

Breaking Through the Food Plot Mentality

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Abstract: Landowners and other wildlife enthusiasts often desire instant gratification when attempting to attract wildlife to their properties. Advertisements distributed by television programs, outdoor publications, and conservation organizations have played a large part in creating the desire for a quick and easy fix. Landowners are erroneously led to believe food plots or plantings of non-native shrubs and trees will raise the carrying capacity for target wildlife species, even though the typical privately-held property contains overstocked, high-graded timber, intensively maintained croplands, mowed roadsides and drainage ditches, fire-suppressed woodlands, and pastures vegetated with non-native grasses that provide no cover and poor-quality forage. In North Carolina, state agency biologists and county Extension agents receive more requests for information about food plots than they do for information about prescribed burning or timber harvest. Although wildlife professionals now realize the importance of holistic forms of habitat management (e.g., prescribed burning, creation of fallow habitats, establishment of native warm-season grasses), the food plot mentality persists. We suggest Extension wildlife specialists can help break through the food plot mentality by stressing native plant management and managing native plant communities, conducting research on food plots, not cost-sharing food plots, creating demonstrations of holistic management, preaching the limiting factor, training natural resource professionals that work directly with landowners, and acknowledging landowners that practice holistic management.

Key Words: food plots, invasive plants, management, native plant communities, prescribed fire, timber harvest

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Origins of the Food Plot Mentality

Aldo Leopold (1933) first introduced the “food patch” in *Game Management*. He also wrote about and promoted other fine-scale practices such as provision of odd corners, windbreaks, and field borders (Leopold 1933). In 1934, Leopold described the efforts taken to create food patches and feeding stations on the Riley Game Cooperative (Leopold 1999). In the decades following Leopold’s writing, habitat managers promoted fine-scale practices, but landscape-level habitat issues were not a priority (Williams et al. 2004). In the mid- and late 1900s, government programs fostered a “quick fix” mentality regarding issues of wildlife habitat management. State wildlife agencies distributed bags of food plot seed and federal agencies, especially the Soil Conservation Service, recommended plantings of non-native species, including sericea (*Lespedeza cuneata*) and bicolor lespedeza (*L. bicolor*), sawtooth oak (*Quercus acutissima*), autumn olive (*Eleagnus umbellata*), and multiflora rose (*Rosa multiflora*). Landowners directly or indirectly were given the impression that plantings would yield instant increases in wildlife abundance. Seeds and plants were distributed in a shotgun approach with little consideration for native species, management of natural vegetation, or landscape-level wildlife management.

The Food Mentality Today

In the 21st century, the focus on fine-scale practices and the desire for instant gratification when managing wildlife habitats persist. The leading question in the minds of most landowners is “What should I plant for wildlife?” We suggest these landowner attitudes (hereafter referred to as the food plot mentality) formed because of the way wildlife professionals and government agencies treated wildlife management on private and public lands during the 20th century. In addition, the agrarian heritage of many landowners likely contributes to their predisposition towards the advantages of farming for wildlife. Finally, the food plot mentality stems from the onslaught of advertisements by seed companies, hunting programs on television,

outdoor publications, forestry and wildlife consultants, and conservation organizations. These advertisements are aimed at consumer dollars and often are unfounded, misleading, and inaccurate.

Today, the typical privately-owned property contains overstocked, high-graded timber with poor development of the shrub and herbaceous plant layers. Crop fields are intensively maintained with herbicides and insecticides, and improved technology has reduced waste grain. Grasses and forbs along roadsides, drainage ditches, and building perimeters are mowed frequently, destroying nests, young, and associated habitat. Pastures and hayfields vegetated with non-native grasses are ubiquitous. Forests and fields are fire-suppressed and harbor low plant diversity. As dismal as this may seem, many of these properties, especially those owned by wildlife enthusiasts, contain a food plot and/or rows of planted non-native shrubs and trees, such as autumn olive and sawtooth oak.

The Food Plot Mentality in North Carolina

In 2005, a graduate student at North Carolina State University (NCSU), with guidance from wildlife faculty, surveyed Cooperative Extension agents and state agency biologists from all regions of North Carolina. The survey was sent to all Extension agents with responsibility for wildlife programming and to all wildlife management biologists (excluding biologists with the faunal diversity program) employed by the North Carolina Wildlife Resources Commission (NCWRC). Survey participants were asked about their job responsibilities, their working relationship with private landowners, the topics constituents most frequently ask about, and the types of educational programming they conduct (relevant only to Extension agents).

When asked which topics they very frequently received requests for information (Table 1), 18 NCWRC biologists listed game management (82%), food plot management (59%), and nuisance wildlife (53%) above timber management (22%) and prescribed fire (12%). Extension agents were asked the same question, and the 47 respondents answered nuisance wildlife (47%), farm pond management (27%), backyard management (13%), and food plot management (7%) (Table 2). No Extension agent answered they very frequently received requests for information about timber management or prescribed fire, and 23% and 40% had never been asked about timber management or prescribed fire, respectively (Table 2). However, similar percentages of Extension agents conducted programming on food plots (33%), timber management (33%), and prescribed burning (21%). Comparable programming efforts relative to the requests for information on the same topics likely are influenced by the types of programs offered by Extension specialists in North Carolina (i.e., many programs on timber management and limited programming on food plots).

Table 1. Percent (%) of North Carolina Wildlife Resources Commission biologists that received questions about wildlife-related topics (2005).

