



Delaware Questionnaire for Annual Implementation Report

A glossary is provided on the back of the survey – words with an * next to it have more information provided in the glossary.

1. How many acres did you farm in Delaware in 2020? _____ acres.
 - a. Break down acres per crop. Corn _____ Soybean _____ Wheat _____ Other: _____
2. Are your fields bordered by a minimum of a 10 foot grass or tree buffer*? Yes No
 - a. What is the purpose of the buffers? _____
3. Are there areas on your farm where you are careful to not place fertilizer? (ex: ditches, buffers, wells)

 Yes No If so, where?: _____
4. For nutrient application, do you use (owned or contracted) GPS* guided equipment? Yes No
5. What equipment do you use (owned or contracted) that is variable rate*? (Check all that apply.)

 Planter Sprayer Spreader Irrigation Other: _____
6. How often are soil tests are pulled on 100% of your acres: Annually Every 2 Years Every 3 Years
 - a. My soil samples are pulled (check all that apply):

 Fall/After Harvest Spring Other: _____

 I or my employee pulls my samples A consultant or company pulls my samples
 - b. My soil samples are pulled on a (check all that apply): Grid* Zone* Field*
 - i. At what scale (acres): _____
7. How many acres of irrigated land did you farm in Delaware in 2020? _____ acres
 - a. How many acres did you fertigate* in Delaware in 2020? _____ acres
8. How did you apply manure? Broadcast* Inject* I do not apply manure (skip questions a – c)
 - a. Did you incorporate* your manure? Yes No
 - i. Within what time frame; assume ideal conditions? Within 24 hours Within 48 hours
 - b. Is your manure tested for nutrient composition? Yes No
 - i. How often do you test each source of manure? Annually Bi-Annually
 - c. What seasons do you typically apply manure? Spring Fall Other: _____
9. How do you apply N and P fertilizer? Mark all that apply. Broadcast Banding* In-Furrow*
10. Did you use starter or pre-plant fertilizer? Starter* Pre-Plant* Both Neither
11. Did you sidedress* Nitrogen? Yes No
 - a. How did you determine your nitrogen sidedress rate? (Check all that apply)

 PSNT (Pre Side-dress Nitrogen Test)* Nitrogen Modeling* According to my plan*
12. What percentage of your nutrients did you apply at the following times (N & P for this question and next):

____% pre-plant ____% starter ____% sidedress/in-season
13. Do you apply less than University rates or less than your plan on some areas of your fields? Yes No
14. Do you use a Nitrogen Stabilizer*? Yes No
 - a. Which of the following do you use?

 Urease Inhibitor*

 Nitrification Inhibitor*

 Other Enhancements? (humic, biogrowth): _____
15. How many acres of cover crop* did you plant in 2020, that you did not receive cost-share* for? _____ acres
16. Since you started working with/under a nutrient management plan, what changes have you made that increased or decreased your applications of N and P the most in 2020?

GLOSSARY

- 2: Buffer:** Natural or artificial vegetated area maintained alongside agricultural fields to help mitigate and control the air, soil and water quality.
- 4: GPS (Global Positioning System):** Computer technology using satellites to identify a precise location
- 5: Variable Rate:** A type of application where the material (seed, fertilizer, irrigation, etc.) is applied based on a specific need-based prescription for differing areas within a field.
- 6a: Grid:** A uniform network of sectioned field areas; usually about 5 acres.
- 6a: Zone:** A series of sectioned field areas that are grouped by similar characteristics. This may be done in the field by soil type, landscape positioning, drainage type, etc.
- 6a: Field:** A soil sample taken is used to represent the entire field.
- 6b: Scale:** The unit area for which you are using to determine your sampling methods. For example, the soil test report(s) you received apply to fields/sections of a field with an average size of 10-20, 20-30 or 30-40 acres.
- 7a: Fertigate:** Fertilization done by mixing fertilizer nutrients to the irrigation water.
- 8: Incorporate:** A practice that mixes manure or fertilizer into the soil profile (tillage, vertical tillage)
- 8: Broadcast:** The practice of surface spreading fertilizers or manure on top of the field.
- 8: Inject:** The application practice of placing manure and/or chemical fertilizer under the soil surface without tillage.
- 9: Banding:** A fertilization practice that applies nutrients in rows at a predetermined distance from the planted crop seed.
- 9: In-Furrow:** A narrow trenched row, typically where seed is planted
- 11: Starter:** The application of fertilizer at roughly the same time as planting crop
- 11: Pre-Plant:** The application of fertilizer days or weeks prior to planting crop
- 12: Sidedress:** The application of fertilizer to crop in-season/during high nitrogen uptake, typically for corn between 12-24 inches tall
- 12a: PSNT (Pre-sidedress Nitrate Test):** An in-season soil test used to determine if a yield response is likely from additional application of sidedress nitrogen
- 12a: Nitrogen Modeling:** a management tool offered by consultants recommending nitrogen applications based on a variety of factors throughout a growing season based on a variety of factors.
- 12a: Plan:** A nutrient management plan written by a certified consultant outlining when and how much fertilizer to apply to your crop based on University recommendations and/or your soil test results
- 14: Nitrogen Stabilizer:** A fertilizer additive to decrease off target movement of nitrogen – decreasing volatilization, leaching, and/or denitrification – allowing increased uptake by crops.
Examples: Instinct, DCD, Agrotain Plus
- 14: Urease Inhibitor:** a fertilizer additive that slows the conversion of urea to ammonia thus **reducing the loss of nitrogen through volatilization** (above ground protection)
Examples: Agrotain Ultra, Anvol, NBPT
- 14: Nitrification Inhibitor:** A fertilizer additive that slows the conversion of ammonium to nitrate, thus prolonging the period of time that nitrogen is in the “protected” form and **reducing its loss from the soil by leaching and denitrification** (below ground protection).
Examples: Nitrapyrin, and DCD
- 15: Cover crop:** A crop planted during the winter months, in fields which would otherwise be fallow, to prevent the loss of soil nutrients, minimize soil erosion, and enhance soil properties; this crop is to benefit the soil and water quality and generally not to be harvested.
- 15: Cost-share:** A program that pays the grower to participate in if all guidelines are met.