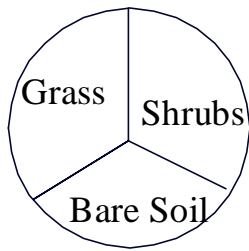




THE COVEY HEADQUARTERS

Volume 8 Issue 4 Winter 2009

This newsletter is aimed at cooperators and sportspeople 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.

Hard Economic Times Impacting the Covey Headquarters

Due to the declining economic conditions, the Department of Conservation has taken steps to reduce expenses and avoid any last-second spending adjustments. The majority of expense reductions will be achieved by keeping vacant positions unfilled and leaving another 134 positions unfilled. Most vacancies will be achieved largely through retirements over the next 18 months. A total of 173 positions, which represents 10.7 percent of the Department's staff, will be left vacant. In addition, the Department will close or end its lease agreements for 13 office facilities throughout the state by July 2011. The Department will also reduce hours of operation at some other facilities over the next year. These efforts will help cut costs by an estimated \$7.5 million annually. For more information see <http://mdc.mo.gov/news/out/archive/arc8-2009.html>.

Since 2000 the Department's two largest revenue sources, the conservation sales tax and permit revenues, have not kept pace with inflation. Revenue from the one-eighth of one-percent conservation sales tax was \$6.4 million lower in Fiscal Year 2009 than the previous year. This decline also marks the first time in conservation sales tax history of two consecutive years with negative sales tax growth (down \$400,000 in Fiscal Year 2008).

Due to the recession and budget reductions, the Covey Headquarters Newsletter will transition into a fully electronic copy. The Missouri Department of Conservation will no longer print paper copies of the newsletter. Our summer 2010 issue will be our last one mailed via hard copy to you. Please send your e-mail address to travis.dinsdale@mdc.mo.gov to get on the e-mail distribution list. Each newsletter is also posted to the MDC website - <http://mdc4.mdc.mo.gov/applications/MDCLibrary/MDCLibrary2.aspx?NodeID=2115> if you would rather view it this way.

Did You Know??? At first glance, stocking seems to be an easy way to restore quail populations. Several state wildlife agencies have tried stocking quail. By the early 1990's every state wildlife agency had stopped the practice because it was ineffective in restoring quail populations and did not address the real problem – loss of habitat! New systems for releasing captive-reared quail have been promoted and the results are the same as those 30 years ago – they are expensive and ineffective. Although captive quail and heavily marketed quail release systems are still popular, there is no quick and easy way to increase quail numbers without habitat management.

What to do with an Expiring CRP Contract

Aaron Jeffries, Private Land Program Supervisor, Jefferson City and Travis Dinsdale, Area Biologist, St. Joseph

Tic... Toc... Tic... Toc

Many landowners, hunters, and outdoor enthusiasts don't realize the looming deadline. Over 21 million acres of Conservation Reserve Program (CRP) contracts will expire over the next five years Tic...Toc...Tic...Toc

There's no doubt that CRP has resulted in millions of acres of habitat for upland and wetland wildlife. When managed properly, CRP is the greatest conservation program for wildlife in the United States. Well-managed CRP grasslands and buffers provide critical nesting, brooding and sometimes shrubby cover for quail and other wildlife. Some of the best quail and pheasant hunting occur on well-managed CRP grasslands. Over the last 20 years, CRP has improved soil, water and air quality, wildlife habitat and environmentally sensitive areas like wetlands and bottomland forests. Over the next five years almost half of the Nation's CRP will expire, most on marginally productive land (why it is in CRP in the first place). Here is a total of expiring acreage by year:

2009 – 3,743,685 acres
2010 – 4,761,139 acres
2011 – 4,421,438 acres
2012 – 6,251,814 acres
2013 – 3,335,608 acres

The Dakotas, Minnesota, and Iowa will likely see the biggest decline in CRP grasslands. It will be interesting to see what happens to pheasant and duck numbers in the Dakotas over the next five years. Less habitat will likely mean fewer ducklings, which will mean fewer ducks flying through Missouri in November and December.

