2013 New Jersey Quail Calendar

STATE OF THE BOBWHITE IN NEW JERSEY

Following World War II, bobwhite population declines accelerated as a result of habitat loss and fragmentation due to urbanization, natural plant succession and changes in agricultural practices. Today, bobwhites and the variety of other birds that share grassland and early successional habitats are in major long term declines. Populations trends in the last five to ten years may be the worst. Many populations of bobwhites in the eastern United States are recreationally extinct, meaning that they can no longer support hunting. Wild quail hunting is a fast fading tradition throughout the bobwhite's range. The state of New Jersey recently suspended wild quail hunting statewide.

Research studies on bobwhite ecology in Cumberland County, NJ conducted by the University of Delaware (UDel) in cooperation with the NJ Division of Fish and Wildlife (Division) found little difference in the vital rates of New Jersey bobwhites and those from other states within the species' range. On average in NJ, bobwhites laid 14.2 eggs per clutch, nest survival was 45% and 96% of eggs in successful nests produced chicks. However, only 8.6% of the bobwhites in the UDel study area survived to the next year. Surviving winter predation and weather events was determined to be the single most important factor in bobwhite ecology in this region.

The NJ Fish and Game Council adopted the Division's *New Jersey Northern Bobwhite Action Plan* (Plan) in December 2009. The Plan contains six goals: (1) Restore bobwhite population in the wild bobwhite zone to the average 1980 density in accordance with the National Bobwhite Conservation Initiative; (2) Identify and engage stakeholders in development and implementation of this action plan; (3) Identify, connect, improve and increase habitat areas suitable for northern bobwhite; (4) Maintain and improve population surveys and databases used to assess bobwhite population status; (5) Conduct research on bobwhite population dynamics, habitat use, weather effects and harvest; (6) Provide for human use consistent with the *New Jersey Northern Bobwhite Action Plan.*

Although human harvest accounted for only 2.9% of bobwhite mortality in th UDel study, such harvest was determined to be more additive in nature at the current low population level. Harvest is the only winter mortality factor that the Division can affect immediately to increase the winter survival of bobwhites. The Plan calls for a Restrictive Season format which permits hunting of pen-raised bobwhite only at Peaslee and Greenwood WMAs and select semi-wild and commercial shoowing preserves when the North American Breeding Bird Survey (BBS) average is below 2.5 for the preceding 3-year period. The BBS average for 2008-10 was 0.2 bobwhite heard per route.

The key to reestablishing the bobwhite population in the state of New Jersey will be to get enough habitat restored to better the chances of winter survival of quail populations and allow their numbers to begin to increase over time. Since the majority of land in New Jersey is in private ownership, landowners will be critical in helping bring bobwhites back. It will take the teamwork of wildlife officials, property owners, sportsmen, conservation organizations and more to become enthusiastic and engaged to give bobwhites a chance to rebound.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

NBCI National Bobwhite Conservation Initiative

New Jersey Quail Project
habitat wildlife stewardship

NEW JERSEY DIVISION OF Fish and Wildlife

WHAT YOU CAN DO

There are many things that landowners can do to help promote wildlife habitat on their property and help improve the chances of restoring the bobwhite population in New Jersey back to healthy levels. This calendar aims to provide landowners with a monthly guide of suggestions for habitat improvements on their land as well as facts about quail biology, all while enjoying photos of the species that is in such dire need of our help. While every Landowner Action may not be a fit for your land, there are certainly plenty of tips that any type of property owner can adapt and implement in a way to fit their specific circumstances.

Managing for bobwhites is tough work but there are a variety of resources available to help you along the way. The New Jersey Division of Fish and Wildlife biologists can give you guidance for managing for quail on your property. You can contact the office of Upland Game Biologist Andrew Burnett at 609.273.3439 or by email at andrew.burnett@dep.state.nj.us for management recommendations specific to your land. Additionally, The US Departmant of Agriculture Natural Resources Conservation Service or Soil Conservation Districts in your area have trained staff available to help you. Landowners with an interest in bobwhites (or any other wildlife species) should commit to providing a portion of their land for wildlife and then take appropriate actions to enhance the value of wildlife habitat on their property. Once you decide that wildlife is a priority for you, the Division recommends the development of a Conservation Plan. A Conservation Plan is simply a written record of your management decisions and the conservation practices you intend to use and maintain on your land. Proper planning and implementation will achieve your goals of protecting the environment and conserving wildlife. This service is provided at no cost to you and you decide which actions you can take to protect and improve your land.

