

# Grasses and Forbs for Spring/Summer Wildlife Food Plots

Rebecca McPeake  
Professor - Extension  
Wildlife Specialist

Many wildlife species rely on plants for food and cover. Ecologically, plants are the cornerstone of food chains. Herbivores such as white-tailed deer and cottontail rabbits depend on plants for sustenance. Bobwhites, turkey and songbirds rely on plants for food, shelter and attracting insects. Different parts of plants are consumed seasonally – leaves, stems, seeds, buds, berries or flowers. Trees, shrubs and native grasses afford cover when wildlife are resting, nesting, brooding young, escaping from predators and surviving cold winter temperatures. Some plants are especially good at attracting insects which wild turkey, songbirds and bobwhite chicks consume during critical life stages (Figure 1).



**Figure 1. Cowpeas provide palatable forage for deer and wild turkey and attract insects for bobwhite and turkey chicks.**

The key to providing wildlife habitat is establishing a diversity of plants which provide year-round nutrition and cover for wildlife survival. Wildlife are adapted particularly to native plants that meet many of their habitat needs. Enhancing beneficial native plants is an essential part of any habitat plan. Native forbs and

grasses can be established through creating disturbance, such as disking, prescribed fire and thinning trees. Timing is everything. Exactly when these disturbances occur and the types of plant species present in the seedbed result in different plant responses.

Landowners who are willing to experiment can gain understanding about native plant responses to these practices on their property. Those who lease land may be restricted from using practices that enhance native species, such as hunting clubs leasing industrial or commercial forest lands. In these instances, planting grasses and forbs provides patches of habitat that provide diversity and attract wildlife.

By cultivating particular plant types and seeding in strategic locations, viewing opportunities are improved. Hunters can draw wildlife into openings for selective harvesting. Others may plant near homes or cabins to enjoy seeing songbirds and butterflies or hearing bobwhites whistling in the countryside.

The following table (Table 1) lists grasses and forbs preferred by wildlife with planting information for Arkansas in the spring and summer. (For fall and winter plantings, see FSA9096, *Grasses and Forbs for Fall/Winter Wildlife Food Plots.*) Note that some plants may not survive in extreme northern- or southern-most locations of the state. Nor is this list meant to be exhaustive or exclusive of other adapted cultivars. Check with your local county Extension office before purchasing seed to be sure the climate and soil conditions are appropriate for your selected plant species.

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**Table 1. Grasses and forbs suitable for wildlife food plots.**