Missouri has a lot of CRP expiring in the next couple of years. In fact, almost 1 million acres of 1.4 million acres will expire by October 2013. Here are a few options for CRP participants with contracts set to expire:

Option One: Re-enroll

The next time there's a general CRP signup consider re-enrolling your CRP contract. Don't worry if your current CRP soil rental rate payment is too low. There's a good chance the rental rate has improved since the last time you signed the CRP contract. Over the last five years FSA has adjusted CRP soil rental rates. If there's another general CRP signup at least stop by your local USDA Service Center to see what the new soil rental rates are. You may be pleasantly surprised.

If there is a general CRP signup, consider converting your CRP field to a quail-friendly mix. Back in the 1990's, some CRP fields were planted to a mix of "giant" native grasses and a pinch of wildflowers. Back then more was better, so many grass seeding rates were around 8 to 12 pounds per acre. We've learned a lot over the last 10 to 15 years about establishing native grasses. Research has shown we can have good habitat and reduce soil erosion with much lower seeding rates (around 3 to 5 pounds of grass along with 2 to 3 pounds of native wildflowers per acre). Better seeding mixes are good for the landowner and good for wildlife.

Back in the 1980s and 1990s a lot of CRP fields in Missouri were planted to fescue or brome. Some were planted to a mix of orchard grass and annual lespedeza, which provided great habitat until the fescue and brome invaded the stand. Now these fields are a pure stand of fescue or brome. These fields are difficult to manage for quail because it is hard to maintain good brood-rearing cover.

Instead of re-enrolling the current grass cover – whether it is warm-season or cool-season, consider replanting the field to a quail-friendly mix of little bluestem, wildflowers and legumes. Old CRP fields will need 2 to 3 herbicide applications to effectively remove the existing cover. Don't skimp on herbicide either. You'll pay for it in the long run with re-invading fescue or brome. During the next general CRP sign up consult with your local wildlife biologist or private land conservationist for recommended seeding mixes and conversion techniques. Converting to a quail-friendly mix may also improve your overall CRP score.

Option Two: Take Advantage of Continuous CRP

Landowners converting their expiring CRP fields into soybean and corn fields or pasture should consider leaving field borders along the field edges and wide buffers next to streams and ponds. Landowners can enroll these sensitive areas into popular Continuous CRP practices such as CP21 Filter Strip, CP22 Riparian Forest Buffer and CP33 Habitat Buffer for Upland Birds. Landowners will still receive an annual soil rental payment and incentives for enrolling the margins of their fields into the Continuous CRP. In some cases the payment is higher because of sign up incentives. If necessary, they can even receive up to 90% cost share for establishing the proper vegetation.

A recent study from the Food and Agriculture Policy Research Institute (FAPRI) from the University of Missouri showed that farmers come out ahead when they enroll their crop field edges into Continuous CRP practices such as CP33. For a copy of the complete report visit www.fapri.missouri.edu. Planting CP33 buffers around the edges of crop fields, not only provides great habitat for quail, but also takes marginally productive ground out of production. With high input costs and low yields it makes sense to keep field edges and buffers in CRP.

Option Three: Production with Wildlife in Mind

Some expired CRP fields may remain in grass for hay or pasture. Landowners can still take advantage of Continuous CRP practices if they plan on haying or grazing the field; however livestock will need to be excluded from the CRP buffer.

Landowners should also consider other conservation programs such as the Environmental Quality Incentive Program and the Wildlife Habitat Incentives Program to help them develop better grazing systems, wildlife habitat and protect sensitive habitats. In Missouri, these programs provide cost share for installing a variety of practices. CRP fields might also qualify for the Grassland Reserve Program or Conservation Stewardship Program. Contact your local USDA Service Center for more information on these programs.

