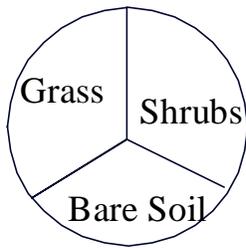




THE COVEY HEADQUARTERS

Volume 10 Issue 1 Spring 2011

This newsletter starts our tenth year of an effort aimed at cooperators and sports-people in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, and University of Missouri Extension. If you would like to be removed from this mailing list or have suggestions for future articles please contact jeff.powelson@mdc.mo.gov or 816-232-6555 x122 or write to the address shown.



The name of this newsletter is taken from an old concept....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use **shrubs** as the cornerstone for your quail management efforts. Manage for a **diverse grass, broadleaf weed and legume mixture and provide bare ground** with row crops, food plots or light disking **right next to** the shrubby area.

Quail need dense, shrubby cover to survive the extremes of a harsh winter

Bill White, Private Land Services Unit Chief, Jefferson City, MO

After the major blizzard that occurred in early February many of us wonder about the well-being of the critters of forest and field. Most of their food was buried in a huge snowstorm then they were faced with below zero wind chills for several nights. Most predators and raptors are affected because their biggest food source, mice and related animals, are buried under the snow and difficult to get to. However, they evolved with a feast or famine eating habit and can probably tough out a few days with not much harm.

What about the songbirds? Some will succumb to the ravages of such a storm, especially if they were already weak or otherwise not healthy. Much of their food source is also buried and this late in the winter a lot of the food above the snow is pretty depleted or of very low quality. But our songbirds also evolved to handle at least brief episodes of such trauma. They are mobile and can search for food near and far. They have a crop which they can fill when they find an abundance of food and digest it later.

Now, let's talk about quail. They have also evolved to make it through at least short spurts of this kind of weather. A shining example occurred in 2007.

What Our Research Shows

The Department had radio collars on several quail at Davisdale Conservation Area near Booneville. A major snow event dumped 18-20 inches of snow at the end of November between Columbia and Booneville and it was followed by sub-zero temperatures for a few nights.

How many of our radio-collared quail died? Our staff thought they had all died.

They kept getting radio signals from an edge feathering brush pile over the course of a couple of days, before the snow had started melting. Finally, thinking the birds had died, they went to the brush pile to retrieve the valuable collars to reuse. As they started to tear apart the brush pile to get to the dead birds, they were surprised when the birds flew out the other side of the brush pile!!! Those birds stayed in the brush pile for at

least 3 days before they were flushed by our workers. There were no tracks in the snow to indicate that they had moved out of the brush pile since the snowstorm. This ability to hunker down and wait out the worst that the elements can throw at them serves the quail well. During that winter storm, we did not lose a one of the birds that we had radio collars on. Davisdale is one of our Quail Emphasis Areas where we have intensified management specifically for quail. The brush pile that those birds flushed from was put there specifically for quail. It takes habitat for the birds to survive extreme winter weather.

The Quail Down My Lane

Like the quail at Davisdale, I had not seen my quail for about 4 days after Monday's freezing rain. But Saturday after temperatures climbed above freezing for the first time we saw the covey. I am sure they were buried in snow for a few days in one of my many brush piles on the farm just trying to survive the harsh conditions. Even though we had about 15 inches of snow in Osage County, the quail on my lane will survive, because they have the habitat. A big gooseberry thicket protects them from most chances of a predator getting to them. They have a wildflower plot nearby with food sticking out above the snow that should sustain them through winter. In addition, I noticed they have really been working on a nearby privet shrub that is still loaded with berries, deeper in the woods are some winterberry that many birds are going to right now, too. If the habitat is there, they will survive to keep on going into the spring. Check out <http://mdc.mo.gov/blogs/more-quail> for additional information.

Missouri Bobwhite Quail Habitat Appraisal Guide DVD

An award-winning new video from University of Missouri Extension can help landowners assess their land's potential for supporting bobwhite quail.

"Bobwhites have more complex habitat requirements than many wildlife species," said Bob Pierce, MU Extension state fisheries and wildlife specialist. "They require an appropriate mix of plant communities that provide food and areas for nesting, rearing broods, loafing and escaping predators-all interspersed closely together."

The 40-minute DVD, "Missouri Bobwhite Quail Habitat Appraisal Guide," visually showcases the habitat components bobwhites require and demonstrates the process landowners can use to evaluate the habitat conditions on their property.

The DVD recently won a Silver Award from the Association of Natural Resource Extension Professionals in the video/DVD/CD category.

"Video lets us show different types of quail habitat in a way that's hard to convey through written descriptions and still photos," Pierce said.

