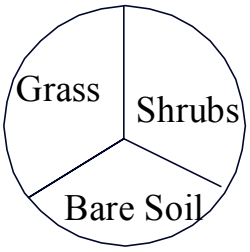
THE COVEY HEADQUARTERS

Volume 18 Issue 3 Fall 2019

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, go to http://mdc.mo.gov/user_mailman_register to unsubscribe. If you have suggestions for future articles, please contact jeff.powelson@mdc.mo.gov



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.

MDC offers new "Auto-Renewal" for easy online permit renewals

Renewing Missouri hunting, fishing, and trapping permits is now easier and more convenient through the Missouri Department of Conservation's (MDC) new online Permit Auto-Renewal service. Permit Auto-Renewal allows online permit buyers to automatically renew their permits prior to the start of the next season or permit year so they never have an expired permit when they need it most.

Participation in Auto-Renewal is voluntary, and the service can only be activated by the permit buyer. Enrollment in Auto-Renewal can be done during an online permit purchase or by using the "Manage Your Account" feature. Within the "Manage Your Account" feature, users can also update their Auto-Renewal settings including payment method and enrolled permits and turn off the service. There are no additional fees for the service. Auto-Renewal will automatically charge permit buyers for their enrolled permits.

Permit buyers must have a valid email address and credit card to participate. The Auto-Renewal service will send personalized email updates to participants – including initial enrollment, changes made by the buyer, 30-day and seven-day reminders of upcoming permit renewals and associated charges, and notifications of successful renewals and associated charges.

Permit buyers can enroll in Auto-Renewal at mdc.mo.gov/buypermits during an online permit purchase or by using the "Manage Your Account" feature. Learn more about Permit Auto-Renewal at huntfish.mdc.mo.gov/permits/permit-auto-renewal

In addition to buying Missouri hunting, fishing, and trapping permits online at mdc.mo.gov/buypermits and through MDC's free mobile apps (MO Hunting and MO Fishing), permit buyers can also purchase permits from numerous retail vendors around the state. Auto-Renewal-

eligible permits purchased from retail vendors are not able to be enrolled into the service during the purchase process but can be enrolled later using the “Manage Your Account” feature.

Missouri’s quail and pheasant populations hold steady despite rough start

2019 season expected to be similar to 2018.

With quail and pheasant-hunting season starting Nov. 1, the Missouri Department of Conservation (MDC) advises hunters that despite the harsh conditions this past winter and flooding this spring, quail and pheasant production appears better than expected. MDC staff note that good hunting can be found virtually anywhere in the state where an abundance of good habitat has been maintained.

Each August, MDC conservation agents record the numbers of quail and pheasants they see while driving a 30-mile route – called the roadside index. A total of 110 routes are completed around the state. These numbers are then tallied and grouped by eight geographic areas of production – called zoogeographic regions. *(SEE RELATED MAP ON THE NEXT PAGE)*

According to MDC, this year’s statewide average roadside index of 1.8 quail per route is slightly above last year’s index of 1.7. An average of 0.31 pheasants were recorded per route; unchanged from last year. “Hunters can expect to find a similar number of quail as last year, except for the Northeast Riverbreaks and Western Prairie regions where numbers were down notably” says MDC Small Game Coordinator David Hoover. He adds, opportunities to hunt pheasants are much more limited, but northern portions of the Northwest Prairie and Northern Riverbreaks regions showed the best numbers this year.

MDC Small Game Coordinator David Hoover points out that, despite unfavorable weather during this past winter and spring, statewide production for quail appeared to be up slightly. Five regions showed counts above last year’s values.

“The amount of quality habitat is the most important factor for maintaining quail and pheasant populations, but weather also plays a very important, and often unpredictable, role,” said Hoover. “This year’s better than expected production highlighted this complicated relationship. The wetter-than-normal conditions this spring and early summer likely benefited birds in areas with good habitat due to the unusually high number of crop field acres that did not get planted and were left fallow for much of the summer. While not good for our farmers, it was good for quail and pheasants as it creates near ideal brood-rearing conditions.”

He added that hunters that focus on the best available habitat should find birds even in regions with lower bird counts. “To find birds, hunters should key in on areas with an abundance of diverse native grasslands or CRP, shrubby cover, and some crop land nearby,” he said.