Topic	Very Frequently	Frequently	Rarely	Never	Unknown	Number Responding
Game Species Management	82	18	0	0	0	17
Food Plot Management	59	41	0	0	0	17
Nuisance Wildlife	53	29	18	0	0	17
Timber Management for Wildlife	22	50	28	0	0	18
Wildlife Diseases	18	41	35	6	0	17
Prescribed Burning	12	47	41	0	0	17
Backyard Wildlife	12	29	59	0	0	17
Hunting Regulations	6	59	35	0	0	17
Invasive Exotic Plants	6	18	71	0	0	17
Nongame Species Management	6	41	47	6	0	17
Threatened and Endangered Species	0	25	69	0	6	16
Farm Pond Management	0	24	53	24	0	17
Hunt Leases	0	29	53	18	0	17
Other	0	25	25	0	50	4

Table 2. Percent (%) of North Carolina Cooperative Extension Agents that received questions about wildlife-related topics (2005).

Topic	Very Frequently	Frequently	Rarely	Never	Unknown	Number Responding
Game Species Management	2	23	47	28	0	43
Food Plot Management	7	39	48	7	0	44
Nuisance Wildlife	47	44	9	0	0	45
Timber Management for Wildlife	0	36	41	23	0	44
Wildlife Diseases	0	2	51	47	0	43
Prescribed Burning	0	16	44	40	0	43
Backyard Wildlife	13	47	38	2	0	45
Hunting Regulations	2	10	43	45	0	42
Invasive Exotic Plants	2	23	49	26	0	43
Nongame Species Management	0	14	51	35	0	43
Threatened and Endangered Species	0	7	47	47	0	43
Farm Pond Management	27	51	13	4	4	45
Hunt Leases	0	12	52	36	0	42
Other	0	15	46	8	31	13

What Biologists Know Now

Though most landowners still equate food plot management with wildlife management, biologists now realize the importance of scale, the limiting factor, and native vegetation. First, successful conservation of many wildlife species requires habitat management at very large scales. For example, research has demonstrated that fine-level practices, such as food plots, fail to sustain northern bobwhite (*Colinus virginianus*) populations; instead, usable space must be created or maintained on broader scales (Guthery 1997, Roseberry and Sudkamp 1998, Williams et al. 2004). Second, food usually is not the limiting factor for populations of game and non-game wildlife. Cover, not food, is almost always the limiting factor for many species, including northern bobwhite. Lastly, a successful wildlife management program must treat food plots as a relatively small component of a comprehensive habitat management plan that includes other practices, such as timber harvests, prescribed burning, and rotational disking. Bolen and Robinson (1999) summarized the role of food plots when they wrote:

“Food patches may increase the availability of nutritious food for herbivores, provided that the size, distribution, and choice of crop are appropriate for local conditions and for the food habits of wildlife present in the area.”

How to Break Through the Food Plot Mentality

While we recognize the usefulness and effectiveness of food plots to provide additional high-quality foods where needed to meet landowner objectives, we believe Extension wildlife specialists have an obligation to de-emphasize food plots and other quick-fix practices (e.g., supplemental feeding, planting invasive non-native shrubs and trees) and promote more holistic forms of habitat management. We propose a variety of strategies to help break the food plot mentality:

- **Stress native plant management instead of food plots** – If landowners hear reference to prescribed fire, for example, more than they hear mention of food plots, they might shift their attitudes about the role of food plots in wildlife habitat management. Some discussion of food plots, however, is necessary to ensure landowners receive accurate information and do not maintain unrealistic expectations.
- **Conduct research on food plots and “natural” alternatives** – Research that clarifies the cost-benefit comparisons of food plots and other forms of wildlife habitat management (e.g., prescribed fire, timber harvests, rotational disking) can help define a clearer and more accurate message to landowners.
- **Preach the limiting factor** – Landowners must learn to identify limiting factors and realize food is often not the main factor limiting wildlife populations. When food is not the limiting factor, efforts to increase wildlife abundance using food supplementation will fail. We recommend Extension programs explain

the role cover plays in the life history of wildlife species and provide information on the land management practices that create or maintain ideal cover.

- **Don't cost share food plots** – Funds from state and federal cost-share programs should not be used to support food plot development. Cost-share funding should promote and provide incentive for landowners to practice more holistic land management activities that are much needed, but not readily accepted or implemented on a widespread basis, such as prescribed burning, pre-commercial thinning of timber, and native warm-season grass establishment. The point is, the majority of landowners interested in wildlife are already planting food plots and will continue to do so whether subsidized by tax dollars or not.
- **Demonstrate alternatives** – Most landowners have the food plot mentality because food plots are what they hear and see. Developing demonstration areas that highlight alternative wildlife management practices, especially on private lands, can convince landowners to change their attitudes.
- **Train the trainers** – Efforts to break through the food plot mentality will be futile if they are undermined as other natural resource professionals, including state agency foresters, Natural Resources Conservation Service field staff, and consultants, continue to recommend quick fixes. Extension wildlife programs can be exponentially more successful if the people working most closely with private landowners are well-informed about sound, holistic management practices and understand the role food plots should play in habitat management.
- **Recognize landowners that practice holistic management** – Landowners that have done no more than establish food plots and non-native species such as sawtooth oak and autumn olive should not be given special recognition as land stewards. Instead, praise and acknowledgement should be reserved for landowners that have worked to enhance and conserve native plant communities and the associated wildlife populations.

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