Another valuable resource is the National Bobwhite Conservation Initiative (NBCI). The NBCI is the unified strategic effort of 25 state fish and wildlife agencies and various conservation organizations --all under the umbrella of the National Bobwhite Technical Committee-- to restore wild populations of bobwhite quail in this country to levels comparable to those in 1980. Check out the NBCI website, www.bringbackbobwhites.org for more information and to get involved!

Basic Northern Bobwhite Habitat Requirements

Food and Water	• Native wild plant seeds, cultivated plants, insects and wild fruits must be available to quail year-round. • Water obtained from dew and through foraging activities.
Nesting Habitat	• Native warm season grasses and forbs with overhead cover and bare ground for travel lanes. • Some leaf litter from previous year to be used as nesting material.
Brood-rearing Habitat	• Recently burned grassland with a diverse mixture of forbs, grasses and as much as 70% bare ground to allow movement for chicks. • High diversity of vegetation is critical to providing an abundance of insects.
Escape Cover	• Tangled thickets, dense grasses, briars, shrubs and brush provide escape from predators. • Must be located close to foraging habitat for bobwhites to utilize them.
Winter Habitat	• A combination of woody shrub cover, tall grasses and weeds should remain available throughout the winter months. • Row of crops left standing after harvest also provide cover and a food source for quail.

For information on Conservation Plans, contact the USDA Natural Resources Conservation Service or Soil Conservation District in your area:

Bergen, Essex, Hudson, Morris, Passaic, Sussex and Warren counties
Hackettstown Commerce Park, Bldg #1
101 Bilby Rd., Hackettstown, NJ 07840
908.852.2576 Ext. 3

Hunterdon, Somerset and Union counties
687 Pittstown Rd., Suite 2
Frenchtown, NJ 08825
908.782.4614 Ext. 3

Mercer, Middlesex and Monmouth counties
4000 Kozloski Rd., PO Box 5033
Freehold, NJ 07728-5033
732.462.0075 Ext. 3

Burlington, Camden and Ocean counties
1971 Jacksonville-Jobstown Rd
Columbus, NJ 08022
609.267.1639 Ext. 3

Atlantic, Cape May and Cumberland counties
1318 S. Main Rd., Bldg. 5 Suite A
Vineland, NJ 08360
856.205.1225 Ext. 3

Gloucester and Salem Counties
51 Cheney Rd., Suite 2
Woodstown, NJ 08098
856.769.1126 Ext. 3

JANUARY 2013

ABOVE: Male northern bobwhite (*Colinus virginianus*). Photo Credit Brynn Reilley.
INSET: Female northern bobwhite. Photo Credit Brynn Reilley.

QUAIL BIOLOGY

- Freezing temperatures and harsh weather often make this month the worst mortality month for bobwhites.
- 50-75% of the early fall population may die by spring.
- Bobwhites need dense stands of shrubs as winter cover to survive the harsh conditions this month.
- Edge feathering creates brushy areas that provide critical winter and escape cover for bobwhites.
- Coveys require 10-15 individuals to generate enough heat to survive the nights throughout the winter.

LANDOWNER ACTION

- Locate portions of your property where you are lacking dense, brushy areas and plan to plant some shrubs there this spring.
- Less foliage on plants makes this month a perfect time to cut trees along field and woodland edges to create dense thickets.
- Place Christmas trees near brushy areas to provide cover for quail, songbirds and other wildlife.
- Burn now through February in your native warm season grass fields to increase bluestem, and have a variety of wildflowers and legumes.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 New Year's Day	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21 Martin Luther King Jr.'s Birthday	22	23	24	25	26
27	28	29	30	31	DECEMBER 2012 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	FEBRUARY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

ABOVE: Male northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male northern bobwhite. Photo Credit Brynn Reilley.

FEBRUARY 2013

QUAIL BIOLOGY

- Food has now become scarce for wildlife and predators are abundant.
- Excessive snow and ice crusts can cover seeds that are vital to the bobwhite's survival throughout the winter.
- Quail are dependent on their fat stores to survive late winter storms and freezing temperatures.
- Coveys roost in a circle on the ground at night for protection and to conserve energy.
- Some cool season grasses prove to be beneficial to quail, providing forage, nesting and brood rearing habitat.

