

## Amritpani: An Elixir for Soils

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### Abstract:

Conserving agricultural resources and safeguarding the environment from chemical risks are the main goals of sustainable agriculture. Traditional bio-enhancers like Amritpani are included in sustainable farming methods. Amritpani, a centuries-old technique, improves agricultural quality and productivity while being environmentally beneficial. Amritpani is known as an elixir for dead soil. It boosts crop yield and soil health by containing minerals, helpful microorganisms like pseudomonas rhizobium, hormones that promote growth, and enzymes like cellulase, amylase, urease and vitamins. It is also called Amrit Khaad. The antimicrobial properties of Amrit Pani against pathogens *Colletotrichum gloeosporioides*, *Fusarium solani* etc.

### Introduction:

Over the past decades, as the world population has increased, the demand for the basic needs of humans has also increased. The most essential need is food and agriculture is the most important source for that. Agriculture is a dominant occupation in a country like India because most of the population depends on it. To increase the yield of the Crop, farmers are using or applying chemical fertilizers that affect soil fertility. To overcome the problem of soil fertility by enhancing the usage of organic manure, Biopesticides, bioinsecticides and Bioherbicides, and using Indigenous Knowledge Techniques (ITK). Approximately nutrients available in Amritpani are <2% Nitrogen, <0.4% phosphorus, and <0.3% potassium. It enhances soil fertility and helps in the growth of seedlings and seed treatment. Resistance to pests and diseases is its quality.

To make agriculture sustainable all the farmers are moving towards organic farming. In India first organic state is Sikkim. Organic farming is integrated into the production management system and promotes the biological cycle, ecosystem, and soil profile. It is a

popular method used to enhance soil fertility, crop yield, soil texture, soil structure, plant growth soil biology etc. Cow dung or cow manure is a waste of cow or bovine animal species. Cow dung is rich in microorganisms like *Bacillus*. It contains many nutrients like cellulose, hemicellulose, vitamins etc. Cow ghee is a nutritious source of antioxidants, healthy fats, high-quality proteins and minerals. Jaggery is a traditional, most effective replacement for sugar and a natural cleansing agent. The earthen pot is eco-friendly and non-reactive, pH gradient is managed.



Fig 1.1 Cow Ghee



Fig 1.2 Jaggery



Fig 1.3 Earthen Pot



Fig 1.4 Cow Dung



Fig 1.5 1-5 days



Fig 1.6 final product

### Materials and Method of Preparation:

Amritpani is prepared by the excreta of livestock animals like cows. Cow products like cow dung, cow urine etc. The materials required for the preparation of Amritpani are cow dung, jaggery, cow ghee, Earthenpot, and water. Mustard oil can be used as a replacement for cow ghee, and honey in place of jaggery. For the preparation of 2 litres of Amritpani, 500gm of cow dung, 50gm of jaggery, and 2.5gm of cow ghee are required. Cow dung, cow ghee and jaggery were added and made into a paste-like consistency and kept aside for 4 hours. 2 litres of Water

were added and stirred properly and kept aside after making it airtight under the shaded area for 7 days for fermentation. During these 7 days, the solution was stirred twice a day. After 7 days the solution was strained through a clean muslin cloth and the final product was extracted.

### **Things to Know About Amritpani:**

Amritpani is an elixir for dead soil. When microorganisms are fed cow dung, they grow and when you feed these microorganisms to the soil, the earth comes to life. They not only strengthen the soil's structure but also start to break down the nutrients in it into forms that plants can easily absorb. Mycorrhiza and an organic mixture are combined to apply it. In crops like rice and wheat, it functions as a biopesticide and not only lessens pest infestations but also boosts crop development and productivity. It is a good source of helpful bacteria that proliferate and break down organic waste when applied to soil.

10 litres of water and 1 litre of amrit pani can be used. Use 200 litres of Amrit pani per acre together with irrigation water to improve soil fertility. An hour before planting, the roots should be treated. Sugarcane dried leaves are utilized as mulch after being soaked in Amritpani. Although it can be kept for a year, the best advantages come from using it within six months.

### **Conclusion:**

Amritpani is an alternative, it enlivens the soil's strengths. Amritpani has been proved via research to have enormous promise in organic farming for long-term agricultural productivity. Its quality and efficacy features, however, are not supported by science. As the majority of ITKs are based on beliefs rather than scientific testing, sufficient study is required to validate the effectiveness of Amritpani formulations. The effectiveness of Amritpani in commercial agricultural productivity needs to be confirmed through research trials in a variety of environments, agro-climatic conditions, and crops. It is also vital to standardize the raw components, the quantities, the timing, the application method, and the dosage. To spread information about Amritpani, which can boost agricultural output and guarantee environmental safety, effective extension efforts are required.

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Ray of hope for Indian farmers.

