

VNMP and CNMP Implementation

Tips to Accomplish Practice Standard

- If new soil samples are taken during the contract, the plan and prescriptions should be updated to reflect the updated soil samples.
- Ensure all the planned nutrient BMPs (Basic & Precision VNMP or CNMP Implementation, Manure Incorporation, Phosphorus Placement), align with the recommendations of the approved VNMP or CNMP. If any nutrient BMP results in an overapplication, the grower forfeits all related nutrient BMP payments.
- Certification and Verification of all nutrient BMPs during the crop year must be completed prior to releasing payment.

Important Dates

The grower must complete the Certification process by June 30th of the enrolled Crop Year.

Certification Instructions

1. Log in to the applicable "Grower" account in the *MyFarms* H2Ohio experience.
2. Navigate to the "BMP Certification" milestone and complete the Certification tasks.
3. Once the Certification tasks are completed, the SWCD will review the documents and either release payment or ask for more information.

Precision VNMP and CNMP Implementation

Tips to Accomplish Practice Standard

- A precision plan must consist of both georeferenced soil test results and one variable rate P₂O₅ prescription map, both uploaded to MyFarms in shapefile format.
- If the producer has a precision plan, they may alternate between Precision VNMP or CNMP Implementation and Basic VNMP or CNMP Implementation on individual fields, based on each crop year's applications, over the life of the contract.
- Ensure all the planned nutrient BMPs (Basic & Precision VNMP or CNMP, Manure Inc, P Placement), align with the recommendations of the approved VNMP or CNMP. If any nutrient BMP results in an overapplication, the grower forfeits all related nutrient BMP payments.
- Certification and Verification of all nutrient BMPs during the crop year must be completed prior to the SWCD releasing payment.
- Below are examples of payment types earned in several scenarios:

Soil Sampling Method	Planned Phosphorus Applications*	Crop Year Payment Earned
≤6-acre grids OR ≤ 12-acre zone uploaded in shapefile format	VRT fertilizer/manure prescription, uploaded in shapefile format, with VRT application at or below recommendation, OR no P ₂ O ₅ application is made.	Precision Implementation**
≤6-acre grids OR ≤ 12-acre zone uploaded in shapefile format	VRT fertilizer/manure prescription, uploaded in shapefile format, with VRT application at or below the 2-year fertilizer recommendation + flat rate starter (≤20 lbs P ₂ O ₅).	Precision Implementation
≤6-acre grids OR ≤ 12-acre zone uploaded in shapefile format	VRT fertilizer/manure prescription, uploaded in shapefile format, with flat rate starter application (≤20 lbs P ₂ O ₅), and/or with flat rate application(s) less than the 590 recommendation.	Precision Implementation
≤6-acre grids OR ≤ 12-acre zone uploaded in shapefile format	Flat rate fertilizer/manure prescription, uploaded in shapefile format, with flat rate application at or below the 590 application rate at the zone or grid level.	Precision Implementation
≤6-acre grids OR ≤ 12-acre zone uploaded in shapefile format	All STP levels have a zero P ₂ O ₅ recommendation, which prevents the VRT fertilizer/manure prescription from being uploaded in shapefile format. No P ₂ O ₅ is applied, except for the flat rate starter application (≤20 lbs P ₂ O ₅).	Basic Implementation
≤25-acre composite	Flat rate fertilizer/manure recommendation, with flat rate application at or below recommendation, OR flat rate fertilizer/manure recommendation without P ₂ O ₅ applied.	Basic Implementation

*If the VNMP or CNMP calls for more P₂O₅ than 590 allows, the field will be excluded from the P2 Contract for all nutrient BMPs. Those fields are still eligible for the O/W Cover BMP.

** All Precision payments require at least one non-zero P₂O₅ fertilizer recommendation across the plan term.

Important Dates

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Certification Instructions

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3. Once the Certification tasks are completed by the grower or an advisor, the SWCD will review the documents and either release payment or ask for more information.