The clock is ticking. What will you do with your expiring CRP contract? Tic... Toc... Tic... Toc... Where will your ducks, pheasant, quail and grassland birds go without it?

Quail Habitat: Putting the Numbers in Perspective

Scott Sudkamp, Private Land Conservationist, Nevada, MO

In my work as a Private Land Conservationist, I frequently work with landowners interested in managing their property for quail. Every farm is different, and often even the plants are different (especially across the quail's range in North America), but areas with good quail numbers have one thing in common: structure. As I tell the landowners, it's great if you know a handful of plants beneficial to quail, but if you're not a botanist, don't sweat it. Just learn to recognize and manage for structure. If you've got the right structure, chances are high that the right plants will be present.

But what is good habitat structure for quail? There are several basic habitat needs of quail, whether we're managing (or hunting) them in Missouri, Florida, or western Oklahoma. Quail need grass clumps for nesting, diverse weedy areas for brood rearing, woody cover for thermal protection, loafing, and predator escape, and abundant patches of bare ground mixed in with it all. Those of you currently managing quail habitat probably know this already. But how much of each habitat type do we need and what do they look like on the farm or landscape? A great starting place is the Missouri Bobwhite Quail Habitat Appraisal Guide, published by University of Missouri Extension. If you don't have this publication, contact your local PLC or find it online at <http://extension.missouri.edu/publications/DisplayPub.aspx?P=MP902> to download a free copy or find instructions for purchasing one. In perusing this guide, you will find the recommended percentage ranges of each of these habitat components:

30-40% Nesting Cover (herbaceous cover consisting of bunch grasses and forbs with last year's growth available May 1 – Sept 15; present in patches of 5-20 acres);

40-60% Brood Habitat (herbaceous plants with ample bare ground, consisting of new growth of forb/weeds, annual plants, and minimum till/no till crops);

5-20% Woody Cover (woody shrubs, edge feathering, downed tree structures, and low growing stemmy trees).

These numbers are a helpful starting point, but it can be difficult to visualize how much these numbers represent on the ground, especially if we have many interspersed small patches. The following should help give you some rules of thumb and mental pictures that you can apply in your management endeavors.

Nesting Cover

Bobwhites typically nest in residual grass clumps from the previous year. Nesting cover should be at least 12 inches high. Research in Missouri and Iowa suggests that quail prefer to nest in these grassy areas up to 50-75 feet from some edge, such as a road, crop strip or food plot, disked strip, etc. For this reason, it is important to manage herbaceous nesting areas to provide ample nesting opportunity throughout the field, especially on large fields such as many enrolled in the Conservation Reserve Program. Unmanaged CRP fields, even if planted to warm-season grasses, tend to have moderate to poor nesting suitability because bobwhites rarely venture far into solid stands of grass to nest. Breaking these large fields up with disk strips, herbicide strips, patch burns, or food plots will improve access to the field interiors for nesting. But be mindful that narrow strips may provide easy meals for nest predators. A hungry raccoon, skunk, or possum is much more likely to find a nest full of eggs in a strip 15 feet wide than in one 100 feet wide. Optimum strip width in plantings heavily dominated by grasses is around 150 feet.

On the other hand, fields with low grass clump densities in a matrix of weedy cover are mostly “edge” as far as quail are concerned. In these instances, birds have easy access to the entire field as all nests are within good brood habitat. Proximity to brood habitat is very important, since the parent and chicks will leave the nest soon after hatching and the chicks will need insect-rich feeding areas that offer easy mobility. At the 2006 Gamebird VI Symposium, researchers from South Texas reported that bobwhite nest productivity peaked at a grass density of **only** 400 clumps per acre. Put another way, this amounts to just 1 clump per 100ft² or a single grass clump in a square 10 feet per side! The rest is bare ground, brushy cover, and lots of wildflowers and legumes. Some of you may be thinking “That’s Texas. It doesn’t apply to my area.” But remember, quail habitat structure is what’s important. Similar evidence was indicated in Missouri when radio transmitters were placed on quail to see how they used available habitat on two Conservation Areas actively managed for quail. Weedy fields with scattered grass clumps were found to be quite attractive to nesting bobwhites. I suspect that in the Midwest, most fields considered to have good nesting cover have way too much grass and not nearly enough weeds and bare ground. If you have some fields of warm-season grass but the birds aren’t responding like you expected, then perhaps most of the field is “interior” and not available as good nesting cover.

