



David Wright, Ph.D.
Plant Health Initiative Coordinator

Want to Increase Your Soybean Yield?

Manage Soybeans from the Ground Up. Part I.

Comparisons of average S.M.A.R.T. yields with state average yields in Mississippi.

	1992-2004	2004	2004 Irrigated	2004 Non-Irrigated
State Average Yield (bu./Acre)	29.2	39.0	—	—
S.M.A.R.T. Average Yield (bu./Acre)	44.7	49.0	53.8	43.6
Number of S.M.A.R.T. Fields	301	34	18	16
S.M.A.R.T. Yield Increase over 2004				
State Average	5.0	10.0	14.8	4.6
S.M.A.R.T. Yield Increase over 1992-				
2004 State Average (bu./Acre)	14.8	19.8	24.6	14.4

Every soybean producer wants higher yield. Getting it appears elusive. However, some soybean producers in Mississippi are harvesting more yield than producers in the Soybean Belt. How? By using very old knowledge.

Some soybean producers try to achieve higher yield by selecting new varieties that topped the state or county yield trial or by recommendation of their seed supplier. Others try the latest and greatest whatever that is purported to increase yield. Achieving a consistent yield increase with either of these practices however, is nearly impossible because predicting the performance of biological systems is nearly impossible.

Agronomists at Mississippi State University have developed a better program, the S.M.A.R.T. program. The S.M.A.R.T. program (Soybean Management by Application of Research and Technology) was initiated in 1992 to demonstrate to growers the impact increased management can have on improving the profitability of soybean.

The key to this program is simply, for lack of no other term, management. Intense management.

Producers agree to allow university agronomists to make all decisions related to the production of the crop, from tillage and fertility recommendations to variety selection, irrigation scheduling, and scouting. In other words, the soybean crop is managed as intensely as the corn crop.

Producers in the program are asked to implement management practices that apply to their fields and represent

the best technology available. The recommended practices are directed at the specific needs of each field.

The result? Participants of the program are harvesting an average 22.6 bu./acre more than the state average in irrigated fields and 6.9 bu./acre more than the state average in non-irrigated fields. No matter how you slice it, that's progress.

The key to success is managing the soybeans from the ground up. Look for problems in the soil first such as poor drainage, proper timing of irrigation, soybean cyst nematode, or compacted soil. Then select your soybean variety and seed fungicide treatment to meet the needs of each field. Then scout each field on a regular basis for diseases and pests that begin robbing yield at emergence. It seems overly simplistic, but it works.

In the next series of articles, the Plant Health Initiative will take a close look at the management practices of the S.M.A.R.T. program and compare them to management recommendations and practices currently used in the Soybean Belt. We will look at new technology that may help producers identify problem areas and visit with university experts to capture their thoughts on the S.M.A.R.T. program.

Soybean producers can do better. For more information on the Plant Health Initiative or information to manage soybean diseases and insects, access www.planthealth.info.