



CATTLE CORNER

Organic hayfield fertility: Availability of hen manure and wood ash

By Katie Webb, MCS Dairy Certification Specialist

High quality forages are the key to profitability for organic dairy farms in the Northeast. Historically, MOFGA certified organic dairy farms have relied heavily on hen manure from layer operations in Turner, Maine for their forage crops' nitrogen needs. In recent years, multiple factors have reduced the availability of Turner hen manure.

Organic producers are looking for organic approved alternative field inputs to help maintain field fertility and feed quality for their farms. Currently Maine's ag businesses and industries are not equipped to answer this rising demand, although new options are being explored on many fronts.

For MOFGA certified organic farms, here are approved fertility and soil amendment options if hen manure is not available.

1) Organic approved wood ashes

According to Rick Kersbergen Extension Professor, Sustainable Dairy and Forage Systems at UMaine Cooperative Extension, nitrogen use efficiency goes up 20% as you raise your soil pH from 6.0 to 7.0. Producers should check soil tests because of high potassium levels in wood ash. However, wood ash increases potassium, thereby improving winter survival of legumes. And legumes are better able to fix nitrogen at the ideal soil pH that woodash can help you reach, according to Caleb Goossen, MOFGA's Organic Crop and Conservation Specialist. Plus woodash can supply calcium.

Current sources of MCS approved wood ash are:

- Louisiana Pacific/New Limerick Wood Ash
- ReEnergy Fort Fairfield Biomass Wood Ash/Boralex
- Covanta West Enfield Power Station Wood Ash

- Covanta Jonesboro Power Station, Jonesboro Wood Ash
- Portsmouth, NH, Wood Ash/Schiller
- ReEnergy Ashland wood ash
- Livermore Falls Biomass Plant Wood Ash
- Athens Energy wood ash/Maine Woods Pellet Co.
- Robbins Lumber Searsmont Wood Ash
- Stratton Wood Ash ReEnergy

NOTE: Before sourcing any wood ash please contact your certification specialist to ensure that the wood ash you want to use is still on the approved list.

2) Conventional manures, including cow manure, can generally be approved for organic use provided they do not contain added synthetic substances.

3) Add more legumes to your fields.

Inoculants are "cheap insurance," that new stands will have the bacteria needed to fix nitrogen, says Goossen, when establishing new stands. Clovers, alfalfa, and trefoil are among the options. When choosing legumes, make sure the varieties are suitable for Maine's northern climate, especially for alfalfa. Leaving generous crop residues before winter can hold a snow blanket and help winter survival. Poor drainage and associated ice present problems for alfalfa crown and root damage. The pH and potassium advantages offered by wood ash may help with winter survival of alfalfa, according to Kersbergen.

4) Liming. Crushed mined limestone must be from an approved source and need should be verified with soil tests (pH).

5) Alternative sources of hen manure. Casella is reported to be hauling poultry manure to Maine from Connecticut, an expensive option that may

become more appealing as local sources become less available. There are also organic approved pelletized hen manures, but these offer a price point that is a challenge for forage crop production.

6) Liquid fish. Neptune's Harvest carries OMRI listed liquid fish and seaweed products. We have yet to hear how pricing will compare to other options in terms of viability for forage crops.

As Caleb Goossen explains it, wood ash is not as buffered as lime and can raise pH excessively high (e.g., above 7), at which point different soil nutrients' availability can again become an issue. If your pH is below 6, a moderate application of wood ash is probably not going to be detrimental. Goossen feels that a target should be pH between 6.5 and 7. Another potential issue with using large amounts of woodash, is that plants can take up potassium in levels much higher than needed, which can lead to milk fever if DCAD values aren't monitored.

Rick Kersbergen notes that wood ash is usually not as strong a liming agent as limestone, and all wood ashes have a different liming power. Therefore, you should ask for the wood ash analysis and specifically the CCE (calcium carbonate equivalent) of the ash you are buying, to determine your application rate. Soil tests are critical for knowing the pH you are starting with.

MOFGA, MCS, Cooperative Extension, and other groups will need to work together in the coming year to find answers to the organic fertility question. Any potential alternative to hen manure presents questions about sources, processing, and price points. Stakeholders in the community hope to explore the potential of seafood industry compost, fish farm effluent, and cow manure-based composts mixed with wood ash.

As with any material or field input, be sure to contact MCS for approval prior to purchase and application. Fields that receive applications of prohibited materials must undergo a 3-year transition before crops can be harvested, sold or fed as organic.

