

Can I integrate manure into my crop rotation if I don't have any livestock?

Livestock manure is an excellent source of nutrients that can complement commercial fertilizer applications to produce high yielding, high quality crops. Studies have demonstrated improved yield and economic returns from the use of manure in cropping systems.

The simple answer

The short answer is yes. Manure (of any type) is found in most regions of the province where crops are grown and often, producers are looking to keep their storages as empty as possible.

A little more information

Manure storage capacity has always been a seasonal stressor for livestock producers across Ontario. Most have capacity for at least 240 days of storage to cover the winter season. The length of time they have storage capacity for can fluctuate based on the number of animals in production, the precipitation in any given growing season or the ability to empty the storage facilities regularly.

Purchasing manure is not commonly done in Ontario, but as yields in manure-applied fields continue to thrive, many growers are asking themselves how they can get those yields without purchasing livestock and the associated infrastructure required.

The full story

Livestock producers often apply manure to fields more than once annually, to ensure they have adequate storage. If they were able to sell manure off the farm to growers without livestock, it could greatly reduce their dependence on these time-sensitive applications.

Livestock manure should be tested regularly; ideally each time the storage facility is emptied, agitated or has contents applied on a field. Multiple manure sub-samples should be taken at each of these times and combined to create one or two composite samples that are submitted to accredited labs to properly represent what is being applied. Once manure has been sampled, valuing it can be quite simple; using the AgriSuite Organic Amendment Calculator to estimate the fertilizer equivalent value of each manure. If manure is sampled regularly, it becomes more predictable and can simplify valuing the product.

Manure applications do not need to be done every year. Manure can easily be incorporated into a once in three-year application, or twice in five years to spread it out. By not applying every year, manure applications can be done to a percentage of a grower's total acres to break up workload, demand and cost of application.

Do I need to adjust any practices if I start applying manure?

If manure is a new addition to your cropping system, there are a few key things to consider. If you are applying manure with a high ammonia concentration or at high rates and to fields within close proximity to surface water and residential areas, then tillage after application is highly recommended to minimize odour and losses. Ideally, all manure applications are injected or incorporated within a day or two of application – but they don't have to be. You can see some reduced nutrient uptake and some loss, especially with liquid manure, but lower application rates can be surface applied. Higher rates of application can require incorporation to avoid complications such as soil crusting, runoff or high nutrient losses. It can also create challenging conditions to plant into.

How do I know which fields should get manure?

It's important to soil sample every 3-4 years and work with current soil test values to determine soil needs. Soils that test high in phosphorus (P) and potassium (K) may not require manure (or any nutrients) and will not likely have an economic response to manure nutrients (P and K). Applying manure to high testing soils can be detrimental to both soil health and crop yields. Local Certified Crop Advisors (CCAs) or agronomists can be instrumental in determining soil test levels, nutrient demands and application timings.



Find out more with the AgriSuite Organic Amendment Calculator.

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