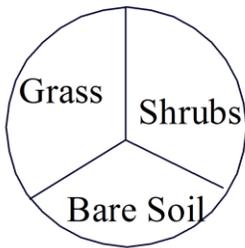




THE COVEY HEADQUARTERS

Volume 11 Issue 2 Summer 2012

This newsletter is 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 Production and Weather Beth Emmerich, Resource Scientist, Kirksville, MO

Production in bobwhites is related to multiple factors. One important factor is the size of the population entering the breeding season (birds that survived the winter months). Luckily for us Missouri experienced a fairly mild winter this year so the number of birds that survived the winter is presumably high. Preliminary data indicated that the winter of 2011-12 will be in the "Top 5" mildest winters for Missouri, and the warmest winter since 1991-1992. It takes roughly 12-18 days for a female bobwhite to complete egg laying and 23 days to incubate the eggs, so roughly 35-41 days to complete the entire nesting cycle. The typical peak for bobwhite hatch in Missouri is June 15th, which can vary year to year, depending heavily on weather conditions. Birds can hatch as early as April and as late as September, as long as the temperatures stay mild. Good weather during this period can also provide opportunities for hens to renege if a clutch is lost, or raise multiple broods. If good habitat is available, and weather cooperates, bobwhite numbers can increase dramatically. Other factors that can impact nesting include the availability of good nesting habitat and available food resources. Bobwhite tend to show some density-dependent nesting characteristics, meaning that when the bird density is high, chick production is lower, but when bird density is low and resources are plentiful, they can take advantage of that and produce more offspring.

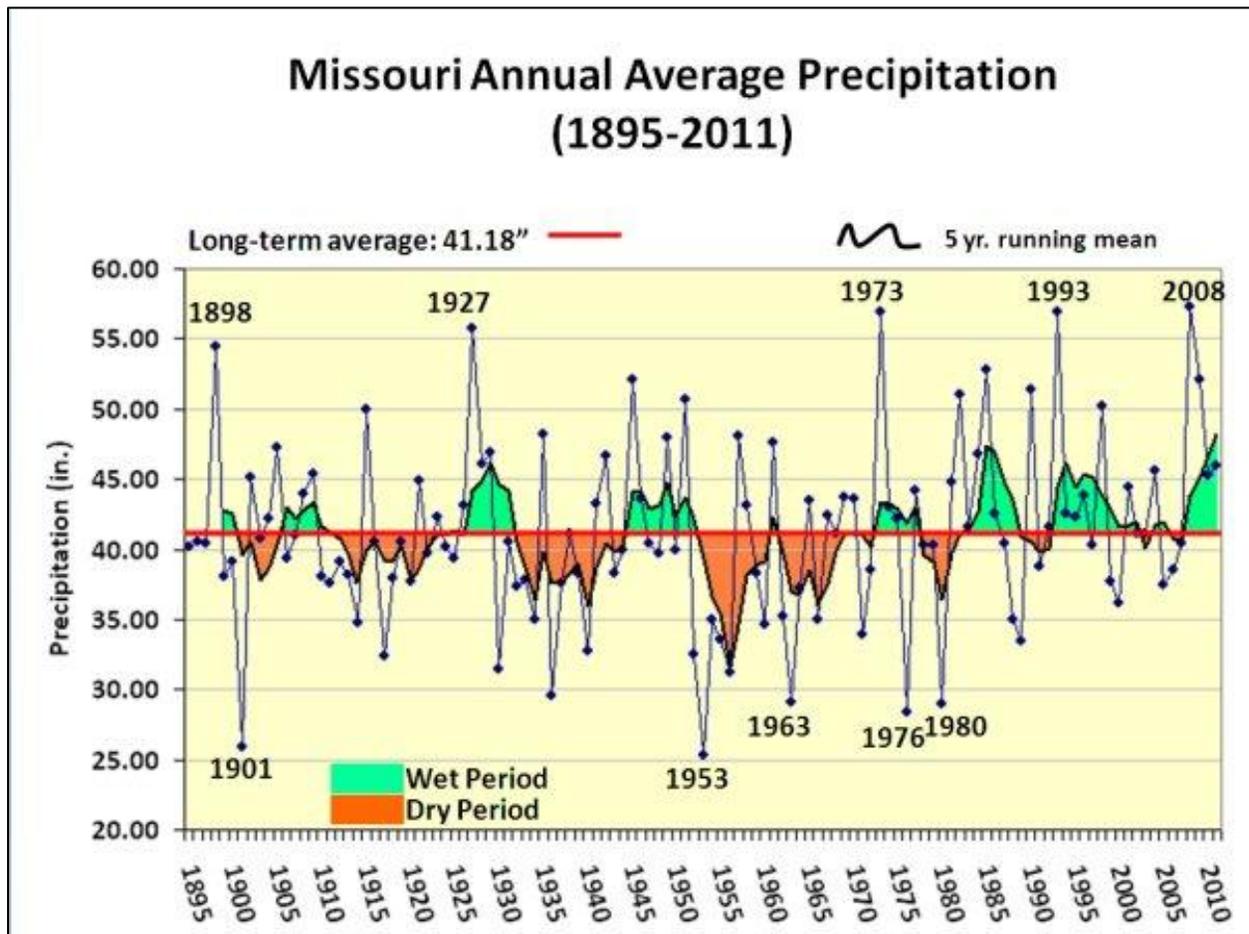
It sounds simple enough, mild winter + good nesting and brood rearing habitat + "normal" spring precipitation = bumper crop of bobwhite, right? Sometimes, unfortunately it's not that simple. How many mild winters and springs will we need to see an appreciable increase in bobwhite numbers? It's hard to say for sure.