| Seed type<br>(other names)<br>'varieties'   | Plant type  | Planting date(s)  | Seeding rate<br>(lbs per acre)<br>(PLS=pure live seed)  | Planting<br>depth<br>(inches) | Wildlife species  |
|---|---|---|---|-------------------------------|---|
| Alfalfa<br>'Alfagraze'<br>'Amerigraze 401+Z'  | Introduced<br>Perennial<br>Cool season<br>Legume  | North Arkansas<br>March 15-April 15<br><br>South Arkansas<br>March 1-April 15 | 15-20 broadcast<br><br>10-15 drilled<br><br>Inoculate seeds                                   | ¼"                            | Cottontail rabbit<br>White-tailed deer<br>Wild turkey   |
| Alyceclover<br>(Alyce Clover)<br><br>Note: Not a true clover  | Introduced<br>Annual<br>Warm season<br>Legume     | South Arkansas<br>May-June 15<br><br>Drought prone                            | 15-20 broadcast<br>16 drilled<br><br>Inoculate seeds  | ¼"-½"                         | Cottontail rabbit<br>White-tailed deer<br>Wild turkey   |
| American Jointvetch<br>(Aeschynomene)   | Introduced<br>Annual<br>Warm season<br>Legume     | April 15-July 4   | 15-20 hulled seed<br>20-25 unhulled<br><br>Inoculate seeds                                    | ½"-1"                         | White-tailed deer   |
| Beggarweed  | Native<br>Annual<br>Warm season<br>Legume         | March-June<br><br>Matures in 150 days   | 10-15 hulled seed   | Leave<br>uncovered            | Bobwhite quail<br>Songbirds   |
| Bluestem, Big<br>'Earle'<br>'Kaw'<br>'Roundtree'  | Native<br>Perennial<br>Warm season<br>Grass       | Dec. 15-April 10  | 5 -10 PLS drilled   | ¼"-½"                         | Bobwhite quail<br>Songbirds<br>White-tailed deer<br>Wild turkey   |
| Bluestem, Little<br>'Aldous'<br>'Cimmaron'  | Native<br>Perennial<br>Warm season<br>Grass       | North Arkansas<br>Dec. 1-April 20   | 5-10 PLS drilled  | ¼"-½"                         | Bobwhite quail<br>Songbirds<br>White-tailed deer<br>Wild turkey   |
| Browntop Millet   | Introduced<br>Annual<br>Warm season<br>Grass      | April-Aug.<br><br>Matures 60-80 days  | 20-40 broadcast<br>8-15 lbs in 2½-<br>to 3½-foot rows   | ⅛"-½"                         | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Waterfowl<br>White-tailed deer<br>Wild turkey               |
| Buckwheat<br>'Common gray'<br>'Japanese'<br>'Mancan'<br>'Manor'<br>'Royal'<br>'Silverhull'<br>'Tokyo' | Introduced<br>Annual<br>Cool season<br>Grass      | April 1-July 20<br><br>Matures 70-80 days                                     | 30-50 drilled<br><br>60 broadcast   | < 2"                          | Bobwhite quail<br>Mourning doves<br>Songbirds<br>Squirrels<br>Waterfowl<br>Wild turkey<br>White-tailed deer |
| Catjang Pea<br>(Oklahoma game bird<br>pea)<br>(Cajan pea)<br>(Pigeon pea)                             | Introduced<br>Annual<br>Warm season<br>Legume     | April-July (June)   | 10-30<br><br>Inoculate seed   | ½"                            | Bobwhite quail<br>Mourning dove   |
| Chickory, Forage<br><br>CAUTION: Can become<br>an invasive weed.                                      | Introduced<br>Perennial<br>Warm season<br>Forb    | Aug. 15-Oct. 15   | 5-6   | ¼"-½"                         | White-tailed deer   |
| Chufa<br>(Nutgrass)<br><br>CAUTION: Yellow<br>nutgrass can become<br>an invasive weed.                | Native<br>Annual<br>Warm season<br>Sedge          | April 1-July 1<br><br>Matures 100-120<br>days<br><br>Grows best alone         | 15-30 in rows 2-3<br>feet apart<br><br>30-50 broadcast<br><br>Recommended plots ><br>1/4 acre | 1"-1½"                        | Feral hogs<br>Raccoon<br>Songbirds<br>Squirrels<br>Waterfowl<br>Wild turkey<br>White-tailed deer            |
| Coreopsis<br>'Lanceleaf'<br>'Plains'  | Native<br>Perennial<br>Warm season<br>Forb (herb) | July -Sept.   | 5-7 broadcast or<br>shallowly drill   | Surface<br>to ⅛"              | Songbirds<br>White-tailed deer  |