Brood Habitat

Many of you have likely planted native grasses in the past with only moderate success. You may feel that you have plenty of brushy cover (see the next section if you think you really do!), but quail numbers aren’t where you hoped they would be. Perhaps the problem lies with your brood habitat. In my experiences, good brood habitat is the most often overlooked component of good bobwhite cover. To put it simply, quail need weed patches, and lots of them. Think about the “good old days”. How weedy were the pastures and cropland edges you used to hunt? Before we had Round-up Ready® weed technology, cropland edges were full of ragweed, pigweed, foxtail, and wild sunflower. Prior to 15 foot bush hogs and air conditioned tractor cabs, many farmers didn’t mess with the ragweed and croton that came up in the pasture in late summer. Sure, we had more brushy hedgerows back then, but we also had a lot more weedy cover everywhere: the old barnlot, road ditch and fallow field. Patches full of annual weeds with a bare ground understory are a major ingredient in the recipe for quail production.

The optimal situation is the one described above under Nesting Cover: scattered grasses for nest construction in a matrix of weedy cover disturbed every few years to keep it weedy and open at ground level. Remember, 40-60% of the home range should be composed of weedy brood habitat. When nesting and brooding cover are combined in the same field, this mixed habitat type could comprise 70-80% of the home range. Management techniques to produce good brood and nesting habitat include disking (especially fall disking), prescribed burning, herbicide application to perennial grass stands or monocultures, and field fallowing. These management techniques should be applied every 2-3 years to keep brood habitat in the desired condition. An often overlooked or even denounced method for producing good brood habitat is grazing. Certainly areas can

be overgrazed to the detriment of bobwhites, but used carefully, the cow can be an excellent habitat management tool, and one that doesn't require diesel fuel.

Can crop fields fill the brood habitat role? Maybe. If minimum till or no-till is employed, there might be enough insects and other invertebrates in the crop residue to provide the energy and protein demands of a growing chick. Quail chicks are unlikely to find enough to eat in conventional till systems, especially in corn. This does not imply that broods won't be found in crop fields. A canopy of soybeans or even corn can provide good shade and overhead cover, but may not harbor enough insects to meet the chick's dietary demands. With conventional till systems, it is important to have a strip of **unmowed weeds** (or a quail-friendly field border like CRP practice CP33) around the field edge for foraging.

Woody Cover

Five to twenty percent of the bobwhite's home range should be comprised of low growing woody cover (shrubs, vines, downed tree structures, etc.) often called covey headquarters. No problem, right? Well, when we break these numbers down into per-acre densities, I'll bet you'd be surprised how much is needed to be optimal. And I'll bet most of you don't have nearly enough of it.

First, consider the size needed. While quail may use patches of brushy cover as small as a bushel basket, past research and experience suggests that likelihood of consistent use increases with size until patch size reaches 1500ft² or so. Beyond that size threshold, use doesn't seem more likely. Fifteen hundred square feet is big. Most folks think of a brushpile or something the size of a pickup. A good covey headquarter should be the size of 2 or 3 buses parked side by side.

