



# Ag News

Volume 11/09 Issue 1

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## TDA Applicator Testing

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Testing for Texas Department of Agriculture (TDA) pesticide applicator licenses will be held at the Wichita County Extension office beginning at 9 a.m. on Wednesday, Nov. 18, 2009. This testing will be for all classes of TDA pesticide applicator licenses: Private, Commercial, and Non-Commercial. **Pre-registration is required.** Call TDA at (214) 631-0265 to pre-register.

Commercial and Non-Commercial Pesticide applicator licenses require successful completion of three exams – General, Laws & Regulations, and subject area. There is no charge for taking the General and Laws & Regulations exams. Subject area exams cost \$24 each, and the fee must be paid by check or money order. Subject areas include: Field Crop Pest Control, Weed & Brush Control in Pasture & Rangeland, Ornamental & Turf Pest Control, Right-of-Way Pest Control, Aerial, Vector (mosquito), and Aquatic Plant & Animal Pest Control. A complete listing of subject area exams can be obtained by calling the TDA regional office at (214) 631-0265. Study materials for Commercial and Non-Commercial applicator exams can be purchased through the Texas AgriLife Extension website: [www.aes.tamu.edu](http://www.aes.tamu.edu).

Persons seeking to acquire a Private Pesticide Applicator's license must attend a Private Applicator training prior to the test date. The Wichita County Extension office will hold a Private Applicator training on Tuesday, Nov. 17, beginning at 9 a.m. at the Wichita County Extension office. Pre-registration is required and study materials cost \$20. Contact the Wichita County Extension office at (940) 716-8610 or your local county extension office for more information.

The Nov. 18 pesticide applicator license testing will be the final testing conducted by TDA in Wichita Falls during 2009. The next date for General pesticide applicator testing in Wichita Falls will be Jan. 27, 2010, and will be held in Wichita Falls the fourth Wednesday of every other month

throughout 2010. The Wichita County Extension office is located on the second floor of the County Courthouse Annex at 600 Scott Street (corner of 6<sup>th</sup> and Scott streets) in downtown Wichita Falls. Private Applicator training and testing dates are also scheduled periodically by local County AgriLife Extension offices.

Persons seeking to acquire a license for indoor termite/pest control or any other category covered by the Structural Pest Control Service must contact the SPCS at (866) 918-4481. For information go to the SPCS website at [www.tda.state.tx.us/spcs](http://www.tda.state.tx.us/spcs). Please note that exams for Structural Pest Control Service licenses are NOT currently being offered in Wichita Falls.

**Nov. 18 will be the final testing conducted by the TDA in Wichita Falls during 2009.**

Anyone wanting this newsletter by email please send me a note at the above address and I will put your name on the list, if you want a mailed copy be sure to add your correct mailing address.

Thank you,

Heath Lusty, BS, MS  
County Agent  
Agriculture & Natural Resources.

## Deer season prospects shaping up with recent rains

Source: Texas Parks & Wildlife



An early and abundant acorn crop, combined with new growth of native vegetation may force Texas deer hunters to stray from supplemental food sources during the 2009-2010 general deer season, which opens Nov. 7. Reports from Texas Parks and Wildlife

Department field biologists indicate above average mast crop production and an early acorn drop. Recent rains across much of the state have also helped generate forb production, adding to the availability of native food sources for deer. "It's been at least three years since ground moisture has been this good at this time of year," said Mike Krueger, TPWD district wildlife biologist in Kerrville. "It looks like springtime in the Edwards Plateau."

Krueger noted the warm-season plants have put on a final burst of growth and flowers and there is a flush of early growth of cool-season grasses and forbs. That will probably contribute to a slow deer season for hunters, especially early in the season and especially for those hunters that are dependent on hunting over feeders. "There is an abundance of food sources for deer right now, and deer movements are reduced because they don't have to move as far or as often to keep their bellies full," Krueger added. "Deer don't appear to be coming to feeders as often or as regularly as they would if it were still dry." The only consolation is that bucks are becoming more active due to the onset of the rut in the Hill Country, so they'll be moving around as they typically do during the rut, regardless of the condition of the range.

