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Ghan-jeevamrit discs: Turning natural farming into rural income

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This article presents an easy and cost-effective method to prepare solid ghan-jeevamrit *discs, offering a practical solution for farmers and rural households for effective utilisation of the cow dung and urine. They are prepared using cow dung, cow urine, jaggery, gram flour and handful of soil using simple tools. They address key limitations of liquid* jeevamrit *by providing a product that is easy to store, transport and apply throughout the year. The article describes preparation of discs, their usefulness and support to both natural farming and rural income generation. By transforming a traditional bio-input into a value-added product,* ghan-jeevamrit *discs can open new opportunities for sustainable farming and small-scale entrepreneurship.*

Keywords: Biofertiliser, Fermented organic fertiliser, Rural income generation, Sustainable agriculture

GHAN-JEEVAMRIT discs offer an innovative, low-cost and farmer-friendly approach to promoting natural farming while simultaneously creating new income opportunities for rural communities. *Jeevamrit*, a traditional bio-stimulant prepared from cow dung, cow urine, jaggery, pulse flour and soil, is known for its ability to enhance soil microbial activity, nutrient cycling and plant growth. However, its liquid form poses practical limitations such as short shelf life, difficulty in storage and the need of equipment for field application. To overcome this limitation, *jeevamrit* can be transformed into its solid version, *ghan-jeevamrit*, which offers longer shelf life, ease of handling and simplified application. Further value addition is achieved by shaping the semi-dry material into small, uniform discs of around 20 g. These discs can be easily packaged, transported, stored and applied directly to crops, home gardens, terrace gardens and potted plants.

The process of preparing *ghan-jeevamrit* discs is simple, scalable, and suitable for household-level production. It involves fermentation of cow dung with cow urine, jaggery, gram/pulse flour and soil for three to four days, followed by shaping the partially dried mixture into discs and drying them completely. Low-cost ingredients and minimal equipment requirements make the technology especially suitable for rural families, women's self-help groups and youth-based enterprises. The discs can be stored for up to one year when kept in a dry environment, allowing year-round availability and marketing. A standard preparation using 4 kg cow dung and 1.2 L of cow urine yields approximately 1.8 kg of discs at a very low production cost. When packed into 250 g pouches, the cost per packet remains affordable, providing attractive margins when sold in local markets, nurseries and urban gardening networks.

Ghan-jeevamrit discs offer multiple agronomic advantages. They improve soil fertility by

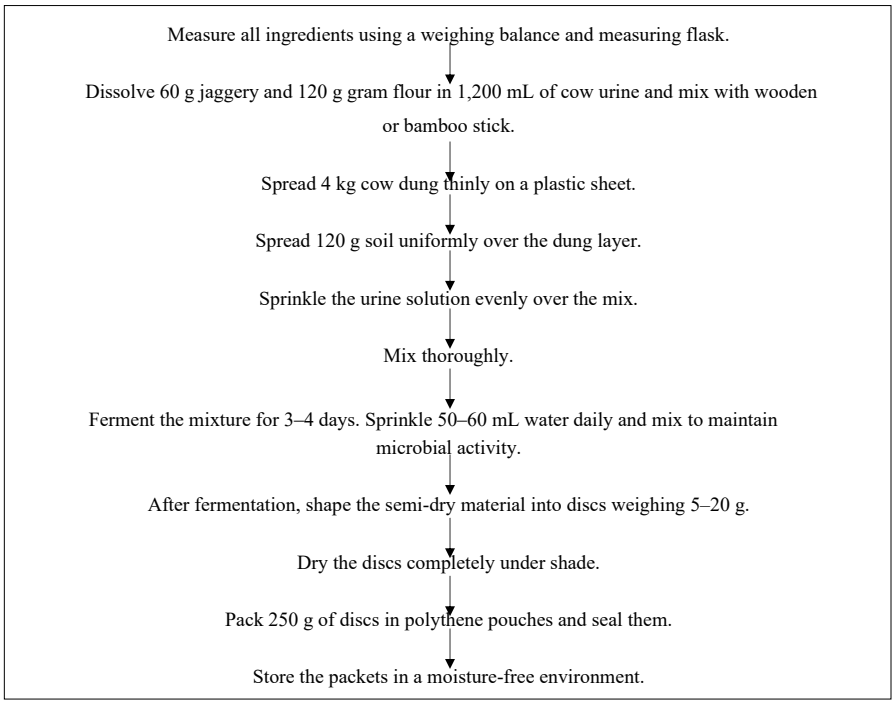
Preparation of *ghan-jeevamrit* discs from fermented cow dung mix