**Table 1. Grasses and forbs suitable for wildlife food plots. (cont.)**

| Seed type<br>(other names)<br>'varieties'   | Plant type   | Planting date(s)   | Seeding rate<br>(lbs per acre)<br>(PLS=pure live seed)     | Planting<br>depth<br>(inches) | Wildlife species  |
|---|--|--|--|-------------------------------|---|
| Corn<br><br>CAUTION: A fungus<br>fungus called aflatoxin<br>can form on corn and<br>potentially cause illness<br>or death of wildlife.                        | Introduced<br>Annual<br>Warm season<br>Grain           | April-May  | 10-15 drilled in rows<br>36 to 40 inches apart             | 1"-1½"                        | Black bear<br>Bobwhite quail<br>Cottontail rabbit<br>Mourning dove<br>Songbirds<br>Squirrels<br>Waterfowl<br>White-tailed deer<br>Wild turkey |
| Corn, Quail<br><br>Note: small kernel,<br>developed to be less<br>susceptible to aflatoxin  | Introduced<br>Annual<br>Warm season<br>Grain           | April-May  | 10-15 drilled in rows                                      | 1"-3"                         | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Waterfowl   |
| Corn, Dwarf Extra Early   | Introduced<br>Annual<br>Warm season<br>Grain           | March-July<br><br>Matures in 65 days                       | 10-15 drilled in rows                                      | 1"-3"                         | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Waterfowl   |
| Cowpeas<br>(southern peas)<br>(blackeye peas)<br>(crowder peas)<br>'Clay'<br>'Calhoun'<br>'Chinese Red'<br>'Iron'<br>'Red Ripper'<br>'Combine' or 'reseeding' | Introduced<br>Annual<br>Warm season<br>Legume          | May 15-July 1  | 60-90 broadcast<br><br>30-80 drilled<br><br>Inoculate seed | 1"-2"                         | Bobwhite quail<br>Mourning dove<br>Songbird<br>White-tailed deer<br>Wild turkey   |
| Crownvetch<br>'Emerald'<br>'Penngift'<br><br>CAUTION: Can be<br>invasive.   | Introduced<br>Perennial<br>Cool season<br>Legume       | April-Sept.  | 5-15<br><br>Inoculate seed                                 | ½"                            | Bobwhite quail<br>Mourning dove<br>White-tailed deer  |
| Deertongue Grass<br>'Tioga'   | Native<br>Perennial<br>Warm season<br>Grass            | April -June  | 12-15 drilled<br><br>20 broadcast                          | ½"                            | Bobwhite quail<br>Songbirds<br>White-tailed deer<br>Wild turkey   |
| Egyptian Wheat<br>(Shallu)<br>(Chicken corn)  | Introduced<br>Annual<br>Warm season<br>Grass           | April-July<br><br>Matures in 90-110<br>days                | 10-20 broadcast<br>4-6 drilled                             | ¾"-1"                         | Bobwhite quail<br>Mourning dove<br>Wild turkey<br>(Not prone to<br>damage by<br>blackbirds)   |
| Foxtail Millet<br>(German millet)   | Introduced<br>Annual<br>Warm season<br>Grass           | May-July<br><br>Matures in 60-70<br>days                   | 20-30 broadcast<br>15-20 drilled                           | ¼"                            | Bobwhite quail<br>Songbirds<br>Wild turkey  |
| Illinois Bundleflower   | Native<br>Perennial<br>Warm season<br>Forb             | April-July   | 10-12  | ¼" -¾"                        | White-tailed deer   |
| Indiangrass<br>'Cheyenne'<br>'Osage'<br>'Rumsey'  | Native<br>Perennial<br>Warm season<br>Grass            | April-May  | 6-10 PLS drilled   | ¼"                            | Bobwhite quail<br>Cottontail rabbit<br>Songbirds<br>White-tailed deer<br>Wild turkey  |
| Japanese Millet<br>(Wild Jap)<br>(Duck Millet)  | Introduced<br>Reseeding annual<br>Warm season<br>Grass | July-Aug.<br><br>Matures in 60-90<br>days                  | 25-40 broadcast<br>15-20 drilled                           | ¼"-½"                         | Bobwhite quail<br>Mourning dove<br>Waterfowl<br>White-tailed deer   |
| Kale  | Introduced<br>Annual<br>Cool season<br>Brassica        | April 1-May 15<br><br>Maximum production<br>in 90-150 days | 3.5-4 broadcast  | ¼"-½"                         | White-tailed deer   |