Although the range conditions are good to excellent right now, the rains came too late to help with this year's buck antler growth, which is probably no better than average throughout the Edwards Plateau region, or with the fawn production that is also no better than average. But if it continues to rain throughout the fall and winter, the stage is being set for better antler growth and fawn production next year.

While recent rains have improved range conditions across much of the state, whitetails in South Texas are battling through an extended stress period that started with last year's rut, according to biologists. "Last season the rut was later and more spread out than normal and this did not fare well for mature deer," said Daniel Kunz, TPWD biologist in Alice. "By the first of February bucks were extremely drawn down and numerous reports of early antler shedding were occurring; an indication that bucks could be in poor shape. This will likely affect antler quality." Hunters should expect a reasonable number of 2 ½ year-old bucks and 5 ½ to 7 ½ year-old bucks as 2002-2004 and 2007 were good fawn production years resulting in good carry over, added TPWD biologist Dustin Windsor in Cotulla. "Everything's greened up and deer aren't coming to feeders as readily because there's so much forage out there," said Alan Cain, TPWD district wildlife biologist for South Texas. "That might affect hunting success early in the fall but deer will still be there." Surprisingly, according to Cain, some of the helicopter surveys in the brush country are showing some decent body conditions on bucks and does. Some places have some pretty good deer despite drought conditions. Fawn crops are looking pretty pitiful this year.

One region of the state that is entering the fall hunting season in prime condition is the Panhandle, according to Calvin Richardson, TPWD district biologist in Amarillo. "The Panhandle deer herds — both mule and whitetail — are in great condition and should go into the fall in great shape," said Richardson. "With harvest being down last year, we should have some older aged bucks carry over into this year's season. My guess is that both mule deer and white-tails are not going to have to move around much to find quality forage, so hunting feeders might not be as productive as in years that we have been dry."

Deer hunters in 52 counties this season will be joining those in 61 existing counties having buck antler restrictions. Legal bucks in those counties are those with at least one unbranched antler (e.g., spikes and three-pointers) or having an inside spread of at least 13 inches. Newly affected counties include: Anderson, Angelina, Archer, Atascosa, Brazos, Brown, Chambers, Clay, Cooke, Denton, Ellis, Falls, Freestone, Grayson, Grimes, Hardin, Harris, Henderson, Hill, Hood, Hunt, Jack, Jasper, Jefferson, Johnson, Kaufman, Liberty, Limestone, Madison, McLennan, Milam, Mills, Montague, Montgomery, Navarro, Newton, Orange, Palo Pinto, Parker, Polk, Robertson, San Jacinto, Smith, Stephens, Tarrant, Trinity, Tyler, Van Zandt, Walker, Wichita, Wise, and Young. According to Clayton Wolf, TPWD big game program director, the antler restrictions have significantly improved age structure while maintaining ample hunting opportunity, based on data to date in the 61 counties where the rule is currently in effect.

Hunters should also note whitetail bag limits have changed in several counties across the state. Be sure to check the county listings in the 2009-2010 Outdoor Annual of hunting and fishing regulations for the county hunted. The department received overwhelming support to increase whitetail bag limits in several areas of the state with growing deer numbers or populations sufficient to support additional hunting opportunity.

The department is increasing the bag limit in most Cross Timbers and Prairies and eastern Rolling Plains counties from three deer (no more than one buck, no more than two antlerless) or four deer (no more than two bucks and no more than two antlerless) to five deer (no more than 2 bucks). Counties affected include: Archer, Baylor, Bell (West of IH35), Bosque, Callahan, Clay, Coryell, Hamilton, Haskell, Hill, Jack, Jones, Knox, Lampasas, McLennan, Palo Pinto, Shackelford, Somervell, Stephens, Taylor, Throckmorton, Wichita, Wilbarger, Williamson (west of IH35), and Young.

In addition, the department is increasing the bag limit from four deer to five deer in Pecos, Terrell, and Upton counties. White-tailed deer densities throughout the eastern Trans-Pecos are very similar to densities on the Edwards Plateau, where current rules allow the harvest of up to five antlerless deer.

