Opportunity Checklist for Cropping System on Swine Farms

If an estimate of Whole Farm Nutrient Balance for your farm identified opportunities for nitrogen or phosphorus balance improvement, then consider the following crop management practices for their potential to improve a nutrient balance. Click here for introduction to WFNB

Review the issue in the left hand column and circle the best answer in columns two through five. Note where your circled responses lie relative to the potential contribution to whole farm nutrient balance. Click here for introduction to Opportunity Checklist

For practices listed below, circle the answer listed to the right best describing your situation.	Contribution to Whole Farm Nutrient Balance				Does this impact N balance? P balance? NH_3 emissions?
	Current Practice Already Contributes Large Improvement in Balance[1]	Current Practice Already Contributes Small Improvement in Balance[1]	Current Practice Contributes to Some Imbalance[1]	Current Practice Contributes to Large Imbalance[1]	
Nutrient Planning: Manure replacement of commercial fertilizer?	On manured land, manure has replaced at least 80% of commercial N fertilizer use	On manured land, manure has replaced 30 to 80% of commercial N fertilizer use		On manured land, manure has replaced less than 30% of N fertilizer use.	N
	On manured land, manure has replaced at least 80% of commercial P fertilizer use	On manured land, manure has replaced 30 to 80% of commercial P fertilizer use		On manured land, manure has replaced less than 30% of P fertilizer use.	P
Utilization of manure ammonium nitrogen?	Manure is incorporated during or immediately after application	Manure is incorporated the same day or applied with irrigation system in a diluted or low solids form with drop nozzles.	Solid manure is surface applied	Slurry or liquid manure is surface applied and not incorporated within 24 hours	N & NH_3
Records?	Records are maintained for: • manure and soil samples, • best estimate of crop available manure nutrients, and • crop yield.		Records are incomplete for manure and soil samples and best estimate of crop available manure nutrients, and crop yields.	Records are not maintained	N & P
Calibration of application equipment?	Application equipment is field calibrated for typical application rates	Application equipment is field calibrated for the most common application rate.		Application equipment is not calibration.	N & P
Nutrient management plan (NMP) implementation?	NMP in fully implemented and meets all regulatory requirements?		NMP is partially implemented and meets some regulatory requirements?	NMP is not implemented	N & P

[1] The contribution that any identified current or future practice will make to whole farm nutrient balance will be dependent upon the acreage of crop land managed and the relative contribution purchased fertilizers makes to the nutrient inputs of the farm.

Inputs: Legumes in Crop Rotations and Nitrates in Irrigation Water

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	Current Practice Already Contributes Large Improvement in Balance[1]	Current Practice Already Contributes Small Improvement in Balance[1]	Current Practice Contributes to Some Imbalance[1]	Current Practice Contributes to Large Imbalance[1]	
Legume crops[2]	Legume crop is removed from crop rotation OR Legume rotation effect is credited in next year's crop N requirements thus reducing manure or fertilizer application.	Legume crops are reduced in their role within cropping program (e.g. corn – corn – soybean rotation) OR Manure is applied to legume crops thus reducing nodulation and fixing of N	Legume crops make up approximately half of crop acres or more (e.g. corn – soybean rotation) AND No N credit is give for the rotation effect	More than 50% of cropland is devoted to legume production AND No N credit is give for the rotation effect.	N
Nitrate in irrigation water?		Irrigation water is sampled every three years for nitrates and commercial fertilizer or manure application is reduced to offset nitrate in irrigation water.	Nitrates in irrigation water are not estimated nor credited to reduce commercial fertilizer or manure application		N

[1] The contribution that any identified current or future practice will make to whole farm nutrient balance will be dependent upon the acreage of crop land managed and the relative contribution purchased fertilizers, legumes, or irrigation water makes to the nutrient inputs to the swine farm.

[2] Legume crops fix atmospheric N in nodules on plant roots. This represents an additional source of N added to a farm which may not be accounted for but may contribute to an excess of N supply to the crop. Legume crops include alfalfa, clovers, beans and pea crops.

Introductory menu for WFNB Resources

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