

Winter Spreading Restrictions



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WHAT QUALIFIES AS WINTER?

- When temperature or snow prevents effective incorporation.
- Effective Incorporation (IV.A.2.d.) - Mixing with topsoil or residue, or subsurface placement of nutrients by such means as injector, disc, sweep, mold-board plow, chisel plow, or other tillage/infiltration methods. Nutrients will not run off the field or drain to subsurface tiles during application.



WHO NEEDS A WINTER SPREADING PLAN?

All farms mechanically applying manure and or organic by-products.



WHAT IS A WINTER SPREADING PLAN?

- It identifies the quantity of manure and/or organic by-products spread during periods of frozen or snow-covered soil, or generated in 14 days, whichever is greater.
- It identifies the capacity of storage for each manure type generated.
- It identifies the capacity for stacking manure that is $\geq 16\%$ dry matter without permanent storage.



WINTER SPREADING RULES



WINTER

(WHEN TEMPERATURE OR SNOW PREVENTS EFFECTIVE INCORPORATION)

- Do not mechanically apply manure within the SWQMA.
- Gleaning or pasturing of animals is allowed in SWQMA and on all slopes in winter.

Map of where SWQMA falls within field



Winter Spreading Map: Red=no spread



WINTER

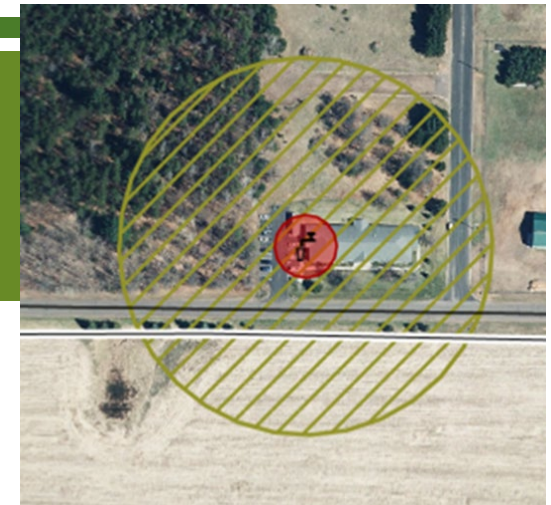
(WHEN TEMPERATURE OR SNOW PREVENTS EFFECTIVE INCORPORATION)

- Manure applications cannot exceed the P removal of the following growing season's crop.
- Limit all winter manure applications to 60 lbs. of P₂O₅/ac or less.
- Limit liquid manure applications to 7,000 gal/acre.



WINTER

(WHEN TEMPERATURE OR SNOW PREVENTS EFFECTIVE INCORPORATION)



- Do not apply within 300 feet of direct conduits to groundwater.
- Do not surface apply liquid manure during February and March on:
 - DNR Well Compensation areas funds provided to replace wells when contaminated with livestock manure or;
 - Silurian dolomite within five feet of soils surface.



WINTER

(WHEN TEMPERATURE OR SNOW PREVENTS EFFECTIVE INCORPORATION)

Do not apply manure and/or organic by-products on slopes greater than 6%, unless the plan documents that no other accessible fields are available for winter spreading and two or more of the following are implemented:

1. Contour buffer strips or contour strip cropping.
2. Leave all crop residue and no fall tillage.
3. Apply manure in intermittent strips on no more than 50% of field.
4. Apply manure on no more than 25% of the field during each application, waiting a minimum of 14 days between applications.
5. Reduce manure app. rate to 3,500 gal. or 30 lbs. P₂O₅, whichever is less.



WINTER

(WHEN TEMPERATURE OR SNOW PREVENTS EFFECTIVE INCORPORATION)



Do not apply manure and/or organic by-products to fields where **concentrated flow channels** are present unless two or more of the following are implemented:

1. Contour buffer strips or contour strip cropping.
2. Leave all crop residue and no fall tillage.
3. Apply manure in intermittent strips on no more than 50% of field.
4. Apply manure on no more than 25% of the field per application, waiting at least two weeks between applications.
5. Reduce manure app. rate to 3,500 gal. or 30 lbs. P₂O₅, whichever is less.
6. No manure application within 200 feet of all concentrated flow channels.
7. Fall tillage is on the contour and slopes are lower than 6%.

