

Panchagavya: A Valuable Gift to Mankind

Khushi Shri Vastava¹, Aastha Priya¹, Ashmika Jha¹, Ayushi Tolasaria¹,
Garima¹, Aditya Pratap Singh Rajawat¹, Abhinav Anand¹, Anil Kumar
Gautam¹ and Yabi Gadi²

^{1,2}Jaipur National University, Jaipur, Rajasthan-302017, India

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Introduction

India is the land of traditions with its roots in ancient science directly linking social rituals and scientific reasons behind them. In India, a cow is called 'Gaumata' or 'Kamadhenu' due to its nourishing nature like a mother. Kamadhenu is the name of the sacred cow who believed to accomplish desired things. Panchgavya is a treasure of health benefits and medicinal properties. The Ayurvedic system of medicine has described the significance of using cow milk, ghee, urine, dung, and curd, each of which is termed 'gavya' (i.e., obtained from 'Gau' means cow) for the treatment of various diseases. Each product possesses different components and used for human health, agriculture, and other purposes. 'Panchgavya' has been derived from two words, 'Panch' meaning five and 'gavya' meaning obtained from 'Gau' means cow which represents five products obtained from a cow. Each of the 'gavya' exerts a different medicinal impact against various diseases (Dhama, 2005). These organic preparation panchagavya has a versatile role and soil fertility improvement by imparting different mechanism that is supplying nutrient, amino acid, vitamins, plant growth promoting substance and beneficial microorganism. Besides improving plant growth, it also enhances plant defense to various biotic and abiotic stresses (Kumar et al., 2021).

✚ **Curd**– It is also called as 'Yogurt' or "Dahi", is consumed worldwide due to its high nutritional value and health benefits. It is prepared by fermenting cow milk using microorganisms viz., Streptococcus, Acidophilus, and Lactobacillus. Curd contains several nutrients and micronutrients, including water, proteins, vitamins like A, B, D, and E; minerals like calcium, phosphorous, magnesium, zinc, etc.

✚ **Cow Dung** - In rural areas of India, a dried cow dung cake is used as a source of energy for cooking food, decreasing the dependency on other sources of energy and is entirely environment-friendly, and ensures air purification by killing the microbes in the

surrounding air. 'Gobar' gas (biogas) plants also serve as a significant energy source. They convert cow dung into methane gas, which is used as a source of energy for cooking and generation of electricity. Furthermore, the remaining residue is the best organic manure after converting most cow dung into methane gas.

- ✚ **Cow Ghee** - Cow ghee prepared by traditional method possesses high nutritional value, medicinal benefits, and helps to promote good health. Ghee is prepared by heating the butter obtained from cow milk, and heating must be continued at high temperature until the moisture is completely lost.
- ✚ **Cow Urine** - Cow urine or "GAUMUTRA" is a non-toxic liquid waste discharged from the cow. Cow urine contains 95% water, 2.5% of urea, and the rest 2.5% include components like enzymes, hormones, salts, and minerals. Besides this, cow urine also contains various enzymes to improve the digestive system and build a robust immune system. Vitamins such as A, B, C, D, and E are also present in cow urine.
- ✚ **Cow Milk**- Traditional Indian systems of medicine had described the medicinal effects of cow milk in ancient literature. Milk is used for its health-protecting, health-promoting, and wide range of therapeutic effects. Indian breed of cows delivers A2 type of milk, whereas A1 type of milk is given by crossbreed or exotic cow species. Milk also contains essential fatty acids and is a rich source of calcium and phosphorus.



Fig 1: Raw material required for Panchagavya preparation

Preparation of Panchgavya

Panchagavya, an organic product has the potential to play the role of promoting growth and providing immunity in plant system. Panchagavya consists of nine products viz. cow dung, cow urine, milk, curd, jaggery, ghee, banana, Tender coconut and water. When suitably mixed and used, these have miraculous effects.