More on the roadside survey

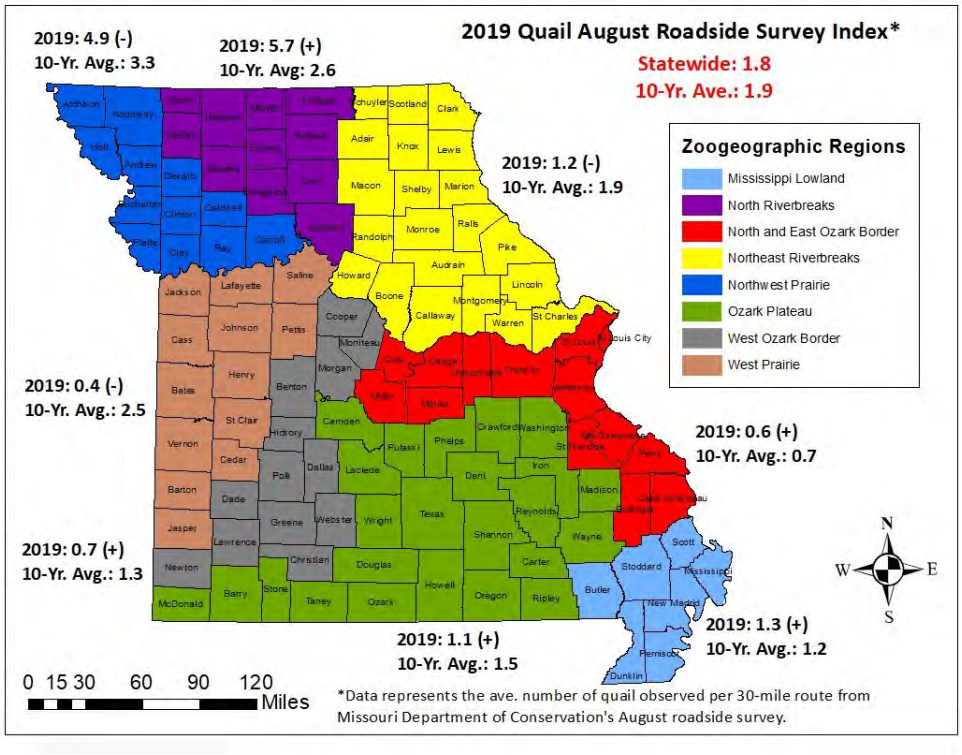
MDC Resource Scientist Beth Emmerich manages the August roadside survey, which has been conducted since 1983.

“It represents the best way we have to track quail and pheasant populations on a statewide basis,” Emmerich said. “The survey does a good job of tracking large-scale population changes and is a good barometer for how more localized populations may also be doing from year to year.”

“In 2015, we saw the highest statewide roadside index in nearly a decade,” Emmerich explained. “That summer was extremely wet, resulting in many crop fields in northern Missouri left unplanted, and most of which developed diverse annual plant cover that persisted well into August. This abundance of good brood cover led to a very good production year for quail, despite the abnormally wet summer conditions. We had similar conditions this summer, but the previous winter had more periods of prolonged snow cover than we’ve had in the past three years.”

Hunting season for quail and pheasants is Nov. 1 through Jan. 15, 2020. The daily bag limit for quail is eight with a possession limit of 16. Daily bag limit for pheasant is two male pheasants with a possession limit of 4. Get more information from MDC online at https://huntfish.mdc.mo.gov/hunting-trapping/species or pick up a copy of Missouri ’s 2019 Missouri Hunting and Trapping Regulations booklet, available where permits are sold. For information on places to hunt quail and pheasants on public lands, check out MDC’s Small Game Hunting Prospects online at

https://huntfish.mdc.mo.gov/sites/default/files/downloads/SmallGameHuntingProspects.pdf.



MDC’s annual roadside index of quail numbers taken around the state are grouped into these eight geographic areas of quail production – called zoogeographic regions.

Did You Know???

One of the native foods most commonly used by bobwhite quail in Missouri is the common ragweed- the bane of allergy sufferers. It also has a vegetative structure that makes it attractive for brood-rearing and roosting. It can be encouraged by fall and winter disturbance of the vegetation and soil surface. Such activities as prescribed burning, light disking, grazing, and herbicide application will result in a flush of ragweed from the natural seedbank in the soil. Even idled food plots can produce a flush of ragweed the first year. Spring disturbances will not encourage ragweed.

Free Private Land Care DVD

The Missouri Department of Conservation has a limited supply of *Private Land Care* DVD's This DVD includes information on how to improve wildlife habitat on your land. Topics include light disking/herbicide spraying, how to plant food plots, important plants for quail, quail habitat components, broadcast sprayer/seeder calibration, covey headquarter shrub planting, eradicating fescue and sericea lespedeza, building an ephemeral pool, and edge feathering. If you would like this free DVD, please send an email to publications.staff@mdc.mo.gov

Seedling Planting and Care

Many of you will be ordering trees and shrubs from the George O. White Nursery near Licking. Orders can be placed now through April 15, 2020. To learn more, visit mdc.mo.gov/seedlings. Below are a few tips to get your planting off to a great start.

During Planting -

- Avoid planting when the ground is frozen or extremely dry, or when excessively wet and sticky.
- Never leave open bundles of seedlings exposed to the sun and wind. During planting, take only a few bundles at a time. Cover the others and keep cool and moist.
- Seedlings should be carried in buckets or bags and covered with wet moss to protect roots from exposure to sun and air.
- Remove only one seedling at a time from the bucket and plant immediately.
- Check spacing periodically to ensure proper number of seedlings per acre.
- When machine planting, be sure tractor speed is matched to the capabilities of the person planting.
- Check furrow depth when machine planting or depth of the planting hole when hand planting to provide for the full length of the roots when they are straightened.
- To check firmness of soil packing, grasp the top of the seedling and pull gently upward; if the tree pulls out of the ground easily, it was not firmly packed.