**Table 1. Grasses and forbs suitable for wildlife food plots. (cont.)**

| Seed type<br>(other names)<br>'varieties'   | Plant type   | Planting date(s)  | Seeding rate<br>(lbs per acre)<br>(PLS=pure live seed)   | Planting<br>depth<br>(inches) | Wildlife species  |
|---|--|---|--|-------------------------------|---|
| Lablab<br>(Lab Lab)<br>(Hyacinth bean)  | Introduced<br>Annual<br>Warm season<br>Legume          | March-July<br><br>Drought tolerant  | 15-20 broadcast<br><br>10 if in rows with<br>36-inch spacing<br><br>Inoculate seeds                  | 1"-1½"                        | White-tailed deer   |
| Flat Pea<br>'Lathco'  | Introduced<br>Perennial<br>Legume                      | April<br><br>Needs 2 years to<br>establish; plant with<br>small grains or grasses | 25   | ½"                            | Bobwhite quail  |
| Lespedeza<br>'Kobe'<br>'Common'<br>'Korean'<br>'Marion'                                       | Introduced<br>Reseeding annuals<br>Warm season<br>Forb | South 2/3 of Arkansas<br>March-May  | 15-30 common,<br>Kobe or Korean<br>Inoculation not<br>necessary but may<br>improve germination       | ¼"                            | Bobwhites<br>White-tailed deer  |
| Matua<br>(Bromegrass)<br>(Rescuegrass)<br>CAUTION: Can be<br>invasive.                        | Introduced<br>Annual<br>Cool season<br>Forb            | March 15-April 15   | 20-30 broadcast  | ¼"                            | Bobwhite quail<br>Cottontail rabbit<br>Mourning dove<br>Songbirds<br>Waterfowl<br>Wild turkey                                       |
| Oats<br>'Bob'<br>'Buckoats'<br>'Ozark'  | Introduced<br>Annual<br>Cool season<br>Grass           | South Arkansas<br>Feb 15-March<br><br>Cold sensitive<br>Drought prone             | 90-120 broadcast   | 1"-1½"                        | Bobwhite quail<br>Cottontail rabbit<br>Mourning dove<br>Songbirds<br>Tree squirrel<br>Waterfowl<br>Wild turkey<br>White-tailed deer |
| Orchardgrass<br>'Benchmark'<br>'Hallmark'   | Introduced<br>Perennial<br>Cool season<br>Grass        | Mar 1-April 15  | 15-20 broadcast<br><br>12-15 drilled, preferably<br>with a legume                                    | ¼"-½"                         | Cottontail rabbit<br>Songbirds<br>White-tailed deer<br>Wild turkey  |
| Partridge Pea   | Native<br>Reseeding annual<br>Warm season<br>Legume    | Feb.-April 15<br><br>Germinate slowly, over<br>100 days<br><br>Mature in 110 days | 10-20 broadcast<br>5-10 lbs in 36-inch<br>rows<br>10-15 with cyclone<br>seeder<br><br>Inoculate seed | ¼"-½"                         | Bobwhite quail<br>Mourning dove<br>Songbirds<br>White-tailed deer<br>Wild turkey  |
| Pearl Millet<br>(Cattail)<br>'TifGrain 102'<br><br>Note: Select grain-<br>producing variety   | Introduced<br>Annual<br>Warm season<br>Grass           | May 1-July 1  | 25-30 broadcast<br>4-10 drilled  | ½"-¾"                         | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Wild turkey<br>White-tailed deer  |
| Proso Millet<br>(Dove proso millet)   | Introduced<br>Annual<br>Warm season<br>Grass           | April-Aug.<br><br>Matures in<br>65-70 days  | 25-40 broadcast<br>20-35 drilled<br>8-10 lbs in 2½- to<br>3½-foot rows                               | ¼"-½"                         | Bobwhite quail<br>Morning dove<br>Songbirds<br>Waterfowl<br>Wild turkey   |
| Rape<br>(Canola)  | Introduced<br>Annual<br>Cool season<br>Brassica        | Feb. 1-May 15   | 25 broadcast<br>4 drilled  | ½"                            | Cottontail rabbit<br>Songbirds<br>White-tailed deer<br>Wild turkey  |
| Rice<br>'Lemont'<br>'Mars'<br>'Labelle'   | Introduced<br>Annual<br>Warm season<br>Grain           | April 1-June<br><br>Matures in 90-100<br>days                                     | 90-100 broadcast<br>or drill<br><br>Difficult to produce<br>where blackbirds are<br>a problem        | ½"-1"                         | Waterfowl   |
| Rye, Cereal<br>(Winter rye)<br>(Grain rye)<br>'Elbon'<br>'Wintergrazer 70'<br>'Wrens Abrussi' | Introduced<br>Annual<br>Cool season<br>Grass           | Feb.-April 1  | 90-120 broadcast   | 1"-1½"                        | Bobwhite quail<br>Cottontail rabbit<br>Songbirds<br>Waterfowl<br>White-tailed deer<br>Wild turkey                                   |

