



Fall Organic Nutrient Recommendations

Summary of Regulations and Recommended Planning Process (5-19 rev)

Introduction

The nutrient management regulations published on December 2016 (Maryland Nutrient Management Manual Supplement no. 8 (I-D1)) update the conditions under which organic nutrient sources may be applied in fall. This document summarizes current regulations/MDA policy and gives instruction on how to construct a nutrient management plan that is consistent with the regulations.

**N-based rec
Fall crop**

Organic nutrients, including poultry litter, can be applied to small grain crops at planting to meet the fall N requirement of the crop (see restrictions, below). This language applies in most situations; see sections below if 1) non-poultry manure is generated on-farm and is fall-applied for fall-planted wheat and barley or 2) fall-planted non-grain crops to be amended with non-poultry manure.

Organic applications must be incorporated within 48 hours unless the fields are under no-till management (page I- D1-3 of the regulations).

Crop	How to	Restrictions
Small grain (wheat and barley) that will be harvested as grain	<ol style="list-style-type: none"> Select the appropriate crop code in <i>NuMan Pro</i>. Choose “nitrogen” or “pre-set” for Rec Base on the scenario page. 	<ul style="list-style-type: none"> A FSNT is required before fall N can be applied (wheat and barley only). A maximum application rate of 30 lbs/PAN/Ac if FSNT indicates nitrogen insufficiency. Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150.
Small grain that will be grazed	<ol style="list-style-type: none"> Select the appropriate crop code in <i>NuMan Pro</i>. Choose “nitrogen” or “pre-set” for Rec Base on the scenario page. 	<ul style="list-style-type: none"> No FSNT is required. An application rate of 30-50 lbs/PAN/Ac depending on planting date. Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150.
Small grain that will be harvested as silage	<ol style="list-style-type: none"> Select the appropriate crop code in <i>NuMan Pro</i>. Choose “nitrogen” or “pre-set” for Rec Base on the scenario page. 	<ul style="list-style-type: none"> No FSNT is required. A maximum application rate of 20 lbs/PAN/Ac. Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150.

PAN – Plant Available Nitrogen, FSNT – Fall Soil Nitrate Test

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Flexible crop codes (special cases of above)

Crop code 32, Fall cover for organic utilization, allows organic applications (excepting poultry litter) at a rate of up to 50 lbs/PAN/Ac for any fall-planted cool-season crop. Typically, crops for this option are forage species and crops may be grazed or chopped.

Organic applications must be incorporated within 48 hours unless hours unless the fields are under no-till management.

Crop	How to	Restrictions
Fall cover for organic utilization	<ol style="list-style-type: none"> 1. Select crop code 32 2. Choose “nitrogen” or pre-set” for Rec Base on scenario page. 	<ul style="list-style-type: none"> • No FSNT is required. • Appropriate for any fall-planted cool-season crop. • A maximum application rate of 50 lbs/PAN/Ac. • Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150. • Crop can be grazed or chopped for forage only. • Any fall N applied that exceeds the specific crop’s fall N recommendation must be subtracted from the spring N recommendation

Crop code 114, Wheat/Barley; fall; on-farm manure, allows organic applications (excepting poultry litter) of **on-farm generated manure only** at a rate of up to 50 lbs/PAN/Ac to wheat or barley grown for grain without a FSNT.

Organic applications must be incorporated within 48 hours unless hours unless the fields are under no-till management.

Crop	How to	Restrictions
Small grain (wheat and barley) that will be harvested as grain (utilizing on-farm generated manure as a nutrient source)	<ol style="list-style-type: none"> 3. Select crop code 114 4. Choose “nitrogen” or pre-set” for Rec Base on scenario page. 	<ul style="list-style-type: none"> • No FSNT is required. • Appropriate for wheat/barley grown for grain only • A maximum application rate of 50 lbs/PAN/Ac. • Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150. • Spring nitrogen (N) recommendation must be cut back by the fall N application that exceeds 30 lbs (i.e. if 50 lbs PAN is applied in the fall, spring N recommendation should be cut back by 20 lbs) • Cannot be used for imported manure

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**P-based rec
Fall crop**

Organic nutrients, including poultry litter, may be applied to small grain crops at a P-based rate for fields whose FIV-P is < 100 as long as the associated N application does not exceed 50 lbs/PAN/Ac.

