



Improving Deer Forage

Food Plots vs. Managed Understory

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Food plot benefits in pine plantations are overrated. While food plots serve a purpose, they are best used as a supplemental — not primary — food source.

Many forest landowners and avid deer hunters are surprised to learn this, because plots have become the standard approach throughout the Southeast to boost deer nutrition and increase harvest by attracting animals to a location. However, the per-pound cost of protein grown by managing pine understory with selective herbicides and prescribed fire is about one-third that of managing food plots.

In addition, the average food plot is not nearly as effective as hunters would like. Here are three reasons why:

- **Tough to establish.** Deer need nutritional supplementation most during summer, but heat and dryness may limit production. Drought years, in particular, have a crippling effect on food plot establishment.
- **Limited acreage.** Many hunters in the Southeast hunt on leased property. Most landowners limit the amount of acreage available for food plots because they rely on crop trees as a primary source of income and don't want to give up the land.
- **Too many deer.** Without careful management, an overpopulation of deer can ravage food plots, annihilating them before they can properly establish.

The most effective and cost-efficient way to improve deer forage in pine forests is to encourage the growth of natural forage under the canopy.

The best technique is the combined use of low-volume herbicides, such as **Arsenal® herbicide Applicators Concentrate** (Arsenal AC) and prescribed fire.

A fall application of Arsenal AC followed by a late winter or early spring prescribed burn can significantly increase the growth of highly desirable and



Food plot protein forage costs three times as much per pound compared to that managed in the pine understory.





Combining Arsenal AC and prescribed burning creates an abundant food source for deer.

Although this technique doesn't produce as many pounds of forage per acre as a food plot, it's less expensive per pound and still produces a lot of high-quality food for deer. I call this a "natural" food plot.

nutritious forbs, which deer love to eat.

Arsenal® herbicide Applicators Concentrate (Arsenal AC) does a great job eliminating mid-story hardwoods that block sunlight from reaching the ground. Hardwoods not only shade out forbs and legumes, but out-compete them for water and nutrients.

Prescribed fire helps remove the "duff layer," which includes pine needles. This prepares the soil so it's easier for seeds to germinate. The germination rate of many seeds — including several varieties of legumes — increases after a fire.

Together, Arsenal AC and prescribed fire lead to an abundance of desirable, nutritious, protein-laden foods that attract deer.

When forestland is managed in its entirety as a natural food plot, more can be gained.

For example, devoting 10 acres of a 1,000-acre tree farm to food plots might produce about 30,000 pounds

(3,000 pounds per acre) of good deer forage in the summer. But, if managed correctly, the remaining 990 acres of pine forest can each produce about 1,000 pounds of forage food per acre. That's an extra 990,000 pounds of forage.

When looking at the per-pound cost of protein, and adding in that understory herbicides and prescribed fire allow crop trees to be grown at the same time, it's a no-brainer.



About Steve Demarais, Ph.D.

At Mississippi State University, Steve Demarais studies the impact of land management decisions on wildlife. Specifically, he focuses on the ecology and management of white-tailed deer populations. He has authored and co-authored dozens of publications and won the Wildlife Society's "Best Edited Book Award" for *Ecology and Management of Large Mammals in North America*.