LANDOWNER ACTION

- Take time this month to plan spring habitat projects for your land. Be sure to create areas with annual weeds and wildflowers, grain crops and dense thickets all close to one another.
- February marks the last month to broadcast native wildflower seed over new snow to allow for spring germination.
- Burn this month until March 15th to encourage wildflowers and legumes in fields.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2 Groundhog Day
3	4	5	6	7	8	9
10	11	12 Mardi Gras	13 Ash Wednesday	14 Valentine's Day	15	16
17	18 President's Day	19	20	21	22	23
24	25	26	27	28	JANUARY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MARCH 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ABOVE: Male northern bobwhite. Photo Credit Brynn Reilley.
INSET: Female northern bobwhites. Photo Credit Brynn Reilley.

MARCH 2013

QUAIL BIOLOGY

- Coveys will begin to break up as days get longer and temperatures rise. Some individuals may disperse more than 2 miles from winter territory in search of mates.
- Bobwhites will begin using more open, grassy portions of the landscape rather than the dense woody cover used over the winter.
- Male bobwhites will begin to perch in high spots such as on fence posts to increase their chances of attracting mates and some may begin whistling as early as this month.

LANDOWNER ACTION

- Seed cool season grasses such as timothy and legumes like alfalfa and clover this month through the end of May.
- Disk food plots that will be planted early.
- Begin planting native tree and shrub seedlings this month through May in areas targeted for dense escape and winter cover.
- Fence out corners, drains and other irregular areas of fields to create more habitat.
- Burn or lightly strip disk portions of fields to provide bare ground and annual weeds for bobwhites and other grassland species before nesting begins.

February 2013

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

APRIL 2013

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7	8	9
10 Daylight Savings Time begins	11	12	13	14	15	16
17 St. Patrick's Day	18	19	20 First Day of Spring	21	22	23
24 Palm Sunday	25	26	27	28	29 Good Friday	30
31 Easter	Passover Begins					

APRIL 2013

ABOVE: Male Northern bobwhite whistling. Photo Credit Brynn Reilley.
INSET: Male with three female Northern bobwhites. Photo Credit Brynn Reilley.

QUAIL BIOLOGY

- Male bobwhites will begin their characteristic "bob-WHITE" whistles as coveys break up in search of mates. Females will call back in series of low, clear whistles.
- Pair bonds will begin to form as mates are found. These pair bonds may last for just one nest attempt, multiple attempts or throughout the whole breeding season.
- Bobwhites need nesting cover at least 12 inches tall.
- Nesting means a dangerous time for quail as only about 1/3 will survive the breeding season.

LANDOWNER ACTION

- The last frost in New Jersey usually comes around the middle to the end of this month. Plant corn no more than 10-14 days before the last killing frost.
- Plant food plots this month with seed mixes.
- Plant partridge pea seeds now through July for quails and doves.
- Incorporate native warm season grass forage into rotational grazing systems.
- Native warm season grass like switchgrass can be planted as early as this month.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 April Fool's Day	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22 Earth Day	23	24	25	26	27
28	29	30	MARCH 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MAY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		

MAY 2013

ABOVE: Northern bobwhite pair. Photo Credit Brynn Reilley.
INSET: Northern bobwhite pair. Photo Credit Brynn Reilley.

QUAIL BIOLOGY

- Most bobwhites will initiate their first nest during this month. Nesting attempts may take 35-48 days from making the nest until the eggs hatch.
- Many nests will fail. Predation, machinery and poor weather can often cause as many as 70% of nests to fail.
- By mid-May nesting is at its height with females laying 1 egg every 29 hours until she has gathered 12-14 eggs.
- This is a very dangerous period of time for the bobwhite eggs and adults as predation during nesting is very high.
- Incubation of quail nests begins after the last egg is laid and usually takes 23 days.
- Only about 1/3 of quail nests will make it to hatch.

LANDOWNER ACTION

- Plant soybeans, sunflowers and grain and forage sorghum this month for wildlife food.
- From mid-May to the end of the month keep an eye out for quail chicks. Quail chicks are precocial which means they are fully mobile and, while small, are relatively mature at the time of hatching.
- Record number of chicks, date and location of any observed.
- Resist mowing, cutting hay and other disturbance practices because newly hatched chicks are very vulnerable at this time. Try to postpone any mowing in or around fields until at least July 15th.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		APRIL 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3	4
5 Cinco de Mayo	6	7	8	9	10	11
12 Mother's Day	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27 Memorial Day	28	29	30	31	JUNE 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

JUNE 2013

ABOVE: Female Northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male Northern bobwhite. Photo Credit Brynn Reilley.

