow pregnancy rates should be a red flag for this disease. This is where records and regular pregnancy testing are important. A low pregnancy rate does not automatically indicate trichomoniasis but does indicate there is a nutritional or disease issue that needs to be investigated. Producers who have a year-round calving season may have a difficult time noticing the effects of trichomoniasis. Even if you have a controlled calving season, without records it is difficult to see the effects of this disease. Without records, the only way you may see the effects of this disease is when you are working on your income taxes and happen to notice that you sold half as many calves as you typically do, and at this point it has already been a very costly oversight.

Records can be a very good management tool, helping you make educated management decisions that will increase the efficiency and productivity of your herd. Equally important, records can be a great diagnostic tool to help you identify potential problems in your herd. Record keeping does not have to be complicated or a time-consuming process. To start keeping records, all it takes is a pen, some paper and discipline to get into the routine. For more information on trichomoniasis or record keeping, please contact your local county Extension office.

Survey Results on Fescue Toxicity
John Jennings, Professor

Tall fescue is the most widespread perennial cool-season grass in Arkansas. Fescue toxicosis from fescue endophyte is a widespread problem with livestock production, but producers are reluctant to convert toxic fescue in many areas. A survey was recently conducted to determine Arkansas producers’ knowledge about fescue toxicity and to determine their interest in converting toxic fescue to nontoxic forage or novel endophyte fescue. The survey was taken by 456 producers by three methods including mail surveys from field day participants (33), online (323) or audience response at producer conferences (100). Due to space limitations, responses to only selected survey questions are shown in this article. Percentages for some questions add up to more than 100% because respondents could choose more than one answer on certain questions.

Who Took the Survey?

Results suggest that Arkansas is definitely a cow/calf state, but the number of farms with horses and small ruminants was...
many of the fescue toxicity symptoms in livestock with 96% having observed behaviors in their livestock consistent with fescue toxicity. Of those answering “no/not sure” to the toxicity question, 78% reported seeing behaviors in their livestock consistent with fescue toxicity. This suggests that many producers don’t recognize symptoms of fescue toxicity in their livestock.

The livestock behaviors commonly associated with fescue toxicity are listed below in the order of frequency ranked by survey respondents.

**Question: Have you observed any of the following behaviors or characteristics of your livestock while grazing fescue? (Check all that apply.)**

1. 35.5% Rough hair coat
2. 35.3% Standing in ponds
3. 21.3% Lameness during winter especially in hind feet
4. 17.8% Loss of tail switch, ear tips or rear hoof
5. 17.3% Panting, salivating in warm weather
6. 12.3% Low percentage calf crop or reproduction rate
7. 10.1% Low weaning weights

The top five behaviors are visual symptoms and quickly noticed. The bottom-ranked, two including low percent calf crop and low weaning weights, are not as visual and require records and measurements to document. However, those two symptoms have the highest impact on livestock profitability.

Actions taken to reduce fescue toxicity were ranked as follows and generally followed Extension recommendations. Research has shown mineral supplementation for fescue toxicity has questionable benefit, but that topic can be another entire article.

**Question: If you have tried to reduce fescue toxicity, which of the following actions have you taken? (Check all that apply.)**

1. 32.5% Maintain mixed grass pastures
2. 25.7% Add clover or other legumes in pastures
3. 21.9% Feed mineral supplements formulated for fescue
4. 19.1% Use other forages
5. 15.4% Do not feed toxic fescue hay
6. 13.2% Graze nontoxic fescue varieties
7. 9.6% Try not to graze toxic fescue
8. 7.9% Remove livestock from toxic fescue pasture in summer

Most respondents (66%) were interested in planting the new novel endophyte (nontoxic or NE+) fescue varieties and wanted more information. Only a few had a definite timeframe for planting NE+ fescue. Of the groups responding to the survey, cow/calf producers were most likely to plant NE+ fescue compared to those growing stockers, horses or small ruminants. Full-time producers were no more likely than part-time producers to plant NE+ fescue, and those noting fescue toxicity in their livestock were no more likely than those who reported no fescue toxicity to plant NE+ fescue. The major limitations for those who would not consider planting the NE+ fescue are shown below.

**If you WOULD NOT consider planting a novel endophyte fescue, which of the following statements best describe(s) your reasons? (Check all that apply.)**

1. 20.0% Not enough benefit to my farm profitability
2. 16.0% Seed cost for novel endophyte fescue varieties is too high
3. 13.2% Don’t have the equipment to renovate pastures or hay acres
4. 11.0% Can’t eliminate toxic fescue that’s already in pastures or hay acres
5. 10.3% Believe that novel endophyte fescue pasture or hay acres will become contaminated with toxic fescue
6. 9.9% Don’t believe novel endophyte fescue will survive

Thank you to everyone who completed the survey. Results will help us develop more effective educational programs regarding fescue and other forage management practices.

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**2011 University of Arkansas Livestock Judging Camp**

Bryan Kutz, Instructor

Each year the University of Arkansas Animal Science Department hosts a livestock judging camp where youth from across our state and surrounding states can learn about the priorities in livestock selection, update themselves on the current industry trends and improve their communication skills through the presentation of oral reasons. Eighty-seven students ranging in age from 9-17 participated in this year’s camp which was held Friday, June 17, through Sunday, June 19.

Students were divided into three divisions depending on knowledge level and experience. These students worked tirelessly the first two days learning all they could about sheep, cattle, hogs and the reasons and terminology that accompany each species. The second day ended with some real fun leadership activities in which the teams competed in redneck relay, egg tossing and the traditional water balloon fight and ice cream social. On the last day, the kids were put to the test on what they had learned in the form of a judging contest consisting of eight classes with three sets of oral reasons. The camp concluded with an awards presentation. The top two scores overall in the advanced group received a scholarship to attend the U of A and major in animal science.

The overall winners in the Beginner division were 1st, Audrey Foster; 2nd, Colton Franklin; 3rd, Olivia Otwell; 4th, Sierra Burnett; and 5th, Jordan Smith. For the Intermediate division: 1st, Kylee Sigmon; 2nd, Melaney Slack; 3rd, Katelyn Mellon; 4th, Lauren Burton; and 5th, Jody Wilson. The overall
Eighty-seven students ranging in age from 9-17 participated in the 2011 University of Arkansas Livestock Judging Camp.

We congratulate all students for such an excellent job at the judging camp. A big THANK YOU goes out to Diana and Butch Watson, Nathan Reinhart, Alan Davis, Melissa Beck, Steve Jones, past and present U of A judging team members, parents and chaperones and all who helped contribute to make this camp a success.