Last summer, poult count surveys for wild turkeys indicated that numbers were up for the first time in years in parts of the state that had seen declines for several years. However, we did not see the same response in our summer or fall quail surveys. Perhaps one year of better nesting weather



was not enough for quail. Bobwhite had a run of bad luck with Mother Nature starting in the spring of 2007, with an Easter Freeze. An abnormally warm March had plants developing when a strong low pressure system moved into place and brought lows in the teens and twenties. The following 4 years (2008, 2009, 2010, and 2011) have all brought above average precipitation ranging from 5 -15 inches above normal. Last year's spring precipitation was just slightly above normal, but birds going into the breeding season were undoubtedly affected by the February 2011 blizzard. Time will tell if this combination of above average spring precipitation and cold winters takes several years to recover from.

Too much rain in the spring can hamper nesting efforts in a variety of ways. Heavy rain storms can wash out nests completely and flood areas that could be used for nesting in a drier period. Cool spring and summer rains can kill newly hatched chicks because they do not have the feathers yet to repel water or the adult's ability to properly control their body temperature, leading to death by hypothermia. Another problem with heavy spring rainfall the past few years is the increased rate of plant succession. Excellent brood-rearing habitat that receives normal precipitation can provide quality habitat for a couple of years with a prescribed burn regiment of every 2-4 years but excessive rain and productive soils may require a prescribed burning regiment of nearly every year in order to set back plant succession and maintain good habitat. Unfortunately, we cannot change the weather, we can only continue to provide quality habitat, and hope that our wet spring cycle will come to an end and lead to a bumper crop of bobwhite this summer.



This graph from the Missouri Climate Center shows statewide precipitation amounts from 1895 to 2011. The data indicates that we have been in a "wet period" since the late 1980's.

Bobwhite Quail and Native Pollinator Field Day

1:00 PM to 7:00 PM - June 21th 2012

MU Bradford Research and Extension Center, Columbia, Missouri

*Designed for landowners, students, quail & native plant enthusiasts;
Meet the experts and see exhibits; No fee and no reservation required.
Drinks and hamburgers provided after the event with your completed evaluation!*

1:00- 3:00 PM Quail Management Demonstrations:

- ATV Sprayer and Warm Season Grass Drill Calibration, Tree Planting Demonstration and Bird Dog Training Demonstrations from Perfection Kennels

3:00- 4:00 PM Plenary Speaker: Why pollinator habitat and native pollinators can be the key to your quail habitat management success

- Pete Berthelsen, Pheasants Forever and Quail Forever Senior Field Coordinator, Elba, Nebraska - Winner of the 2011 Farmer/Rancher Pollinator Award from the North American Pollinator Protection Campaign

4:15- 7:00 PM Quail Management Classroom Techniques:

- Quail Management 101, Predator effects, Prescribed Burning & Quail Ecology

One Hour Field Tours: 4:15-7:00 PM Walking Tour

- ✓ Landscaping and Pollinators with Native Plants

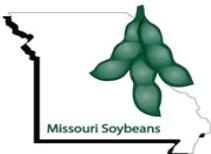
Wagon Tours

- ✓ On the Edge: Economics, Field Borders and Edge Feathering
- ✓ Creating Quail and Pollinator Habitat
- ✓ Implementing Wildlife Practices: A Private Landowner's Perspective!



