

Commentary

Importance of green manure in agriculture

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DESCRIPTION

In agriculture, a green manure is a crop that is grown expressly to be put into the soil while it is still green. Typically, as with (brown) manure, the biomass of green manure is often integrated with a plough or disc. The primary purpose is to improve the soil by adding organic matter. Green manuring is a method of adding nitrogen to the soil for subsequent crops that is commonly employed with legume crops, especially in organic farming, but it is also used in conventional farming.

Green manure primarily serves as a soil-acidifying substance, generating humic acid and acetic acid to lower the alkalinity/pH of alkali soils.

Incorporation of cover crops into the soil allows the nutrients held within the green manure to be released and made available to the succeeding crops. This results immediately from an increase in abundance of soil microorganisms from the degradation of plant material that aid in the decomposition of this fresh material. This additional decomposition also allows for the re-incorporation of nutrients that are found in the soil in a particular form such as nitrogen (N), potassium (K), phosphorus (P), calcium (Ca), magnesium (Mg), and sulfur (S). Use green manures in established vegetable gardens after you harvest early-maturing vegetables. You can plant green manure where these vegetables were growing to keep the garden weed-free, prevent soil erosion and add organic matter to the soil. Turn in the dead plant material after a killing frost in late fall.

Microbial movement from incorporation of cover crops into the soil prompts the development of mycelium and thick

materials which benefit the strength of the dirt by expanding its soil design. Water infiltration and retention, aeration, and other soil qualities improve when the percentage of organic matter (biomass) increases. The soil may be turned or tilled more easily than non-aggregated soil. The ability of the root systems of many green manure crops to penetrate dense soils efficiently results in more soil aeration. With increased rates of decomposition, the amount of humus in the soil increases, which is advantageous for the growth of the crop that follows the green manure crop. The primary purpose of non-leguminous crops is to increase biomass.

Some green manure cultivars have deep root systems that pull up nutrient resources that are unavailable to shallower-rooted crops. Weed control is a common function of cover crops. The majority of crops are non-leguminous (e.g. buckwheat) Many green manure crops are effective at suppressing weeds due to their deep roots capabilities.

When allowed to flower, several green manure crops supply feed. Limitations to consider in the use of green manure are time, energy, and resources (monetary and natural) required successfully growing and utilizing these cover crops. Consequently, it is important to choose green manure crops based on the growing region and annual precipitation amounts to ensure efficient growth and use of the cover crop. Green manures are not generally fed, but there are possibilities for utilising organic poultry or other manures to boost fertility without the manure being used at the same time as a crop for human consumption is being grown.

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