



Forwarding Approach in Organic Farming using Jeevamrut

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Jeevamrut is a natural liquid fertilizer. It is made by mixing water, dung and urine from cows with some virgin soil from the same area as the manure will be applied in later Nileema and Sreenivasa (2011). Food is then added to speed the growth of microbes: jaggery or flour can be used. Jeevamrut is a liquid organic manure which is an excellent source of natural carbon and biomass that contains macro and micro nutrients required by crops (Devakumar et al., 2008). In comparison to other forms of manures, Jeevamrut has proven to be more effective and can be used along with other manures. The product of organic liquid fertilizer is meant for the fermentation process (Devakumar et al., 2011), which constitutes efficient living soil microorganism that improves the plant growth, productivity and supply sufficient amount of nutrients. Such fertilizers are cost effective and eco-friendly (Papen et al., 2002) bio-inoculants having great potential to enhance agricultural production in a sustainable way. It can reduce excessive use of the chemical fertilizers in the soil which cause low fertility of the soil. Therefore, Jeevamrut is the best alternative to chemical fertilizer. Jeevamrut is completely organic. Therefore, it can be used in the organic farming, serves as a rich source of the micro-organism that fixes the nitrogen and solubilize phosphorus and also it is a rich source of carbon, nitrogen, phosphorus, potassium and many micronutrients. The materials used in jeevamrut eco-friendly and organic. Thus, these methods do not hurt the crops as well as the soil in any way. Jeevamrut used to increase the fertility of the soil by activating microorganisms in the soil. These methods can be used as a fertiliser as well as pesticide. During financial year 2021, Madhya Pradesh had the highest organic agriculture area with approximately 1.6 million hectares across India. Followed by Rajasthan with over 481 thousand hectares of organic farming land (Somasundaram et al., 2003).

Composition of jeevamrut

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|---------------------------|----------------|------------------------|
| a. Cow's dung (Fresh one) | b. Cow's urine | c. Pulse flour (besan) |
| d. Jaggery | e. Virgin soil | f. Water |

Materials required for jeevamrut

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|-----------------------------------|----------------------------|-------------------------------|
| a. Cow's dung (Fresh one): 2.5 kg | b. Cow's urine: 2.5 litres | c. Pulse flour (besan): 500 g |
| d. Jaggery: 500 g | e. Virgin soil: 125 g | f. Water: 50 litres |

Preparation method of jeevamrut

Take 50 litres of water in 100 litre capacity barrel or clay pot. Add the cow dung and urine first and, mix them properly with normal water and then add virgin soil and jaggery and pulse flour properly. After mixing all the essential ingredients keep the solution for fermentation for 48-72 hrs. make sure to cover the mouth of barrel with muslin cloth or wiremesh to protect from flies, which lay eggs and destroy the whole mixture. So, care should be taken

and mix the solution every day two times in the morning and evening hours. The solution must be kept in shade away from sunlight. The Jeevamrut will be ready after 72 hours to apply on outdoor, indoor as well as kitchen garden plants and crops (Palekar,2006).

Application methods

Application as a seed treatment: Add jeevamrut to the seeds of any crop; coat them, mixing by hand; dry them well and use them for sowing. For leguminous seeds, which may have thin seed coats and just dip them quickly and let them dry.

Uses of jeevamrut

Jeevamrut is completely organic. Therefore, it can be used in the **organic farming**, serves as a rich source of the micro-organism that fixes the nitrogen and solubilize phosphorus and also it is a rich source of carbon, nitrogen, phosphorus, potassium and many micronutrients.

Conclusion

Jeevamrut is the best alternative of chemical fertilizers for organic farming of all kind of plants including cereals, pulses, oilseeds, fiber crops, commercia; crops, fruits and vegetable crops. It supplies the richness of microbes to soil to mineralize the soil nutrients which are available to plants in unavailable forms, the solution activates the microbial decomposition of organics and other raw materials in the soil, and turn them into useful plant available plant nutrients, in the easily available forms as well as in the right amount. The generally used application rate for plant spray is 5-10 % and it can also be used directly to soil after diluting in normal water.

Conflict of interest

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