Another change increases the bag limit from three deer to five deer (no more than one buck) in selected counties in the western Rolling Plains. Counties affected include: Armstrong, Borden, Briscoe, Carson, Childress, Collingsworth, Cottle, Crosby, Dickens, Donley, Fisher, Floyd, Foard, Garza, Gray, Hall, Hardeman, Hemphill, Hutchinson, Kent, King, Lipscomb, Motley, Ochiltree, Roberts, Scurry, Stonewall, and Wheeler. The department also opened whitetail hunting in Dawson, Deaf Smith, and Martin counties (three deer,

no more than one buck, no more than two antlerless).

Areas of the state having sufficient antlerless deer populations to warrant additional hunting opportunity are getting more doe days this fall. The department is increasing antlerless deer hunting in the following areas:

Hemphill, Hutchinson, Kent, King, Lipscomb, Motley, Ochiltree, Roberts, Scurry, Stonewall, and Wheeler. The department also opened whitetail hunting in Dawson, Deaf Smith, and Martin counties (three deer, no more than one buck, no more than two antlerless).

Areas of the state having sufficient antlerless deer populations to warrant additional hunting opportunity are getting more doe days this fall. The department is increasing antlerless deer hunting in the following areas:

- from 16 days to full-season either-sex in Dallam, Denton, Hartley, Moore, Oldham, Potter, Sherman and Tarrant counties;
  - from 30 days to full-season either-sex in Cooke, Hardeman, Hill, Johnson, Wichita, and Wilbarger counties;
  - from four days to 16 days in Bowie and Rusk counties;
  - from four days to 30 days in Cherokee and Houston counties;
- from no doe days to four doe days in Anderson, Henderson, Hunt, Leon, Rains, Smith, and Van Zandt counties.

The department is also expanding the late antlerless and spike season into additional counties. Counties affected include: Archer, Armstrong, Baylor, Bell (West of IH35), Borden, Bosque, Briscoe, Callahan, Carson, Childress, Clay, Collingsworth, Comanche, Cooke, Coryell, Cottle, Crosby, Denton, Dickens, Donley, Eastland, Erath, Fisher, Floyd, Foard, Garza, Gray, Hall, Hamilton, Hardeman, Haskell, Hemphill, Hill, Hood, Hutchinson, Jack, Johnson,

Jones, Kent, King, Knox, Lampasas, Lipscomb, McLennan, Montague, Motley, Ochiltree, Palo Pinto, Parker, Pecos, Roberts, Scurry, Shackelford, Somervell, Stephens, Stonewall, Tarrant, Taylor, Terrell, Throckmorton, Upton, Wheeler, Wichita, Wilbarger, Williamson (West of IH35), Wise, and Young. In Pecos, Terrell, and Upton counties, the season would replace the current muzzleloader-only open season.

In East Texas, the department is establishing a special muzzleloader season in additional counties, lengthening the existing muzzleloader season by five days to be equivalent in length with the special antlerless and spike buck seasons in other counties, and altering the current muzzleloader bag composition to allow the harvest of any buck (not just spike bucks) and antlerless deer without permits if the county has "doe days" during the general season. New counties affected include: Austin, Bastrop, Bowie, Brazoria, Caldwell, Camp, Cass, Cherokee, Colorado, De Witt, Fayette, Fort Bend, Goliad (North of HWY 59), Goliad (South of HWY 59), Gonzales, Gregg, Guadalupe, Harrison, Houston, Jackson (North of HWY 59), Jackson (South of HWY 59), Karnes, Lavaca, Lee, Marion, Matagorda, Morris, Nacogdoches, Panola, Rusk, Sabine, San Augustine, Shelby, Upshur, Victoria (North of HWY 59), Victoria (South of HWY 59), Waller, Washington, Wharton (North of HWY 59), Wharton (South of HWY 59), and Wilson.

The department is also adding one additional weekend and 10 additional weekdays in January to the current youth-only season. The department also established a one buck only, antlerless by permit, nine-day mule deer season for Parmer County, the first ever deer season for that county. The season concludes in the North Zone on Jan. 3 and the South Zone season ends Jan. 17.

## Planning for Fall and Winter Forage

*Source: Noble Foundation, Writer – Chuck Coffey*

As of Oct. 5, 2009, El Nino was still present across the equatorial Pacific Ocean with sea surface temperatures at least 1° C above average and expected to strengthen, lasting through the winter. This increases our probability of having a cool, wet winter. Winter El Nino episodes feature a strong jet stream and storm track across the southern part of the United States as depicted in the figure.

