USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

DRAFT

590 – Nutrient Management Implementation Requirements

Producer:		**Project or Contract:**	
Location:		**County:**	
Farm Name:		**Tract Number:**	

Manure Management Planner (MMP) is the preferred tool for nutrient planning utilizing commercial fertilizers and manure. This form is an alternative format that requires significant planner input. Contact your Area Resource Conservationist or Area Nutrient Management Planning Specialist for details on MMP training and assistance.

☐ **Complete an Implementation Requirement worksheet for each year of the planning period (minimum of four years).**

☐ **Conservation Plan Map:** An aerial map clearly showing the farm/site location, all field and sub-field delineations, locations of sensitive features, and setback distances where applicable.

The Practice Purpose(s):

☐ Improve plant health and productivity.

☐ Reduce excess nutrients in surface and groundwater.

☐ Reduce emissions of odors, particulate matter, greenhouse gases, and ozone.

☐ Reduce pathogen loss to surface and groundwater.

☐ Improve or maintain soil organic matter.

Description of work:

Explain crop rotation and associated nutrient management activities.

NRCS Review Only

Designed By:		**Date**	
Checked By:		**Date**	
Approved By:		**Date**	

Clear Form

Nutrient Management Specifications Sheet

Table 1. Field Conditions and Recommendations

Crop sequence/rotation (circle current crop)					Expected yield
Current soil test levels (ppm or lb/ac)					
N	**P**	**K**	**pH**	**S.O.M.%**	**EC**
Nutrients Recommended by MU Recommendations Online/amendments to meet expected yield					
N	**P_2O_5**	**K_2O**	**Lime**	**Other**	**Other**

Table 2. Nutrient Sources Year of

Credits		N	P_2O_5	K_2O
			Pounds per acre	
1. Nitrogen credits from previous legume crop				
2. Residual from long-term manure application				
3. Irrigation water				
4. Other (e.g., atmospheric deposition, biosolids, organic by-products)				
5. **Total credits**		0	0	0
Plant available nutrients applied to field		**N**	**P_2O_5**	**K2O**
6. Credits (from row 5, above)		0	0	0
7. Fertilizer	Starter			
	Other			
8. Manure/organic material				
9. **Nutrients supplied subtotal (sum of lines 6, 7, and 8)**		0	0	0
10. **Nutrients recommended (from table 1)**		0	0	0
11. **Difference between nutrients supplied and nutrients recommended (subtract line 10 from line 9)**		0	0	0
If line 11 is a negative number, this is the amount of additional nutrients needed to meet the crop nutrient recommendation.				
If line 11 is a positive number, this is the amount by which the available nutrients exceed the crop nutrient recommendation.				

Table 3. Nutrient Balance

Credits	N	P_2O_5	K_2O
	Pounds per acre		
1. Nutrients supplied from all sources (Table 2 Line 9)	0	0	0
2. Nutrients utilized by the crop (crop removal)			
3. Nutrients residual in the soil (subtract Line 2 from Line 1)	0	0	0

Table 4. Projected Soil Test P & K at End of Plan Period

	P_2O_5	K_2O
Values in this Table must be input by the planner	Pounds per acre	
1. Year 0 residual soil nutrients:		
2. Projected soil test P and K at the end of the soil test cycle:		

Line 2 is calculated using the companion IR document (590_MO_IR_Projected_End_of_Plan_P_K_Calculator_2019.xlsx) in FOTG under the same directory as this form. Change in P (lb/ac) = Round ((Net P2O5/110 + sqr(P))^2 - P). Change in K (lb/ac = round ((Net K2O/75.5 + sqr(K))^2 - K)

Nutrient Management Specifications

Amount to be applied (lb/ac)	N		P_2O_5		K_2O
Method, form, and timing of application					

Operation and Maintenance (for a detailed O&M description see the Missouri 590 CPS)**:**

- ☐ Conduct periodic plan reviews to determine if adjustments or modifications to the plan are needed. At a minimum, plans must be reviewed and revised, as needed, with each soil test cycle (maximum of 4 years), changes in manure volume or analysis, crops, or crop management.
- ☐ Monitor fields receiving animal manures and biosolids for the accumulation of heavy metals and phosphorus in accordance with University of Missouri-Columbia Extension guidance and State law.
- ☐ For animal feeding operations, significant changes in animal numbers, management, and feed management will necessitate additional manure analyses to establish a revised average nutrient content.
- ☐ Calibrate application equipment to ensure accurate distribution of material at planned rates. For products too dangerous to calibrate, follow University of Missouri-Columbia Extension or equipment manufacturer guidance on proper equipment design, plumbing, and maintenance. Document the nutrient application rate.
- ☐ When the applied rate differs from the planned rate, provide appropriate documentation to explain the difference.
- ☐ Maintain records for at least 5 years to document plan implementation and maintenance.

CERTIFICATION OF PRACTICE - As Installed

Total Acres Treated:

Planting Date:

Harvest Date:

Yield:

Fertilizer Weight Tickets Provided?: ◯ Yes ◯ No

Fertilizer Nutrients Applied Follow Nutrient Recommendations?: ◯ Yes ◯ No

Fertilizer Application Date Complies with Planned Date? ◯ Yes ◯ No

Practice performed, to the extent shown above, meets approved plan, practice standard and specifications as applicable.

Certified by: _____ **ESJAA Level:** _____

Certification Statement:

I certify that implementation of this conservation practice is complete, meets criteria for the stated purpose(s), and meets the NRCS conservation practice standard and specifications.

X _____

Planner/Technical Service Provider Signature

_____

Date