



QUAIL-NEWS

THE QUAIL-TECH ALLIANCE NEWSLETTER
Winter 2011



Quail-News: Issue 6.0

WHAT'S BEEN GOING ON?

By Brad Dabbert

Fall 2011 has been extremely busy. We have almost completed fall covey call counts (see article in this issue) and have been continuing our multi-pronged efforts to benefit quail. We continued our surveillance for West Nile Virus in serum samples. Analyses revealed that only 0.4% (1 of 275) of samples tested were positive for anti-West Nile Virus antibodies. These samples were collected at 9 different sites across several hundred miles. We will continue this surveillance as we try to understand the relationship between West Nile Virus exposure, infection, and quail health. We also tested again for anti-Newcastle Disease Virus antibodies in the serum of birds from ranches where birds were positive for anti-Newcastle Disease Virus antibodies during 2010. However, no birds tested positive in 2011.

In our last newsletter we announced the start of collaborative efforts with Dr. Bill Palmer and his Upland Game Bird Research Group at the Tall Timbers Research Station in Tallahassee, Florida. Dr. Palmer was able to visit our research group and speak at our 2011 field day (see article in this issue). We are very excited about this collaboration and look forward to a busy spring research push. One significant development will be the release of wild-strain parent-reared chicks onto Anchor Ranches in the Quail-Tech Alliance Program.



Though much is planned for the spring, I don't believe anyone could be working much harder than the graduate students and undergraduate technicians of the Quail-Tech Alliance. In our last newsletter we announced a generous donation by the Hill Country Chapter of the Quail Coalition to help us build a research and breeding facility on campus. We are well on our way to completing this structure by the New Year. Though the truck often leaves for call counts at 4:30 am, students are also putting significant amounts of sweat equity into this facility as we try to maximize the value of every dollar we receive from donors and our Anchor Ranches (check out the pictures accompanying this article).



continued

Management Actions:

Supplemental feeding using a spreader off the road (see related articles).

Adjust livestock numbers to as low as possible (see related article)

Eliminate bird shooting this year, use a camera instead!



This facility is going to be an excellent tool for a variety of research efforts including the areas of nutrition, disease resistance, and genetics. We are very excited about the wild-strain parent-reared chicks which will be produced in this facility and the research questions which can be answered with the help of this new tool. We have experiments poised to start as soon as we can move in. In addition to the Hill Country Chapter of the Quail Coalition we wish to thank the Burnett Foundation whose support is instrumental to completing our mission. Finally, as we strive to continually increase the quality of all of our programs we have started a new article series in our newsletter. We know to most landowners hunting dogs are second only to the quail themselves. Thus, we have asked veterinarian and Tech alumnus Dr. Eric Cunningham to provide us information on how we can best care for our canine friends in the field. I believe you will enjoy and learn from his article. I know I did.



Building progression with graduate students working on interior framing & finishes.

Grazing Management & Quail Habitat

By Ron Sosebee

Grazing and quail habitat management go hand-in-hand as we have discussed many times. But, it might never have been as important as it is today. And, with the adversities that ranchers and landowners have faced this year with the worst single-year drought on record and devastating fires, we must make adjustments to save our renewable resources (rangeland and quail habitat) if we want to have good habitat in the future.

We advocated relocating livestock earlier in the summer if it had not been done before. Relocation could be accomplished by moving livestock to leased land, or, if necessary, selling the animals to protect the rangeland. Buying hay and keeping the livestock on the rangeland does not accomplish the goal of protecting the rangeland. The livestock continue to eat (nibble) on the few grasses that are left ultimately destroying the rangeland and the quail habitat. And, with the grasses "greening up" following the recent rains that we have received, grazing is not recommended. The daylength is so short now that the grasses are not going to produce much and the growth that occurs will be needed to store carbohydrates and recruit tillers for next year's production.

Many years ago, the late Mr. Dick Whetsel, former manager of the Adams' ranches in Oklahoma noted that the time to adjust livestock numbers is during late autumn and not in the spring. The amount of grass production that one will have next year is based on the amount of residual herbage that exists in the late autumn. Therefore, if we want to have vegetation for our remaining quail populations, and hopefully, an increase in numbers next year, **we must adjust our livestock numbers now** to allow the grasses an opportunity to store carbohydrates and recruit tillers for next year's production.