QUAIL BIOLOGY

- The bobwhite hatch will peak this month with parents moving their chicks from nesting habitat into more open, weedy brood habitat.
- At this point chicks are still dependent on their parents for regulating their body temperature as they still do not have full adult feathers and won't until the end of June.
- Mortality for adults is high when tending a nest but can be twice as great while caring for flightless chicks.
- Insects make up the majority of the chicks diet at this early age, as much as 80-90%.

LANDOWNER ACTION

- The end of this month marks you last chance to plant areas with native warm season grasses like big and little bluestem.
- This month look for quail chicks foraging for insects along bare ground beneath vegetation.
- Conduct bobwhite whistling counts this month to see how many birds survived the winter.
- By the end of this month many wildflowers and other quail-friendly plants begin to bloom. Take this time to work on identification of these native beauties.
- Scout out areas that would be good for a wildflower meadow and begin site preparations this summer to remove weeds for planting in the fall and next spring.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		MAY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	JULY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			1
2	3	4	5	6	7	8
9	10	11	12	13	14 Flag Day	15
16 Father's Day	17	18	19	20	21 First Day of Summer	22
23	24	25	26	27	28	29
30						

ABOVE: Male Northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male Northern bobwhite. Photo Credit Brynn Reilley.

JULY 2013

QUAIL BIOLOGY

- Incubation of bobwhite nests by males is most common during the month of July.
- Hens may begin to abandon broods this month to prepare for a second nest attempt.
- Chicks from early in the season are now easily identified as male or female at about 8 weeks of age and are now fully able to fly.
- High temperatures during this month and August can reduce nesting activity.
- Many wild fruits like blackberries, raspberries, and pokeberries begin to ripen this month providing food for quail.
- Woody vegetation is beneficial for loafing cover to help keep bobwhites cool as temperatures climb during the next two months.

LANDOWNER ACTION

- Continue to resist disturbance practices this month such as mowing since quail chicks are still small and vulnerable. If harvesting after the 15th, begin cutting from the field's center and work outwards to give quail the chance to escape unharmed.
- When cutting hay leave grass at least 6 inches high to still provide some cover for quail and chicks.
- Look for partridge pea blooms this month. The seeds are a preferred food plant for adult bobwhites, flowers attract insects for chicks and foliage provides overhead cover.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4 Independence Day	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31		JUNE 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	AUGUST 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ABOVE: Male northern bobwhite. Photo Credit Brynn Reilley.
INSET: Female northern bobwhite. Photo Credit Brynn Reilley.

AUGUST 2013

QUAIL BIOLOGY

- By now bobwhite chicks from early in the breeding season will look like adults.
- The hatch of second broods will peak during this month.
- Bobwhite chick survival is very low, 50% or more could be lost to predation or unfavorable weather during the first two weeks.
- Desmodium, or tick-trefoil, is finishing blooming and beginning to set seeds, a valuable food source for quail.
- Ragweed is beginning to bloom this month. Its seeds supply food for quail and foliage provides brooding cover throughout the summer.

LANDOWNER ACTION

- When harvesting row crops or cutting hay this month, leave margins along the edge of fields to provide winter cover and forage for quail and other wildlife.
- Mow portions of sunflower fields to attract birds this month.
- Burn and spray lespedeza with herbicide to control.
- Plant beneficial cool season grasses such as timothy and legumes like alfalfa and clover starting the end of this month through the fall.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		JULY 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	SEPTEMBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

ABOVE: Female northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male northern bobwhite. Photo Credit Brynn Reilley.

SEPTEMBER 2013

QUAIL BIOLOGY

- The bobwhite population is highest at this time of the year.
- Wild grapes ripen and provide food for quail as well as other species. Many plants with "hitch hiker" seeds will set this month, providing food for quail.
- Quail will begin to utilize shrubby brush with an open canopy more often at this time of year as escape from predators as fields are harvested.
- The fall shuffle begins. Coveys of 12-15 birds start to form as October approaches.
- Temperatures begin to drop and lone quail will burn more resources trying to stay warm.

