

## WEB RESOURCES FOR SOYBEAN PRODUCTION INFORMATION

Much new technology has been added to the resources available to soybean producers in the lower Mississippi River Valley. An increasing amount of this new information is available on internet websites. However, finding and/or accessing this information can be a formidable task when you must visit websites of several organizations that may or may not have what you need, and then determine where on each website to find the information you are looking for.

Most websites are uniquely designed; thus, there is no consistent pattern that can be used for searching for the same or similar subjects among websites. This article provides you with URL's (addresses for web pages) of sites (mainly those of university academic and extension departments) that contain production information that has been arbitrarily categorized for this article. However, the included links can be re-categorized and bookmarked for individual use when needed.

For those who may want some instruction on how to use the below information, do this. Click on the colored or highlighted text. You will be sent to the site. Once there, simply bookmark that site into your favorites list under the descriptive title of your choice. Hopefully this will provide you with a valuable shortcut when you need information about a particular subject.

One explanation about these URL's. Web addresses for sites may change over time. The ones shown here are functional at the time of this writing, and will be periodically checked to ensure they continue to be functional. The shown links were updated in Jan. 2016.

If you find a link that does not work, send an email to the address shown below with that information.

Websites other than those shown here may also offer helpful soybean production information. Their exclusion from this article does not imply

their lack of credibility or usefulness. However, the below sites, when taken collectively, offer a comprehensive body of information that covers a broad range of production issues for soybeans in the midsouthern states.

Much of the information in the linked resources was developed with the support of state soybean checkoff monies, and thus provides a return on soybean producers' investment.

Again, I encourage you to bookmark these sites by the listed categories so that you will have quick access to the indicated information.

**Variety trials.** Results from soybean variety trials in [Arkansas](#), [Louisiana](#), [Mississippi](#), [Missouri](#), and [Tennessee](#) can be used for making informed selections. The Missouri site is provided because information from its Southeast region may provide useful information about early-maturing varieties that may not be included in the other states' sites. An [article](#) posted on this website provides important points about using variety trial information from more than one state. I encourage you to go to each of the listed state sites and use their information to give you a more complete picture of how a variety will perform in environments that are similar to those in Mississippi.

Click [here](#) for an MSSOY White Paper that contains links to websites that contain information about traits associated with each linked company's varieties.

**Crop Enterprise Budgets.** Soybean enterprise budgets are an excellent source of up-to-date estimates of costs and returns for various soybean cropping systems. These budgets are usually generated annually; click [here](#) for Mississippi and Arkansas soybean budgets. They are especially useful for evaluating how the addition of extra inputs that may be unnecessary can significantly

affect a producer's bottom line. The [Mississippi State Budget Generator](#) can be used to produce budgets for your individual operation.

**Soil fertility recommendations.** Information from [Mississippi State University](#) is linked. Click [here](#) for an article on fertility recommendations following land leveling. The combination of this information with that in the above-cited budgets can aid in deciding how much and when a needed soil amendment can be applied economically. Mississippi State University has an online publication that gives details about [soil sampling](#) for determining fertilizer and lime requirements. Click [here](#) for a summary article about sampling for both soil fertility and nematodes. Click [here](#) for a White Paper that links to all the information about soil fertility on this website. Articles about [Iron Deficiency Chlorosis](#) and its management and [using poultry litter as fertilizer](#) are also posted.

Click [here](#) for a White Paper about using tissue testing as a tool to determine sufficiency or deficiency of plant nutrients, as well as how to use its results to provide information to supplement results obtained from sampling and testing for soil nutrients.

**Planting date recommendations.** The decision of when to plant soybeans is often based on the safest early date in the spring to avoid cold injury to emerging seedlings. Go to the [National Oceanic and Atmospheric Administration](#) (NOAA) site and find the probable last spring frost or freeze date for your town or the one nearest you. Click your state in the search box, and data for locations in that state will appear. Click [Arkansas](#), [Louisiana](#), [Missouri](#), and [Tennessee](#) for data in those states. An article on this website has a table of these dates and the probabilities associated with them for [Mississippi cities](#), along with an explanation of how to use the dates and probabilities to evaluate cold-injury risk for a given planting date.

**General Pest Management.** Guides for management and control of all soybean pests and [WWW.MSSOY.ORG](http://WWW.MSSOY.ORG)

weeds in midsouthern states can be found [here](#).

Click [diseases](#), [insects](#), and [nematodes](#) for White Papers on this website that provide additional information for managing these pests.

**Weed Management.** The midsouthern states publish weed management guides, usually on an annual basis. The most recent guides for midsouthern states are provided [here](#). All of these linked guides give estimates of weed control resulting from preplant, pre-emergence, and post-emergence applications of individual and combination herbicides used in myriad soybean cropping systems.

A White Paper entitled "[Weed Control Issues in Soybean](#)" is a compilation of short articles dealing with weed management issues that are specific to a defined portion of the growing season, both pre and post planting.

Information for managing crop sites that have herbicide-resistant weeds can be found in articles [on the weeds resource page on this website](#).

The United Soybean Board has initiated a program called "[Take Action Against Herbicide-Resistant Weeds](#)". The purpose of this industry-wide partnership is to provide information that will help in the management of herbicide-resistant weeds that plague soybean producers. Information on this site can be used to learn how to diversify weed control techniques to fight this increasing problem.