This is a difficult decision to make, but one that we must be made if want to promote quail habitat for the future.

PROTECTING YOUR K9 COMPANION IN HUNTING SEASON

About the only thing worse than not finding any birds on your hunt is seeing your most loyal hunting partner go down with an injury. While a bird dog loves nothing more than slamming into the brush full speed after a scent, nature has a wide variety of pitfalls that can strike even the healthiest of dogs. Knowing what some of these problems are, and more importantly being prepared for them, will keep both of you doing what you want which is spending more time in the field.

Preparing for the intense activity that your dog will see on your first day should ideally start at least a few weeks in advance. Conditioning the footpads and lungs by gradually increasing activity each day prior to your first day on the hunt is the best way to avoid being out of commission that first day. If your dog, like many, serves double duty as the family pet for most of the year, spending more time on carpet than dirt, his footpads will be very soft and prone to tearing and cracking. Hunting boots can help protect their feet, but unless they are used to wearing them already, they may become more of a distraction to the dog than anything else. Many dogs will initially goosestep when bandages or coverings are placed on their feet. If your dog is used to wearing "boots" then they can be a good option to avoid some common foot injuries. Generally, they will not repel cactus or mesquite thorns however. That is where a good pair of needle-nose pliers can come in handy. If you see an obvious thorn injury, grasp the thorn as close as you can to the skin and pull straight out. Watch for swelling over the next 48 hours. If the dog becomes lame on the foot or you notice swelling, there is a good chance that part of the thorn is still lodged in the foot and a trip to the vet for thorn removal and antibiotics is warranted. Another tip from an experienced thorn puller: you might have someone holding the teeth end of the dog while you are dealing with the injury. Sometimes pain can cause a temporary lapse in judgement for these guys and then you'll be dealing with two injuries instead of just one.



Birds are not the only things that hide in the brush. Around West Texas, you are likely to encounter a various assortment of rusted metal including barbed wire, old farm equipment, nails and who knows what else. Most of the time, the first thing you notice different about your dog that is still running around with excitement is a large gash or flap of skin open on the flank, chest or legs. A bottle of clean water and some soap are my first choices to clean a wound. Hydrogen peroxide is losing favor amongst most wound specialists in terms of first aid and alcohol in an open wound is a great way to get bit and cause some unnecessary pain. Good old antibacterial soap and water is a great choice to clean out dirt, debris and bacteria from an open wound. After the wound is clean, I will use a small amount of triple antibiotic ointment and then apply a bandage. Depending on where the wound is, there are many different field coverings you can use. The main goal is simply to keep the wound as clean as possible until you are finished that day and can get the dog to the vet for sutures and antibiotics if necessary. Wounds on the leg can be bandaged with a non-stick pad and some elastic tape. The tape should be tight enough to secure the pad but not so tight that it cuts off circulation. If you see the foot start to swell, the bandage is too tight and needs to be loosened. A wound on the flank can also start with a non-stick pad and then be secured with an Ace bandage that wraps around the body. In a pinch, a simple t-shirt tied up around the waist is better than nothing. It might also lighten the mood a bit.

Another common issue that can arise is when you see your dog come back to you with one eye squinted or even closed shut. Debris such as grass awns, dirt, splinters and feathers can magically make their way into your dog's eye. Having a bottle of artificial tears on hand is a great way to flush the eye out. Many times this almost instantly resolves the problem and your dog goes back to keeping both eyes open. Flushing out the eyes indirectly keeps the nasal passages clean as well via the nasolacrimal tear duct that empties out in the nose. If an awn is stuck in the conjunctiva, which is the pink lining around the eye, it may require some sedation from a vet to get it out. So if your dog is still closing an eye several hours after flushing, there may be a foreign body in the eye or the cornea could be scratched. Either way, it is an indication to see the vet about it when you can.

