

# Summer fire, rollerdrum chopping could double Florida rangeland quail numbers

**T**he dry prairie in South Florida is some of the best remaining quail and grassland habitat in the Southeastern United States, but years of winter burning have significantly degraded the prairie as habitat, as well as forage for cattle.

Saw palmetto, a native evergreen shrub, dominates in many areas, reducing quality of grasslands for quail, songbirds, and cattle.

“Historical accounts suggest that saw palmetto likely only composed 20 percent of the vegetative community of the dry prairie, and our work suggests that conditions for many grassland and Savannah bird species can be improved if managers strive to attain this natural level,” says James Martin, a researcher at the Tall Timbers Research Station. “These habitats are meant to be disturbed—it’s a fire-driven ecosystem.”

Old habits of land management are changing and show promise for better habitat and cattle production, says Dr. Bill Palmer, Director of Game Bird Research at the Tall Timbers Research Station.

“By using rollerdrum chopping, an U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)-supported practice, and fire in the summertime rather than winter, we are seeing increases in bobwhite quail populations, an increase in winter bird use and an increase in forage production for cattle,” Palmer says.

The Florida study looked at Bachman’s sparrow, eastern meadowlark, and grasshopper sparrow. They also radio-collared about 120 bobwhites a year and followed their movements.

The combination of radio telemetry and songbird point counts gave researchers data on bird abundance on numerous properties with vary-

ing vegetation throughout southern Florida for 2 years.

They found few songbirds and quail where palmetto dominated. Conversely, birds were more abundant at sites with higher percentages of grasses and forbs in the ground cover, conditions associated with more frequent use of prescribed fire.

“Our research has shown we have an opportunity to double or even triple quail populations with relatively little change in management. It’s mostly a matter of a change in season of disturbance, whether it’s fire or roller chopping. We’d like to see a 2-year fire frequency,” Palmer says.

“We’ve seen that very quickly—in a matter of a couple of years, you can see an increase in quail populations using these practices.”

NRCS programs, such as the Environmental Quality Incentive Program (EQIP) targeted to Florida’s dry prairie, can directly benefit quail and improve conditions for numerous grassland bird species and likely improve foraging conditions for cattle, Palmer says.

He recommends EQIP practices that include active management scenarios on remnant prairie patches that mimic natural disturbances and shift the plant community more towards herbaceous instead of shrub species.

The results add to the science available on bobwhites, says Dr. Wes Burger of Mississippi State University (MSU), who coordinated 11 studies across the quail range, and Ed Hackett, a biologist with the NRCS Agricultural Wildlife Conservation Center (AWCC), which funded the study.

The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.



*NRCS photo by Lynn Betts*

**Northern bobwhite covey rise**

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## Summary of:

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For more information, see:

USDA/NRCS Bobwhite Restoration Project online at <http://www.cfr.msstate.edu/nbci>

### **Ed Hackett**

NRCS AWCC

Phone: (601) 607-3131

E-mail: [ed.hackett@ms.usda.gov](mailto:ed.hackett@ms.usda.gov)

Web site: <http://www.whmi.nrcs.usda.gov>

For more information on this summary, contact:

### **Dr. Wes Burger**

MSU

Phone: (662) 325-8782

E-mail: [wburger@cfr.msstate.edu](mailto:wburger@cfr.msstate.edu)