Sponsored by:

University of Missouri College of Food, Agriculture and Natural Resources
MU Extension, Lincoln University
Missouri Department of Conservation,
Missouri Soybean Association, USDA NRCS



Directions: From the junction of U.S. 63 and Hwy AC on the south edge of Columbia, go 5.5 miles east on New Haven Road, turn right (south) on Rangeline Road and go just over a mile to the Bradford Farm entrance on the right.

<http://aes.missouri.edu/Bradford>

For More Information Contact:

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Haying Warm-season Grass Properly Will Increase Summer Forage and Wildlife Habitat

Chris McLeland, Private Land Programs Biologist, Columbia, MO

Stands of native grasses such as Big and Little Bluestem, Side Oats Gramma, Indian Grass and Eastern Gamma Grass along with various forb and legume species such as Purple Coneflower, Prairie Blazing Star and Illinois Bundle flower can be a great asset to your property. Many landowners today are beginning to incorporate native grasses and forbs into their farm management systems. Haying native pastures and prairies is one option that can increase the overall productivity and diversity of these areas while increasing the amount of summer forage available on your farm.

Whether the site is a remnant or reestablished prairie, haying can be a valuable management tool when used correctly. There are several factors to consider when haying natives: Timing of Cutting, Cutting Height, Fertilization, and Management.

When harvesting native hay, the timing of the cutting is very important. The first step is to determine your objective. The maximum tonnage and highest quality do not occur at the same time of the year, with maximum tonnage occurring in August and highest quality occurring in May. The best approach is to harvest native hay in late June to mid-July. Cutting after July will have negative effects on the stand, as there will not be sufficient time available for the grasses to rebuild and replenish their root systems before the first frost. This can lead to a large decrease in hay production the following year. If the stand is not provided sufficient time to rebuild the root system, this can lead to an increase in undesirable and unpalatable plants within the stand. If the stand of native grass is hearty, the height of the cutting should be 3 to 4 inches. It is important that there is ample area available to ensure that root reserves are replenished for next year's production.

There are many factors that you can consider to effectively manage your native grasses for hay production and wildlife. One factor to consider is establishing a haying system that allows 15-50% of the available native hay area to rest each year. This will ensure high production on these sites the following year as well as provide nesting and bedding cover for many different wildlife species.

Prescribed burning will help control invasion of undesirable cool season plants as well as woody vegetation, while also enhancing your native grasses. Recently burned areas of warm season grasses provide excellent brood rearing and bugging habitat for ground nesting birds such as bobwhite quail.

Burning at different times of the year can help you manage your native hay for higher grass content or forb content. In a haying situation, native grasses and forbs are usually burned on a 4 to 5 year basis. Grazing can also be a very helpful and productive tool when managing warm season grasses. Establishing a grazing system in conjunction with haying can help you increase your bottom line while enhancing the wildlife benefits of your farm, when performed correctly.

For more information on haying native warm season grasses or converting to wildlife friendly species, [click here](#). You can also contact your local USDA Service Center or your Missouri Department of Conservation office.

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New Continuous CRP Initiatives

On March 2, 2012 Secretary Vilsack announced the opportunity for producers to enroll 1 million acres of land in new Continuous CRP Initiatives to preserve grasslands, wetlands, and wildlife. These continuous practices will include annual rental payments, cost share for establishment and management, and possible sign-up incentives. Look for these new opportunities this summer –

- **Increase in Sign-up Incentive Payments (SIP's) to \$150/acre for some practices.**
- **New Continuous Pollinator Practice.**
- **Additional State Acres for Wildlife Enhancement (SAFE) acres focusing on creating bobwhite quail and prairie chicken habitat.**
- **Additional CP33 (Habitat Buffers for Upland Birds) acres – Use this practice to plant your unproductive cropland edges into wildlife-friendly grasses and wildflowers.**
- **Continuous CRP Sign-up for Highly Erodible Cropland with an Erodibility Index of 20 or greater.**

Summer Covey Headquarter Calendar

June

Quail hatch begins and continues through September
Contact NRCS or MDC for burn plan assistance this month
Seed milo, millet, and forage sorghum food plots by June 30
Conduct breeding bird surveys this month
Mow newly planted native grass fields to a height of 6-8 inches to control weed competition
Spray actively growing Johnsongrass