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Weekend warrior syndrome affects dogs as much as it does people. If you haven't had time to properly prepare your dog for the increased activity, you may not notice a problem until the day after when soreness begins to set in. This can be particularly noticeable if your dog did any swimming. A condition commonly called "swimmer's tail" can present quite severely sometimes with the dog being unable to lift its tail and yelping in pain when it is manipulated. This can last for several days. Medication that you can get from your vet can help alleviate some of the pain and inflammation. A class of drugs called NSAIDS (non-steroidal anti-inflammatories) are good choices for soreness. Talk with your vet to see if you can get some pills to have on hand for various pain associated with the rigors of high activity. Do not use aspirin, ibuprofen or ANY over the counter pain meds



unless directed to do so by your vet. Many of these can cause serious and life threatening illness. Pain meds are also useful when a dog comes up lame on a leg for one reason or another. A good rule of thumb to determine severity of an injury is whether or not the dog is bearing any weight on the leg. If he is putting any weight at all on the leg there is a high probability that no bone fracture exists. If he is not bearing any weight, check the paw for stickers and thorns first but if you don't find any, a trip to the vet should be in your future. Also discuss with your vet about having him vaccinated for rattlesnake bites. The vaccination has been available for a few years and in most cases lessens the severity and increases survival rates in dogs that have been bitten. Non-serious side effects are rare and it is definitely a worthwhile investment for any dog that hunts or spends time in the field.

One final aspect to consider in keeping your hunting companion in tip top shape is nutrition. I can't even fathom how many calories one of these dogs burns in a day of hunting, so be sure to feed them a good quality dog food meal at least an hour before they go to work. In general, select a dog food that has a reputable brand name. Generally speaking, you get what you pay for with dog food. Avoid cheap foods that tout "High Protein Formula". Dog food labels have very loose requirements as far as what they can claim, so unfortunately, price is generally a good indicator as to the overall quality of a food. Provide plenty of water throughout the day, at least every hour during activity. Many people feed energy bars to recharge them in the field as well. Small snacks or treats are fine during the day but avoid feeding a full meal too close to high activity times. Most hunting breeds aren't generally predisposed to a life threatening stomach bloat condition called GDV (gastric dilatation and volvulus), but retrievers are. Be particularly careful with older Labrador and Golden Retrievers and wait at least 30-45 minutes after activity has ceased to feed them.



Before you head out, have on hand the phone numbers to both your home vet clinic and the closest available vet clinic in case of an emergency.

I'll leave you with a list of items to include in your K9 first aid kit:

1. Clean water- both for drinking and cleaning wounds
2. Antibacterial soap
3. Non-stick bandage pads
4. Bandage materials- elastic tape, ace bandages, t-shirts
5. Triple antibiotic ointment
6. Artificial tears
7. Needle nose pliers
8. Muzzle
9. Pain medication from your veterinarian
10. Energy bars

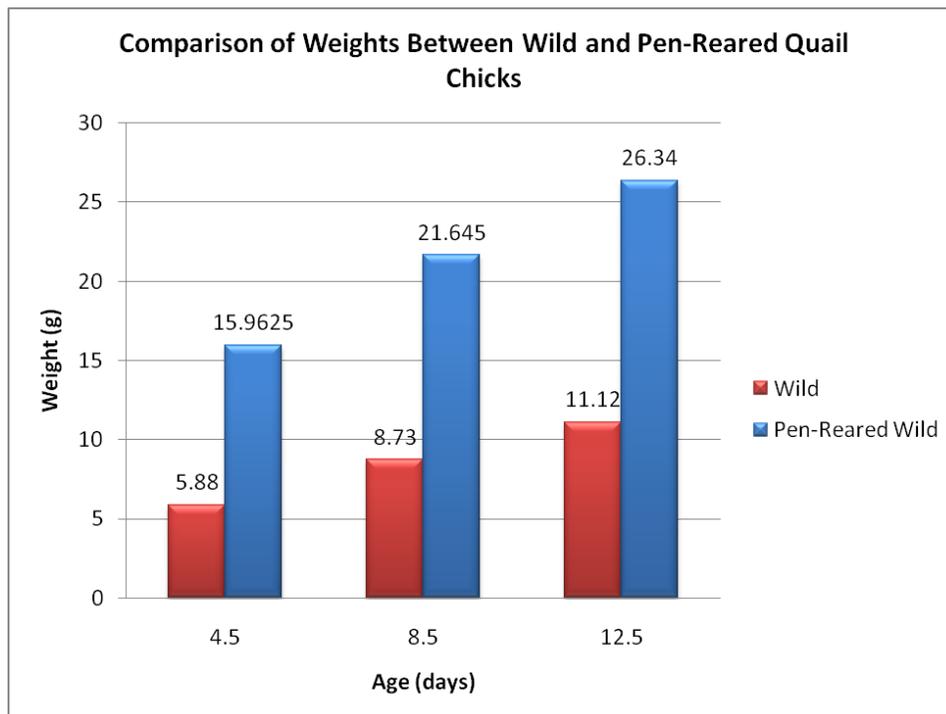
Good luck, have fun and be safe.

