

MANAGEMENT MATTERS  
SERIES

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*Tips to help North Carolina soybean growers  
increase yield & profits*

# Maximizing Yields





- > What are some management practices any grower can implement to help increase soybean yields?

In North Carolina, soybeans are often thought of as a rotational crop.

The state's average yield is about 35 bushels per acre, only 70% of the national average. With over one million acres grown in the state, soybeans are our largest cash crop, occupying 25% of the field crop acreage.



# Variety Selection

Variety selection is one of the most important management decisions a soybean producer can make. Selecting the right variety for the right environment is essential. When selecting varieties for particular fields, one should not only look at overall yield data but also performance in specific environments. There

can be as much as a 15 bushel per acre difference in varieties grown side by side. In addition, disease and pest resistance should be considered when selecting a variety. Choosing varieties with the proper resistance package may help save money on pesticide applications late in the season.

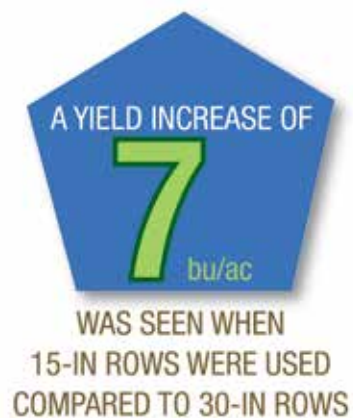
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DIFFERENCE IN VARIETIES  
GROWN SIDE BY SIDE

# Row Spacing

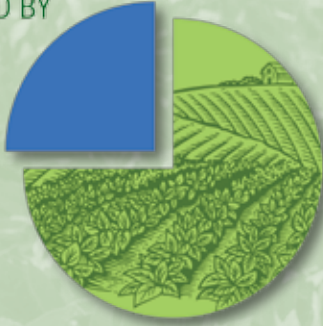
While optimal row spacing can vary by location and equipment available, typically reducing row widths to 20 inches or below will result in a yield increase. A seven bushel per acre increase in yield was seen when 15-inch rows were used compared to 30-inch rows in a recent maximum yield study carried out across N.C. Narrower rows allow quicker canopy closure and greater light interception, which helps maximize yield potential. In addition, narrower rows also help block light from reaching weeds and help minimize moisture loss.



# Fertility

YIELDS CAN BE REDUCED BY

**25%**  
WITH INADEQUATE  
FERTILIZATION



Proper soil fertility is critical to producing a high-yielding crop. Soil testing to determine fertility needs is a basic but important practice. It is common for growers to overlook or undervalue soil fertility for soybean production, but to have a high-yielding crop the soil must be fertilized properly. Soybean yields will decrease by as much as 25% if there are inadequate

levels of phosphate or potash. It is recommended that soil testing be done every year, but if this is not happening the amount of fertilizer used should be based on the expected nutrient removal. Phosphorus and potassium are the most important nutrients to replenish for the next soybean crop.

# Fungicides

Fungicides help protect crop yield by protecting the investment the plant has made in the leaves. Healthy, photosynthesizing leaves are critical for intercepting sunlight and maximizing seed fill. Fungicide applications are especially important where the potential for disease development is high. In environments with high disease pressure, the use of fungicides can increase yield by as much as six bushels per acre. The key to an effective fungicide application is determining the best time to apply the product. Growth stage, weather, variety resistance and past disease history should all be used to determine if and when to apply fungicides.

WITH HIGH DISEASE  
PRESSURE, FUNGICIDES  
CAN INCREASE YIELD BY



# Seed Treatment

In certain environments, a seed treatment may be a smart investment. Seed treatments can help protect yield potential by promoting germination and early plant vigor. Seed treatments may include fungicides, nematicides, insecticides, biologicals, inoculants or any combination of the above. Seed treatments are probably most beneficial when planting into cool, wet soil. The selection of seed treatments should be based on issues specific to a given farm.

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In order to increase soybean yields in the state, growers must be willing to focus on increased agronomic management of the crop.

Incorporating even one or two of these practices into a management plan may have a positive impact on soybean yields. But remember, when deciding to incorporate an additional input, it is critical to consider the potential return on investment which is unique to each operation.

