

## Take Steps To Ensure Profitable Crop

NEWARK, Del. — A sound crop rotation is essential for ensuring good yields in soybeans, according to Derby Walker, University of Delaware Cooperative Extension county agent.

"If you feel you cannot rotate out of soybeans, then at least rotate to varieties that are resistant to nematode and soilborne diseases," he said.

The agent suggests that farmers who have experienced soybean severe stunt disease with their crops switch to an immune variety such as HT 5203. In addition, they can use a nematocide to control the dagger nematode that transmits this virus, which has been found in the Millsboro, Georgetown, and Harbeson, Del., areas.

Soybeans do well in soil with a pH level between 5.8 and 6.2. Walker said a manganese deficiency may be created on some loamy sand or sandy loam soils when pH exceeds 6.3. If a deficiency occurs, a manganese foliar fertilizer should be applied. When the deficiency is corrected early, little or no yield loss will occur.

Walker said that when the University of Delaware soil index

results exceed 50 for phosphorus (P) or potassium (K), no fertilizer is necessary for that field.

Spacing is another consideration when growing soybeans.

"Do not overplant soybeans," Walker said. "Extra plants compete for nutrients, light, and moisture."

He recommends the following guidelines:

row spacing	plants/ foot of row
36"	7.5
30"	6.5
20"	5.0
7"	2.0

The agent said soybeans planted 2 inches deep often do not make it out of the ground. Beans should be planted 1 to 1-1/2 inches deep.

"Weeds are an enemy of soybeans that must be dealt with," said Walker. "Incorporated soybean herbicides give excellent weed control because they are blended with the soil rather than left sitting on top. But take care not to incorporate too deeply, or you will dilute the herbicide."

Walker suggests using a field cultivator with rolling baskets. It

should be set up with 2- to 2-1/2-inch teeth. Four-inch teeth are too wide and will result in non-uniform mixing. A second choice is to use a disk with 7-inch spacing.

"A disc with 9-inch spacing is too far apart to satisfactorily incorporate the herbicide," Walker said. "I hesitate to suggest this last option, but if you have no other

choice but the 9-inch spacing, make two passes over the field, with the second pass at an angle to the first. You will have streaking and probably will not be satisfied with the results."

Walker cautions farmer to avoid herbicide carryover problems for crops in 1992 through 1994 by carefully reading labels.

"Take the time to read the label before applying any herbicide," he said. "Any crop-rotation restrictions will be on this label. If vegetables are in your rotation, it is essential for you to plan not just one season in advance, but two, in some cases. These restrictions involve the use of old and new herbicides alike."

## Animals Produce More Manure

Herbert C. Jordan  
Associate Professor Of  
Poultry Science  
Penn State University

Animals on farms in Pennsylvania normally produce more fresh manure and urine by weight than any other product. Therefore, animal farms are primarily in the manure business; and secondly, in the food production business.

The tonnage of fresh manure from poultry farms is normally greater than any other product. However, if manure is dried as it drops, fewer flies and less odor is produced.

Fresh manure is mostly water. Sixty-five to 95 percent of fresh

poultry manure is normally water. Therefore, those who haul manure spend most of their time and money hauling water, not hauling dry matter manure.

The percent water in fresh manure is increasing on many farms. Percent water in fresh manure increases when animals have diarrhea, enteric disorder, or if they drink too much water.

If birds spill water into fresh manure, it becomes too wet to be salable. Poultry manure from a healthy bowel can normally be dried as it drops by ambient air if ventilation is adequate. This drying can reduce the weight to haul to the field several fold.

Dry matter in fresh manure is 5

to 35 percent by weight. Dry matter in manure normally has more minerals, elements, or nutrients on a dry weight basis than the feed eaten on a dry weight basis. Therefore, we find dry matter manure normally concentrates elements 2 to 3 times as much as what is found in the feed.

When dry matter manure is used as fertilizer, it must be spread 1 to 2 ton dry matter per acre per year or less to prevent pollution.

Many manure spreaders cannot spread manure less than two tons of dry matter per acre because of their design.

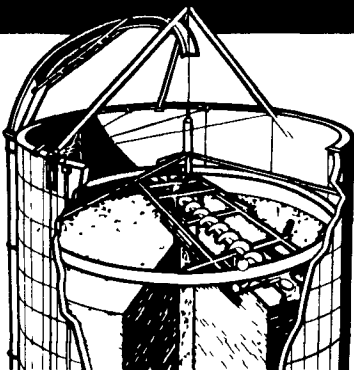
It is important to test a manure spreader before you buy it. A manure spreader can be either a valuable asset or a machine to pollute soil, reduce crop yields, pollute well water on the farm, or cause other problems. It pays to buy and use manure spreaders wisely. Do not spread manure near a well on a watershed or near a spring.

Do not let flies and/or odor complaints mislead you. These problems can occur simultaneously with high moisture manure held in storage a long time.

To prevent manure problems, keep birds' bowel function normal; stop or divert water leaks; and dry manure as it drops. Spread manure fresh. Turn the manure into the top 3 to 6 inches of soil before sundown the same day it is spread.

Call your county agricultural agent if you need help.

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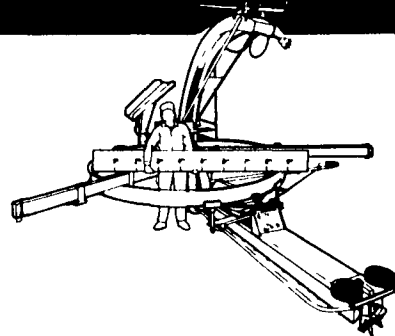
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