LANDOWNER ACTION

- Leave rows of crops such as corn and soybeans next to dense woody cover for quail.
- Burn or disk native warm season grass stands to favor legumes and wildflowers. Quail prefer this mixture of vegetation.
- Begin seeding winter wheat on harvested fields to provide winter ground cover for quail and other wildlife.
- Spray areas you will edge feather this winter to kill grasses and other vegetation beneath felled trees.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 Labor Day	3	4 Rosh Hashanah Begins	5	6	7
8 Grandparents Day	9	10	11	12	13 Yom Kippur Begins	14
15	16	17	18	19	20	21
22 First Day of Autumn	23	24	25	26	27	28
29	30			AUGUST 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	OCTOBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	

ABOVE: Male northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male northern bobwhite. Photo Credit Brynn Reilley.

OCTOBER 2013

QUAIL BIOLOGY

- The fall shuffle is in full effect this month and coveys are forming for the winter ahead.
- Covey headquarters are becoming vital to the bobwhites survival at this time of year as crops are harvested and plants begin to drop their leaves.
- Average first frost usually comes around the middle of this month in New Jersey.

LANDOWNER ACTION

- Spray cool season grass now to impede growth throughout the cooler months.
- Spray or disk areas to prepare for planting shrubs in spring.
- Spray native warm season grass stands after the first frost in order to remove cool season grasses.
- Burn now to eradicate fescue, following up with herbicide once fescue greens up again.
- Conduct fall covey counts this month. The covey call is a much shorter whistle than the familiar male bobwhite call. These calls are usually brief and occur about a half an hour before daybreak.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	
SEPTEMBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	NOVEMBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3	4	5
6	7	8	9	10	11	12
13	14 Columbus Day	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31 Halloween		

ABOVE: Male northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male northern bobwhite. Photo Credit Brynn Reilley.

NOVEMBER 2013

QUAIL BIOLOGY

- Oak tree species with small sized acorns like pin, post, blackjack and chinquapins all provide a good source of carbohydrates for quail to store fat.
- Predation is high for quail during the winter months but species like red-tailed hawks and coyotes might actually displace or remove other predators that prey more heavily on bobwhites.
- Ragweed and other late season blooming weeds will start dropping seeds this month which serve as critical sources of food for quail and songbirds.
- Flushed coveys will provide hunters and wildlife viewers the incredible experience of the thunderous covey rise.

LANDOWNER ACTION

- Disk cool season grasses after there has been a hard freeze in order to expose roots and kill the plants.
- Get your chainsaw ready and work on thinning tree stands, edge feathering woodlands and removing trees 15 feet or taller along fencerows.
- Use the cuttings of limbs and smaller trees to create brush piles along woodland edges and near thickets to create cover for quail, rabbits and other species.
- Burn warm season grass stands to increase native wildflowers now through March 15th. Be sure to leave some dead vegetation for quail nesting material in the spring.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		OCTOBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	DECEMBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		1	2
3 Daylight Savings Time Ends	4	5 Election Day	6	7	8	9
10	11 Veterans Day	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27 Hanukkah Begins	28 Thanksgiving Day	29	30

ABOVE: Male northern bobwhite. Photo Credit Brynn Reilley.
INSET: Male northern bobwhite. Photo Credit Brynn Reilley.

DECEMBER 2013

QUAIL BIOLOGY

- December starts the season that is hardest on quail due to harsh weather and predation.
- Remember that bobwhites require a diverse habitat that contains warm season grasses for nesting cover, broad-leaved forbs, bare ground with overhead cover for brood habitat and dense shrubby habitat for escape and winter cover.
- These components must be interspersed with one another, all in close proximity to ensure the best success for the bobwhites on your land.

LANDOWNER ACTION

- Plan habitat projects for the new year. Developing 5-10% of farm acreage can greatly improve wildlife habitat while only sacrificing a small amount of land used in production.
- Spend cold days indoors researching native plants to use as wildlife cover on your property.
- Research and order seedlings for new shrub plantings in the fall.
- Some plants may require colder temperatures to germinate so be sure to spread these seeds during the colder months to ensure germination.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21 First Day of Winter
22	23	24	25 Christmas Day	26 Kwanzaa Begins	27	28
29	30	31	NOVEMBER 2013 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JANUARY 2014 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		

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