Those of us who planted winter pasture this September are enjoying excellent pasture conditions with stocking rates of 400-600 pounds of beef per acre. This is likely the best fall you have seen since 1994. Winter pasture will continue to grow for a little while as we move into December. Once soil temperatures fall below 55-60° F, plant growth is seriously inhibited, and what you have is about all you will see until the soil begins to warm up again in the spring. As a rule of thumb, 90 percent of fall production occurs by December. This is a great time for you to estimate reserve herd days to see if you will be under- or overstocked for the next 90 days and adjust accordingly. For fallplanted small grains, you will have approximately 150 lbs per acre-inch of forage and need to figure on leaving a 3-inch stubble height. Our Reserve Herd Day Calculator ([www.noble.org/Tools/](http://www.noble.org/Tools/ReserveHerdDay.html)

[ReserveHerdDay.html](http://www.noble.org/Tools/ReserveHerdDay.html)) will assist you with your calculations.

If you are understocked, then animal gain will be maximized for the fall period and range between 2-2.25 lbs of gain per head per day. If you are overstocked, plan to feed a little along the way or simply expect average daily gain to be slightly below 2 pounds.

Those of you who will be grazing livestock on dry grass have already had enough moisture this fall. Any additional moisture from December-February only decreases the quality and quantity of available standing forage. It is much easier to maintain a cow's body condition during a dry winter as the grass remains more upright and is "stronger." Increased humidity during the winter also adds to the chance of an animal being out of its thermal comfort zone, which reduces its performance. Unless you are grazing on native grass in good to excellent condition, there is a high probability you will be feeding hay a little sooner than normal or expect to lose a little more condition on your cows. Even if you are grazing on standing native grass in excellent condition, you might plan to feed a supplement high in energy after Jan. 1 to help maintain body condition on your cows.

## Texas cattle industry groups meet to discuss tick fever prevention

Source: Texas A&M AgNews

Representatives from Texas' cattle industry recently discussed future research and educational partnerships related to fever ticks at a summit hosted by the Texas AgriLife Extension Service. The fever tick is a major concern to the livestock and wildlife industry, said Dr. Tom Hairgrove, livestock systems program coordinator with AgriLife Extension Service and Texas Veterinary Medical Diagnostic Laboratory. It can carry and transmit *Babesia*, a blood parasite that can kill adult cattle. Other hosts for the fever tick are horses, deer, elk and other deer species. "The purpose of this summit was to bring together all stakeholders (livestock and wildlife) in Texas to begin a concerted effort in battling movement of the fever tick," Hairgrove said. "I think at the end of the day, everyone got a sense of where we are at and the work that needs to be done."

"This is a major concern not just for Texas, but the U.S.," said Dr. Ron Gill, AgriLife Extension beef cattle program leader and associate department head for animal science at Texas A&M University. "There needs to be more producer education, research and commercialization of technology that will all aid in preventing spread of the fever tick. If we can control the spread of the ticks which can carry the protozoa we can prevent the occurrence of tick fever that had huge consequences in the 1940s and thousands of cattle deaths in the 1800s." Gill said if the tick and the disease are not controlled at the South Texas border, "the economic consequences of re-introduction of tick fever into the naive U.S. cattle population would be staggering."

The fever tick was declared eradicated from the U.S. in 1943, except for a permanent quarantine zone that runs from Del Rio to Brownsville. Earlier this year, Texas Animal Health Commission officials quarantined more than 150,000 acres in Starr and Hidalgo counties. In Zapata County, a five-mile quarantine perimeter was enforced around fever-tick infested pastures, according to animal health officials. Currently, more than 1.4 million acres are under quarantine for ticks and 666 premises involved. Counties involved are Maverick, Dimmit, Webb, Starr, Hidalgo, Zapata, and Jim Hogg, according to the animal health commission.

Potential economic losses due to the cattle tick are in the millions, said Dr. David Anderson, AgriLife Extension Service livestock economist. In one modeling scenario, Anderson said, a widely separated area with diverse cattle operations where the fever tick is found with no disease transmitted, losses would approach \$100 million or more when calculating state/producer costs, treatment and eradication efforts. "That's assuming there's one tick found in the outbreak."