- Grassed waterway
- ditch
- non-eroding channel



SNAPPLUS WINTER SPREADING PLAN

Will account for manure applied through grazing applications, if applicable

Calculates winter manure produced, in 14 and 120 days, from the animal numbers entered into the manure production estimator

NM6 Win

Manure Production for 2021

Animal Type and Size	No. of head	lb/day per animal	Liquid gal/day per animal	14-day production as tons*	14-day production as gallons*	120-day production as tons*	120-day production as gallons*
Dairy Calf 150 lbs	60	13	2.8	5	2,352	47	20,160
Dairy Calf 250 lbs	60	21	4.5	9	3,780	76	32,400
Dairy Dry Cows 1400 lbs	60	115	25	48	21,000	414	180,000
Dairy Heifer 1000 lbs	60	82	18	34	15,120	295	129,600
Dairy Heifer 750 lbs	120	65	13.8	55	23,184	468	198,720
Dairy Lactating Cows 1400 lbs	250	148	32	259	112,000	2,220	960,000
Totals				410	177,436	3,520	1,520,880

* These are estimates of the total manure produced by all the animals on the farm. This calculation is for comparison to planned winter spreading amounts. It makes it easier for planners to compare to whichever units are used for livestock to plan for winter-spreading for a minimum of 14-days or 120-days because that is the approximate length of the frozen soil period in Wisconsin. The number of days that should be planned for winter application or storage.

Shows manure storage and capacity

Manure Storage for 2021

Storage Name	Storage Source	Storage Type	Solid Storage (tons)	Liquid Storage (gallons)
#1 Small Pit	DairyLiquid2021	Dairy, liquid	0	3,220,000
#2 Big Pit	DairyLiquid2021	Dairy, liquid	0	10,470,000
#3 Slurry	DairyLiquid2021	Dairy, liquid	0	726,893
New pit north	DairyLiquid2021	Dairy, liquid	0	24,407,958
Totals			0	38,824,851

Manure Spreading for 2021

Total planned winter mechanical applications on 138.2 acres: 1,371 tons and 0 gallons

Total planned winter grazing applications on 0 acres: 0 tons

All fields with Mechanical Spreading in Winter 2021

Field Name	Winter Acres	Slope %	Other Field Avail. if S>6%*	Conc. Flow	Winter Application Strategies	Winter Compliance Prob.	Problem Explanation
B1	8.9	7	yes		d. Apply on no more than 25% of the field during each application waiting a minimum of 14 days between applications. e. Reduce application rate to 3,500 gallons or 30 pounds of P2O5, whichever is less.		
C3	9.6	6	n/a				
C4	9.4	4	n/a				
C6	7.8						

Lists the two winter mechanical application practices selected for each field in the cropping screen

Shows a list of low-risk fields best suited for emergency manure applications

* Fields with no winter applications and no spreading restrictions in 2021 (97 acres): B9, B15, C5, C7, C18, CR01, LH5, LH6, LH7, LH11, LH12, 'LO 03', 'LO 07', 'LO 11', 'LO 12', 'LO 13'



THE 590 CHECKLIST AND WINTER SPREADING REQUIREMENTS



SECTION 2. CHECKING REQUIREMENTS FOR WINTER APPLICATIONS

	Yes	No	NA
a. Identify manure quantities planned to be spread during the winter , or the amount of manure generated in 14 days, whichever is greater. <i>For daily haul systems, assume 1/3 of the manure produced annually will need to be winter applied.</i>			
b. Identify manure storage capacity for each type applied and stacking capacity for manure $\geq 16\%$ DM if permanent storage does not exist.			

Always blank

	Storage Name	Storage Source	Storage Type	Tons or Gallons	Maximum Allowed Storage Capacity	No. of times emptied per year	Collected Annually (tons or gallons)
▶	Stack	Pack	Dairy, solid	Tons	100	3	300

Manure produced in the winter needs to be stored, spread, or grazed.



Section 2. Checking requirements for winter applications

When frozen or snow-covered soils prevent effective incorporation at application:

Will be NA if no winter manure applications

	Yes	No	NA
c. Show on map and make no applications within the SWQMA.	X		
d. Show on map and make no surface applications of liquid manure during February and March where Silurian dolomite is within 60 inches of the soils surface OR where DNR Well Compensation funds provided replacement water supplies for wells contaminated with livestock manure.	X		
e. Show on map and make no applications of manure within 300 feet of direct conduits to groundwater.	X		

Update winter manure prohibited areas

-
- Feb/Mar liquid manure prohibited areas
-
- Winter manure prohibited areas



- Field Restrictions**
- Field in 590 SWQMA
 - Drinking water well or conduit to groundwater 50 ft
 - Local prohibitions for winter applications
 - Slope restriction for winter applications
 - Concentrated flow channel
 - February/March prohibition on liquid manure

As long as all fields have boundaries, will be Yes or NA

Always if DNR Well Comp or <5' to Silurian

Guidance: This field is in an area with Silurian dolomite soils. Liquid manure and/or organic by-products are prohibited in February and March.



