



ADJUSTING NUTRIENT MANAGEMENT PLANS DUE TO EXCESSIVE WET CONDITIONS

In nutrient management planning, we are always looking ahead to the future at the time plans are written. It is important to remember that they are plans and that plans can change. This spring, for example, has caused many farmers to change plans due to extensive rainfall and wet field conditions not allowing for field work to get done. When cropping plans change, it is important to make sure that nutrient management plans are accurately updated to reflect those changes.

Updating Nutrient Management Plans When Cropping Plans Change

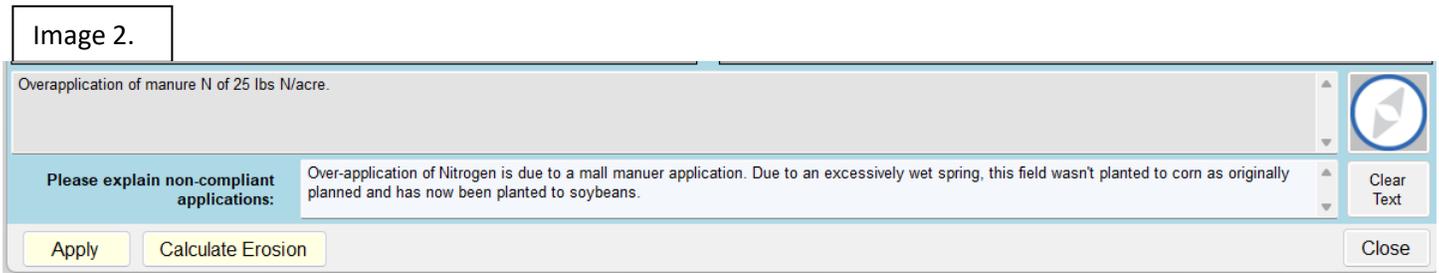
Sometimes when updating a nutrient management plan to change the crop that was planned to be planted, users can run into scenarios where previously compliant nutrient applications are now deemed non-compliant due to differences in nutrient needs between the planned crop and the actual crop. When situations like this arise, it is important to accurately document what nutrients were applied. For example, this past fall you applied manure and were planning to plant that manure-applied field into corn, but due to the wet conditions, you haven't been able to plant corn and have now decided to pivot and plant soybeans instead. When updating your nutrient management plan, you now see a red box indicating an N overapplication (Image 1a) along with a compliance message (Image 2). If that happens, utilize the text box within the nutrient application planner "Please explain non-compliant applications" to explain the situation (Image 2.). Additionally, a write-up can be provided in the farm narrative stating which fields have compliance messages related to having to change cropping plans. After explaining the over application SnapPlus will change the red box to a light blue box (Image 1b) indicating that planner has provided an explanation.

Image 1a

2024			
Soybeans 7-10 inch row			
36-45			
No Till			
2024-06-26			
NA			
<input type="checkbox"/> Irrigated			
N	P2O5	K2O	
0	60	30	
-	0	0	
0	60	30	
0	-	-	
0	-	-	
180	90	255	
0	0	0	
180	90	255	
180	30	225	

Image 1b

2024			
Soybeans 7-10 inch row			
36-45			
No Till			
2024-06-26			
NA			
<input type="checkbox"/> Irrigated			
N	P2O5	K2O	
0	60	30	
-	0	0	
0	60	30	
0	-	-	
0	-	-	
180	90	255	
0	0	0	
180	90	255	
180	30	225	



Evaluating and Documenting Need for Supplemental In-season N

Sometimes, crops have been planted but have seen excessive rainfall amounts after manure or fertilizer applications. In situations like this, growers might be questioning if they have lost nitrogen and may be considering putting out more. The 590 standard allows for supplemental in-season N when N deficiency from excessive rainfall has been documented on each field. Evaluation and documentation of this field situation is not necessarily simple because of the complexity of estimating N loss, determining crop N deficiency, and assessing physiological damage to the crop from waterlogged soil conditions.