Once we realize how big our covey headquarters need to be, we need to know how many are required. Here's where it gets surprising. Consider the lower threshold of 5% woody cover. An acre is 43,560ft², and our covey headquarter is 1500ft². One covey headquarter would thus cover a little over 3% of an acre. Two covey headquarters per acre covers almost 7% of the home range, barely enough to surpass the minimum of 5%. On a 40 acre farm, we would need fifty-eight 1500ft² covey headquarters to reach the 5% minimum. If you installed 2 covey headquarters per acre, you would need 80 covey headquarters on each 40 acre tract! This is the lower end of the optimal range. Do the math and you'll see that to provide 20% brushy cover on a 40-acre tract, you would need 232 covey headquarters! I'd bet a good bird dog that very few reading this have anywhere close to 20% of their quail habitat in well-distributed brushy cover. Those of you who have ever hunted Western Oklahoma or west Texas take note: this is exactly what good quail range out there looks like. Clumps of plum, skunkbush sumac, and shinnery oak are everywhere, so that a covey is never more than a stone's throw from escape cover. Remember, the plant species doesn't matter, but the structure does. We should have patches of brushy cover so that a quail is never more than 50 yards in some direction from brushy cover, no matter where it is in the field.

I hope that by breaking these habitat components down, I've helped you develop a better mental image of what your quail cover should look like. For assistance on your project, contact your local wildlife biologist or private land conservationist.

Mark Your Calendars

Prescribed Burn Workshops - training burns follow classroom presentations, dress appropriately - long sleeves/pants, gloves, sturdy boots, natural fibers like cotton

January 16, 2010 – Litton Center, Smithville, MO. Classroom portion runs 8AM-noon. Register by calling Andy Carmack at 816-622-0900 or Paul Lowry at 816-792-8662

February 20, 2010 – Shelbyville, MO, 9AM – Register by calling Ted Seiler at 660-385-2616 ext. 118

March 13, 2010 – Macon, MO, 9AM - Register by calling Ted Seiler at 660-385-2616 ext. 118

Small Game Workshop

January 16, 2010 – 1PM - Thomas Hill Reservoir Conservation Area southwest of Macon, MO
Register by calling Ted Seiler at 660-385-2616 ext. 118 or David Stoppel at 660-385-4920

Quail Focus Areas – Targeting private land habitat work

MDC is targeting habitat restoration on two fronts. Quail Emphasis Areas (QEAs) include 19 Conservation Areas where quail management is the focus. Quail Focus Areas (QFAs) are larger and primarily target private land. QFAs were selected in areas where landowners were already managing for quail, near conservation areas with good quail habitat, and/or where conservation partners have expressed an interest in quail management. Today, there are 34 QFAs located throughout the state. Many focus areas are around 30,000 acres in size, but some are even larger because of wide-spread landowner interest and success. Within focus areas, staffs have been working with landowners to improve quail habitat by providing technical and financial assistance. Landowners and conservation partners are also spreading the news about QFAs and the benefits of habitat management. Success will come one farm at a time. Every little bit helps! Listed below are highlights of two QFAs.

KNOX COUNTY QUAIL FOCUS AREA

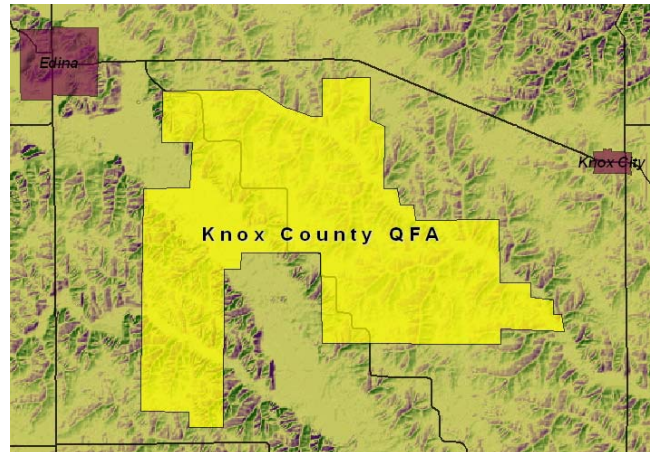
Region: Northeast **County:** Knox **Size:** 11,294 acres

Person to Contact: John Pinkowski, Private Land Conservationist (660) 397-2223, ext. 117

Focus Area Facts: Just east of Edina, this focus area is in the heart of quail country in northeast Missouri.