The ticks cling to forage during the warm-season months and wait for a host animal. Ticks have to be at least 6 millimeters in length to be detected. When examined in the chute, cattle have to be physically examined for detection. If cattle ticks are found in a herd, several eradication measures are taken, according to state animal health officials:

- Cattle and pastures are quarantined for nine months or longer.
- Cattle are inspected and run through dipping vats-spray boxes containing acaricide.
- Horses are sprayed and wildlife are provided medicated feed or

lured to treatment stations where they can rub against permethrin-coated posts while eating.

Once cattle are declared tick free, alternatively, the cattle can be moved to another site, allowing the vacated pasture to let the remaining ticks desiccate (die). However, greater success has been to inspect and treat animals every 14 days with acaricide or every 25-28 days with Doramectin, officials said.

Dr. Pete Teel, AgriLife Research entomologist, told attendees there are two cattle fever tick species that were introduced to the New World by early explorers and settlers. *B. microplus* originated in the Tropics of India and are thought to be distributed from southern Texas along the Gulf Coast to Florida. *B. annulatus* is thought to have originated from the temperate climate of the Mediterranean and was distributed throughout 14 southern U.S. states. "The populations of cattle ticks are influenced by the number and diversity of hosts and by weather," he said. "Cattle are considered the primary hosts. However, the emerging interaction between cattle and wildlife influence the population dynamics of this tick. That's why shared grazing among these animals is a focal point of concern. Dry weather helps reduce populations through desiccation of ticks on vegetation, but when rains return, populations start building and increasing as rain persists."

The survivorship of eggs and larvae is highest in shady places, Teel said. "These happen to also be habitats preferred by cattle in the summer." That's when the potential for ticks to interact with cattle are at their highest as cattle look to escape the heat and seek shady areas. "Our future challenges are connected to detection, surveillance, population and survivorship," Teel said. "All of these areas need lots of attention by all of the cattle industry to ensure a large outbreak doesn't occur."

Another area of interest is change in land use. Some ranches have switched from cattle operations to hunting operations. "And even though these cattle have been pulled off of these pastures, wildlife are still there and serve as potential hosts," said Dr. Bob Hillman, director of the Texas Animal Health Commission. Another concern is the development of potential products to combat the tick that have not yet been approved for use, Hillman said. He told attendees that federal and state officials need to become more engaged about cattle tick prevention efforts to secure "much-needed funding" for these activities.

"The fever tick is a U.S. problem," Hillman said. He noted part of the problem with getting federal support for control of the fever tick is the longstanding view that this is just a Texas problem only. "If we don't control the tick at the border, this becomes a national problem."

Dr. Adalberto Perez de Leon, laboratory director with the U.S. Department of Agriculture-Livestock Insects Research Unit in Kerrville, presented research projects currently in progress with wildlife. A "two-poster system" has been tested where white-tailed deer are drawn to a permethrin-treated feeder. The deer push their head through an opening and during this process, their neck and shoulder region are rubbed with permethrin. The deer then spread the permethrin over the rest of their body through normal grooming.

over the rest of their body through normal grooming. Another system, which uses Ivermectin-treated corn dispensed in feeders for white-tailed deer, is being used as part of prevention efforts. However, the treated corn must be withdrawn well in advance of hunting season (at least 60 days) due to potential residues in the meat. Both systems were developed by USDA-ARS.

More information about fever ticks can be found at the Texas Animal Health Commission Web site at [http://www.tahc.state.tx.us/animal\\_health/fevertick/fevertick.html#ticks](http://www.tahc.state.tx.us/animal_health/fevertick/fevertick.html#ticks)

## Equine Piroplasmosis Disease Investigation Continues

Canada and a number of U.S. states have imposed movement restrictions or additional entry requirements for horses from Texas after equine piroplasmosis, a tick-transmitted blood disease of equine animals, such as horses, donkeys, mules and zebras, was detected in South Texas in mid-October. Equine piroplasmosis may be carried and transmitted by as many as 15 species of ticks. Although ticks have been collected from the South Texas ranch for testing, final results are not complete, and it is not known whether any of the ticks can serve as a host for the disease.