For corn that is between V3 and V5, a [presidedress nitrate test \(PSNT\)](#) will indicate whether and how much additional N should be side-dressed.

For corn that is beyond V5, there is not a single test in Wisconsin calibrated to give guidance for profitable response to nitrogen applications. The 590 standard allows for an additional 46 lb. of N to applied as a rescue treatment following a period of heavy rain and saturated conditions, provided N loss is documented through tests or models. Applied nitrogen can be lost following heavy rainfall through denitrification or leaching. As stated previously, there are no tests calibrated to provide guidance on the need for supplemental N for corn post side-dress. One way to identify or “model” whether supplemental N is needed is to consider the date, amount rate and form of N application; amount of time elapsed between prior N application and excessive rainfall; rainfall amount; duration of rainfall event(s); soil water holding capacity; soil aeration/saturation; amount of time the soil was saturated; soil temperature; and appearance of the crop. This [presentation](#) by Carrie Laboski describes how to use the above information to document the likelihood that applied N will have been lost through denitrification or leaching.

Avoiding Further N Losses by Planting Appropriate Late-season Crops

Since the weather continues to lead to saturated conditions, the potential for N loss remains high. In order to minimize further loss, it is recommended that split applications of manure and commercial fertilizer take place for the remainder of the nutrient application season. It is also recommended, if corn is unable to be planted and nutrients have already been applied, to select a crop to plant that can utilize the excess N from the nutrient applications. The following table (Table 2) from the 590 Technical Note shows you manure available N allowed based on crop and yield range.

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Table 2. First-year available manure N application rates allowed for legume and legume plus companion crops*

Crop	Yield range	Manure available N allowed (lb/acre)
Alfalfa; alfalfa/brome; red clover; or trefoil, birdsfoot, seeding or established †	< 1.5 ton/a	50
	1.5 – 2.5 ton/a	100
	2.6 – 3.5 ton/a	155
	> 3.5 ton/a	205
Barley for grain underseeded with alfalfa, alfalfa/brome, or red clover seeding ‡	All yield levels, bu/a	150
Dry beans	10-20 cwt/a	75
	21-30 cwt/a	125
	31-40 cwt/a	175
Oats for grain underseeded with alfalfa, alfalfa/brome, or red clover seeding ‡	All yield levels, bu/a	140
All pastures §	0.5-1.9 ton/a	55
	2 -3 ton/a	115
	3.1 - 4.0 ton/a	160
	4.1 - 5.0 ton/a	205
Small grain silage underseeded with alfalfa	2 - 3.5 ton/a	170
Small grain & legume silage	2 - 3.5 ton/a	70
Small grain & legume silage underseeded with alfalfa	2 - 3.5 ton/a	170
Soybean	15-25 bu/a	75
	26-35 bu/a	115
	36-45 bu/a	155
	> 45 bu/a	195

*Some legume crops such as peas and snap beans are not included in this table because N removal in the harvested portions of the crop is similar to their N fertilizer recommendation.

†To minimize the potential for stand injury, single applications should not exceed 5,000 gal/acre for liquid or 10 ton/acre for solid manures.

‡ Nitrogen allowed is the recommended rate for the grain crop plus removal in the forage crop. This rate may be too high for successful management of the grain crop.

§ Nitrogen allowed is the total available N deposited by grazing animals plus manure applied mechanically.

Note: As per the FOTG 590 Standard, commercial N should not be applied to legume crops that do not have an N requirement unless it is an unavoidable ingredient of a fertilizer needed to provide other required nutrients.

References:

NRCS Conservation Practice Standard Nutrient Management (590)

<https://datcp.wi.gov/Documents/NM590Standard2015.pdf>

Wisconsin Conservation Planning Technical Note 1 | Nutrient Management (590)

<https://datcp.wi.gov/Documents/NM590TechNoteApp23.pdf>

A2809 Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin, UW Extension.

<https://learningstore.extension.wisc.edu/products/nutrient-application-guidelines-for-field-vegetable-and-fruit-crops-in-wisconsin-p185>