The DVD is packaged with a printed copy of the MU Extension publication, MP 902 that provides in-depth information on conducting the appraisal and determining your management goals, as well as a two-page worksheet to help you identify and score available habitat components on your property.

"Once you have identified the habitat components that are missing or in short supply, the appropriate management technique can be implemented to improve the condition of the habitat and provide more usable space for quail on your farm," Pierce said.

There are a variety of available management techniques, depending on your goals, the amount of time and resources you are willing to invest, and how intensively you are able to manage the land. Some practices are as simple as leaving shrubs and brush on unused land or around crop fields to provide escape cover for quail. More intensive management practices for creating favorable habitats include prescribed burning, strip disking, developing borders along crop fields or pasture, and "edge feathering" by thinning trees at woodland edges.

Pierce and wildlife biologists with the Missouri Department of Conservation and the USDA's Natural Resources Conservation Service developed the video with producer and editor Robert Mize of the MU Cooperative Media Group. MDC and NRCS partnered with MU Extension to provide funding for the project.

Much of the videotaping took place on the property of farmer and quail enthusiast George Hobson, at an MDC Conservation Area and at MU's Bradford Research and Extension Center, which includes a 591-acre research farm that for the past several years has been a laboratory for practices that integrate wildlife management, including quail habitat, into modern farm operations.

"Missouri Bobwhite Quail Habitat Appraisal Guide" (DVD16) is available for \$22 from MU Extension Publications. See <http://extension.missouri.edu/publications/> or call 573-882-7216 or 800-292-0969.

If you build it, they will come...

"Do Something"

In 1991 Dr. Paul Callicoat purchased his farm and decided that the north 200 acres would be devoted to quail management (he enjoys working his quail dogs, a lot!). In 1993 he contacted the Missouri Department of Conservation (MDC) and a management plan was developed. Over the next several years he began to implement his practices, but his work didn't allow him to devote as much time as he wanted.

Then in 2007 Dr. Callicoat contacted MDC again. We reviewed his previous plan and addressed the woody encroachment (oaks and hickories) that had occurred. He contracted the mechanical clipper to cut the poles and he sprayed and used prescribed fire for the saplings. We were able to offset some of the cost by using MDC cost share. The initial treatment with herbicide killed the woodies and allowed more sunlight to hit the ground. Since the shade was eliminated, an increase in native grasses and forbs occurred. This increased the fuel load for prescribed fire which keeps the woodies in check.



He created brush piles from the poles that were cut and disks around these piles. And he

randomly disks throughout his tract and plants food plots or lets it sit idle. With the number of burn units Dr. Callicoat has, he's able to rotate his burns and still provide the habitat diversity that quail need. Dr. Callicoat has seen his covey count increase to 8 coveys last winter (his highest).



We were driving around his property last week looking at his progress and talking about this project. He mentioned that back when he started in the 90's he felt intimidated by what needed to be done and might do something wrong or mess up. This last go around he wasn't worried about messing anything up. He said you have to "Do Something" or you'll never get anything done. I'd have to agree...8 coveys aren't bad! **Mike Petersen, Private Land Conservationist, Cassville, MO**

Mark Your Calendars

Prescribed Burn Workshops

March 4, 2011, 9AM, Blind Pony Conservation Area Shop in Saline Co. Topics include - Proper methods and techniques used for implementing control burns, burn equipment, and developing burn plans. A demo burn is planned immediately following lunch on nearby public land. Workshop & burn should conclude around 3:30 p.m. If demo burn is not possible, then the workshop will conclude at approximately noon.

Brown bag lunch will be provided for registered participants. Register by March 1st by calling 660-886-7447 ext 112 **OR** 660-248-3358 ext 119

Directions to Blind Pony: From I-70 take Hwy 127 north(Sweet Springs exit) to Hwy ZZ, take Hwy ZZ north about 4mi, turn right on 160th Rd, turn left at the sign (1st drive on left) come up through the Hatchery. From Marshall, take Hwy 20 West, turn south on Hwy EE for 5 mi, turn right onto 160th Rd, go 2.5 mi turn right into hatchery entrance.

March 8, 2011, 6–9:30PM, Sedalia MDC office, register by March 1st by calling 660-826-3354 ext 3 or david.niebruegge@mdc.mo.gov or steve.hoel@mdc.mo.gov

March 9, 2011, 5:30-9PM, Independence Bass Pro Shop, register by calling 816-622-0900, or email paul.lowry@mdc.mo.gov or andy.carmack@mdc.mo.gov

March 10, 2011, 6:30PM, MDC Cape Girardeau Nature Center, register by calling 573-243-1467 x117

April 2, 2011, 9AM, Osage County NRCS – 1315 E. Main St. Linn, MO Topics Include - Safety, proper methods and techniques used for implementing controlled burns, use of prescribed fire as a tool for a variety of land management goals, burn equipment, and developing burn plans.