**Table 1. Grasses and forbs suitable for wildlife food plots. (cont.)**

| Seed type<br>(other names)<br>'varieties'   | Plant type                                      | Planting date(s)  | Seeding rate<br>(lbs per acre)<br>(PLS=pure live seed)   | Planting<br>depth<br>(inches)      | Wildlife species  |
|---|---|---|--|------------------------------------|---|
| Sesame<br>(Benne)<br>(Swamp Pea)<br>Shattering:<br>'Margo'<br>'Oro'<br>'Blanco'<br>'Eva'<br>'Dulee'<br>'Ambia'<br>Non-shattering:<br>'Baco'<br>'Delco'<br>'Rio'<br>'Palmetto' | Introduced<br>Annual<br>Warm season<br>Forb     | April 15-May 15<br><br>Matures in 85 days<br>or 120-150 days,<br>depending on variety | 4-6 lbs in 30-inch rows<br><br>2-12 broadcast  | ½"-2"<br><br>Depends<br>on variety | Bobwhite quail<br>Mourning Dove<br>Songbirds  |
| Sorghum<br>'Kafir'<br>'Hafir'<br>'Hagari milo'<br>'Small game food'   | Introduced<br>Annual<br>Warm season<br>Grain    | May 1-June 15   | 16-30 broadcast<br>4-10 lbs in 30- to<br>36-inch rows  | ½"-1"                              | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Waterfowl<br>Wild Turkey<br>White-tailed deer                       |
| Sorghum-Sudangrass Hybrids<br>(Sudex)<br>(Sudex Dekalb)   | Introduced<br>Annual<br>Warm season<br>Grass    | North Arkansas<br>May 15-July 15<br>South Arkansas<br>May 1-July 15                   | 30-35 broadcast<br>20-25 drilled   | 1"-1½"                             | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Wild turkey   |
| Soybean<br>'Laredo'<br>'Quail Haven'  | Introduced<br>Annual<br>Warm season<br>Legume   | April 15-July 1   | 60-75 broadcast<br>30-60 lbs in 30-<br>to 40-inch rows<br><br>Inoculate seeds  | 1"-2"                              | Bobwhite quail<br>Cottontail rabbit<br>Mourning doves<br>Songbirds<br>Squirrels<br>White-tailed deer<br>Wild turkey |
| Sudangrass, Sweet   | Introduced<br>Annual<br>Warm season<br>Grass    | April-Aug.  | 25   | 2"                                 | White-tailed deer<br>Wild turkey  |
| Sunflower, Common<br>(annual sunflower)<br>'Peredovik'  | Native<br>Annual<br>Warm season<br>Forb         | March-July<br><br>Peredovik matures in<br>90-100 days                                 | Varies widely<br>depending on hybrid<br>seed type. Check bag<br>for recommendation.<br><br>Peredovik: 5-6 or 10-15<br>in 28- to 38-inch rows,<br>25-30 broadcast | ¾"-1½"                             | Bobwhite quail<br>Mourning dove<br>Songbirds<br>Squirrels<br>Wild turkey  |
| Sunflower, Maximilian<br>'Aztec'<br>'Prairie Gold'  | Native<br>Perennial<br>Warm season<br>Forb      | Spring (March-May)  | 3 broadcast<br><br>1 in 35-inch rows<br><br>Aztec: ¼-½ broadcast;<br>3 with spacing between<br>seeds   | ⅜"-½"                              | Bobwhite quail<br>Cottontail rabbit<br>Mourning dove<br>Some waterfowl  |
| Swede turnip<br>(Rutabaga)  | Introduced<br>Annual<br>Cool season<br>Brassica | April 1-May 15<br><br>Matures in 150-180<br>days                                      | 1.5-2 broadcast  | ½"                                 | White-tailed deer   |
| Switchgrass<br>'Alamo'<br>'Blackwell'<br>'Cave-in-Rock'<br>'Kanlow'   | Native<br>Perennial<br>Warm season<br>Grass     | Dec. 15-May<br><br>Slow to establish  | 5-8 PLS drilled<br><br>10 PLS-<br>conventional<br>planting   | ¼"                                 | Bobwhite quail<br>Cottontail rabbit<br>Mourning dove<br>Songbirds<br>White-tailed deer<br>Wild turkey               |