Eric Cunningham, DVM

Influence of Supplemental Feeding and Drought on Bobwhite Quail Chick Survival and Growth on the 6666 Ranch:

By Alicia Andes and Brad Dabbert

In the last newsletter (Issue 5.0), we described the start of an effort to estimate the influence supplemental feed has on northern bobwhite chick survival and growth on the 6666 ranch this past summer. Chicks are extremely vulnerable to predators and environmental conditions during their first few weeks of life. Lack of rain negatively influenced northern bobwhite chick survival and recruitment into the fall population. Unless supplemental feed was provided as a food source, there was very little chick production on the ranch (see the companion article in this newsletter). For example, in areas where supplemental feed was provided, 18 broods consisting of 158 chicks were hatched compared to only 3 broods with 27 chicks in non-feed areas. Even if supplemental feed was available allowing adult quail to initiate and hatch nests, chick survival, was abnormally low on both supplementally-fed and non-fed areas: 2.53% and 0% chick survival respectively. We attribute much of this mortality to lack of food availability. Chicks are unable to use traditional sources of food such as milo because of its low protein content. Chicks rely on invertebrates to provide sufficient dietary protein for feather and body growth and development. Since the drought caused low invertebrate abundance this past summer, chicks were unable to consume the protein needed for normal body growth. For instance, compared to wild strain pen-reared chicks that were provided a daily diet of high protein feed in our laboratory, growth rates for wild chicks on the 6666 were reduced (see bar graph). This reduced growth and development leads to early chick mortality, and little to no recruitment into the fall population.



Since recruitment into the fall population for quail was low, additional management practices are necessary to increase the overwinter survival of adults into the next breeding season in order to mitigate the effects of the drought on the previous reproductive season. Based on the data collected from the 6666, the application of supplemental feed is encouraged throughout the year to increase adult quail survival and chick production; however, further effort is needed to increase chick survival next summer if the drought persists. Quail Tech researchers plan to experiment with the application over the summer of a high protein feed for chicks to increase their survival as well as recruitment into the adult population.

UPDATE ON SURVIVAL STUDY ON THE CIRCLE A RANCH

By Paul Woods and Brad Dabbert

If you have read our last few newsletters you have been following our efforts to monitor the survival rate of pen-reared birds released into the wild on the Circle A Ranch. The second year of research is winding down on the Circle A. The study from the summer and fall of 2010 was replicated this year with a few minor, but helpful changes. Roughly the same number of quail were released this year (2011) during July, August, and September. All of these birds were banded and 50 were equipped with 1.5 gram radiotransmitters upon their release so that we could monitor their movements and survival. Birds were recaptured a few weeks later and fitted with larger 6 gram transmitters when their body growth permitted. Though we continue to monitor these birds we wanted to update you concerning this study.

This year has been a tough one for quail, mainly due to the drought. Most of the tanks on the property were dry for the majority of the study. The native grass and vegetative cover was lower quality compared to last year, because of the extreme dry conditions. Consequently, the survival rates this year were lower than the estimates from 2010. For instance, survival rates were 85% through October 1, 2010 (1.5 gram transmitters) and 52% through the end of December 2010 (6 gram transmitters). Mammals were the cause of predation approximately 60% of the time. This year the survival rate through October 1, 2011 was 58%. Survival for birds October 1 to Nov. 14th was only 21%, with mammals being the cause of predation approximately 78% of the time. Unfortunately, we believe drought has played a role in reduced survival during 2011.