Demonstration Burn: (If weather conditions are suitable)

A demo burn is planned immediately following lunch on nearby private land. If you are interested in assisting on the burn you must have the following safety apparel: cotton or natural fiber outerwear (no synthetic), leather boots and gloves, safety glasses and drinking water. The workshop should conclude around 4:00 p.m. If demo burn is not possible, then the workshop will conclude at approximately noon.

A free lunch will be provided courtesy of the Missouri Department of Conservation after the classroom session. You must register by Thursday, March 31st by calling 573-897-3797 ext. 3

April 5, 2011, 9:30AM, Ed Graves Farm near Daisy, MO in Cape Girardeau Co. Classroom session then demo burn to follow. A light lunch will be provided and if you will be participating in the burns please wear sturdy work boots and cotton clothing. For directions and to register call 573-243-1467 x117

Regional Landowner Workshop

March 19, 2011, Mineral Area College, Park Hills, MO. Topics covered include forestry, ponds, deer, turkey, native warm-season grass management. Register by calling the Missouri Department of Conservation's Southeast Regional Office at 573-290-5730 by March 1, 2011 - register early as space is limited.

Quail Workshop

March 5, 2011, 7AM–11AM Litton Community Room 3 miles west of Chillicothe off Hwy 190
The Quail Challenge - Managing for Maximum Potential during Declining Population Trends

Free seminar to provide landowners insight into why upland bird populations have struggled the past three years plus success stories from two landowners on ways they have maximized habitat to stack the odds in their favor as well as setbacks in their strategies. Free Breakfast at 7AM to all registered attendees. Program begins at 8AM. Limited to 100 people. RSVP by 4 p.m. Wednesday March 2nd to guarantee your spot! 660-359-5685 ext 114

Tree & Shrub Planting Workshop

March 26th, 2011 – 9AM Prairie Star Restoration Farm 117 Co. Rd. 741, Bland, MO 65014

Each workshop participant will have the opportunity to take home a seedling - Offering your choice of 25 varieties of bare root tree and shrub seedlings, tree planting tips by MDC foresters, plant identification guides and literature. For directions to site and more info call MDC at 573-437-3478 Kyle Lairmore at 573-291-9147 or Bruce Sassmann at 573-368-8393. Honor system distribution of seedlings - **Begins 9:00 am Sharp!** Refreshments available, there will also be an optional afternoon farm tour.

Listed below are various herbicides for controlling unwanted vegetation. **HERBICIDES LISTED BELOW ARE ONLY EXAMPLES AND NOT AN ENDORSEMENT. READ AND FOLLOW ALL LABELS BEFORE PURCHASE/APPLICATION.**

Mow, hay, graze, or burn before spraying to reduce residue and ensure maximum exposure of new growth to herbicide contact.

	<i>Chemical</i>	Trade names	Suggestions for when, where and how to use – Read labels before use
Herbicides that control grasses and broadleaf weeds	<i>Glyphosate</i>	Roundup, Accord, Gly-4, generics	Fescue and weed eradication prior to establishment; or use while native warm-season grass (NWSG) is dormant to control undesirable weeds (It will kill desirable forbs). Temperatures must be over 50 degrees for three hours or more after application. Use with AMS.
	<i>Imazapic</i>	Plateau	Fescue eradication prior to, during or after establishment. Provides pre and post-emergent weed control for tolerant seed mixes when soil applied. Control of weeds in established stands. Eastern gama grass, side oats grama, switch-grass, and forbs may be stunted or killed by <i>Imazapic</i> . Carefully select tolerant species and observe label rates to prevent plant loss, or exclude <i>Imazapic</i> from the herbicide application.
	<i>Imazapic + Glyphosate</i>	Journey	Fescue eradication prior to establishment, or while NWSG are dormant for weed control. Provides pre and post-emergent weed control if applied before planting tolerant seed mixes (it will kill desirable forbs). Use with crop oil.
	<i>Sulfosulfuron</i>	Outrider	Fescue and weed eradication prior to establishment or post-emergent control of Johnson grass, crabgrass, cocklebur in established switch grass, bluestems, and Indian grass stands (It will kill desirable forbs). Plant no sooner than 14 days after application.
Herbicides that specifically control broadleaf weeds or trees and shrubs	2, 4-D & 2, 4-DB	Salvan other generics	Controls some unwanted broadleaf plants such as thistle & cocklebur. It will not kill golden rod and some other perennial broadleaf weeds. It will kill newly emerged WSG and desirable forbs.
	<i>Triclopyr</i>	Remedy, Pasturegard	Control of sericea lespedeza, goldenrod, thistle and other broadleaves prior to or in established NWSG. (It will kill desirable forbs if applied after establishment).
	<i>Metsulfuron</i>	Escort, Ally, generics	Control of Eastern red cedar, sericea lespedeza, goldenrod and other broadleaves prior to or prior to or in established NWSG. (It will kill desirable forbs if applied after establishment).
	<i>Imazapyr</i>	Arsenal	Control of woody saplings. Read label and select hack and squirt, foliar, or cut stump application methods. Sometimes the best kill is accomplished with a tank mixes of two herbicides.
Herbicides that specifically control grass	<i>Clethodim</i>	Select, Arrow	Use when established NWSG is dormant to control cool-season grass. Will not harm most forbs.
	Quizalofop	Assure	Use when established NWSG is dormant to control cool-season grass. Will not harm most forbs.
	Sethoxydim	Poast plus	Use when established NWSG is dormant to control cool-season grass. Will not harm most forbs.