enhancing microbial populations, enriching organic matter and promoting natural nutrient release. Their slow decomposition ensures sustained plant nourishment, while their compact form allows precise dose application, especially in small-scale or urban horticulture. The discs eliminate the logistical challenges associated with liquid *jeevamrit*, enabling broader adoption among farmers who lack irrigation or spraying systems. Urban gardeners and terrace garden enthusiasts also find the discs convenient because they are odour-free after drying, easy to store and clean to handle.

Beyond their direct agronomic use, *ghan-jeevamrit* discs hold significant potential for rural income generation. The increasing demand for organic inputs, particularly in urban and peri-urban gardening communities, creates a ready market for these products. With simple branding, attractive packaging, and regular supply, rural entrepreneurs can develop sustainable micro-enterprises. The activity is labour-friendly and can be adopted by women, elderly farmers, and rural youth, making it a promising source of supplementary income.

Overall, *ghan-jeevamrit* discs combine the principles of natural farming with rural entrepreneurship, offering an eco-friendly, cost-effective, and practical solution for improving soil health and livelihood opportunities. The simplicity of preparation, low investment requirements, and broad market potential make them a viable model for strengthening sustainable agriculture in both rural and urban ecosystems.

Weighing of dried *ghan-jeevamrit* discs



Method of preparation of *ghan-jeevamrit* discs

Table 1. Economics of *ghan-jeevamrit* disc production

Item	Quantity (g/units)	Rate	Cost (₹)
Jaggery	60	₹60/kg	3.60
Gram flour	120	₹130/kg	15.60
Sealing machine	-	₹1.10/day	1.10
Plastic packets	7 packets	₹2/packet	14.00
Cow dung and urine	4,000 + 1,200	Assumed zero cost	0.00
Total cost	-	-	34.30

Disc preparation trials at ICAR-IARI, Assam

At ICAR-IARI, Assam, dedicated trials were undertaken to develop and standardise the preparation of *ghanjeevamrit* discs in recommended proportions. These trials established a reliable formulation where the standardised ratio ensured proper fermentation, uniform disc formation, and consistent quality of the final product. The work provided scientific validation and demonstrated that the method is practical, replicable and suitable for adoption by farmers, rural households and selfhelp groups.

***Materials required*:** Fresh indigenous cow dung: 4 kg; Indigenous cow urine: 1200 mL; Jaggery: 60 g; Gram flour: 120 g; Soil: 120 g; Water: 500 mL; Weighing balance; Measuring flask; Masks and gloves; Plastic sheet; Sealing machine; Plastic containers or pouches for packing; Large Bucket; Wooden stick.

From 4 kg cow dung and 1.2 L urine, around 1.8 kg of *ghan-jeevamrit* discs can be prepared. The total expenditure is about ₹34.30. The cost per kilogram is around ₹19.06. When divided into seven packets, each packet of roughly 250 g costs around ₹4.90. Depending on local market conditions, these packets can be sold at ₹15–25 per packet, offering good income for rural families.