A [Weed ID app](#) for smart phones has been released by the University of Missouri Extension Service.

**Disease Management.** Disease management and control guides published by midsouthern universities is provided [here](#). Pictorial displays of symptoms exhibited by the major soybean diseases are shown in publications by [Louisiana State University](#) and the [University of Missouri](#). A thorough treatment of [soybean rust](#) knowledge was published in 2008, and the University of Arkansas

has published information about [fungicide treatments for rust control/management](#). An [article](#) on this website provides a concise summary of fungicide, insecticide, and nematocidal seed treatments that can be used to manage seed and seedling pests.

**Insect management.** [Louisiana State University](#) and [Mississippi State University](#) have online publications that contain information about the management and control of insect pests. A soybean insect identification guide published by [Mississippi State University](#) contains presentations of the major soybean insect pests. [A Soybean Insect Management Guide](#) posted on this website provides a summary of the major insect pests of soybeans in the Midsouth, their treatment thresholds, and insecticides that can be used for control.

While consultants are often employed to monitor and manage insect activity in soybeans, you may find it advantageous to use the above linked sites to gain a basic knowledge of particular insects that may be potentially damaging to your crop, and to learn some basic scouting and control protocols.

**Soybean cyst nematode (SCN) management.** The [University of Missouri](#) and the [NCSRP](#) (North Central Soybean Research Program; funded by checkoff monies) have published guidelines for managing SCN in soybeans. The latter publication is currently the most complete guide for managing this most damaging pest to US soybeans. An [article](#) on this website gives the latest information and guidelines for managing all nematode pests in Midsouth soybeans.

**Irrigation Management.** An [Irrigation White Paper](#) on this website provides details needed to properly irrigate soybeans. Links to other sites that have additional and/or supporting information to help manage irrigation to maximize efficiency and returns are included in that article. Also, an [article](#) on this website describes how more efficient soybean irrigation will conserve water

[WWW.MSSOY.ORG](http://WWW.MSSOY.ORG)

that is being pumped from the Mississippi River alluvial aquifer. [MAFES Bull. 919](#) and a White Paper entitled [Soil-Plant Water Relations](#) offer helpful insights into how soils and plants interact to affect soil water and its availability.

**Cover crops and plant residue management.** Management of these two important components of conservation production systems will increase in importance when/if the acreage devoted to conservation farming practices increases. Two NRCS publications, [Corn and soybean crop residue management guide \(NRCS AG 67\)](#) and [A guide to managing crop residues in corn and soybeans](#), and a [Purdue University](#) publication provide information about how to measure crop residues and estimates of how various tillage operations affect residue cover. A publication entitled [Managing cover crops profitably](#) gives a complete treatment of cover crops. Information in these publications may become more important as conservation soybean production systems are increasingly adopted by producers. Main points for [Cover Crops](#) and [Residue Management](#) have been summarized in articles on this website.

**Weather data.** Mississippi soybean producers are fortunate to have [detailed weather information](#) for many locations throughout the state. These data can be used to plan many of the operations that are dependent on the weather that is likely to occur on a given date or during a given period. You can access both recent and historical data for each location, as well as have averages for chosen weather variables over selected periods calculated on the website.

**Latitude.** Maturity date and/or relative maturity of soybean varieties are strongly influenced by latitude. Therefore, varieties that you are considering for your farm should be evaluated using trial data from locations that are near the same latitude as your location. (Hint: one degree of latitude equals about 69.5 miles.)

For best results and if possible, use data from

variety trials that are conducted within one degree of latitude to the north or south of your farm. Latitude of your farm or a nearby location can be found on the [USGS website](#). Just enter the town name in the feature name box, select Mississippi, and click Send Query [for towns/locations in other states, follow same procedure as for Mississippi].

**Growth stages.** In-season management inputs are increasingly being applied to soybeans in relation to developmental stage. Links to definitions and pictures of the accepted and widely used categorization of soybean growth stages can be found in links to Mississippi State University, Iowa State University, and University of Wisconsin resources that are shown in the Growth Stage White Paper linked above. A [blog](#) on this website presents an alternative for scheduling inputs based on reproductive development of soybeans.

**Commodity Seed Quality.** Seed quality standards are used for grading commodity soybean seed, or seed that are produced for sale at the elevator. These standards are used to determine the grade that will result in the net price received by producers for their product. Dockage resulting from poor seed quality costs producers millions of dollars in profits each year.

The [Federal Grain Inspection Service \(FGIS\)](#) has established standards for grading commodity soybeans, and these criteria are used by certified graders to assess dockage at producers' delivery points. [Supplemental information](#) about these standards compiled by MSU-ES is available on this website. Varieties and management practices that are projected to result in low dockage should be considered for soybean production.

Click [here](#) for a detailed treatment of how soybean grade requirements and discount schedules are applied to establish the net price paid for a load of soybeans delivered to the elevator.

The University of Arkansas Cooperative Extension Service has published guidelines that can be used to safely dry and store harvested soybeans to reduce or maintain moisture content to meet recommended levels for safe, long-term storage. Click [here](#) to access that publication.

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