July

Excessive June and July rains can shift peak quail hatching to August
Quail are nesting – stay off your mower!
Mow newly planted native grass fields to a height of 8-12 inches to control weed competition

August

Quail are nesting – stay off your mower!
Continue to treat sericea lespedeza through September
Hand collect plum and dogwood seed late this month and plant the seed to establish covey headquarters
Prepare firebreaks for fall prescribed burns

Sericea Lespedeza Control

Sericea lespedeza is an introduced perennial legume. It has erect, herbaceous to somewhat woody stems, standing 3 to 6 feet (0.8 to 2 meters) high, with many erect, leafy branches which are green to ashy in color. The compound leaves are composed of three leaflets, with leaflets varying in length from 1/4 to 1 inch (0.8 to 2.5 cm). The lower leaves have petioles, but the upper leaves are nearly sessile. The leaflets are much longer than wide, tapering to the base, and wider above the middle, narrowing abruptly to a small sharp point. Flowers are in clusters of mostly two to three in upper leaf axils. The corollas measure from 1/4 to 3/8 inch (7 to 9 mm) long and are a pale creamy-yellow with conspicuous purple or pink markings. Its myriads of fruits are oval, and up to 1/8 inch (3 mm) wide.

Habitat

Sericea lespedeza grows in woodlands, thickets, fields, prairies, disturbed open ground, borders of ponds and swamps, meadows, and especially along roadsides. It shows great resistance to summer drought and an ability to form a dense stand on sterile, steep or eroded slopes. Where it has invaded grasslands, sericea lespedeza is unpalatable compared to native species because of tannins present in its tissues.

Life History

Sericea lespedeza produces growth in the spring (mid to late April) from root crown buds at the base of last year's stems. Flowering begins in late July and can continue through October. As flowering progresses, root reserves are increased; a fact that has implications for use of translocated herbicides. Seeds are dispersed in the fall and are reported to remain viable for 20 or more years. Birds may play a role in seed dispersal, and certainly the species is spread by haying of infested fields.

Current Status

Since its introduction into Missouri this century, sericea lespedeza has been widely planted and has become naturalized in most if not all Missouri counties. Numerous stands that are well established along roadways will continue to provide a source for spreading into surrounding, more natural habitats. Sericea lespedeza is a noxious weed in Kansas.

Control Recommendations

Options available for control of sericea lespedeza include management, mechanical and chemical methods. There are no biological controls approved for sericea lespedeza at this time other than grazing.

Management:

Grasslands can be managed to control sericea lespedeza by burning, grazing, and fertilization. Prescribed burning of native grass in the late spring followed by intensive grazing with mature cattle will increase utilization on sericea lespedeza. Grazing infested sites with sheep and goats will provide effective control. Pastures should be properly fertilized and grazed during April and May to reduce the occurrence of sericea lespedeza.

Fire has been used on non-grassland infestations with some success. Late spring burns (May 15 to the end of June) may be effective if a fire will carry through the area at that time. Seed dormancy of sericea lespedeza can be broken by prescribed burning but resulting seedlings may be less viable. Breaking seed dormancy by burning may be preferable to allowing natural processes to accomplish this, since a persistent, long-lived seed bank may add new plants to the site for years to come. By forcing more seeds to germinate, following up with a mechanical or chemical treatment may have more long-term effects.

Mechanical:

Root reserves of sericea lespedeza increase during flowering with a low point in the cycle at the flower bud stage. This low point provides a vulnerable stage at which to use mechanical control. Mowing in the flower bud stage for two to three consecutive years will weaken the plants, but not kill them.

Chemical:

The best control is early detection followed by spraying all plants with herbicides containing the active ingredient Triclopyr (such as Remedy) or Fluroxypyr (such as Pasturegard). Spray from June to September, after the stem has branched but prior to the production of seed. Hand-pulling or other mechanical methods of control are impractical because of the extensive root system and deep tap root. If not completely removed, the plant will regenerate. Once sericea lespedeza is established, an integrated approach, such as mowing, burning and spraying, will help minimize the damage to native plants. Due to the plant's extensive seed bank, the same areas will require treatment for several years.

