



Importance of organic fertilizers and its impact on yield value

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DESCRIPTION

Organic fertilizers are plant and animal wastes that are used as a source of nutrients for plants. They release nutrients when broken down. The technology of collecting and using animal, human and plant waste to improve crop productivity is as old as agriculture. Manure is organic matter derived from animal, human, and plant residues that contain phytonutrients in complex organic forms. Farm manure is a decomposed mixture of manure and urine from livestock, along with bedding and residues of forage or fodder fed to livestock. The advantage of crops grown organically is strongly correlated with the preservation of soil fertility, which is mostly dependent on the amount of organic matter in the soil. One of the more valuable organic fertilisers for preserving soil fertility in alternative agricultural systems is Farmyard Manure (FYM). On average, well-rotted manure contains 0.5% N, 0.2% P₂O₅, and 0.5% K₂O. Wasted urine contains 1% nitrogen and 1.35% potassium.

Nitrogen present in urine is mainly in the form of urea and is subject to volatile losses. Nutrients are also lost during storage through leaching and volatilization. In practice, however, losses cannot be completely avoided, but they can be reduced by improving the handling of manure on farms. Dig a trench with a length of

6 m-7.5 m, a width of 1.5 m-2.0 m, and a depth of 1.0 m. Organic farming has become part of the global agribusiness, and as a result organic produce is traded not only between farms and regions, but also between countries and continents exported from the farm. These farms can continue to produce acceptable amounts of high quality food only when these nutrients are replaced. There is value arising from the replacement of commercially available nutrients required for production. Previous articles on Organic fertilizer value have focused on soil health, environmental benefits, and tools for estimating Organic fertilizer value. This article focuses on the economic benefits of Organic fertilizers.

Targeting fields in need of phosphorus (P) supplementation yields the most economic value from Organic fertilizer.

2nd Targeting fields in need of additional potassium (K) greatly increases the value of Organic fertilizer.

Added value comes from organic fertilizer nitrogen (N) and micronutrients and increased yield. However, these advantages are usually less significant than P and K.

Organic fertilizer is an additional source of P, organic N, ammonium N, and micronutrients commonly required in many fields. Fields that

are top-fertilized benefit from both organic nitrogen and phosphorus. Nutrient values in cow dung are strongly influenced by phosphorus values, but organic nitrogen is less so no added value. For many Organic fertilizers and fertilizers, it is important to incorporate the manure immediately to take advantage of the Organic fertilizer's high ammonium N content. To further increase the value of Organic fertilizer, targeting fields with K requirements will provide added value. Soil tests in high-yielding fields increasingly indicate the need for K supplementation. Manure is an excellent source of K.

In the case of cow dung, application to fields with K requirements almost doubled the manure value. Such yield responses may be the result of improved soil structure and greater drought tolerance of soils receiving Organic fertilizer increases the amount of nutrients available to plants. A recent global literature review of 159 study comparisons of the nutrient replacement value of manure observed an average yield increase of 4.4%. Adding a 5% yield increase to a 200 bushel/acre corn crop will produce some additional value.