As mentioned before, one of the changes we decided to make to the study this year was to band every bird that we released during 2011 with an identifying leg band. This identification allows us to determine how old the bird is and to make sure it is not a wild bird. These data will be very helpful at the end of the hunting season allowing us another method of estimating the survival rate. As the study winds down we hope to see the survival rate stay the same and are anxious to see how many bands are recovered during this season.

Study Update

Promising Results on the 6666 Ranch:

By Byron Buckley and Brad Dabbert

(Please see previous newsletters 3.0, 4.0, and 5.0 for background information regarding the project)

On October 1st 2011, we completed our first year of data collection on the 6666 ranch. It has been a harsh year with high heat and hardly any measureable rain; however, we have collected promising data suggesting positive effects of supplement feeding for northern bobwhite.

Last year, we trapped and radio marked a total of 121 hens (69 on non-fed areas/52 on fed areas). Hens were tracked using radio telemetry from Oct 1- late March resulting in 3087 locations. These hens were monitored for survival and distribution (home-range). Throughout the year (October 1, 2010-October 1, 2011) we documented a 35% survival rate on areas where feed was supplied compared to only a 17% survival rate on areas that did not receive feed. We noted 65 depredations throughout the study site. Causes of predation were 58% avian, 29% mammals, and 8% unknown. Some depredations were labeled as unknown due to the lack of evidence at the kill site or the place where the radio transmitter was found. We are still in the process of fine tuning our home-range estimates, but our first calculations reveal a similar average home-range size for hens in both fed (63 acres) and non-fed (64 acres) areas.

In March, we shifted to monitoring nesting activity throughout the study site. We documented 31 nests on fed areas as opposed to only 4 on areas without feed. During this relentless drought we found that 78% of the available hens on fed areas attempted to nest versus only 15% on non-fed areas. We recorded 62% of the nests were successful while 22% and 8% were depredated and abandoned, respectively. We documented 2 hens that were depredated while at least >50 meters away from their nests. It is important to note that in hens on non-fed areas all breeding attempts stopped and coveys reformed in mid-June while hens on fed areas continued breeding until the end of July. Thus, supplemental feeding allowed hens in fed areas to nest despite the severe environmental conditions.

We are currently in the field trapping and tracking for our second year of data collection. We have trapped 80 bobwhites since October 1st and, so far, radio marked 40 hens. We already knew that breeding was very poor this past season and of the 80 birds captured only 2 have been juveniles. Though these data confirm the poor reproduction of the summer, the good news is that our current survival estimates indicate that we are “holding on to” or sustaining adults from last year. Hopefully, we will be able to “hold” these adults until this coming breeding season and, with any luck we will have a wetter summer. We will be bringing you updates throughout this season.

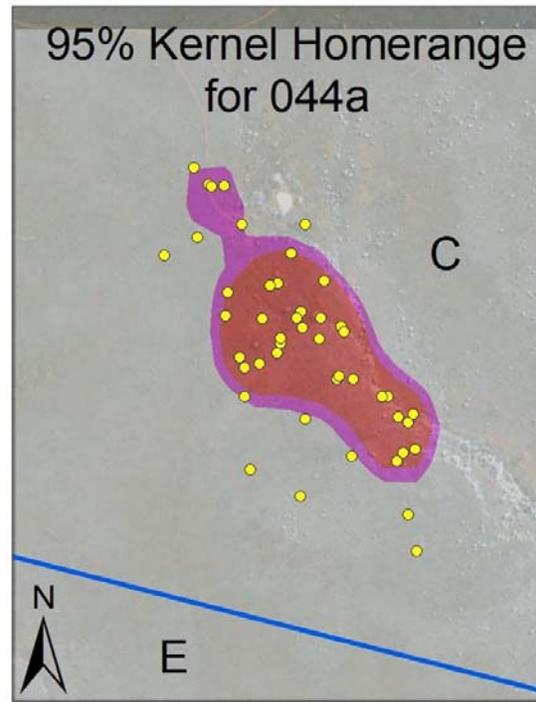


Figure1: Home-range estimate for a hen radio marked bobwhite quail. Red is the core home-range used by this bird on the 6666 ranch 2010-2011.



Figure 2: Quail (far left quail) captured and radio-marked this season with a small covey.