Recommended Plan of Attack:

Use a prescribed burn to stimulate germination of sericea seed. Be ready to use chemicals starting in June and check back every month through September. Spray ALL patches and single plants with herbicide. The same area will require treatment for several years. Check infested fields in early June every year and continue to treat with approved chemicals. Be sure to read and follow all herbicide labels. [Click here](#) for a two-page, full-color .pdf that shows you how to identify and control sericea lespedeza. [Click here](#) for a YouTube video on how to eradicate sericea lespedeza.

Grazing and Quail Are a Perfect Fit

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

Do you want to bring quail back to your property and not lose any income because of it? It is possible to make quail a byproduct of the land again without affecting your bottom line. Quail and a livestock grazing system are the perfect fit.

Quail require 3 habitat types located adjacent to each other:

- Shrubby cover
- Diverse grass/legume mixes
- Bare ground with a canopy of legumes or annual plants

Let's take a close look at each of these requirements.

Diverse grass/legume mix - If you have a properly managed rotational grazing system you are probably providing the diverse grass/legume mixture so critical to quail nesting and broodrearing. A stand of closely grazed fescue or brome does not do the trick. Deferring grazing in one or more paddocks assures an undisturbed nesting area.



Bare ground with an overhead canopy – In some instances your grazing system has also supplied this bare ground requirement, too. It is critical for quail chicks (the size of a bumblebee) to be able to freely move through vegetation in search of insects. If they spend too much energy climbing over and through thick vegetation the chicks will starve. They need to be able to move about on the ground while protected by overhead cover. Ideally that cover will contain a lot of legumes and annual plants which are attractive to insects. Insects are a quail chick's primary food source the first 3-4 weeks of life.

Shrubby Cover – We are not talking about trees, but shrubs like wild plum and dogwood or blackberries. If you look inside a clump of shrubs you will see bare ground and stems placed every 2-3 feet apart. Shrubs are a daily, year-round requirement for a quail.....they provide loafing cover and protection from predators and weather.

Many grazing plans require the fencing of wooded creeks, draws and fencelines to keep cows out of the shade and in the grass. It is within these fenced areas that you can provide for quail habitat requirements. Some recommended habitat management techniques are:

- Spray strips in dense fescue or brome to create the bare ground. Overseed with legumes such as lespedeza.
- Plant food plots. This helps create the bare ground needed by quail and promotes annual plants.
- Knock down trees in fencelines, draws and along creeks with a chainsaw or clipper to recreate shrubby cover. Spray any fescue or brome under these trees first.

Providing these requirements will bring back the quail and shouldn't affect your income. Cost-share for these practices is available through several USDA and state programs.

Don't Attach Your Mower!

Once the food plots or crops are in the ground and the hay harvested, many landowners can't stand being away from the machinery.....they get on a tractor and start mowing all of the odd areas on the farm that they can get to!! **THIS IS NOT A QUAIL-FRIENDLY PRACTICE**.....Studies have shown that quail populations are doubled when recreational mowing is avoided. We recommend you sell your mower and buy a disk or sprayer! Save the cover for quail nesting and brooding. Where quail are concerned a mower should only be used to control weed growth in new shrub or grass plantings

Did You Know???

Eighty to 95 percent of a bobwhite chick's diet consists of insects during its first few weeks. The amount of food needed requires hours of foraging. Commonly eaten invertebrates include spiders, leafhoppers, beetles, grasshoppers, crickets, stinkbugs, ants, flies and snails. Brood cover that is open enough for chicks to pursue and capture insects reduces foraging time and the vulnerability of chicks and adults to predators and the elements. Fallow fields are among the best foraging sites because they have bare ground, cover, and an array of seed-producing annual weeds. Old fields also provide suitable feeding areas if there is not too much litter.

Typically, quail have two daily feeding periods: one beginning at daylight and continuing for several hours, the second beginning during mid-afternoon and continuing until roosting. Timing and length of feeding periods may be altered by adverse weather as well as disturbances, particularly those serious enough to cause the birds to flush. Birds that have been flushed may miss a meal entirely.

Mark Your Calendar

Prescribed Burn Workshop - August 14, 2012 at the MDC Southeast Regional Office in Cape Girardeau. Two sessions will be held. The first session will be from 1:00 to 4:30 p.m. and the second will be from 6:00 to 9:30 p.m. Register by calling Brad Pobst at 573/243-1467 ext. 123

UNIVERSITY OF MISSOURI
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 NRCS Natural Resources
Conservation Service

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