

Bijamrut – Enhancing Soil Health and Crop Resilience

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Summary.

Indigenous technical knowledge is the real knowledge of a specific community or farmers which represents traditional-based experiences and more recent experiences with modern technology. Out of all the Indigenous techniques BIJAMRUT is considered as one of Indigenous Technical knowledge which improves seed germination and controls seed diseases. As compared to modern techniques the usage of BIJAMRUT by the farmers towards any field or farm indicates its development in different ways. Bijamrut is considered a 100% natural effective technique which neither harms anyone nor declines the productivity of the agricultural produce, rather it improves the quality of yield which will be beneficial to the farmers. This agricultural practice is implemented with the help of ancient knowledge of the people like Charak Samhitha, Sushrut etc which is unique to a given culture or society.

Introduction.

Organic farming has been drawing the attention of the world for the past few years as it is environment environment-friendly, sustainable way of farming with zero usage of chemicals. Adapting to eco-friendly and sustainable way of farming practices by using organic treatments not only creates a reverse in the declining trend in global productivity but also helps protect the environment. The increasing population rate of the country, and various kinds of pollution like land, and water resulting in environmental pollution which ultimately concerns the health of the population. To cope with this problem various Indigenous techniques like BIJAMRUT are introduced to improve organic farming by reducing the use of chemical treatments protecting the plants from soil and seed-borne pathogens and to facilitate better health of the population by naturally controlling the pollution.

Liquid organic formulations like BIJAMRUT are used to improve organic farming which is prepared by fermentation process from the locally available ingredients which are

available on the farm, are rich sources of beneficial microflora which gives support and helps in stimulating plant growth and better vegetative growth by producing good quality yield. Cow dung and cow urine have been used in India from ancient times for various organic formulations and various medicines which are well known for their germicidal and medicinal properties. Bijamrut is prepared from cow dung and cow urine and used for seed treatment before the process of sowing the seeds. It shows 100% better results when it is used on the day of preparation. It consists of higher activity of beneficial microorganisms that act as anti-bacterial, anti-fungal and anti-viral for disease-causing pathogens, viz. nitrogen fixers, phosphorus solubilizers, actinomycetes and fungi which help in facilitating the seed protection during initial stages of germination and helps in improving seed germination%, crop growth and also increases the productivity of the crops. Scientific studies convey the effect of BIJAMRUT important for seed germination which acts as nectar for the seeds, especially for leguminous crops like Ground nut, Moth bean, green gram etc. which are economically used in the production of oil and pulses. This article tells us about the effectiveness of BIJAMRUT on seed germination and seedlings of various crops which results in producing good quality yield for the farmers.



Fig1.1. Materials required preparation (I. Lime, ii. Cow milk, iii. Cow urine, iv. Water v. Cow dung.)



Materials and Methods

BIJAMRUT is a low-cost liquid organic formulation which is prepared by using locally available ingredients which are readily available on the farm like cow dung, and cow urine. To prepare 1 litre of BIJAMRUT-1kg of local cow dung,1 litre of cow urine,1 or 2 litres of water and 2.5g of lime juice are required. To prepare 1 litre of BIJAMRUT-1kg of local cow dung,1 litre of cow urine,1 or 2 litres of water and 2.5g of lime juice are required. 1kg of cow dung,1kg of cow urine, 1 litre of cow milk, and 2.5g of lime juice are added to the bucket or tub. The lime juice was added to maintain the pH of the solution, for making a liquid formulation 1 or 2 litres of water was added and transferred into the bucket followed by a good stirring in a clock-wise direction with the help of a wooden stick to avoid the lumps. The bucket was covered with a lid or a clean piece of cloth properly and kept under shade for 12 or 24 hours to complete the fermentation process. Finally, it is extracted by using a clean muslin cloth or mesh which is stored for further use for atleast 7days. It costs nearly 10 rupees to produce 1 litre of Bijamrut.

Things to Know About Bijamrut.

After the completion of 24 hours sprinkle or dip the above prepared solution on the seeds air dry the seeds under shade and go for the sowing process for better growth and development of the yield. 1 litre of BIJAMRUT can be used for seed treatment of 5kg seeds. Advantages of Bijamruth are

- It protects plants from seed- borne diseases during initial stages of germination and establishment stage results in to good yield.
- Effective in protecting young roots from fungus which increase germination %, seed development, strengthens the plants.

Conclusion.

It is a low-budget organic farming which gives freedom for the farmers from externally purchased inputs which reduces the cost of cultivation by 60-70% thereby results in improving the farmer's net income. With the increasing population rate of the country, we have to protect the environment from chemicals and hazardous polluting products and we all need to maintain the ecological balance. Sustainability and recycling of natural resources for further generations This organic technique helps us to sustain eco-friendly agriculture. So, it's time to turn back the clock and adopt natural farming to save our environment. Natural



farming along with other ancient farming practices like BIJAMRUT is the way forward.

References:

Ghosh, P.k., and Sahoo, B. (2011). Indigenous traditional knowledge. *Orissa review* 67(6),66-71.

Sundramari and Ranganathan,2003. Indigenous Technical Knowledge (ITK) and eco-friendly agriculture.