“Before moving horses from Texas, we urge you and your veterinarian to check with animal health officials for any state of destination, to ensure the animals have met all entry requirements,” said Dr. Bob Hillman, Texas’ state veterinarian and head of the Texas Animal Health Commission (TAHC), the state’s livestock and poultry health regulatory agency. “Regulatory requirements can be fluid as disease situations evolve, so it is essential to call each state each time you haul.” As states provide entry restrictions and requirements, the documents are posted on the TAHC web site at <http://www.tahc.state.tx.us>. Dr. Hillman urged equine owners and veterinarians to call state animal health officials directly before hauling, as many states have not yet distributed entry requirement information. Contact information for state veterinarians may be obtained from the TAHC at 800-550-8242, ext. 710, or by emailing [ceverett@tahc.state.tx.us](mailto:ceverett@tahc.state.tx.us).

“We are continuing the equine piroplasmosis disease investigation initiated in October in South Texas. No horse movement is being allowed from or to the ranch where the infection was detected,” said Dr. Hillman. “While this tick-borne disease has not been considered endemic in the U.S., cases of the disease, scientifically known as *Theileria equi*, and previously called *Babesia equi*, have been detected in the U.S. Our epidemiologists are tracing the movement of specific equine animals. Blood tests will be conducted, and the animals will be examined for ticks. Individual equine owners will be contacted, if their horse needs to be tested by animal health officials.”

Dr. Hillman refrained from speculating on how many equine animals will be tested or how many may be exposed or infected. “Until the epidemiological work and testing of potentially exposed horses is completed, there is no way to predict how many horses may be affected with this tick-borne illness,” he said.

Dr. Hillman said horses infected with equine piroplasmosis may appear well, while others may exhibit a host of non-specific clinical signs, such as fever or anemia. These clinical signs also could be attributed to a variety of other diseases or causes. Blood tests are needed to diagnosis the disease.

“Equine owners should talk with their private veterinary practitioners about complying with interstate movement requirements, testing recommendations and protecting their horses from ticks. If a horse appears to be ill, it should be evaluated by an accredited private veterinary practitioner,” said Dr. Hillman.

## Prescribed burning a tool for brush management

Source: Texas A&M AgNews

The sprawling JA Ranch has seen its share of fires, some intentionally set and some not. Ranch managers now are looking at the results of the fires to help determine how prescribed fire could be used for brush management on their property. Texas AgriLife Extension Service officials conducted a field day on the JA Ranch, located southeast of Amarillo in Armstrong and Donley counties. During the course of the day, ranch operators and AgriLife Extension and Texas AgriLife Research experts discussed various treatments and results.

Red-berry juniper and mesquite so thickly covers many of the pastures on the ranch, it makes it difficult to gather cattle from pastures, said Andrew Bivins, one of the ranch owners and current leader of the Panhandle Prescribed Burning Association. Some of these pastures we can’t aerial spray because there is too much juniper, and it’s too rough to grub it, Bivins said.

A prescribed burn takes time to properly plan, he said. And sometimes even after taking the management practice to defer grazing to build up fuel for the fire and burning black lines, the weather doesn’t cooperate for the burn. To top-kill the juniper, you need moisture levels down where the canopy will burn and enough grass where it will carry the fire from tree to tree, said Dr. Jim Ansley, Texas AgriLife Research range management scientist from Vernon.

The problem with juniper densities like this is you could defer this for 10 years and not get rid of the bare patches, Ansley said. You

may have to do some mechanical treatment to open it up some and get more grass growing. He said an option would be to burn smaller portions of the pasture on the north and east sides first with fairly conservative fires that have pre-burned blacklines. Then one could possibly push the limits in terms of humidity and air temperatures for a hotter headfire on the southern sections, assuming the burn occurs with a south or southwest wind. The limits would include coming close to but not below the 20 percent humidity level, air temperature between 70 and 80 degrees and wind speeds between 10-20 mph. If you don't mechanically treat it first and want fire to do the job, you are going to have to push the limits, Ansley said, but this is not the most desirable situation.

