



Inoculants, which are a combination of bacteria and a material to make them adhere to the seed, work on increasing the amount and mass of the nodules. The nodules are critical in nitrogen fixation. David Bitler examines the nodules on one plant.

## Use Of Seed Treatment Depends On Frequency Of Soybean Planting

ANDY ANDREWS

Lancaster Farming Staff

FLEETWOOD (Berks Co.) — First-year soybean growers and those attempting up to five years of growing soybeans on the same fields would do well to triple-inoculate the seed before planting, according to an agronomist who spoke at a farm field day Wednesday.

Dr. Elwood Hatley, Penn State Department of Agronomy, told 16 soybean producers and agri-industry representatives that a properly applied inoculant will help — with the right soil conditions — the plant to nodulate and increase the mass of the nodules.

Hatley spoke at the David Bitler Vista Grande Farm in Fleetwood at a Penn State-sponsored soybean inoculant field day.

On hand were members of the Kutztown Young Farmers Association and several agri-industry representatives, as well as extension service.

Bitler, who also spoke at the field day, reviewed the five-acre soybean test plot. The plot was planted on May 19 on 14-inch rows using Dekalb 399. Minimum tillage and a single-disc drill were used. The plot was previously corn since 1994.

Bitler, who utilized the services of a Lancaster crop consultant, planted a total of 60 acres of soybeans out of 500 acres at his farm, including pasture land on his 100-cow registered Holstein dairy. Typical soybean yield, he indicated, is 45-50 bushels per acre.

According to Jon Stutzman, agronomist with Brubaker Agronomic Consulting Service who helped Bitler establish the soybean fields, the aim was to drill down 200,000 seeds per acre. Emergence was actually about 140,000 plants per acre.

At the Bitler five-acre test plots, there were four separate studies. One plot included a check, one included an all-liquid inoculant, another included a material combining a fungicide, inoculant, and molybdenum, and another a USDA peat-based inoculant.

The inoculants were mixed in the drill at planting time, according to Stutzman.

Soil fertility included a pH of 6.7 with a phosphorous reading of 198 and potassium of 545. The field receives cow manure annually.

Other factors, according to Elwood Hatley of Penn State, important for stand and nitrogen uptake include soil conditions at time of planting (growers should ensure the soil is not too cold and hard), soil pH, and weather. Bitler said he received, as of Wednesday, a little more than an inch of rain in the past week.

Often growers are hesitant to spend dollars on the triple inoculant, "but I believe in using triple inoculants in low pH situations," said Hatley.

With inoculants, which are basically bacteria in a medium that coats the seed, the plant has the potential to draw up the four pounds of nitrogen per bushel needed.

This year, some of the poor stand problems can be blamed on seed maggots. Many stand problems, the result of the long, cool spring this year, can be blamed on the maggots or fungus.



Dr. Elwood Hatley, Penn State Department of Agronomy, center with dark cap, told 16 soybean producers and agri-industry representatives that a properly applied inoculant will help — with the right soil conditions — the plant to nodulate and increase the mass of the nodules.



### When you need a loan for farm equipment, we'll be there... generation after generation.

Before you get a standard equipment loan, talk to Farm Credit. As a cooperative owned by the people who use us, Farm Credit has served the needs of rural Americans for generations. In fact, for over 75 years we have been a dependable source of credit to agriculture.

We make loans at competitive interest rates for all kinds of purposes, like an equipment loan for that combine or tractor. Our loan officers are knowledgeable and can help tailor a financial package to fit your situation.

So, whether you are a commercial operator, a part-time farmer or simply like living in the country, we want to do business with you.

*And we'll be there for future generations.*



**Farm Credit**  
A Customer Owned Business

**Southeastern PA**  
Keystone Farm Credit  
(800) 477-9947

**Western PA**  
PennWest Farm Credit  
(800) 998-5557

**Northern PA**  
Northeastern Farm Credit  
(800) 326-9507

**South Central PA**  
York Farm Credit  
(800) 503-8957