



Manure Spreading Plan

Livestock System Progressive Planning Fact Sheet

Natalie Rector, Michigan State University Extension

Planning where, when and how much manure will be spread on fields is one of the biggest benefits to developing a spreading plan. A CNMP will require a projected spreading plan that shows all of the manure that is produced in a twelve-month period can also be applied appropriately. Longer planning is even better, especially if you have long-term rotations on your farm.

Planning ahead prevents unintended consequences. A spreading plan will help:

- 1) Apply manure nutrients agronomically, based on soil test and crop needs.
- 2) Apply manure to reduce the risk of manure reaching surface waters, especially when spreading manure on frozen or snow-covered fields.
- 3) Apply manure at rates the soil can absorb.
- 4) Apply manure in tune with the cropping sequence and days of available storage capacity.

Developing a spreading plan on paper can be time consuming unless you only have a few fields. Otherwise, computer software can be extremely helpful. Both MSU NM and Purdue's MMP will calculate rates based on Michigan rules and Tri-State fertilizer recommendations.

Components

- Soil Tests
 - Begin with current soil tests (less than 3 years old) for ALL fields that will receive manure
 - Fields testing over 300 lbs. (150 ppm) per acres Bray P1 CANNOT receive manure
 - Tri-State or MSU fertilizer recommendations should be followed
- Manure Sampling
 - May use book values for annual volume generated, or
 - Sample manure ideally after mixing and at time of hauling
 - Visit www.maeap.org for a listing of labs accepting samples. Be sure to ask for total and ammonium N tests, along with the standard lab package
- Rate per Acre of Manure
 - Determine weight of load
 - Calculate area covered in the field
 - Adjust speed or RPMs to get desired rate
 - Depending on soil tests, you may want to calibrate manure to be applied based on a maximum of two years worth of crop removal, if this rate is not over the nitrogen recommendation. For a chart of crop removal values, visit www.maeap.org

- Nutrients per Acre
 - Determine cropping plan for coming season
- Pre-sidedress Nitrate Test
 - Beneficial in indicating how much N is actually available at the time of greatest plant need
 - PSNT tests need to be taken one/two weeks ahead of planned side dress application
- Records
 - Calculate amount and timing of manure applications
 - Utilize manure tests
 - Evaluate yield performance
- Planning
 - Know how much manure needs to be hauled (storage and barn)
 - Know frequency of hauling needs
 - Utilize manure tests to determine application rate for future crop (manure should never be applied at rates that exceed the nitrogen recommendation or removal value of the next crop)
- Long Term Sustainability
 - Prioritizing fields assists in applying manure where it is most valuable to the future crop, at agronomic rates and with the least risk to the environment

Resources

- Certified Comprehensive Nutrient Management Plan (CNMP) Provider
- Michigan State University Extension
- Certified Crop Advisor

Other Resources

Extension bulletin E-498 for soil sampling procedures. Resources available at www.maeap.org include: Book values of animal manure content, crop removal charts, record keeping sheets, spreader calibration, addresses of manure labs, links to computer record systems and other useful information.

Timing

Check the file cabinet to see how old your soil tests are and which fields need to be sampled. Plan soil sampling for fall or first thing in the spring. Get all fields up to date. Anytime manure is being hauled is a good time to take manure samples. Develop a spreading plan as soon as you know your next crop plan.