Benefit-cost analysis

With a total expenditure of ₹34.30 per batch, seven packets of 250 g each can be produced at a breakeven cost of ₹4.90 per packet. When sold at market prices ranging from ₹15–25 per packet, the total revenue rose between ₹105 and ₹175, yielding profits of ₹70.70 to

Table 2. Benefit-cost ratio of *ghan-jeevamrit* disc production

Scenario	Selling price (₹/packet)	Packets per batch	Total revenue (₹)	Total cost (₹)	Profit (₹)	Benefit-cost ratio
Low price	15	7	105.00	34.30	70.70	3.06
Mid price	20	7	140.00	34.30	105.70	4.08
High price	25	7	175.00	34.30	140.70	5.10

₹140.70 per batch. Thus, a benefit-cost ratio (BCR) of 3.06 at the lowest selling price, 4.08 at the mid range, and 5.10 at the highest price, clearly demonstrated that *ghan-jeevamrit* disc production offers rural families a highly profitable and sustainable income opportunity.

Income projection from 1,000 kg cow dung

Using 1,000 kg of cow dung, rural households or self-help groups can generate a substantial income through the production of *ghan-jeevamrit* discs. Based on the established conversion ratio, 1,000 kg produces about 450 kg of finished product. The total production cost scales proportionally, amounting to approximately ₹8,575 for 1,000 kg of cow dung, with the cost per kilogram remaining around ₹19.06. When packed into 250 g packets, this quantity results in 1,800 packets. Depending on the local market price, which generally ranges between ₹15 and ₹25 per packet, total revenue can vary from ₹27,000 to ₹45,000. After deducting the production cost, the net profit lies between ₹18,425 and ₹36,425. This demonstrates that *ghan-jeevamrit* disc is a feasible and profitable rural micro-enterprise, particularly suitable for small farmers, women and youth groups seeking low-investment, high-return livelihood opportunities.

Packaging and sealing of *ghan-jeevamrit* packets

Advantages of *ghan-jeevamrit* discs

***Long storage life*:** Unlike liquid *jeevamrit*, which must be used in a short period, the discs remain usable for many months. This is especially beneficial during rainy seasons or when farmers face labour shortage.

***Easy to apply*:** The discs can simply be placed near the root zone of crops or added to pots. Thus, requiring no water, sprayer or irrigation system. This makes them suitable for both field crops and urban gardening.

Ghan-jeevamrit disc (250 g Packet)

***Low production cost*:** The ingredients required are inexpensive and easily available. The low input cost allows even small households to produce large quantities at minimal expenditure.

***Labour-friendly*:** Women, elderly farmers, and youth groups can prepare these discs at home. The work is simple, hygienic and not physically demanding.

***Eco-friendly*:** The discs reduce dependency on chemical fertilisers. Consistent use rejuvenates soil, increases organic matter content, and enhances natural nutrient cycling.

Scope for branding and local entrepreneurship

The product can be marketed with attractive labels and eco-friendly packaging. Local brands can emerge around organic inputs such as *jeevamrit* discs, vermicompost or seedling kits. There is strong demand in urban markets too, especially among terrace gardeners. Some income possibilities include:

- Selling packets in village markets, fairs, and agri-exhibitions.
- Supplying to nurseries, urban gardeners, and terrace garden enthusiasts.
- Creating subscription-based organic input kits.
- Bundling discs with seeds as ready-to-grow kits.
- Marketing the product through social media pages or local groups.

If a unit produces 50 kg per month, with a selling price of ₹20/250 g packet, monthly revenue can be substantial. Profit margins increase when cow dung and urine are sourced locally at no cost.

SUMMARY

Ghan-jeevamrit discs represent a highly profitable and sustainable innovation in natural farming. With a benefit-cost ratio ranging from 3.06–5.10, discs demonstrate strong economic viability for rural producers. This ratio highlights that for every unit of cost incurred, farmers can expect three to five times return, making the practice not only financially rewarding but also resilient against market fluctuations. The standardised weight of each disc ensures efficient application in the field, allowing farmers to manage nutrient distribution precisely and avoid wastage. This efficiency supports sustainable use of natural and eco-friendly fertilisers, improving soil health and crop productivity over time. In addition to their agronomic benefits, the discs are easy to prepare, store well due to their long shelf life, and can be marketed effectively in both rural and urban settings. By offering a low cost, high return product, *ghan-jeevamrit* discs empower rural families especially women and youth to engage in entrepreneurship while promoting ecological balance and strengthening local livelihoods.

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