

Liquid Organic Fertilizers: Friend or Foe?

Over the past several months, CCOF has become increasingly concerned with the prevalence of perfectly flowable high nitrogen liquid fertilizers commonly available to organic growers. While larger concerns remain about the role of off-farm high nitrogen inputs, there are also short term hot-button potential issues with product formulations to consider. CCOF has increased its efforts to ensure the integrity of inputs used by CCOF certified organic growers.

The Role of Nitrogen Fertilizers

Nitrogen is essential to plant growth, and the nitrogen cycle is an important concept for organic agriculture, overall. Most farming rotations will acknowledge this cycle by cover cropping whenever possible to collect free nitrogen from the air in plant biomass that is incorporated to the soil.

Nitrogen can also be supplemented by using soil amendments that add to the organic matter content of the soil, thus providing more humus particles that serve as sites for slow release nitrogen fertilizers. This can be done by using compost for both short term fertility and long term soil building, and enhancing the soil improvement program with liquid or sidedressed fertilizers with faster availability.

The need for supplemental products is particularly great in heavy feeding, shallow rooted crops that are in the ground for a whole season, such as strawberries. They may also be useful in cooler weather when nutrient cycles in the soil are slower at providing plants what they need, and in soils that have not yet built their organic matter up enough to provide nutrients throughout the season.

Fertilizer Formulation

The nitrogen in fertilizers used in organic production must come from starting materials that are high in nitrogen from natural sources, and not from petroleum or ammonia-derived fertilizers like ammonium nitrate or synthetic urea. Natural materials high in nitrogen are usually proteins or high protein feedstock like fish, blood meal, meat or feathers, and manures. Worm castings can be quite high in nitrogen, and so can produce trimmings, kitchen waste, and food processing by-products. The skill in making fertilizers is to stabilize the nitrogen while still making a product which has the nitrogen available.

The rule of thumb in fertilizer manufacturing is that every 6.2% protein turns into 1% nitrogen. Therefore, a typical fish fertilizer at 5% N would have started with a product that is 31% liquid protein, or 62% dry weight protein, since liquid products are often half water and half dry matter. Innovative companies try various approaches to concentrate the nitrogen more like evaporating the water further, adding specific microbes which are claimed to have a further concentration effect, or experimenting with ultrasound technology. However, liquid fertilizers that claim more than 6% nitrogen seem improbable through normal chemistry.

Guidelines for producers thinking about liquid fertilizers

- Consider better ways to provide fertility to your crop before you plant to avoid having to use liquid fertilizers. Look into cover crops, composts, and pre-plant slow-release products.
- Is the product you want to use on the OMRI or WSDA lists? And are there restrictions with its use (such as if the product contains manures or sodium nitrate)? Order listed products early as they may be in short supply this year.
- Ask the supplier to get listed by OMRI or WSDA before you buy or use the product. Be suspicious of self-certification schemes, promises for results that are too good to be true, smells that smell wrong, and salespeople with dubious claims. If growers keep asking, the companies will comply.
- Send a Materials Review Request Form (www.ccof.org/forms.php) to CCOF before using any unlisted product. CCOF is only likely to do a site visit ourselves if numerous growers want to use the same product and/or if the supplier wants to help defray the cost. Plan well ahead because if you are using something that is not listed, you stand the chance of receiving a "cease and desist" notice or even a loss of certification.

Concerns Deepen

Recently the organic fertilizer manufacturers have come under increased scrutiny from certifiers, growers, Organic Materials Review Institute (OMRI), and the California Department of Food and Agriculture (CDFA). One product, Biolizer XN, which was 6% Nitrogen, was removed from the market voluntarily after a CDFA investigation. While intentional wrongdoing was not publicly stated by either CDFA or the company, it has affected the rest of the organic fertilizer market by making conscientious growers more suspicious of

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the other products on the market with even higher analyses.

CCOF is under pressure from the National Organic Program (NOP), CDFA, its own concerned growers who have a lot to lose if they make a mistake, auditors from ISO and international programs, and fertilizer companies who suspect their competition. Each of these groups rightfully expect CCOF Certification Services to give clients accurate and consistent information about what products can be used for fertilizer. Therefore, it is becoming increasingly cumbersome for growers to use a substance that has not been reviewed by an outside party such as OMRI or the Washington State Department of Agriculture (WSDA).

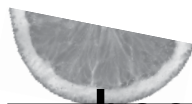
Outside review protects CCOF growers. Therefore, we would like to see increased effective oversight over fertilizer manufacturers. CCOF is urging OMRI to take an approach to fertilizer approval that increasingly relies on inspections and audits of manufacturing sites. After all, if all growers are inspected thoroughly, why shouldn't organic fertilizers be also? There are currently several liquid fertilizers on the market with nitrogen ratings in the 8% and higher range. These materials will be receiving increased scrutiny in the future to ensure the integrity of CCOF organic products is maintained and CCOF

growers are protected.

While some fertilizer companies avoid OMRI listing, CCOF understands that the questions and thoroughness are essential to protect CCOF growers and avoid another situation like Biolizer XN.

We are pleased to see that OMRI is in the process of setting up site visit and audit procedures and should be able to implement them sometime this spring. In the meantime, CCOF Certification Services is heading towards requiring that liquid fertilizers either be listed by OMRI or WSDA, or else CCOF will perform our own site visits and audits. It will not be automatically accepted for growers to use liquid fertilizers that are not listed. CCOF is also exploring options for requiring site visits in the near future of specific materials brought into question by CCOF growers and other concerned parties.

Everyone wants to grow abundant and delicious crops. Let's make sure that they are grown within the spirit of soil balance, ecosystem harmony, and stewardship that the organic movement was founded on.



books

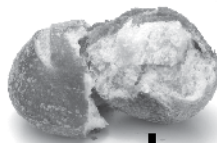
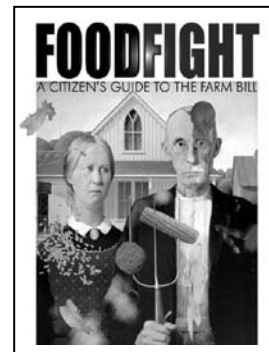
Shaping our Food System

Food Fight, A Citizen's Guide to a Food and Farm Bill

by Daniel Imhoff

The 2007 Farm Bill is the topic of this edition of Certified Organic, and perhaps the single most significant land use legislation enacted in the United States, yet many remain unaware of its full scope and power. With subsidies

reaching \$25 billion dollars per year, the Farm Bill largely dictates who grows what crops, on what acreage, and under what conditions — all with major impacts on the country's rural economies, health and nutrition, national security, and biodiversity. As debate and wrangling over the 2007 Farm Bill intensifies, "Food Fight" offers a highly informative and visually engaging overview of legislation that literally shapes our food system, our bodies, and our future. If you have questions about the Farm Bill, and need answers from the sustainable community, this book is the place to start. Purchase online at www.wildfarmalliance.org



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