Overwintering Cover

Tips to Accomplish Practice Standard

- Reference NRCS Appendix A (Cover Crop) for detailed requirements.

Method/Timing

- Ensure the planned Overwinter Cover planting dates are compatible with the expected harvest date of the preceding cash crop or ensure alternative seeding methods are planned.
- Plan the method to establish the Overwinter Cover.
 - For cover crops, drilling/planting, aerial seeding, broadcast seeding and interseeding are acceptable.
 - An aerial, interseeded or broadcast seeding of cover crops, requires a 20% higher seeding rate than those shown in Figure 1 of NRCS Appendix A.
 - Frost seeded clover into wheat is acceptable, if the clover remains until March 15th of the following year.
- If the grower plans to interseed overwinter cover before the Appendix A establishment window, the producer is accepting the risk of poor establishment due to herbicide carryover, inadequate moisture, and poor light conditions. The grower may forfeit payment if a poor stand results from deviating from Appendix A.

Seed Quality

- The grower shall ensure the seed being used for the Overwinter Cover BMP meets the Appendix A seed quality standards including: % purity, % germination, % weed seed, and Ohio noxious weed content.
- If the grower plans to use bin-run seed, a seed test must still be submitted. ODA provides limited, free testing from June 1st - December 31st. See the ODA website for details:
<https://agri.ohio.gov/divisions/plant-health/grain-warehouse-feed-and-seed/seed-testing>
- The “Seed Quality Adjustment Factor” (Figure 1) should be consulted to determine if a seeding rate adjustment is needed based on the grower’s germination and/or seed purity test results.
- If the seed being used is more than one year old at the time of planting, a seed test must be submitted.
- If the seed test lists any noxious or invasive weeds the seed must be cleaned to remove the weeds and retested before use until the test comes back with no noxious or invasive weeds listed.
- Once the above requirements are met, ensure the Pure Live Seed (PLS) seeding rate follows the respective seeding table:
 - Cover crop seeding rates are shown in Figure 2 for quick reference, or see NRCS Appendix A (Cover Crop) for more detailed information.
 - For forage seeding rates, see NRCS Appendix A (Forage Production and Erosion Control)
 - For small grain seeding rates, see Figure 2 or NRCS Appendix A for minimums, or relevant Agronomy guides for cash crop guidance.
- Pure Live Seed (PLS) is calculated as follows: $[(\% \text{ Seed Purity}) \times (\% \text{ Seed Germination})] \div 100$.
- Keep application records, which will ultimately be entered into MyFarms during the VNMP or CNMP Certification process.

Example Calculations for Cover Crop Seed Mixes

Planned Species or Species Mix	Standard Seeding Rate (lbs/ac PLS)	Scenario Requiring Rate Adjustment	Required Adjustment	Total PLS needed (lbs/ac)
Winter Rye	50	Aerial seeded = (+20% of normal rate)	50×1.20	60
Winter Rye	50	80% germ and 94% purity-adjustment needed, see App. A figure 1 below	50×1.16	58
Winter Rye / Spelt Mix	50/64	Two-way species mix	50% x full rate of each species 50×0.5 64×0.5	Rye=25 Spelt=32
Rye/Oats/Oilseed Radish	50/40/2	3 way species mix, only 1 species is overwintering	Overwintering species must be 50% of its full rate, others can be 25% each Winter Rye: 50×0.5 Oats: 40×0.25 Radish: Chart shows 25% rate = 1.5 lb	Rye=25 Oats=10 Radish=1.5

Figure 1 - Seed Quality Adjustment Table

Additional Seed Quality Adjustment Factor ¹										
Germination										
	98%	96%	94%	92%	90%	88%	86%	84%	82%	80%
Purity	98%	-	-	-	-	-	1.02	1.04	1.07	1.11
	96%	-	-	-	-	1.01	1.04	1.07	1.10	1.13
	94%	-	-	-	1.01	1.04	1.07	1.09	1.13	1.16
	92%	-	-	1.01	1.04	1.07	1.09	1.12	1.16	1.19
	90%	-	1.01	1.04	1.06	1.09	1.12	1.15	1.19	1.22
	88%	-	1.01	1.04	1.07	1.09	1.12	1.15	1.18	1.22
	86%	1.02	1.04	1.07	1.09	1.12	1.15	1.18	1.21	1.25
	84%	1.04	1.07	1.10	1.12	1.15	1.18	1.21	1.25	1.28
	82%	1.07	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.32
	80%	1.11	1.13	1.16	1.19	1.22	1.25	1.28	1.32	1.35