Ken Cearley, AgriLife Extension wildlife management specialist, said looking at it from a wildlife perspective, it would be best to leave a mosaic of plant communities in the pasture. If other woody cover is lacking, some cedar is better than no cedar for wildlife, Cearley said. If you end up not killing all of it, it's not a bad thing. Historically, cedar existed in rougher country that protected it from naturally occurring wildfires and provided thermal and screening cover for deer, for example.

He suggested sometimes turning cattle in on the burned pasture a little early if quail were a major part of the operations plan, because that would encourage the growth of forbs, weeds favored by wildlife that are necessary for their habitat. Frequent use of this strategy could encourage the success of invasive brush, however, due to the lessened competition with grasses, Cearley said. Deferment through a full growing season would more likely be in order if livestock production is the priority. Mesquite might not be prime cover for quail, but he said if it is basically the only woody plant available, it can be managed for their use. Cearley also said burning as early as possible in the winter will generally benefit forbs, though a good grass cover can still be expected come springtime with deferment. Burning later in the winter, just before spring green-up, will favor grasses and therefore, livestock production.

In their Boggy pasture, Bivins said they spent two years to get 2,000 acres grubbed and then deferred it for a year before burning it in 2003. The grubbing/burn combination did a good job of cleaning up the brush growth. We like to wait a year or two after grubbing before we burn, but you don't want to wait too long, he said. Bivins also said that everything didn't catch fire the first day and he and his mother went out the next two days with drip torches, walking around and lighting fires to get better coverage.

He estimated it takes \$120 an acre to grub, so what they have started doing on the ranch is bulldoze two lines 100 yards apart and grub in between. They then let that area sit for a year before burning it as a black line. This procedure is followed by fire across the rest of the pasture.

To keep the mesquite suppressed you really should burn it every six to seven years, Ansley said. Redberry juniper has a slower regrowth and you can get by with 10-year intervals. He said in studies of mesquite seedlings, they discovered that the growth node can slip back under the soil surface in the early stages of growth to protect it from fire, so earlier burning may not do a good job. While fire may

be very hot at the soil surface, at a half-inch down in clay soils, you won't have any temperature difference, Ansley said.

He said summer is when many of the wildfires started years ago, and while it may not be the practice now, they have benefits. Summer fires have a higher duration of extreme heat, which can top-kill brush species easier. We don't recommend it in cedar country, but with mesquite and prickly pear, it's doable and more effective, he said.

Warm-season grasses may be delayed by a summer fire, but the long-term data shows that after a few years, the reverse happens, Ansley said. We have more warm-season mid-grasses replacing warm-season short grasses like buffalograss, he said. So in the long run, if you can arrange a management scheme where you can tolerate the slower recovery, a summer fire will be better.

Ansley said his studies also have shown that if mesquite is only top-killed, the original canopy cover as a percentage of ground area returns within just a few years because of rapid multi-stemmed regrowth. Regrowth mesquite has more leaf area than before and can become a greater problem than the plant was before. Another option for mesquite management is to apply treatments that maintain top-kill and maintain the mesquite canopies as a savanna, he said. Low-intensity fires or spraying Reclaim by itself can be used for this option, Ansley said. These treatments will reduce the canopy foliage to about one-third the size and keep the mesquite from resprouting.

J.F. Cadenhead, AgriLife Extension range specialist from Vernon, said several years could pass following a spray with something like a Reclaim/Remedy mix before a follow-up maintenance burn is needed. However, a point of controversy related to this long-term strategy was raised when the field tour came to a pasture where the JA Ranch crew did such a plan.

Dale Smith, another member of the ranch management team and prescribed burn association, said a pasture was sprayed with a Reclaim/Remedy mix (quarter pound each) in 2001 and it provided good control with most of the mesquite appearing dead. However, about five years after they sprayed, they applied a prescribed fire to clean up the dead stems. While it initially looked good, two or three years later the mesquite began to resprout and this is causing a major concern regarding long-term planning. Ansley said there obviously was not a true root kill, but he could not explain what happened. He and Cadenhead agreed that this had not been seen before and was a major concern.

If you're interested in learning more about prescribed burning, we will be having a series of meetings here in Jacksboro beginning in late January. This program will be a joint effort of Jack County Extension & NRCS. If you would like to go ahead and get your name on the list, please let me know. More details will be coming soon!



**Jack County**

100 N. Main, Courthouse  
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940-567-2132