- Cow dung - 7 kg
- Cow ghee - 1 kg

Mix the above two ingredients thoroughly both in morning and evening hours and keep it for 3 days

- Cow Urine - 10 liters
- Water - 10 liters

After 3 days mix cow urine and water and keep it for 15 days with regular mixing both in morning and evening hours. After 15 days mix the following and panchagavya will be ready after 30 days.

- Cow milk - 3 liters
- Cow curd - 2 liters
- Tender coconut water - 3 liters
- Jaggery - 3 kg
- Well ripened poovan banana – 12 nos.

Procedure

All the above-mentioned items can be added to a wide mouthed mud pot, concrete tank or plastic can as per the above order. The container should be kept open under shade. The content is to be stirred twice a day both in morning and evening. The Panchagavya stock solution will be ready after 30 days. Care should be taken not to mix buffalo products. The products of local breeds of cow is said to have potency than exotic breeds. It should be kept in the shade and covered with a wire mesh or plastic mosquito net to prevent houseflies from laying eggs and the formation of maggots in the solution. If sugarcane juice is not available add 500 g of jaggery dissolved in 3 liter of water.



Fig 2: Step by step procedure of panchgavya preparation

Benefits of Panchagavya

- ✚ Plants when sprayed with Panchagavya invariably produce bigger leaves and develop denser canopy. The photosynthetic system is activated for enhanced biological efficiency, enabling synthesis of maximum metabolites and photosynthates.
- ✚ The Panchagavya has the ability to restore the yield level of crops. The harvest is advanced by 15 days in all the crops. It not only enhances the shelf life of vegetables, fruits and grains, but also improves the taste. By reducing or replacing costly chemical inputs, Panchagavya ensures higher profit and liberates the organic farmers from loan.
- ✚ The deep and extensive roots developed by the plants allow to withstand long dry periods. And thereby reducing the irrigation water requirement by 30% and to ensure drought hardiness.
- ✚ Panchagavya is a living essence of many microorganisms, known and unknown growth promoting factors micronutrients trace elements antioxidant and immunity enhancing factors such as bacteria, fungi, protein, carbohydrate, vitamins and enzymes. When taken orally by animals and human beings, the living microorganisms in the Panchagavya stimulate the immune system and produce lot of antibodies against the

ingested microorganisms. It acts like vaccine. This response of the body increases the immunity of animals and humans and thus helps to prevent illness and cures disease.

Recommended dosage

- 3% solution was found to be most effective compared to the higher and lower concentrations investigated. Three litres of Panchagavya to every 100 litres of water is ideal for all crops.
- The solution of Panchagavya can be mixed with irrigation water at 50 litres per hectare either through drip irrigation or flow irrigation
- 3% solution of Panchagavya can be used to soak the seeds or dip the seedlings before planting. Soaking for 20 minutes is sufficient. Rhizomes of Turmeric, Ginger and sets of Sugarcane can be soaked for 30 minutes before planting.
- 3% of Panchagavya solution can be used to dip the seeds before drying and storing them.

Problems in adopting Panchagavya

- There are chances of contamination during fermentation.
- Quality of the produce may become degraded.
- Weed problem may emerge as it is non selective.
- Limited availability of its product in the market.

Conclusion

Panchgavya improves soil fertility by increasing organic matter, macro and micronutrient level, and the uptake of nutrients in plants, promoting the growth and reproduction of microorganism and maintaining good health.

References

- Dhama K., Rathore R., Chauhan R.S., Tomar S. 2005. Panchgavya (cowpathy): an overview. International Journal of Current Science.1:1-15.
- Kumar, M. S., Perumal, M. S., Murugan, G., Sai, M. V., & Reddy, B. M. 2021. Influence of Inorganic nutrients and Panchagavya on Growth attributes of Direct seeded Rice. Bhartiya krishi Anusandhan Patrika, 36(3): 264-266.
- Shah C.P., Patel D.M., Dhama P.D., Kakadia J., Bhavsar D., Vachhani U.D. 2011. In vitro screening of antibacterial activity of cow urine against pathogenic human bacterial strains. International Journal of Current Pharmaceutical Research. 3:91-92.