1. The “additional seed quality adjustment factor” is to be used only if the percent germination and percent purity is lower than the assumed value. Combinations without numbers (-) do not need an adjustment of the listed seeding rate.

Figure 2 - Cover Crop Seeding Table (See NRCS Appendix A for more information and forage species)

Species	Seeding Rates in Pounds PLS (Percentage of Mix)						Seeding depth (in)	North
	Overwintering ¹	100%	75%	50%	33%	25%		
Winter Rye	Yes	50	38	25	17	13	1	8-1 to 11-1
Winter Barley	Yes	59	44	29	19	15	1	8-15 to 10-10
Winter Wheat	Yes	64	48	32	21	16	1	9-22 to 11-1
Winter Triticale	Yes	60	45	30	20	15	1	8-1 to 11-1
Spelt	Yes	64	48	32	21	16	1	9-22 to 11-1
Annual Ryegrass	Yes	18	13	9	6	4	0.5	8-1 to 9-20
Oats	No	40	30	20	14	10	1	8-1 to 9-20
Oilseed Radish	No	NR	NR	NR	2	1.5	0.5	8-1 to 9-15
Rapeseed/Canola/Kale	Yes	4	3	2	1.5	1	0.5	8-1 to 9-15
Mustards	No	4	3	2	1.5	1	0.5	8-1 to 9-15
Turnip	No	2.5	2	1	0.75	0.5	0.25	7-20 to 9-15
Alfalfa ⁴	Yes	16	12	8	6	4	0.25	8-1 to 8-15
Red Clover	Yes	9	7	5	3	2	0.25	7-20 to 8-30
Yellow Sweet Clover	Yes	8	6	4	3	2	0.25	7-20 to 8-30
Crimson Clover	Yes	12	9	6	4	3	0.25	6-15 to 9-15
Winter Pea	No	40	30	20	14	10	1.25	8-1 to 9-15
Hairy Vetch	Yes	16	12	8	5	4	1	8-1 to 9-20
Sorghum-Sudangrass	No	24	18	12	8	6	1	5-15 to 7-5
Sudangrass	No	20	15	10	7	5	1	5-15 to 7-20
Pearl Millet	No	12	9	6	4	3	0.75	5-15 to 7-20
Japanese Millet	No	14	11	7	5	4	0.75	5-15 to 7-20
Buckwheat	No	NR	NR	12	8	6	1	6-15 to 8-15
Sunflower	No	NR	NR	NR	4	3	2	5-15 to 7-20
Cowpea	No	60	45	30	20	15	0.75	6-15 to 8-1
Sunn Hemp	No	12	9	6	4	3	1	6-15 to 8-1
Berseem Clover	No	11	8	5	3	2	0.25	5-15 to 8-15
Soybean	No	54	40	27	18	13	1.5	6-15 to 8-15

Important Dates

The grower must complete the Certification process by January 15th of the enrolled Crop Year.

Certification Instructions

1. Log in to the applicable “Grower” account in the *MyFarms* H2Ohio experience.
2. Navigate to the “BMP Certification” milestone and complete the Certification tasks.
3. Once the Certification tasks are completed, the SWCD will review the documents and either release payment or ask for more information.

