



## Ghanajeevamrit and Jeevamrit: Chemical free Bio-formulations

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Vegetable crops play a vital role in providing essential nutrients, nourishment and make our diets full of nutrients like vitamins, minerals, proteins etc. As the demand for healthy, pesticide-free produce continues to rise, farmers are sharply adopted organic farming methods. Among the various techniques/methods available, the use of biofertilizers along with organic manures and cow based bio-formulations has gained significant attention. Due to the presence of chemical residues in crops and their adverse effect on the consumers major portion of population change their mind and move toward the organic and chemical free product. The beneficial use of two remarkable cow based bio-formulations, Ghanajeevamrit and Jeevamrit, in vegetable crop cultivation are the parts of chemical free farming. These organic concoctions are rich in essential nutrients and beneficial microorganisms that can enhance soil fertility, promote plant growth, and mitigate the harmful effects of chemical fertilizers.

### How Ghanajeevamrit and Jeevamrit contribute to sustainable vegetable crop production

Ghanajeevamrit, also known as Ghanajeevamrut, is a potent organic/cow based bio-formulation that are the combination of various bioactive components. The primary ingredients include cow dung, cow urine, jaggery, gram flour, soil and water. In Jeevamrit the mixture is fermented for several days to provoke the beneficial microorganisms present in cow dung and urine and used as a foliar spray or with irrigation whereas, Ghanajeevamrit is used in the powder form. Mixture of all component dry in shade and make powder or small ball like structure for the future use. These bio-formulations increase the microorganism's population in the soil, including bacteria, fungi, and actinomycetes, help in converting the organic matter into readily available plant nutrients, thereby improving soil chemical and physical conditions.

### Composition of Ghanajeevamrit and Jeevamrit

Jeevamrit for one-hectare		Ghanajeevamrit for one hectare	
Ingredient	Quantity	Ingredient	Quantity
Cow dung	25 kg	Cow dung	250 kg
Cow urine	25 litres	Cow urine	Small quantity
Jaggary	5 kg	Jaggary	5 kg
Pulse flour	5 kg	Pulse flour	5 kg
Soil	2.5 kg	Soil	handful
Water	500 litres		

### Benefits of Ghanajeevamrit

- a. **Enhanced soil fertility:** Ghanajeevamrit enhances soil fertility by enriching it with beneficial microorganisms. These microbes aid in nutrient cycling, improve soil structure, and increase nutrient availability for plants.
- b. **Better health of consumers :** due to the absence of chemical and chemical residues the produce is safe for the consumers and improve their health.
- c. **Disease suppression:** The presence of beneficial microorganisms in Ghanajeevamrit can suppress soil-borne pathogens, reducing the incidence of diseases in vegetable crops.
- d. **Improved plant growth:** The application of Ghanajeevamrit promotes root development, nutrient absorption, and overall plant growth. It stimulates the production of plant growth hormones, such as auxins, cytokinins, and gibberellins etc.
- e. **Nutrient enrichment:** Ghanajeevamrit contains essential macronutrients (nitrogen, phosphorus, and potassium) and micronutrients (iron, zinc, copper, etc.), which are crucial for the healthy growth and development of vegetable crops.
- f. **Improve soil conditions-** The use of Ghanajeevamrit improve the soil properties. It increase the water holding capacity of soil.

### Unveiling the Benefits of Jeevamrit

Jeevamrit is another cow based bio-formulation which was widely used in organic vegetable farming. It is prepared using fresh cow dung, cow urine, jaggery, gram flour, water, and soil. The mixture undergoes a fermentation process, which results in a nutrient-rich liquid which was full of beneficial microorganisms. The application of Jeevamrit enhances soil health, promotes plant growth, and reduces the dependence on chemical fertilizers.

### Benefits of Jeevamrit

- a) **Soil and consumers health improvement:** Jeevamrit enhances soil structure, moisture in soil, and nutrient-holding capacity. It helps in the decomposition of organic matter, thereby releasing nutrients locked within crop residues. It also maintains the soil pH.
- b) **Nutrient availability:** The microorganisms present in Jeevamrit facilitate the conversion of complex organic nutrients into plant-available forms, making them easily accessible to vegetable crops. Jeevamrit is also a good source of NPK and other micronutrients.
- c) **Pest and disease management:** Jeevamrit stimulates the growth of beneficial microbes, which outcompete harmful pathogens in the soil. This natural pest and disease suppression reduces the reliance on chemical pesticides.
- d) **Sustainable nutrient management:** By providing a balanced mix of essential nutrients, Jeevamrit reduces the need for chemical fertilizers. This promotes sustainable nutrient management and minimizes environmental pollution risks associated with excess fertilizer application.

### Application of Ghanajeevamrit and Jeevamrit

The application of Ghanajeevamrit and Jeevamrit in vegetable crops involves simple and cost-effective methods. These bio-formulations can be applied through foliar sprays, soil drenching, seed treatment, or by adding them to the compost pile. However, it is crucial to follow proper guidelines and recommended dosage rates to ensure optimal results. Additionally, integrating these bio-formulations with other organic farming practices such as crop rotation, mulching, and water management further enhances their efficacy.

Jeevamrit should be applied as a foliar spray @ 5 to 10 % at different periodic stages of crop growth like at 20, 40 and 60 DAS whereas, Ghanajeevamrit applied in powder form directly in the field.



Jeevamrit preparation

Foliar spray of Jeevamrit

### Case Studies and Success Stories

Several farmers and agricultural institutions have reported significant success with the use of Ghanajeevamrit and Jeevamrit in vegetable crop cultivation. For instance, in CCS Haryana Agricultural University, Hisar a new unit under name of Deen Dayal Upadhyaya Centre of Excellence for Organic Farming was started. In this horticultural as well as cereals and pulses were grown as an organic produce. In Maharashtra, farmers have observed increased yields of tomato, brinjal, and cabbage after incorporating these bio-formulations. Additionally, reduced pest and disease incidences have been observed in crops treated with Ghanajeevamrit and Jeevamrit, leading to improved crop quality and market value. Such success stories highlight the potential of these biofertilizers to revolutionize vegetable farming.

### Conclusion

The beneficial use of Ghanajeevamrit and Jeevamrit in vegetable crop production offers numerous advantages for both farmers and consumers. These bio-formulations enhance soil fertility, promote plant growth, improve nutrient availability, and reduce the reliance on chemical inputs. By adopting these organic farming techniques, farmers can achieve sustainable agricultural practices while delivering safe and nutritious vegetables to consumers. As we strive for a greener and healthier future, harnessing the power of Ghanajeevamrit and Jeevamrit is a step towards sustainable and eco-friendly vegetable crop cultivation.

### References

1. Bhogave, A., Jena, N., Kumar, M., & Verma, A. Sustainable Agriculture Volume II.
2. Kumar, Sumit. (2023). different type formulation used in natural farming. Volume 3. 110-112.
3. Saharan, B. S., Tyagi, S., Kumar, R., Vijay, Om, H., Mandal, B. S., & Duhan, J. S. (2023). Application of Jeevamrit improves soil properties in zero budget natural farming fields. *Agriculture*, 13(1), 196.
4. <https://ncof.dacnet.nic.in/>