Landowners in this QFA have successfully restored hundreds of acres of quail-friendly habitat by establishing native grass and wildflower field borders, edge feathering and managing CRP fields for quail. Landowners are also hosting workshops and meetings to attract more neighbors and to talk “quail”. Resource Science Division with MDC staff, landowners, and Truman State University students are monitoring quail numbers by conducting fall whistle counts within the

QFA. Twenty points were sampled both inside and outside the QFA in 2008 and 2009. In 2008, the average number of coveys heard at each point was 3.4 inside the QFA and 2.5 coveys outside the QFA. In 2009, 3.4 coveys were heard inside the QFA at each point while only 2.2 coveys were heard outside the QFA. Even with the wet spring, coveys inside the QFA seem to be holding their own, while coveys outside the QFA show a slight decline.



SMITHVILLE QUAIL FOCUS AREA

Region: Kansas City **County:** Clay **Size:** 30,079 acres

Person to Contact: Paul Lowry, Private Land Conservationist (816) 781-5580 ext. 105

Focus Area Facts: This new QFA was established around the southern end of Smithville Lake because of landowner interest in CRP and CREP – both programs have resulted in the establishment of native grass and wildflower fields and filter strips. Department staff recently held a landowner workshop around Smithville Lake viewing actively managed quail habitat. Several quail management techniques were demonstrated as well as how to create 100% useable space on the landscape.



Time to Enjoy the Season

Jim Humphrey, Livestock Specialist, University of Missouri Extension, Savannah, MO

Over the last several years you have heard about the things you should do to improve quail habitat and hopefully your quail numbers. Several of you have worked hard to make improvements to your land. I suggest now is the time to enjoy your hard work with family and friends.

I remember as a youth every Thanksgiving our family getting together, most of the time at our house. We boys and sometimes our dads would head out quail hunting in the morning. It was great to spend time with my dad, brother, cousins and uncles. While not always harvesting many quail, a great time was had by all, watching the dogs work while talking about football and other activities happening at school. Additionally, we always enjoyed being outdoors in the elements, observing the wildlife and livestock while moving from one area to the next.



Some of my best quail hunting memories were hunting with my good friend Gil. We hunted almost every weekend during quail season. I remember getting up early and Gil's grandpa dropping us off and picking us up on his way to do chores. We would hunt along the hedgerows, rock walls, and ungrazed areas adjacent to small patches of horse weeds, along soybean and milo fields. At times I thought I was the bird dog, being sent into the thickets trying to flush the quail along with the bird dogs. We would spend several hours hunting; occasionally we would get cold or be walking from one farm to the next and would stop by the neighbors. They would ask us to come in to warm up. We knew most of the time there would be something homemade to snack on and usually something hot to drink. We always had good conversation with the neighbors and occasionally they would say go to this part of the farm, as they had been seeing quail while choring. These were some of the most enjoyable and memorable times of my youth.

My wife and I have tried to do similar things for our children and their friends. Please take the time to enjoy the fruits of your labor whether you harvest a quail or not. Spending time with family and friends during the hunting season and around the holidays are memories you will always treasure.