Care After Planting -

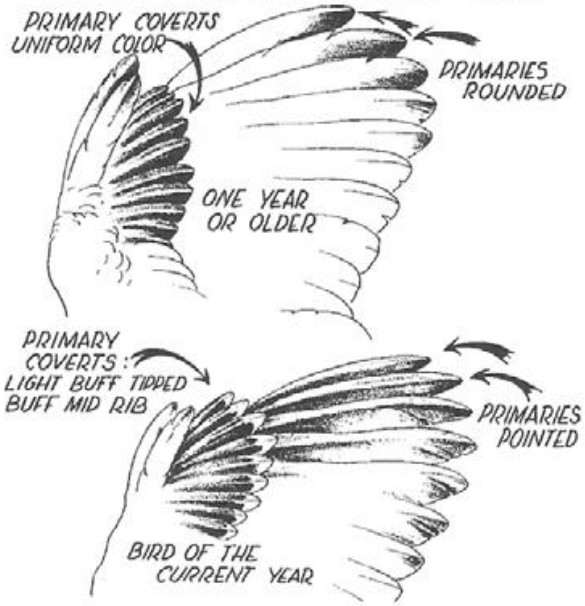
- After establishment, the work begins! It is necessary to take several precautions to protect your investment of time, money and effort.
- Livestock will eat young seedlings and trample the protective soil and leaf cover, encouraging soil erosion. Fence livestock from your woods and tree/shrub planting.
- Animals such as rabbits, mice and deer can damage young trees. Keep all vegetation short within your planting to deter these damaging pests. Shrub protectors work well to prevent rabbit damage.
- Prevent growth of weeds and grasses around new trees by cultivating, using herbicides, disking or hoeing as often as necessary during the first three to five years. Weed and grass competition inhibits tree growth.
- Inspect planting regularly for evidence of insect or disease damage. If excessive damage is found, contact your local MDC forester for help in diagnosing the problem and recommending controls.
- Mulching around trees in smaller plantings can help conserve soil moisture and control weed growth. Do not mulch around shrubs to encourage shrub suckering.

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.

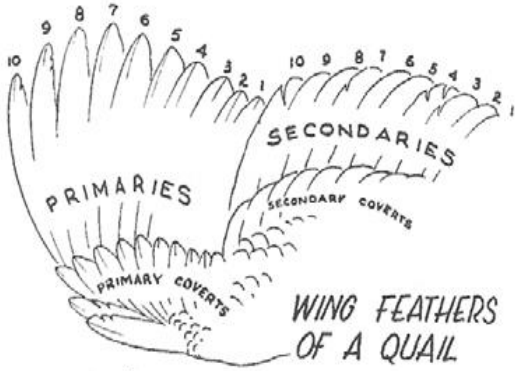
TO AGE YOUR BIRDS

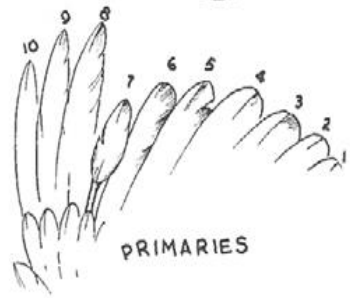
1. Check the wings and determine whether the bird is an old bird or a young bird of the current year. *(See illustration at left.)*
2. If the bird is a young-of-the-year, decide if it is under 15 weeks of age by examining primaries number 1 to 8. If any primary has recently been lost or replaced (evident 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.

Energy Value of Seeds

The relative value of seeds to quail during winter can be calculated from the seeds' energy value and size. Below lists the number of seeds needed per 24-hour day to meet energy needs of a single quail during different temperatures.

Number of seeds needed per day to meet energy needs

Temperature	70 F	32 F	0 F	0 F
Activity Level	Low	Low	Low	High
Corn	41	49	69	94
Soybean	103	122	174	236
Milo	666	788	1,121	1,520
Sunflower	1,165	1,379	1,961	2,660
Black locust	1,250	1,479	2,104	2,854
Partridge pea	3,601	4,261	6,062	8,223
Common ragweed	3,870	4,580	6,515	8,837
Smooth sumac	6,125	7,248	10,310	13,985
German millet	8,418	9,962	14,171	19,222
Korean lespedeza	9,480	11,218	15,959	21,647
Switchgrass	27,524	32,570	46,331	62,846

Prescribed Burn Timing Quick Reference Table
Dark shading indicates cool-season grass activity. Light shading indicates warm-season activity.

Management Objective	Jan	Feb-Mar	April	May	June	July	Aug	Sept	Oct	Nov-Dec
Stimulate cool-season grass										
Seedbed preparation for legumes										
Stimulate germination of legumes										
Set back cool-season grasses										
Stimulate legumes and weeds in warm-season (WSG) stands										
Seedbed preparation for interseeding legumes or forbs into WSG stands										
Thicken poor stands of native grass										
Control woody invasion										
Stimulate native forb growth in WSG										
Set-back WSG dominance										

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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