**Table 1. Grasses and forbs suitable for wildlife food plots. (cont.)**

| Seed type (other names) 'varieties'                                | Plant type  | Planting date(s) | Seeding rate (lbs per acre) (PLS=pure live seed)                      | Planting depth (inches) | Wildlife species  |
|--|---|------------------|---|-------------------------|---|
| Trailing Soybeans (Wild reseeding soybeans) 'Bobwhite' 'Laredo'    | Introduced<br>Reseeding annual<br>Warm season<br>Legume | April 15-June 1  | 5-8 broadcast or drilled (NRCS)<br>20-25 broadcast<br>30-50 broadcast | 1"-1½"                  | Bobwhite quail<br>Cottontail rabbit<br>Songbirds<br>Groundhogs<br>Wild turkey<br>White-tailed deer                                  |
| Turnips, Seventop<br><br>Note: Select if goal is forage production | Introduced<br>Annual<br>Cool season<br>Brassica         | April 1-May 15   | 1.5-4 broadcast<br><br>1.5-2 drilled                                  | ¼"-½"                   | White-tailed deer   |
| Turnip, Purpletop<br><br>Note: Select if goal is root growth       | Introduced<br>Annual<br>Cool season<br>Brassica         | April 1-May 15   | 1.5-4 broadcast<br><br>1.5-2 drilled                                  | ¼"-½"                   | White-tailed deer   |
| Velvet Bean  | Introduced<br>Annual<br>Warm season                     | March -June      | 12-15<br>10 lbs in 15-inch rows                                       | ½"                      | Bobwhite quail<br>Cottontail rabbit<br>White-tailed deer  |
| Winter Wheat (Forage wheat)  | Introduced<br>Annual<br>Cool season<br>Grass            | Sept. 1-April 1  | 90-120 broadcast<br>60-100 drilled                                    | ½"-1½"                  | Bobwhite quail<br>Cottontail rabbit<br>Mourning dove<br>Songbirds<br>Tree squirrel<br>Waterfowl<br>White-tailed deer<br>Wild turkey |

## Planting Tips

Before planting, be sure to conduct a soil test to determine nutrient needs. Prepare a good seedbed where seeds will contact the soil and germinate (Figure 2). Following are additional planting tips:

- **Legumes.** Apply the appropriate inoculant to legumes before planting. An inoculant contains microorganisms which are applied to the seed to improve growth. Inoculants vary, as certain legume species require a particular micro-organism. Make sure the inoculant matches the plant type. Store in a cool location to avoid killing microorganisms, and discard inoculant past the expiration date.