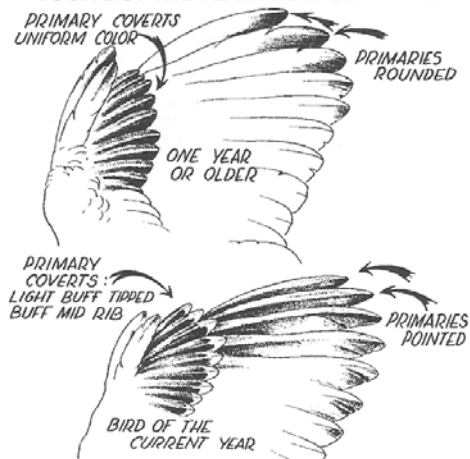
BOBWHITE QUAIL WING AGING GUIDE FOR USE IN THE FIELD

Wing Aging Bobwhite Quail

From a study of the wings, it is possible to determine:

- A. Old birds from young birds-of-the-year.
- B. The age of birds-of-the-year when they are under 15 weeks of age.
- C. Field and weather conditions which effected quail production any given year. Compute the age of the birds-of-the-year and count back on the calendar to determine their hatching period.

YOUNG-OF-THE-YEAR FROM OLD BIRDS



In this way, knowledge of the ratio of young-to-old birds in the fall population and the time of hatching periods helps your Conservation Commission measure the annual bobwhite production, the condition of the state quail population, and other factors important in the management and regulation of your favorite sport.

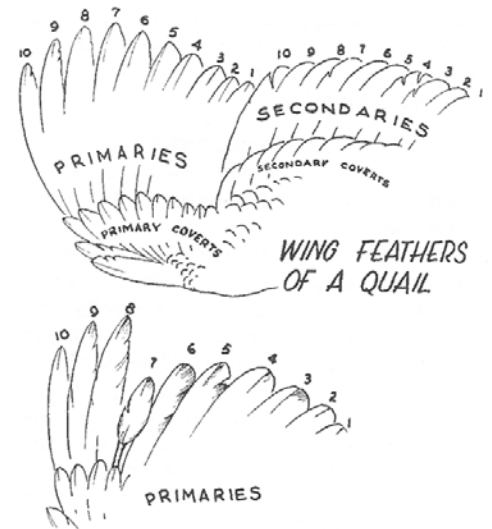
TO AGE YOUR BIRDS

1. Check the wings and determine whether the bird is an old bird or a young bird of the current year. (See illustration at left.)
2. If the bird is a young-of-the-year, decide if it is under 15 weeks of age by examining primaries number 1 to 8. If any primary has recently been lost or replaced (evident by being only partially grown), the bird is under 15 weeks of age. (See illustration on following page.)
3. If under 15 weeks of age, determine the number of the latest primary dropped or replaced.
4. Check the aging table below for the number of the primary dropped or replaced, and determine the age of the bird.
5. Count back on the calendar, in weeks, the age of the bird, and determine the time of the hatch.

YOUNG QUAIL AGING TABLE

Number of Last Primary Dropped or Replaced	1	2	3	4	5	6	7	8	All Feathers
Age of Young Quail in Weeks	4	5	6	7	8	9	10.5	14.5	Mature 16.5

AGE DETERMINATION OF YOUNG QUAIL UNDER 15 WEEKS OLD



Wing primaries of a quail showing the latest dropping and replacement of number 7 primary. By locating number 7 primary in the aging table on previous page, the bird is found to be 10 1/2 weeks old.

Winter Covey Headquarters Calendar

December

Order your covey headquarter shrubs from the MDC nursery – www.mdc.mo.gov
Check with your local USDA Service Center for 2010 EQIP and WHIP signups
Dormant seed native grasses and wildflowers
Create downed tree structures in areas with little shrubby cover

January

Continue to burn warm-season grass CRP fields through March 15
Notice what critical winter habitat your birds are using this month and create it across your entire farm

February

Got cabin fever? Visit your favorite hunting spot and edge feather the woody draws and fencelines
Interseed wildflowers and legumes in conjunction with your CRP management practices. Cost share may be available from USDA
Get your spray equipment ready to kill fescue and brome in fencelines, woody draws and under shrub thickets

UNIVERSITY OF MISSOURI
 Extension

 NRCS Natural Resources
Conservation Service

The Covey Headquarters Newsletter
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RETURN SERVICE REQUESTED

