



Renewable Natural Resources Timely Tips

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Landowners

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Do Wild Turkeys Influence Quail or Grouse Populations?

Bobwhite quail and ruffed grouse populations have declined considerably in major parts of their range over the past 20 years. At the same time, wild turkey populations have increased significantly. Without supporting evidence, many people are convinced wild turkeys have contributed to the decline in quail and grouse numbers. “Turkey blamers” cite food competition, nest and chick predation, and incompatibility (area exclusion) as ways wild turkeys have negatively influenced quail and grouse populations. However, often what appears as cause-and-effect actually has no influence at all.

Wild turkeys have a varied diet that includes almost anything they can get down their throats. While they primarily eat acorns, soft mast, forbs, and miscellaneous seeds, grains and insects, on rare occasion you might also find a small mammal, bird, snake, frog, lizard or salamander in a turkey’s crop. As you might imagine, gobblers are more likely than hens to eat these larger food items. Wildlife researchers have investigated food habits of wild turkeys for decades, in virtually every area where turkeys exist, during all seasons of the year. Never has a quail or grouse chick been reported in a turkey’s crop, nor has a wild turkey been cited depredating a quail or grouse nest. Does that mean it has never happened? Of course not. I’m sure at sometime in the history of the world, a turkey has eaten a quail or grouse chick, and there’s no doubt a turkey has eaten the eggs of

the smaller game birds. I’m also sure a wild turkey gobbler has eaten a young wild turkey poult before! But so what? It doesn’t matter. Relatively rare occurrences such as these do not affect populations.

To consider wild turkeys incompatible with bobwhites or grouse is curious and without merit, especially considering cover requirements of the three vary considerably. Each has its own unique niche in the natural world. While there may be common foods among them, they co-evolved and have co-existed for thousands of years where their preferred cover types converge. This logic escapes most people who blame turkeys for decreased quail and grouse populations. If turkeys out-compete quail and/or grouse, then how have each existed in the same area over time? Early explorers cited large numbers of all three species prior to and even during settlement. So what has changed? Habitat!

Wild turkeys are generalists. That is, they can exploit many different cover types and use a broad array of food items. Bobwhite quail and ruffed grouse are more specialized. Bobwhites require early successional habitat; old-fields with native grasses, forbs, shrubs and brushy cover must be present to support quail. They are not woods birds. Ruffed grouse are woods birds. In particular, they require young forest cover, especially in the 5-year-old to 20-year-old range. Grouse do not use fields to any real extent.

So, what has happened? To bobwhites, a number of things. Small rowcrop fields and the associated fallow fields and brushy fencerows, so common yesterday, have been sown to tall fescue or bermudagrass

as pasture or hayland. Neither is compatible with quail – no food, no protective cover, and too dense at ground level for quail to navigate. Other fields have been allowed to “grow up,” and trees now cover what once was quality quail cover. Today, production agriculture requires double-cropping, which usually provides no suitable cover for quail at any time of year. Landowners perennially mow and/or spray brush and weeds because they think it looks bad (“It looks snaky,” and “What would the neighbors think?”). Few realize they are destroying what little nesting or escape cover that might be present for the small game birds.

For ruffed grouse, forest maturation is the problem. Where grouse occur on national forest land in East Tennessee, fewer acres are regenerated now than at any time since the property was acquired by the US Forest Service. Mature forest does not contain high stem densities grouse require. Therefore, an active forest management plan is needed to perpetuate desirable grouse cover. Grouse feed on acorns, beechnuts, and other foods in mature forests, especially near the edge of young forest cover, but the birds are much more susceptible to predation in the more-open mature stands. Wild turkeys, on the other hand, readily use mature forests for nesting, raising broods, feeding and roosting. So where grouse occur in Tennessee, the forest has matured beyond the ideal stage for grouse and into the ideal stage for turkeys. Would you not expect turkeys to increase and grouse to decrease in this scenario? Of course!

If you are concerned with declining quail or grouse populations, then work to provide suitable habitat; specifically, make sure quality cover is available year-round. Then you’ll realize those ill-regarded turkeys are actually nothing more than innocent bystanders!

Craig A. Harper
Professor

Carbon Sequestration for Forest Landowners: Easy Goes It

A new word has emerged in the forestry lexicon: sequester or sequesterate. In legal terms sequester means “to seize and hold (a debtor’s property), until legal claims are satisfied.” In like terms with forest landowners, it means seizing atmospheric carbon then storing it in trees, and potentially earning revenue for the service.

How does it work? It works through “carbon markets” that help to fund greenhouse gas offset projects.

The Chicago Climate Exchange (CCX) is one example, serving as a CO₂ emission registry. Manufacturing firms in the US that are members of the CCX make a voluntary but legally binding commitment to lower their greenhouse gas emissions. Known as “cap and trade,” CCX members have a CO₂ emission quota. If this quota is exceeded, they must offset the excess by purchasing carbon credits from sources that sequester carbon, such as forests.

Only forestlands that have been third-party certified are eligible to participate. This certification requires a forest stewardship plan and third-party verification. Several third-party forest certification systems in the US have been recognized as credible, most commonly: Sustainable Forestry Initiative (SFI), Forest Stewardship Council (FSC) and American Tree Farm (ATF). Landowners must work with a qualified professional forester¹ to conduct a “carbon” inventory that establishes the baseline carbon stocks. The data is submitted to a Registered Carbon Aggregator who uses a model to artificially grow the forest into the future. The model predicts the carbon sequestration rate, a figure that varies forest-by-forest and is largely a function of stocking, species and site index. Periodic payments are made to landowners based on the predicted carbon sequestration. Landowners are required to give an annual update if any changes have been made to the forest which would alter the carbon stock (e.g., harvesting, reforestation, catastrophic events, etc.). A carbon inventory at the conclusion of the contract quantifies the actual amount of sequestered carbon and allows for final settlement.