Spreadable Acres

Field Name	Field Acres	Total Acres	FSA Acres	Cropping Acres	Manure spreadable acres	Manure prohibited acres	Winter Spreadable acres
SWQMA	6.3	6.3	6.3	6.3	6.3	0	1.5

Only 1.5 acres spreadable in winter

When frozen or snow-covered soils prevent effective incorporation at application:

	Yes	No	NA
f. Do not exceed the P removal of the following growing season's crop when applying manure. Liquid manure applications are limited to 7,000 g/acre . All winter manure applications are not to exceed 60 lbs. of P2O5/acre .	X		

Do not exceed the P removal of the following growing season's crop when applying **manure**. Liquid manure applications are limited to **7,000 g/acre**. All winter manure applications are not to exceed **60 lbs. of P2O5/acre**.

As long as no compliance issues for winter P2O5 application rate

NM2 Compliance Check

Application Restriction Problems

Field Name	Year	Problem	Explanation
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No problems with Winter P2O5 application rates



Section 2. Checking requirements for winter applications



When frozen or snow-covered soils prevent effective incorporation at application:

	Yes	No	NA
g. Make no applications of manure to fields with concentrated flow channels unless using two of the following: 1. Contour buffer strips or contour strip cropping; 2. Leave all crop residue and no fall tillage; 3. Apply manure in intermittent strips on no more than 50% of field; 4. Apply manure on no more than 25% of the field waiting a minimum of 14 days between applications; 5. Reduce manure app. rate to 3,500 gal. or 30 lbs. P2O5, whichever is less; 6. No manure application within 200 feet of all concentrated flow channels; 7. Fall tillage is on the contour and slopes are lower than 6%. Make no applications to slopes greater than 6% (soil map units with C, D, E, and F slopes) unless the plan documents that no other accessible fields are available for winter spreading AND two of the options 2.g.1. through 2.g.5. are used.	X		



Application Restriction Problems **NM2 Compliance Check**

Field Name	Year	Problem	Explanation
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No problems with winter practices

Apply Nutrient System Create Nutrient System **Field Restrictions**

Manure / Biosolid Applications + - **Winter Practices** Grazing Est.

Source name	Season	Spread method	Area	Acres applied	Rate	Units	NO ₃ Inh.	Actual
Beef Solid	Wi...	Uninc...	Sp...	24.7	10	ton...	<input type="checkbox"/>	<input type="checkbox"/>
Beef Solid	Sp...	Uninc...	Wi...	1.7	10	ton...	<input type="checkbox"/>	<input type="checkbox"/>



Practices for fields with slope > 6%. The slope of this field is 4%.
 Winter spreading practices are not required but may be selected.

- a. Contour buffer strips or contour strip cropping.
- b. Leave all crop residue (this prohibits removal of silage or bedding) and no fall tillage.
- c. Apply in intermittent strips on no more than 50% of the field.
- d. Apply on no more than 25% of the field during each application waiting a minimum of 14 days between applicati
- e. Reduce application rate to 3,500 gallons or 30 pounds of P2O5, whichever is less.

SnapPlus allows for fertilizer to be spread in specific areas of the field to compensate where manure can't be spread.



Farm | Soil Tests | SnapMaps | Fields | Nutrients | Cropping | Records | Reports

Nutrient Application Planner

Farm nutrient source availability*

Source name	Nutrient type	Units	N	N Incorp	N Inject	P2O5	K2O	S	DM %	Available annual volume	Planned applications	Remaining volume	
Beef Grazing	Beef, grazing	Tons	4	0	0	3	7	0	12	0	110	-110	
Dairy Semi- Solid	Dairy, semi-so							0.4	15	1,711	1,809	-98	
*Values are for first year available nutrients in lbs/ton or lbs/1000 gallons										Total solid:	1,711	1,919	-208
										Total liquid:	0	0	0

Field: Home 12 | Soil: ZiA, ZITTAU | Soil Test P: 12 K: 128 | Acres: 21.5 | Crop: Oat-Pea Forage w/ Alfalfa Seeding Spring | Prev: Corn grain | Crop Year: 2019

Apply Nutrient System: **Field Restrictions** | Fall 2018 thru Summer 2019

Manure / Biosolid Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units	NO ₃ Inh.	Actual
Dairy Semi-...	Wi...	Uninc...	Sp...	17.2	10	ton...	<input type="checkbox"/>	<input type="checkbox"/>

Winter Spreadable

Fertilizer Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units	Time	Actual
Potassium ...	Sp...	Unincor...	Entire	21.5	150	lbs/...		<input type="checkbox"/>

Entire field
Manure prohibited
Winter manure prohibited



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