**Figure 2. After broadcasting seed, a roller firms the soil around the seeds, ensuring shallow seed placement and seed-to-soil contact.**

- **Native warm-season grasses.** The seed of native warm-season grasses is measured as pure live seed (PLS), a term used to describe the viability and purity of native prairie seed. PLS is calculated as  $PLS = (\text{lbs seed}) \times (\% \text{ germination} + \% \text{ dormant seed}) \times \% \text{ purity}$ . Warm-season grass species can be planted in the winter; however, they won't emerge until the soil warms up in April, by which time existing species like tall fescue, downy brome (also called cheatgrass) and little barley may crowd them out. Check with your local county Extension agent for details about soil testing and plant establishment.
- **Avoid invasive plant species.** Invasive species increase across the landscape and reduce plant diversity, which degrades wildlife habitat. Invasive, non-native grasses and forbs found in Arkansas include bamboos, giant reed, tall fescue, Nepalese browntop, garlic mustard, Vasey's grass and johnsongrass. Two lespedeza species, shrubby lespedeza and Chinese lespedeza, at one time were recommended for bobwhites but now are considered invasive. Even native plants can be invasive, such as reed canarygrass, a warm-season perennial which is recommended for waterfowl or deer.
- **Extending the life of your food plot.** Some agricultural practices can help extend your food plot and continue producing wildlife benefits. For example, wheat can benefit from planned applications of nitrogen during certain growth stages. Periodic liming of pastures can be critical for maintaining clover. These agricultural "tricks of the trade" gleaned from production agriculture can

result in more habitat availability for wildlife with relatively little effort, while maximizing your initial investment in the food plot. Ask your local county agent for assistance with extending the life of your food plot.

## Common Errors

A carefully planned and properly established food plot can yield a good crop for wildlife (Figure 3). Here are some common mistakes made when establishing food plots:

- **More is better.** Exceeding the seeding, lime or fertilizer recommendation is a waste of both time and money and may negatively affect the crop. Recommendations for seeding and nutrient application have been researched and should not be exceeded.
- **Not fertilizing.** Most crops need applications of fertilizer to help them grow and achieve maximum productivity. Don't assume your soil doesn't need fertilizer. Soil test – don't guess.
- **Using old seed.** Seed that is old may not have been properly stored and handled. Make certain to use new, high-quality seed in your food plot.
- **Planting agricultural seeds in shaded areas.** Plants grown for agricultural purposes require sunlight for energy and growth. Avoid placing these seeds in shaded areas such as woods. Instead allow brushy growth in these areas, or consider seeding native plant species that are adaptable to shade.
- **Not planting enough acres.** Food plots need to be large enough that they aren't grazed down too early in the season and small enough that wildlife can flee to protective covering. As a rule of thumb, food plots should be from 1 to 3 acres and an irregular shape with brushy edges. Grain food plots should be no less than ¼ acre.

**Figure 3. Ten Steps for Establishing a Food Plot**

1. Select the best sites for food plots with consideration to its size and shape.
2. Check soil type, conduct a soil sample, and follow its recommendations.
3. Select plant varieties according to adaptability and soil type.
4. Check on availability of seed and order if necessary.
5. Prepare seedbeds beginning several months before planting.
6. Apply inoculant to legumes before planting.
7. Plant using the recommended rates and dates for wildlife.
8. Install exclosures.
9. Follow maintenance and management requirements to enhance plant growth and sustainability.
10. Check exclosure cages and measure your success.

- **Plant the entire field from fence to fence.** Consider planting grain on only half of the field and leaving the remaining half disked but unplanted. Native plants in the seedbed will furnish food and cover for wildlife and provide an additional measure of plant diversity that wildlife may need in times of feast or famine.
- **Planting too late for maturity.** All crops require a certain number of days to grow and mature. If the plants are planted too late, they will not mature and will fail to provide food to wildlife.
- **Planting midwest or northern seed varieties.** Because of climate differences, many seed varieties suitable for cooler climates are not well-adapted to Arkansas. Use plants that have been proven to grow in Arkansas conditions.

## Measuring Success

Many land managers don't keep records about their food plots. However, these records are very beneficial as you begin experimenting with various plantings, seed mixtures and planting techniques. These records can contain the location and identity of the food plot, types and variety of plants, how the seedbed was prepared, planting dates and seeding rates, information from the soil test, type, rate and timing of fertilization and liming, planting method, maintenance and management of planting, rainfall and temperature during planting and growing season, use by wildlife, cost of establishment and maintenance, wildlife harvest in the vicinity of the food plot and evaluation of the food plot's success.

