

Positioning and strategies for resolving the Preparation / PHI conflict with the NOP
Updated: February 5, 2019

1. Background and Positioning

Biodynamic farmers and growers use Preparation 500, called horn manure, as a soil and plant fertility stimulator. It is made with raw cow manure which is placed in a cow horn and buried in the ground for a minimum of six months, a longer period than the pre-harvest interval (PHI) requirement for raw manure that is applied directly to a field. The cow horn is then dug up, and is applied as a spray to fallow ground, young developing crops, and grass swards. The dilution rate is approximately 1/3 cup of finished Preparation 500 or horn manure per 3 gallons of water per acre. (Note: More bird dung falls from the sky per acre than that, not to mention rodent dung or one load of deer droppings.) The finished product is a humus material not a raw manure. There is a long history of usage with no known negative food safety consequences.

2. Current Situation

A [2016 NOP memorandum](#) (see pg. 3 “Biodynamic Preparations) clarified the restrictions on Biodynamic Preparations by reclassifying them as raw manure: “Preparations containing animal manure, including horn manure spray, must comply with manure restrictions at 205.203(c)(1)”. This ruling change, when proposed, was not widely publicized so Demeter and the biodynamic community did not have an opportunity to voice their opposition or coordinate a response.

Following this reclassification, the [Organic Materials Review Institute \(OMRI\)](#)- the material review program that USDA NOP certifiers contract with for material review- changed their classification, stating that Biodynamic preparation 500 is allowed in organic practices with restrictions as per 205.203(c)(1) (i,ii, and iii).

The USDA NOP section §205.203 on Soil Fertility and Crop Nutrient Management practice states the following:

(a) The producer must select and implement tillage and cultivation practices that maintain or improve the physical, chemical, and biological condition of soil and minimize soil erosion.

(b) The producer must manage crop nutrients and soil fertility through rotations, cover crops, and the application of plant and animal materials.

(c) The producer must manage plant and animal materials to maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances. Animal and plant materials include:

(1) Raw animal manure, which must be composted unless it is:

(i) Applied to land used for a crop not intended for human consumption;

(ii) Incorporated into the soil not less than 120 days prior to the harvest of a product whose edible portion has direct contact with the soil surface or soil particles; or

(iii) Incorporated into the soil not less than 90 days prior to the harvest of a product whose edible portion does not have direct contact with the soil surface or soil particles;
(2) Composted plant and animal materials produced through a process that:
(i) Established an initial C:N ratio of between 25:1 and 40:1; and
(ii) Maintained a temperature of between 131 °F and 170 °F for 3 days using an in-vessel or static aerated pile system; or
(iii) Maintained a temperature of between 131 °F and 170 °F for 15 days using a windrow composting system, during which period, the materials must be turned a minimum of five times.

3. Implications

Farmers that are both NOP and Demeter certified do not have the freedom to determine the best application times for the Preparations on their farms. If they wish to use the Preparations within the PHI timeframe they risk being non-compliant with the requirements of the NOP. Conversely, if they decide not to use them, they may risk being noncompliant with the requirements of the [Demeter Farm Standard](#), (section 1C (4) on pg. 19). For short life crops application of 500 immediately prior to planting, while in their vegetative growing phase, or post seedling is a typical practice. Ultimately, not utilizing the Preparations as the farmer sees fit may decrease the vitality of their Biodynamic crops and food.

This is also an issue for any farmer that wishes to utilize the Preparations, organic or not, because FISMA also does not allow the application of raw manure within the same PHI restrictions.

4. Strategies

Multiple avenues are being explored to address this issue with the goal that Biodynamic practitioners may use the Preparations freely without compliance concerns. These options include but are not limited to:

- Cause section §205.203 of the NOP to be amended to de-classify the stated Biodynamic Preparations as raw manure by:
 - Strategy TBD after discussion with materials review staff at NOP based on the following points:
 - 500 and other manure based preparations are in contact with the soil for far greater than the PHI
 - The quantities being applied are minuscule and therefore inconsequential
 - The preparations are no longer manure, despite being manure based. They are a humus structure.
 - There was insufficient opportunity for practitioners to comment on the rule change
- Research what research is already out there that is pertinent to this topic
- Conduct research

- Michael Fields interested in testing horn manure temperatures during burial period
- What other research?
- Communicate with organic certifiers to understand position regarding Demeter client use within PHI intervals. CCOF has already stated they are handling this issue from an educational point of view and are not issuing non-compliances. They are interested in seeing progress on the issue with the NOP. Demeter to reach out to other organic certifiers as well.
- Create temporary flexibility around Biodynamic certification requirements so that Biodynamic practitioners are permitted to amend their Preparation applications to fall in line with the current NOP/ FISMA requirements until this issue is resolved.
- Organizations that make and sell the preparations could ensure that there is no presence of any pathogenic organisms via testing regimes. Harriett Behar, NOP President, has indicated that if enough testing is done over a period of a year or two and all tests come back with no e-coli or salmonella indicated that the NOP would likely change its classification.

5. Next steps

- a. Tarry will reach out to other organic certifiers in addition to CCOF to ensure that issue is “gently” handles while we deal with the issue with the NOP
- b. Tarry to reach out to two NOP staff whose role is materials review to seek guidance on what would the NOP require to change classification of Preparations from raw manure.
- c. Perry interested in researching temperatures of curing cow manure while horn is buried
- d. Tarry to reach out to Demeter International colleagues to find out if there is pertinent research available
- e. JPI and other prep makers consider doing testing?
- f. Demeter will circle back to committee once Tarry speaks with the NOP

For more information or to participate in the development of this issue please contact Demeter Director of Certification Tarry Bolger (tarry@demeter-usa.org)