FALL 2011 COVEY COUNT RESULTS

By Brad Dabbert

We have completed most (90% complete) of the covey call counts for Fall 2011. There is a wide range (0 to 3.6) of means among Anchor Ranches with a mean of all Anchor Ranches of 1.6 coveys per point. Unfortunately this is a 40% decrease from our Fall 2010 numbers. To put these numbers into perspective, one can make some assumptions to arrive at a density (birds per acre). If we assume we can hear coveys from up to 500 meters away (generally accepted), then our listening area is 194 acres. Research by scientists in the Southeastern United States (Wellendorf et al. 2004) indicates that factors such as wind speed, cloud cover, number of adjacent coveys, and changes in barometric pressure all can influence whether a covey chooses to call on a given morning. Additionally, there are differences in our ability to detect calls in different environments because of factors such as vegetation type and topography. While the Quail-Tech Alliance is examining these relationships to be able to better estimate calling rates on Anchor Ranches, the best we can do at this point is to use some of the same assumptions developed by Wellendorf et al. (2004) for the Southeastern states. Wellendorf et al. (2004) estimated that a person could detect an average of 90% of the coveys within 250 meters, but only 40% of the coveys beyond 250 meters. Applying these data to our mean Anchor Ranch value of 1.6 calling coveys (assume 1 covey detected within 250 meters and 0.6 coveys detected beyond 250 meters) produces a value of 2.6 calling coveys ($1/0.9 + 0.6/0.4 = 2.6$). If you further assume, all conditions being average, that 70% of the coveys present actually call on a given morning then we estimate there are actually 3.7 coveys present ($2.6/0.7 = 3.7$). Last, if we apply an average covey size of 12 birds and the area of 194 acres, then the mean bird density for anchor ranches would be 0.2 birds per acre ($3.7 (12)/194 = 0.2$). This is not good news, but not unexpected given the reduced rate of nest initiation and extremely low chick survival we documented this past breeding season (see additional articles in this newsletter). When we finish up the counts we will put out an e-bulletin with more specific data. Given these reduced numbers it is extremely important to shepherd as many birds as possible through the winter and spring. We suggest landowners supplementally feed using milo broadcast into the habitat as we have shown this method increases survival of northern bobwhites in the Rolling Plains. Additionally, we recommend landowners severely curtail or eliminate shooting birds this year. Enjoy the field experience by watching the coveys flush away, hopefully, to breed next summer.

Citation

SHANE D. WELLENDORF, WILLIAM E. PALMER, PETER T. BROMLEY, (2004) ESTIMATING CALLING RATES OF NORTHERN BOBWHITE COVEYS AND MEASURING ABUNDANCE. *Journal of Wildlife Management*, Vol. 68:672-682.

SUCCESSFUL FIELD DAY AT THE TONGUE RIVER RANCH!

By Brad Dabbert

The Quail-Tech Alliance held a field day on the Tongue River Ranch on October 1, 2011. The event was well attended by about 65 people. The agenda started with presentations in the pavilion at the Tongue River Ranch on a range of topics from supplemental feeding to predator management and a disease surveillance update. At noon, guests were treated to a brisket lunch with all of the trimmings. After lunch the group viewed quail management and research activities currently underway on the Tongue River Ranch. The day was completed with a presentation by Dr. Bill Palmer. Dr. Palmer, the Director of Game Bird Research at the Tall Timbers Research Station in Tallahassee, Florida, spoke about quail management successes in the Southeastern United States that might be applied in the Rolling Plains of Texas.



Dr. Bill Palmer speaks at a field stop on the Tongue River Ranch.

One hundred percent of field day participants who provided feedback indicated the information provided them would be useful. These participants on average rated the field day a 4.3 out of 5 stars. We are very pleased with our second annual Quail-Tech Alliance Field Day and look to build on this year's success. The Quail-Tech Alliance wishes to thank the Tongue River Ranch and The Burnett Foundation for generously supporting the field day.



Dr. Brad Dabbert briefs the field day crowd about upcoming Quail-Tech Alliance initiatives.



Attendees listen to presentations during the morning session of the field day.

Attention Anchor Ranches...If you need bulk milo call Charles Hodges at 214-679-9781.