Calibrating Boom Sprayers

1. **Check your sprayer speed.** Mark a 100- or 200-foot strip of turf. With tank half full, record the time required to drive the course at your desired throttle and gear settings. Be sure to bring the sprayer to speed before you pass the start marker. Convert time to miles per hour, then identify and record the correct throttle and gear setting.
2. **Record your set-up before spraying.** For example, assume you are going to use a nozzle with a flat-spray tip to spray 21 gallons of material at 4 mph. (Make sure all tips on the boom are identical). Then record the set-up as: Application volume: 21 gallons per acre or 0.48 gallons per 1,000 square feet; Spray speed: 4 mph; Nozzle spacing: 20 inches
3. **Calculate your required nozzle output.** To determine nozzle output in gallons per minute (gpm), use one of the following formulas:

$$\text{gpm} = \text{gpa} \times \text{mph} \times W/5,940 \quad \text{OR} \quad (\text{gallon per 1,000 square feet}) \times \text{mph} \times W/136$$

gpa = recommended gallons per acre from product label

mph = your actual sprayer speed

W = width of nozzle spacing (or spray width in inches for single nozzle and boom-less spraying)

Note: The denominators — 5,940 and 136 — are unit-less constants that remain the same in their respective equations regardless of other values.

4. **Set the correct pressure.** First, turn on the sprayer and check for leaks; inspect and clean tips and strainers with a soft-bristle brush. Then check the appropriate tip selection table and determine the pressure needed to deliver the target flow rate calculated from the formula in Step 3 for your new tip. Finally, turn on the sprayer and adjust it to the desired pressure.

Check for target flow rate. Do this by collecting water from one new nozzle for 1 minute. Then compare the volume of this nozzle to your target flow rate in Step 3 (0.28 gpm in the example). Make any fine adjustments to the spray volume by adjusting the pressure. Next, check the flow rate of several tips on each boom section. If the flow rate of any tip is 10 percent more or less than that of the manufacturer's specifications, recheck the output of that tip. If only one tip is faulty, replace it with a new tip. However, if a second tip is defective, replace all the tips on the entire boom. Two worn tips on the same boom indicate tip-wear problems. Once you have replaced all the appropriate tips, your system is ready for spraying.

Spring Covey Headquarters Calendar

March

For quail, do not burn native warm-season grasses after March 15

Take soil samples for food plots

Plant shrubs for quail through May

Continue edge feathering operations

Spray actively growing fescue and brome in your shrubby cover before shrub bud break

Disk grassland acres to promote broadleaf weeds

April

Quail whistling and pairing begins

Burn fescue and brome to severely stunt grass, then strip disk and broadcast legumes

Till and fertilize food plots

Do not burn native grass now unless utilizing for forage or trying to eliminate woody encroachment or fescue and brome. Fall and winter burning preferred for quail

May

Quail begin nesting – do not mow road ditches or old fields

Listen for male bobwhite whistle calls on clear calm mornings

Clip weeds in newly planted native warm-season grasses to a height of 4-6 inches

Missouri Department of Conservation offers e-Permits beginning March 1

On March 1, Missouri moves into a new era of hunting and fishing permit sales with the launch of the e-Permits System. E-Permits are a change for the better in several ways.