Sometimes landowners report that seeds didn't germinate or shoots emerged but disappeared. This may happen for many reasons, such as poor soil temperature or soil moisture, inappropriate soil fertility or applying the wrong inoculant or no inoculant at all. However, in some circumstances wildlife may be consuming the new growth, particularly in areas with high deer densities and smaller-sized food plots. To discover how much your food plot is being utilized, install a caged exclosure after planting seed (Figure 4). The cage is simply a small fenced-in area, usually 4 to 5 square feet, that protects plants from



**Figure 4. Setting up a cage can visually demonstrate the value of your food plot for wildlife.**

being eaten by wildlife. A 4- x 6-inch woven-mesh fence can be constructed with fence posts. To protect against rabbits and rodents, a smaller mesh size (e.g., chicken wire) can be added to the bottom half of the fence. The height and density of plants inside the cage can be easily compared to the surrounding food plot. Be sure to measure the height of plants in the center of the fence, as those along the outer edges are accessible to wildlife.

Digital and/or video wildlife cameras, also called game or trail cameras, can be used to visually measure wildlife utilization of food plots (Figure 5). Cameras can be purchased in many sporting goods stores and catalogs, or a homemade version can be constructed. Based on infrared technology, some camera systems detect animals by the heat they emit. Others trigger a picture when an animal crosses a beam of light. An array of camera features is available, such as recording the date and time on the picture. These cameras can be useful tools for evaluating your food plot.



**Figure 5. Wildlife cameras installed at key locations provide visual evidence of wildlife using food plots.**

## Food Plots – The Big Picture

Food plots cannot substitute for sound wildlife and land management. Food plots are one of many tools that can lead to healthier, sustainable wildlife populations. To be effective, food plots need to be used with other practices, such as wildlife harvest strategies, prescribed burning and forest stand improvements, as part of a broader wildlife management plan. In dense deer herd situations, food plots may not even grow well until the deer herd is reduced.

Cultivated food plots may help sustain a wildlife population through careful planning and a large investment in time and financial resources.

Alternatively, encouraging native food plots or rotating natives with cultivated plantings is less expensive and provides a diversity of plantings that improves wildlife survival when other food sources are unavailable.

A food plot's success cannot be measured in a single year. Seasonal variations, an abundance of surrounding native plants, wildlife's lack of familiarity with a new or different planting, improved soil through annual amendments and wildlife population fluctuations can affect utilization of a food plot. Further questions will be generated by sowing different plant types and mixtures, enhancing native plants and testing different planting arrangements. Improving wildlife habitat can evolve into a long-term commitment of trial-and-error experimentation.

Successful land managers are willing to be creative and experiment with native and cultivated food plot designs, keep records of plant successes and assess wildlife use. This may entail sowing plant species that offer delayed nutritional value for critical times of the season when surrounding native plant species are less abundant. Another option is placing electrical fencing around food plots to keep out wildlife until plantings are able to sustain heavy grazing pressure or until nutritional shortages occur. There is no limit to the number of combinations and techniques for establishing and maintaining food plots. Developing a wildlife management plan and keeping records is necessary for understanding what works best for achieving your particular goals in attracting or sustaining wildlife on your land.

For more information about food plots, see FSA9092, *Establishing Wildlife Food Plots*, FSA9096, *Grasses and Forbs for Fall / Winter Wildlife Food Plots*, and FSA3110, *Seeding and Fertilization Rate Conversions for Wildlife Food Plots and Small Areas*. Additional information about establishing plants listed in this fact sheet can be found in FSA2139, *General Traits of Forage Grasses Grown in Arkansas*, and FSA2150, *Sunflowers Grown for Dove Hunting*. Contact a regional private lands biologist with the Arkansas Game and Fish Commission (800-364-4263) for additional information about practices for establishing native plants in your area.

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**DR. REBECCA (BECKY) McPEAKE** is professor - Extension wildlife specialist, Arkansas Forest Resources Center, University of Arkansas Division of Agriculture, Little Rock.

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