



Wildlife Food Plot Budgeting Tool User's Guide

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Introduction

Wildlife food plots are helpful tools for hunters, landowners and wildlife enthusiasts. Food plots can act as both an attractant and high-quality nutritional source for deer, elk, turkey, upland game birds, waterfowl and songbirds. It is important to note that food plots are not always necessary for wildlife success¹. A food plot is unlikely to attract additional animals if the area does not have sufficient cover, water and space¹. When food plots are needed the most, such as during drought, they may not provide much relief since the plot will also struggle to grow (unless the landowner is irrigating).¹ For help matching animals to food plot options, a [wildlife food plot app](#)² is available through Oklahoma State University. Food plots should be planted away from public roads for safety¹. To have a large impact on wildlife management, using good practices like proper grazing, prescribed burning, timber cutting and brush management are the gold standard^{1,3}. Although food plots may make a marginal difference, they are a good way to attract wildlife to an area to improve hunting or viewing opportunities. It is important to carefully consider the type of wildlife you want to attract. For example, if you want to attract waterfowl, consider moist soil management and take special considerations for pesticide and fertilizer restrictions near wetlands. More details are available in [E-1032 A Practical Guide to Food Plots in the Southern Great Plains](#)³ through OSU Extension. The [OSU Food Plot Budgeting Tool](#)⁴ can help hunters and landowners estimate the cost of various food plot crops, including seed, fertilizer, pesticide and machine operation costs.

Opening the Excel File

The budgeting tool is programmed in Microsoft Excel and uses Visual Basic for Applications. When opening the file, users might see a warning that the file includes macros and will then be asked if they want to enable the macros. Select "Enable macros" to fully use the features of the budgeting tool. Alternatively, at the top of your Excel screen, you might see a message "SECURITY WARNING: Macros have been disabled." Select the box "Enable Content" to use the Excel sheet. The program is divided into the components below.

Seed and Seed Cost

The seed section provides a list of commonly used food plot crops and production guide links to select from. In the yellow cells C5-C9, which are titled Seed1-Seed5, double clicking brings up the menu of crops stored in the program's data. Select a crop and then click "Continue" on the Crops list. This places the selected crop in the appropriate cell and provides a link to a production guide in the adjacent cell. Noted: "Other" is an option on the crops list, but the program does not search for a production guide associated with manually entered crops.

You will need to enter the seeding rate and seed costs to compute the per acre seed cost. Seeding rate is in pounds per acre and seed price is in dollars per pound. Up to five different seed types can be selected from a list of 44 default crops. The program then calculates total seed cost in \$/acre.

Fertilizer and Fertilizer Cost

The second section computes fertilizer cost and total amounts of applied nutrient for nitrogen (N), phosphorus (P) and potassium (K). Fertilizers are typically designated by the percentage of these three nutrients. For example, 18-46-0 contains 18% nitrogen, 46% phosphorus and 0% potassium, and 17-17-17 contains 17% of each. A hyperlink is provided to the OSU [Soil, Water and Forage Analytical Laboratory](#).⁵ Users are encouraged to obtain a soil test before fertilizing, planting and applying herbicides. Fertility recommendations help determine economical uses of fertilizers. If using fertilizers and other inputs, it is important to read the application directions and restrictions. This is especially important if you are starting a wetland wildfowl plot. Some plant species are sensitive to soil pH, and fertility recommendations vary among plants species. Also, herbicides can be very sensitive to soil pH. Soil sample test results can help avoid many agronomic and weed control issues. Your county Extension educator can help you in obtaining a soil sample test.

The program allows users to enter up to four fertilizers with different nutrient compositions and lime (used to lower soil pH). Users enter the fertilizer composition, pounds per

acre and the price per pound. The program then computes the cost per acre for fertilizer and lime.

In the orange-colored boxes in row 19, the total amount of active ingredients consisting of nitrogen, phosphorus and potassium are calculated by the program.

Pesticide and Pesticide Cost

The third block allows you to enter up to five separate pesticides. Pesticides include herbicides, insecticides and fungicides⁴. Herbicides control weeds and other unwanted vegetation, insecticides kill or control insects, and fungicides kill or control fungi⁶. Not all weeds will need to be eliminated, as some might serve as food for wildlife. For example, ragweeds are important for gamebirds, and greenbriar is important for deer. Links are provided to [PSS-2750 Guide to Effective Weed Control](#)⁷ and to [OSU Pest Control publications](#)⁸. Users must be aware that only specific herbicides can be used on certain crops. Applying the wrong herbicide can kill off a food plant stand. Furthermore, some herbicides are applied pre-plant, pre-emergence or post-emergence. As with soil testing, Extension educators can be helpful in choosing a pest management plan specific to your site, crops and pest pressures.

Pesticides are entered in ounces per acre, and pesticide prices are entered in dollars per ounce. The program then tallies total pesticide cost per acre.

Mechanical operations and costs

The fourth section allows users to enter various mechanical field operations (tillage, mowing, spraying, planting, fertilizing, etc.). Costs, including labor, fuel and rental rate or cost of operating, are entered per acre, and the number of trips (passes) are entered. The program then computes the total cost of mechanical operations per acre.

Conclusion

In the last section, seed, fertilizer, pesticide and mechanical operation costs are totaled and provided on a per acre basis. In preparation for designing your plot, this tool can be used to evaluate the costs associated with different options. You might find a combination of inputs that meets your needs while decreasing costs. For others, it is important to know the costs associated with your food plot for budgeting purposes or to determine if the additional wildlife is worth the food plot expense.

References

- 1 Sams, Mike (2023). The pros and cons of food plots. Available online: <https://www.wildlifedepartment.com/outdoorok/oj/pros-and-cons-food-plots>
- 2 Arnall, Brian (2023). Wildlife food plots. Available online: <https://extension.okstate.edu/programs/precision-ag-and-soil-fertility/online-tools-and-apps.html>
- 3 Gourley et al. (2018). A Practical Guide to Food Plots in the Southern Great Plains. Available online: <https://extension.okstate.edu/fact-sheets/a-practical-guide-to-food-plots-in-the-southern-great-plains.html>
- 4 OSU Food Plot Budgeting Tool. (n.d.). Excel Link. https://apps.dasnr.okstate.edu/SSSL/54/80/storage/files/ag-economics/9729-Spreadsheet-20735-1-6-20240219.xlsm/at_download/file
- 5 Soil, Water and Forage Analytical Laboratory - Oklahoma State University. (2020, December 4). <https://agriculture.okstate.edu/departments-programs/plant-soil/soil-testing/>
- 6 NIH (2023). Pesticides. Available online: <https://www.niehs.nih.gov/health/topics/agents/pesticides#:~:text=Pesticides%20kill%2C%20repel%2C%20or%20control,are%20commonly%20used%20on%20lawns.>
- 7 Greer, Howard A.L. (2017). Guide to Effective Weed Control. Available online: <https://extension.okstate.edu/fact-sheets/guide-to-effective-weed-control.html>
- 8 Entomology and plant pathology fact sheets - Oklahoma State University. (2020, July 23). <https://agriculture.okstate.edu/departments-programs/entomol-plant-path/research-and-extension/extension-publications/>

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