Fees are associated with inventory development, aggregation, verifications and transactions, and in some cases fees may exceed the carbon revenue. Some of these fees are deducted from the gross revenue of the sale of carbon-offset credits. Other fees, such as inventories and carbon modeling, are normally due up front. The Registered Carbon Aggregator typically charges a commission, serving as a broker of accumulated sequestered carbon for a pool of landowners. Thus, the highest trading price mutually benefits all parties.

Only those landowners with a serious and lasting commitment to long-term sustainable forest management should consider this program. It is a contractual agreement with initial costs that presently may not be suited for all ownerships. Landowners should understand that participation in the program comes with an obligation that forests will remain in certified status

for 15 years. Selling timber during the contract period will greatly affect carbon sequestration rates, potentially resulting in a penalty. This program is funded by private investors, not the government, and these investors are counting on participating landowners to deliver a product: sequestered carbon. And like the stock market, prices paid for sequestered carbon fluctuate daily with no minimum guarantee.

The program is in its infancy. Presently there are very few certified forests in Tennessee eligible to participate, and even fewer aggregators capable of marketing carbon. **Participants should seek full disclosure of all potential benefits and risks prior to enrolling.**

Dr. David Mercker

Extension Forester

1 Includes 1) a Certified Forester through the Society of American Foresters, 2) a State Registered Forester, or 3) a member of the Association of Consulting Foresters.

Wood Pellets: A Clean and Convenient Form of Firewood

With the growing interest in biomass, people are increasingly looking to wood products as alternative fuels. While the conversion of wood and other cellulosic materials to ethanol or bio-oil offers exciting possibilities for producing liquid fuels and other products, simply burning wood can be a cost-effective, technologically-feasible and environmentally-friendly fuel option. Wood pellets offer an additional clean and convenient way to heat with wood.

Burning wood for heating and cooking is as old as human civilization and even today consumes more than half the wood harvested worldwide. Burning wood for fuel to power lumber-drying kilns and pulp and paper plants is also the biggest source of renewable energy in the United States. Wood is less costly as a fuel than most other sources of energy (with the exception of coal), and the technology to burn wood cleanly in factories and homes is well developed. Burning wood is also “green” because it is an abundant and renewable resource that is “carbon neutral” in terms of its contribution to greenhouse gas emissions.

Burning wood to heat one’s home has all of the potential benefits of burning wood at an industrial scale, with the added advantage of the pleasure associated with watching a cozy fire. However, burning firewood to heat your home is less convenient than simply flipping the switch on a gas- or electric-powered furnace. This is

where wood pellets can fit in as a more convenient form of firewood.

Wood pellets are made from sawdust and ground wood that is compressed under heat and pressure. No glue is required; the lignin in the wood binds the particles together. Pellets are made from clean and dry wood processing residues such as the off-cuts from wood flooring manufacture. Because pellets are small and dry they burn very well with little ash or smoke. Pellets are also very easy and clean to handle. Pellets are usually packaged in 40-pound bags and pellet stoves are equipped with hoppers and thermostatically-controlled feed-screws. Simply dump a bag or two into the hopper and the rest is taken care of!

Wood fuel pellets are common in the northeast US, where burning wood to heat homes is more well-established. However, there has been a big increase in fuel pellet production in the US and Europe recently, as countries in Europe search for ways to reduce their consumption of fossil fuels. New pellet plants are also being installed here in the southeast, including in Tennessee where we have many hardwood flooring plants that produce an ideal raw material for pellet products.

Burning firewood has many advantages. Wood pellets made in Tennessee offer a more convenient form of excellent wood fuel.

For more information, contact Adam Taylor at 865-946-1125 or AdamTaylor@utk.edu

Check Out www.forestandrange.org for Educational Information about Natural Resources

The University of Tennessee now hosts the National Learning Center for Private Forest and Range Landowners, an interactive and online educational resource for private landowners. Located at www.forestandrange.org, the natural resource education information is based on learning and understanding different natural resource principles, not just information retrieval. The learning modules are all developed by natural resource professionals and are peer-reviewed for both technical and educational content.

The learning center utilizes interactive technology via web-based resources to provide a learning environment for users to gain knowledge about natural resource management. The Web site also provides resources for educators to increase their teaching capacity (refer to Extension agent resources section of module). The Web

site is divided into three subject area learning options: forestry, wildlife and rangeland. Learning modules are located within each of the subject areas. A few of the forestry modules include Timber Sales and Contracts for the Savvy Landowner; Making Estate Planning More Accessible for Forest Landowners; Visual Guide to Timber Harvesting; Sustainable Forestry for Bioenergy and Bio-based Products; The How, When, and Why of Forest Farming; The Story of the Forest: Forest Connections...A Family Economic Issue; Economagic; and Wetlands Management, just to name a few. Learning modules on wildlife and rangeland are also available at the Web site.

The learning center is funded by the USDA Cooperative State Research, Extension and Education Service.

Check out the Web site at www.forestandrange.org to learn more about natural resource management through thorough education modules in an interactive and self-paced manner. We also seek your comments on how we may improve the content and navigability of the Web site.

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Sign up to receive "Timely Tips" as an e-mail.
Contact Mirian at mwright@utk.edu.



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Natural Resources Timely Tips — Landowners

From:

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