Organic applications must be incorporated within 48 hours unless the fields are under no-till management.

Note the difference between P-based and P-removal. P-based planning is based on soil test results. P-removal is an estimate of the amount of P that the plant will remove during its life cycle. P-removal planning for small grains is not allowed in the fall.

Crop	How to	Restrictions
Small grain for silage	<ul style="list-style-type: none"> • Select crop code 52 in <i>NuMan Pro</i>. • Choose “phosphorus” for Rec Base on the scenario page. • Do not click on the P-removal button 	<ul style="list-style-type: none"> • Confirm that the N rec does not exceed 50 lbs/PAN/Ac. • If the N rec exceeds 50 lbs, change the Rec Base to pre-set and reduce the application rate until the N rec is no greater than 50 lbs/PAN/Ac.
Small grain for grazing	<ul style="list-style-type: none"> • Select crop code 258 in <i>NuMan Pro</i> (259 will limit the PAN application to 30 lbs) • Choose “phosphorus” for Rec Base on the scenario page. • Do not click on the P-removal button 	<ul style="list-style-type: none"> • <i>NuMan Pro</i> will automatically limit the application to 50 lbs/PAN/Ac.

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P-removal rec for next spring crop

Organic nutrients, except poultry litter, may be applied up to P-removal of the crop that will be planted the following spring and no later than June 1 as long as the associated N application does not exceed 50 lbs/PAN/Ac.

A cover crop must be planted no later than November 15 and as soon as possible after nutrient application. Crop code 32, Fall cover for organic utilization must be included in the scenario to show the intention of growing a fall crop.

Organic applications must be incorporated within 48 hours unless the fields are under no-till management.

Crop	How to	Restrictions
Fall 2017 plan for Spring 2018 planted Crop	<ol style="list-style-type: none"> 1. In <i>NuMan Pro</i>, include Crop code 32, <u>Fall cover for organic utilization</u> and the spring crop on the scenario page. 2. Click the P-removal button. 3. Do not print out the fertilizer recs for the spring crop. 4. Include a statement in the cover letter about the requirement to plant a fall crop no later than November 15. 	<ul style="list-style-type: none"> • A cover crop must be planted no later than November 15. • The spring crop must be planted by June 1. • Recommendation must be consistent with the PSI/PMT if FIV-P ≥ 150. • The associated N application must not exceed 50 lbs/PAN/Ac.
Spring 2018 plan for Spring 2018 planted crop	<ol style="list-style-type: none"> 1. Add the Fall 2017 manure application to the history. 2. An N-based, P-based or preset application rate would be appropriate for the spring 2018 crop. 	

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N-based rec for next spring crop

Organic nutrients, excepting poultry litter, may be applied at an N-based rate for the crop that will be planted the following spring and no later than June 1. The N application may not exceed 50 lbs/PAN/Ac or 50% of the spring crops N recommendation (whichever is less).

This option would be used in situations where P-based or P-removal planning does not result in an achievable application rate (equipment limitations) or a P-removal rate is not available for the intended spring crop.

A cover crop must be planted no later than November 15 and as soon as possible after nutrient application. Crop code 32, Fall cover for organic utilization must be included in the scenario to show the intention of growing a fall crop.

Organic applications must be incorporated within 48 hours unless the fields are under no-till management.

Crop	How to	Restrictions
Fall 2019 plan for Spring 2020 planted Crop	<ol style="list-style-type: none"> 1. In <i>NuMan Pro</i>, include <u>Fall cover for organic utilization</u> (crop code 32) and the spring crop on the scenario page. 2. Do not print out the fertilizer recs for the spring crop. 3. Include a statement in the cover letter about the requirement to plant a fall crop no later than November 15. 	<ul style="list-style-type: none"> • A cover crop must be planted no later than November 15. • The spring crop must be planted by June 1. • Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150. • The N application must not exceed 50 lbs/PAN/Ac or 50% of the recommendation, whichever is less.
Spring 2020 plan for Spring 2020 planted crop	<ol style="list-style-type: none"> 1. Add the Fall 2019 manure application to the history. 2. An N-based, P-based or preset application rate would be appropriate for the spring 2018 crop. 	<ul style="list-style-type: none"> • Recommendation must be consistent with the PSI/PMT if FIV-P \geq 150.