

Pre-Sidedress Nitrogen Testing (PSNT) and Final Results

PSNT helps determine if additional nitrogen is needed to reach the desired yield goals, limit and in some cases eliminate excess nitrogen from entering surface water entities such as adjacent streams and may end up saving the farmer money or what's saved can be put towards other operation expenses.

Testing is most effective when the corn is approximately knee high. Soil samples are collected by walking in a zigzag pattern and inserting a soil probe into the ground around a foot. Collected soil was broken down by hand and placed into a bag for transportation back to the office. In the office, the soil was placed on labeled plates to allow drying for 24-48 hours. When the soil is dry, it's run through a 2mm sieve. .07 ounces is measured and added to 40ml of a nitrogen extraction solution, that pulls what nitrogen is in the soil to the top, shaken for 1 minute and left to sit for 10 minutes. During those 10 minutes, a Nitrachek 404 Meter and required test strips are used to take standard readings before testing the extracted nitrogen. After 10 minutes, the meter and strips are used to measure the amount of nitrogen extracted from the soil in parts per million (ppm). A new strip is used before each reading and test The Nitrachek 404 Meter readings and testing procedure is conducted 2-3 times to ensure accuracy.

Emily Stambaugh a student at Penn State and Rachel Stine a student at Delaware Valley made the 2021 PSNT Program a record breaking year. 121 fields equaling a total of 3,142 acres were tested with only 15 farmers participating. Only one farmer required additional nitrogen. On the next 2 pages are graphs that display the results.



Table 1 is a table showing the list of farmers, the number of fields and total acreage they had tested.

Farmer's Name	Number of Fields	Number of Acres
Dan Miller	2	23.5
Denny Garman	6	120
Ed Thompson	12	185.6
Gary Halteman	7	123
Ian Stamy	34	1223.67
Jonathan Bream	1	15
Josh Barrick	18	408.6
Ken Deitch	1	40
Lee Chronister	3	19
Luther Mountz	4	53
Mark Fulton	9	144.5
Matthew Hoover	4	41
Phares Newswanger	5	118.5
Tristan Noggle/Strock-Key Inc	1	64

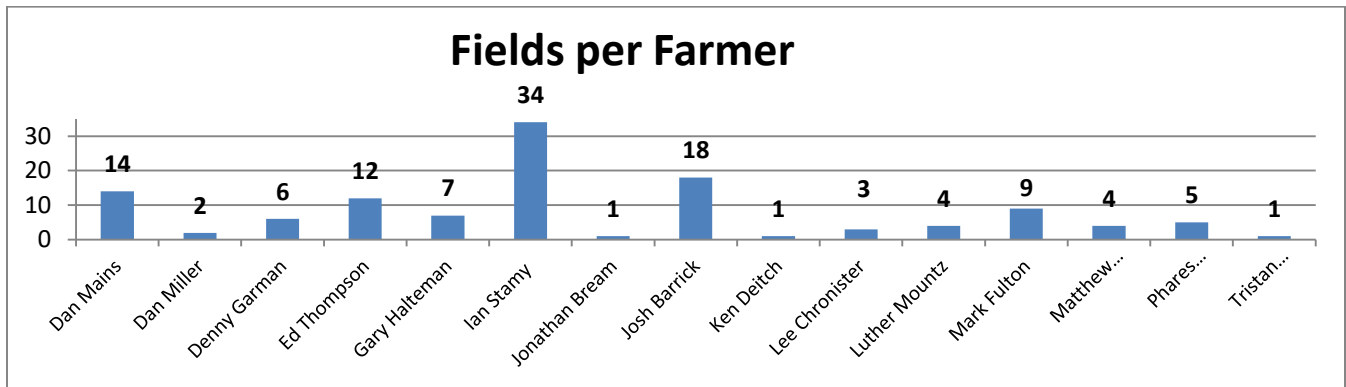


Figure 1 is a bar graph that provides a visual display of how many fields each farmer had tested.

