



## ***Making the Most of Manure***

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There are many approaches to improving soil health. Manure is a part of many farmers' fertility programs. It is a good source of nutrients, can improve soil tilth, and over the long term, increase levels of organic matter. It addresses some fertility needs and usually adds to the bottom line by helping hold the line on fertility costs.

Manure also has its challenges. Let's focus on dry manure waste, although much of the following discussion is equally applicable to liquid effluent.

- **Nutrient Availability** - Conservatively, between 35% to 40% of that value will be available to the current crop, *once it has mineralized*. It is not uncommon for 10% of it to volatilize and 5% of it to leach (depending on soil type). The numbers are similar in the second year after application.
- **Volume** - It is a lot to handle, and the further you have to transport it the greater the expense.
- **Weed Seed** - The seeds of most weeds have incredible viability. Most manures contain weed seed, and the presence of any is too much, especially in organic production.
- **Seed Environment** - As manure breaks down, large amounts of carbon dioxide are produced which are beneficial to weed seed germination and can be detrimental to crop seed germination.

- **Microbial Life** - There is microbial life present in manure, but much of it can be anaerobic, which is worth considering as you look at the total health of the soil.

So where does all of this leave us?

We believe the nutrient value of manure is a benefit to cropping systems. Is there an alternative to applying raw manure to our fields? Is there a way to increase the value of that same manure, increase the health of our soils, and increase the return from our efforts?

We will examine these questions in a future article in Ground Work. Stay tuned...