



## Liquid Organic Manures and their Benefits

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### Abstract

Liquid organic manures, are receiving more attention as an eco-friendly substitute for synthetic fertilisers due to the growing interest in sustainable agriculture. In order to improve soil fertility and agricultural productivity, this study investigates the manufacture, composition, application techniques, and advantages of LOMs. Legumes of mixed minerals (LOMs) are made from a variety of organic resources, including plant leftovers, animal dung, and compost. They are a great source of microbes and important nutrients. By promoting microbial activity, improving soil structure, and increasing nutrient availability, their application boosts plant growth and resistance to pests and diseases. Lab investigations and field testing show that LOMs can drastically cut production costs, eliminate the need for chemical inputs, and support sustainable farming methods. The results imply that LOMs are a workable element of integrated nutrient management strategies, promoting environmental health and long-term agricultural viability. To improve their formulation, harmonise application methods, and assess their long-term impacts on various crop systems, further study is required.

### Introduction

One of the most important innovations in the search for environmentally acceptable and sustainable farming methods is liquid organic manures. These manures are produced by processing organic resources like compost, animal dung, plant leftovers, and bio-waste into a liquid that is simple to apply to crops. Farmers and horticulturists are increasingly using liquid organic manures because of its many advantages, which include bettering plant health, increasing soil fertility, and aiding in environmental preservation. Compared to conventional solid manures, liquid organic manures have a number of advantages. First off, because they are liquid, plants may absorb them more readily and their distribution can be more uniform. This may result in more effective absorption of nutrients, fostering stronger and better plant development. Furthermore, the minerals in liquid organic manures are easily absorbed by crops, giving them a quick nutritional boost that can be especially helpful during crucial growth phases.

These manures usually include high levels of trace elements like calcium, magnesium, and iron along with important minerals like potassium, phosphorus, and nitrogen. They also include advantageous bacteria that contribute to the breakdown of organic matter, the enhancement of nutrient availability, and the improvement of soil structure. Moreover, applying liquid organic manures can improve soil microbial activity, promoting a balanced soil ecology that promotes plant development.

**Neemasthra:** Neemasthra is a natural, eco-friendly pesticide that can be used to protect crops from pests and diseases. It is easy to prepare and has numerous benefits for

agriculture is an organic pesticides used as a major component of zero budget natural farming and highly effective in controlling the wide range of pests.

#### Materials Required

- Neem leaves
- Cow dung
- Cow urine
- Water
- 2 liter bottle

**Procedure::** Crush neem leaves in 50 litres of water properly. In a plastic drum or earthen pot mix this crushed neem leaves and water in cow dung and urine. Leave this solution under shade for 24 hours for fermentation. In the meanwhile stir the solution 5 to 6 times in a day with the help of a wooden stick. During winters, keep this solution for 48 hours for fermentation. After 24 hours filter this solution with the help of a cotton cloth. Dilute this filtered solution in 100 litres of water and now you can use it on your plants. You can use this solution for one acre of farmland.

**Jeevamrutham:** Jeevamrutha is a type of organic liquid manure mostly used in organic farming practices. It is a fermented microbial culture made from cow dung, cow urine, jaggery, gram flour and water, and soil. The mixture undergoes fermentation to enhance its nutrient content and microbial activity. Jeevamrutha is rich in beneficial microorganisms like bacteria, fungi, and protozoa, which help in improving soil fertility, enhancing plant growth, and suppressing harmful pathogens. Promotes the microbial count in rhizosphere.

All these have abundant production capacity. Each substrate used in the Jeevamrutha formulation has a specific key function to enhance the overall nutrient characteristics of the soil. The cow dung and cow urine are rich resources of beneficial microorganisms and enhance the plant resistivity against pathogenic attack. Jaggery and pulse flour serve as potential carbon and nitrogen source respectively. Soil serves as a bio-inoculant of beneficial microbes.

#### Materials required

- Cow urine
- Cow dung
- Jaggery
- Soil
- Water

#### Procedure

- For preparation Jeevamrutham, you need a 200-liter tank or a water barrel is required.
- You should add 10kgs of cow dung into the water. with the help of a stick Stir the mixture in clockwise.
- After put the handful of fertile soil from your farm in to the mixture.
- And add 10 liters cow urine to the mixture. Stir it well again clockwise.
- Finally, you must add remaining the semi powdered jaggery and the flour to the mixture.
- The above mixture should be kept in a shaded place and away from sunlight.
- The mixture should be stirred a thrice a day for 4 days.
- And Cover the water barrel or tank with a breathable jute bag.
- It takes approximately 5-8 days for ferment if varies upon summer and monsoon.
- After the fermentation process complete filter the mixture for pure extract and Jeevamrutham is prepared for the use.

**Uses:** Neemastra promises the farmers a safe, sustainable and acts as an alternative to conventional pesticides that protect the crops, environment, and human (consumer) health. It

controls pests efficiently in addition it also maintains the ecosystem balance. Neemastra is one of the popular choices among the farmers performing organic farming practices, because of its simple preparation, utility and affordability. To experience the rewards of this natural pest control method in your farming, try Neemastra. Jeevamrutham it provides various benefits to soil health, fertility and crop productivity. It helps in users like less cost, easily adoptable to poor farmers increase the crop productivity, environmental safety, and successful crop production. We can store jeevamrutham for many days or for weeks too. Generally, only the fresh preparations of liquid organic formulations are used by the farmers as they do not have information about the shelf life of liquid organic formulations. Stored material also have their own advantages like increase in nitrogen, micronutrients, EC, etc. To get good yield, healthy quality of crop, we must have to adopt this organic fertilizer application.

## References

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