- E-permits enhance convenience. Those who choose to buy permits online can do so from any Internet-connected computer with a printer. Hunters and anglers will be able to print them and use them immediately.
- E-Permits save taxpayer dollars. The change to e-Permits is part of the Department's continuing effort to improve services and keep permit costs low in spite of declining revenues.
- Most permits will be available online. All sport fishing and hunting permits including deer, turkey, trapping and the Apprentice Hunter Authorization. They will still look like permits and are about the same size as in the past.
- Permits will continue to be available through vendors and by telephone at 1-800-392-4115.
- Visit <http://mdc.mo.gov/permits/e-permits> to learn more about e-Permits.

CRP Signup Announced

The USDA announced that the next general signup for the Conservation Reserve Program (CRP) will begin on March 14, 2011, and continue through April 15, 2011. Through CRP, eligible landowners receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland. Land can be enrolled for a period of 10-15 years. During the general signup period, producers may offer eligible land at their county Farm Service Agency office. Land currently not enrolled in CRP may be offered in this signup provided all eligibility requirements are met. Additionally, current CRP participants with contracts expiring this fall may make new contract offers. Contracts awarded under this signup are scheduled to become effective Oct. 1, 2011. The general sign-up for CRP will not affect cropped acres for the coming growing season. Be sure to include the pollinator seeding option with your CRP offer. Pollinator habitat will attract many insects which are a critical food item for quail and many other grassland birds.

Food Plot Seeding Rates

Food is seldom a limiting factor to having bobwhites on your farm. Make sure you have adequate herbaceous cover (grass, legumes, wildflowers and weeds for nesting, feeding, brood-rearing and roosting), and shrubby cover before planting food plots.

Species	Broadcast seeding rate (lbs/acre)	Planting Time
Grain or Forage Sorghum	16 lbs	May – early June
Corn	15 lbs	April – early May
Millets	20 lbs	April – June
Buckwheat	40 lbs	May – June
Soybeans	45 lbs	April – May
Oats	50 lbs	Fall – early spring
Wheat	50 lbs	September – early November
Sunflowers	8 lbs	April – early June
"Bobwhite" trailing soybeans	8 lbs	April – May

- Rates can be reduced 50% for planting or drilling, except for soybeans, which can be reduced to 34-40 pounds/acre.
- Fertilize grain plots according to soil test. In the absence of a test, consider adding 150 pounds of 12-12-12 fertilizer per quarter acre of food plot

How to Get a Soil Sample for Fertility Testing

Soil sampling is the most important step in soil testing. Fertilizer and limestone decisions hinge on results obtained from your sample. A well taken soil sample results in appropriate recommended rates of fertilizer and limestone. Conversely, a poorly taken sample may result in under- or over-application of fertilizer and limestone and in lower profit potential. You can use a shovel or spade for sampling, but these tools are not as good as a probe or auger. If you use a shovel or spade, dig a hole to the proper sampling depth, about 6 or 7 inches.

Then shave a 1-inch slice from the side of the hole to the sampling depth with the shovel. Save the vertical, 1-inch wide center portion of the soil as one sub-sample. Always use a clean plastic pail for mixing sub-samples to obtain one composite sample. Metal pails contaminate the soil with micronutrients. Your local University Extension center has soil sample boxes available for use at no charge to you. One box of soil is all a laboratory needs for analyses.

Map the fields or obtain field maps from your county's soil survey or USDA office. Carefully delineate any known differences in soil nutrient composition. Common causes of nutrient differences in a field include soil color, soil texture, slope, crop rotation, limestone, fertilizer, manure, and old farmsteads or feedlots. Avoid any known differences in composite samples; sample them separately. A sample should not represent more than 20 acres. For each composite sample, take 15 to 20 separate cores at random in a zigzag pattern across the field. Allow the soil to dry, and then mix these sub-samples in a plastic pail and retain 1 pint for analyses.

You should take soil samples for fertilizer and limestone recommendations to a depth of 6 to 7 inches or to tillage depth if deeper. Soil sampling to the 6 to 7 inch depth is vitally important in pasture, permanent forages, minimum tillage, and no-till fields. Nutrients accumulate at the surface because of fertilizer application. The surface soil is not, however, a good indicator of fertility requirements. An equal amount of soil from the surface to 6 or 7 inches in depth (as obtained with a soil probe) is best for determining fertilizer needs for these situations. Soil samples are tested for acidity, phosphorus, potassium, calcium, magnesium, and organic matter to provide recommendations for limestone, nitrogen, phosphate, and potash on your crop. Soil samples can be taken to your local University Extension office and some fertilizer dealers. They will send your soil samples to a lab for analyses for a small fee.

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The Covey Headquarters Newsletter
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RETURN SERVICE REQUESTED

