

Effective Cow Dung Disposal Pattern: A Need of the Hour

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OPEN ACCESS

Keywords

Dung, Market, Urban, Fertilizer

How to cite this article:

Panigrahy, S. 2024. Effective Cow Dung Disposal Pattern: A Need of the Hour. *Vigyan Varta* 5(11): 244-246.

ABSTRACT

Growing concern of resource crunch and keeping dairy for livelihood sustenance, opens the opportunities of cow dung disposal and its management that helps to tap the untapped market for the producers and generate money through effective circular economy strategy. Again, it also addresses other issues of urban management, wastage management, natural resource management and many more in changing circumstances of dairy development. In broader perspective, cow dung management and its disposal pattern advocate the negative impact of climate change, methane gas production, cost escalation in dairy development, income from wastages and in the end, the solution to the dairy farmers in the line of atmanirbhar bharat.

INTRODUCTION

Our country witnessed the success of green revolution and white revolution for the last 75 years and capable enough to feed its growing population with other basic requirements like clothes, shelter and many more. However, the chemistry of equations has been changed a lot in this time

due to resource crisis, environmental uncertainties, market instabilities and international volatilities. To counter act the present issues and challenges and to achieve better farmers' income with quality output for the consumers, a need-based solution and strategy should be implemented in the line of

atmanirbhar bharaat and for which, it was tried to bring some of the marketing models in cow dung disposal pattern to address the topics of waste management, urban management, natural resource management, and many more in present context.

Dairy provides 80 percent of total livestock contribution by value terms which is even higher than the cumulative contribution of rice, wheat and maize in the same categories. Despite that many farmers could not reap other economic benefits in the time of dry period, pregnancy, morbidities and other such conditions when income through milk was almost negligible or absent. Increase cost of input; especially feed and fodder escalate the gravity of the situations to rear dairy efficiently which can be strengthened through a dung-based marketing system. As increase in income stimulates protein consumption and future dairy development mostly in urban and semiurban areas where every resource counts in economic measurements. In the scenario of land shortage mostly in the urban centric areas, the growing volumes of cow dung will be a concern for all without a proper market, supportive ecosystem and linkages.

In other side of the situations, overuse of the chemical fertilizer, acidic and abrupt rain, monocropping, high cropping intensity, and heavy mechanical applications systematically impact on soil quality, its moisture holding capacity, aerations, and genesis of amicable bacteria and microorganisms for the agricultural production. Application of dung and dung-based products will pave the way for genesis of soil through organic farming and natural farming practices. That's why a symbiotic interconnection between the dairy sector with agricultural one is need of the hour through many technological interventions and applications.

While country is facing the international negative remarks as the major contributor of

methane gas production from its agro-dairy based production pattern, in that time efficient disposal of cow dung will be a panacea against the counterparts' statements and simultaneously act as an ingredients of biofuel generation that will address the crisis of growing energy requirements of different industries, institutions and developmental domains. The average dung production is about 1.5 tons per household annually and India produces close to 500 million metric tons of agricultural waste per year (ICF, 2024). About 170 lakh families affiliated to the Dairy Co-operative Societies across the country rear around 3 animals per unit (family). Based on average 15 kg dung generation per animal per day, about 2660 lakh tons of liquid bio-slurry (80 % of dung and water mixture 1:1) could be produced annually or about 443.5 lakh tons of solid bio-slurry could be made available for processing of bio fertilizers (Rath & Patel, 2020). Only the symbiotic approach is necessary across the sector and within the sector as well to counteract the challenges into opportunities.

Marketing is an art and understanding the models with a perceptual map depiction in the mind of the stakeholders through an effective prototype is quite an artistic articulation that needs to be understood properly. That's why many institutions try to develop some models in a pilot based as per tailor made basis. In Anand districts of Gujarat, some of the models in cow dung disposal patterns were worked out in which it was tried to understand which will be better to be centralized one or decentralized practices to develop biogas units as per their benefit to cost analysis. Some of the organizations are providing initial financial support to the entrepreneurs to develop such biogas units for self-sustenance in energy production for their own requirements. Some models also capture the previously informal cow dung disposal pattern to a profitable biofertilizer, biofuel and slurry production



solutions to counter act the requirements of soil moisture deficiency and increase cost of fertiliser through contract farming models; more informal but assured market set up with desired microbial ingredients in the cow dung.

Another district of Gujarat, Kutch district, a more a dry and semi-arid one, find its state significance in domain of organic fertilizer market where disposal of cow dung to the target crop land through companies and goshala is another marketing models, may be replicated in other areas by understanding the demographic, cropping pattern and production purviews accurately. After producing different products from cow dung, companies here develop some models in output market by giving discounts, in time supports, easy availability, adequate storage and transportation facility, technical knowhow and many more for luring customers towards their market segments (Prajapati & Panigrahy, 2024). The market is lucrative for companies that sell organic fertilizer to farmers engaged in dairy farming and agriculture.

In a nutshell, cow dung marketing in an efficient way is the need of the hour to

understand the concern of communities and other stakeholders to tackle the issues of natural resource management, urban management, waste management, sustained energy requirements through effective planning processes and its implementation; without it our way of agricultural production and dairy development will be at a stake in the current climatic changes and market volatilities.

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