Subsurface Phosphorus Placement

Tips to Accomplish Practice Standard

- Plan the application method to be used to accomplish P Placement. All phosphorus that is applied must be placed a minimum of two inches below the soil surface.
 - When phosphorus is applied, the following injected application methods are acceptable:
 - 2 x2
 - Strip-till
 - Side-dress
 - Other method approved by the contracting SWCD prior to application.
 - If the VNMP or CNMP includes a non-zero phosphorus recommendation for a field and the grower does not apply phosphorus, the grower will receive payment.
- If a field has a VNMP or CNMP that qualifies for Precision, and some grids/zones of the field have a phosphorus recommendation of “zero”, and the VNMP or CNMP planned rates (or less), are followed on all grids/zones, a P Placement payment will be received for the whole field. Ahead of cash crop, a 20 lbs P₂O₅ starter application made with the planter is allowed on all grids/zones, including those that have a P₂O₅ recommendation of zero.
- Ensure all the planned nutrient BMPs (Basic & Precision VNMP or CNMP, Manure Inc, P Placement), align with the recommendations of the approved VNMP or CNMP. If any nutrient BMP results in an overapplication, the grower forfeits all related nutrient BMP payments.
- Certification and Verification of all nutrient BMPs during the crop year must be completed prior to the SWCD releasing payment.
- Keep application records, which will ultimately be entered into MyFarms during the VNMP or CNMP Certification process.

Example Scenarios

P ₂ O ₅ Recommendation	Fall P ₂ O ₅ Application	Spring P ₂ O ₅ Application	Total P ₂ O ₅ Applied:	Payment Yes/No
55 lbs	Broadcast 30 lbs	2 X 2 @ 25 lbs/acre	55 lbs	No
55 lbs		2 x 2 @ 55 lbs/acre	55 lbs	Yes
110 lbs	Strip Till 80 lbs	2 x 2 @ 30lbs/acre	110 lbs	Yes
55 lbs			0 lbs	Yes
0 lbs (whole field/all grids/all zones)			0 lbs	No

Important Dates

The grower must complete the Certification process by June 30th of the enrolled Crop Year.

Certification Instructions

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3. Once the Certification tasks are completed by the grower or an advisor, the SWCD will review the documents and either release payment or ask for more information.

Manure Incorporation and Utilization

Purpose

- Ensure all the planned nutrient BMPs (Basic & Precision VNMP or CNMP, Manure Inc, P Placement), align with the recommendations of the approved VNMP or CNMP. If any nutrient BMP results in an overapplication, the grower forfeits all related nutrient BMP payments.
- Ensure manure analyses include organic nitrogen and ammonium nitrogen content.
- Follow applicable guidelines and setbacks for manure application set forth in the Ohio NRCS 590 Nutrient Management Standard.
- Manure application must be consistent with any other applicable permits or local requirements
 - If applicable, check with the Ohio Department of Agriculture - Division of Livestock Environmental Permitting to be sure application rates are compliant.
- Ensure that the timing and method of manure application meets one of the application methods detailed in the Manure Incorporation Practice Standard.
- Keep application records, which will ultimately be entered into MyFarms during the VNMP or CNMP Certification process.

General Timing for Approved Application Methods

Method	Manure Type	Time Frame	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Spring Incorporation	both	After April 20, before emergence												
Side Dress	liquid	After emergence												
Grassland Applicator on wheat or overwintering cover	liquid	after greenup, before termination												
Incorporated after harvest	both	After harvest, before Nov.1												
Direct Injection on established cover, minimal disturbance	liquid	After harvest, before Nov.1												
Irrigated on growing crop	liquid	June 15-Aug. 1												
On perennial forage immediately following harvest	both	Immediately following cut												
On 75% residue cover	dry	April 20-before July 1												
Following small grain, On established cover crop, no incorporation	dry	After harvest-before Aug. 15												
No Spreading	both	Nov. 1 to greenup												

Important Dates

The grower must complete the Certification process by September 30th of the enrolled Crop Year.

Certification Instructions

1. Log in to the applicable “Grower” account in the MyFarms H2Ohio experience.
2. Navigate to the "BMP Certification" milestone and complete the Certification tasks.
3. Once the Certification tasks are completed by the grower or an advisor, the SWCD will review the documents and either release payment or ask for more information.