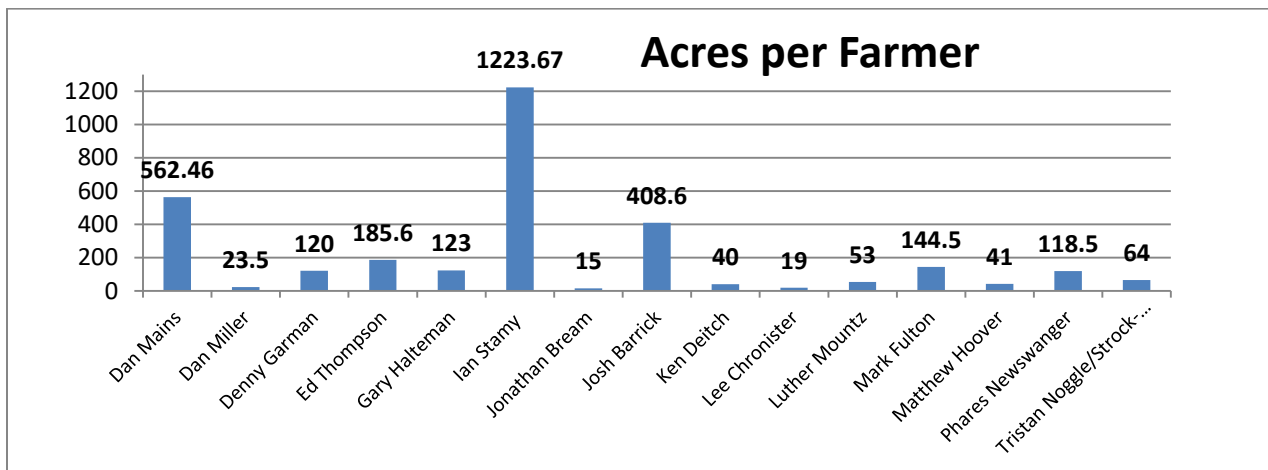


Figure 2 is a bar graph that shows the total amount of acreage each farmer had tested.

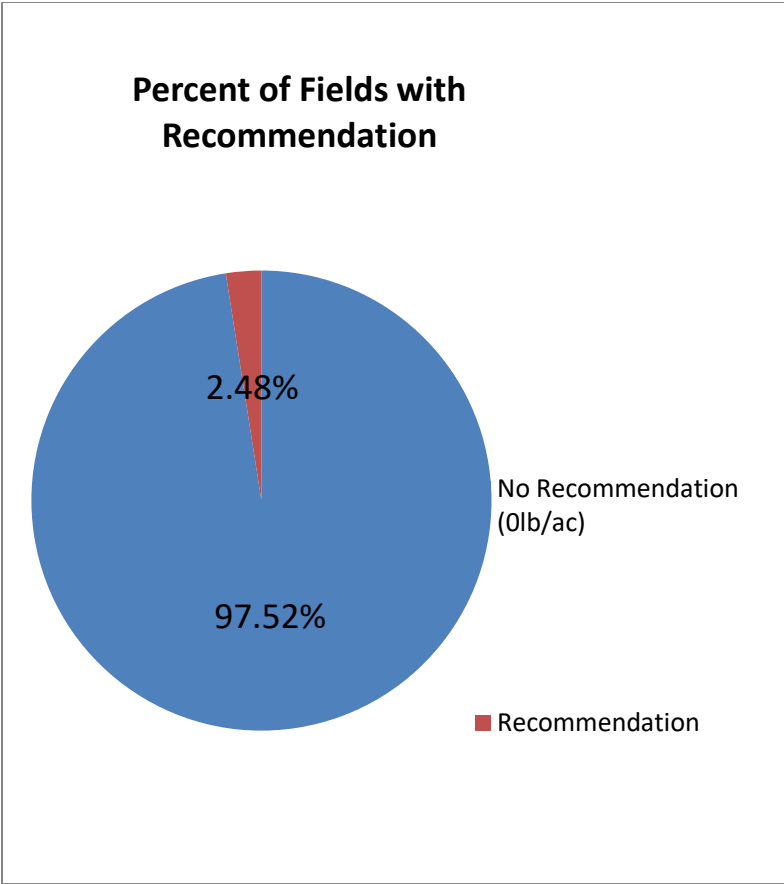


Figure 3 is a pie chart depicting the percentage of fields with a recommendation vs. the percentage that does not.

