

Knowledge & Attitude of Farmers towards Cow Based Natural Farming: A Study Undertaken among 100 Farmers of Umreth Taluka

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Abstract

The primary necessity for humans to survive in civilisation is agriculture. The primary source of income for people is agriculture, which gives them a means of subsistence. Agriculture is the primary source of income for the majority of people living in rural areas. A nation's gross domestic production, or GDP, is greatly influenced by its agricultural sector. As the years go by, several revolutions occur to enhance agriculture in a nation or around the world. If we talk about agriculture, India has witnessed a number of revolutions that is, the green revolution, yellow revolution, blue revolution, agriculture. Natural Farming is a chemical-free alias traditional Indian farming practices. It is considered as agro ecology based diversified farming system which integrates crops, trees and livestock with functional biodiversity that largely depends on use of on-farm biomass recycling with major stress on biomass mulching, on-farm production of cow dung urine based formulations for maintaining soil fertility as well as crop protection etc. Natural farming is a system where the laws of nature are applied to agricultural practices. Cows have played an important role in Indian farming. Traditionally, Indian farmers used desi cow dung and cow urine to make manure and pesticides. These farming aids were 100% chemical-free and were available to farmers at no cost if they had their own cows. This kind of farming today qualifies as organic farming as well. In addition to being organic, it is also sustainable and natural.

Key Words: Agriculture, Natural Farming, GDP, Biodiversity.

Introduction

The use of cow dung, urine, and other by products to feed crops and soil is a key component of cow-based natural farming. Based on traditional Indian farming methods, this strategy seeks to establish a self-sustaining ecosystem where microbes, plants, and animals cooperate to preserve the soil's fertility and health. Cow-based natural farming encourages ecologically beneficial and sustainable agricultural operations by using natural inputs and methods. Because of its focus on long-term sustainability and soil health, this holistic approach is becoming more and more well-liked.

Cow based natural farming, also known as cow-based agriculture or cow-based organic farming, is a farming method that centers around the utilization of cow dung, urine, and other cow-related byproducts to enhance the health and fertility of the soil and promote sustainable agriculture. This approach is deeply rooted in traditional Indian agricultural practices and has gained traction globally due to its emphasis on ecological balance and

environmental preservation. In cow based natural farming, cows are regarded as integral members of the farming ecosystem. Their dung and urine are considered valuable inputs that provide essential nutrients and beneficial microorganisms to the soil. Cow dung is typically collected and used as a natural fertilizer and soil conditioner. It is rich in organic matter, nitrogen, phosphorus, potassium, and other micronutrients, making it an excellent source of nourishment for plants.

People choose organic food due to its importance for a healthy lifestyle and evidence of various negative impacts from the use of synthetic chemicals in farming, artificial ripening agents, and food preservation. (Neelam, & Kadian, 2016). Consumption of organic products is rising, according to Kamal et al. (2009), but to further boost demand, new products and advancements in certification, processing, labelling, and packaging are required. He added that 39 per cent of respondents thought the higher price of organic food items was fair. It is actually a fantastic chance for farmers to create in-demand goods and sell them for a reasonable price.

Group leaders/family members (84.25%) and friends/neighbors/group members (52.25%) are the most prevalent sources of knowledge for farmers, according to Sharma (2014). He went on to say that farmers can obtain information from a variety of vital and efficient mass media, including radio, television, and newspapers (Sharma, 2014). Shivani Meena (2023) found that Cow-based farming will result in the conservation of water, soil, and lives. Not only that, but this method would consume only 10% of the irrigation water utilized in typical farming. The rearing of a cow will allow for the cultivation of 30 acres of land at no cost. It has been demonstrated by the principles of zero-budget farming. Farmers and cattle ranchers both benefit from zero-budget farming.

The environment and soil were in danger due to the careless application of chemical pesticides and fertilisers. Numerous studies have demonstrated the negative impacts of altered soil composition, contaminated soil, contaminated groundwater, and a decline in soil microflora, among other things. According to studies, natural farming increases the amount of available minerals and soil microflora while requiring the fewest external inputs possible. Supplements like Jeevamruth are also applied to promote soil fertility. This technique promotes micro and macro flora biodiversity and multi cropping. Production and labour expenses are kept to a minimum. As a result, many people view it as sustainable and environmentally beneficial.

Objectives

- ❖ To study the knowledge of farmers about cow based natural farming in the Umreth Taluka
- ❖ To investigate the knowledge of farmers about the how important of cow's dung and urine for land and crops in the Umreth Taluka
- ❖ To know the challenges, face by farmers in cow based natural farming in the Umreth Taluka

Research Methodology

This study is conducted among 100 farmers of the Umreth Taluka with using Simple Random Sampling Method. The research design of this study is descriptive in nature. Independent variable are age, occupation, caste

whereas dependent variables are farmer's perception, knowledge & attitude about cow-based natural farming. Questionnaire was used as a primary tool to collect primary data.

Result & Discussion

- ❖ **Demographical Details of Respondents:** 38 percent of the farmers are in between age groups of 41-50 years. 38 percent of the farmers had more than 20 years of experience of farming. 61 percent of farmers have Animal husbandry as another source of income apart from farming. And they have a cow. 32 percent of the farmers grown grains in their farms. 80 percent of the famers use surface irrigation in their farms. 36 percent of the farmers said that the pests and diseases is major challenge in farming. 62 percent of the famers handle the pests and diseases through use of pesticides on their crop. 47 percent of the farmers do not practice any specific farming techniques or use organic method in their farming.
- ❖ **Knowledge of Farmers about Cow Based Natural Farming:** 76 percent of the famers have information about the importance of dung and urine for soil and crop. 70 percent of the farmers familiar with nutrition present in cow's dung and urine. 90 percent of the farmers agreed about the cow based natural farming has the potentiality to enhance soil health and fertility. 76 percent of the farmers believed that cow based natural farming is an effective and sustainable agriculture method. 56 percent of the farmers had inherited or learned traditional knowledge or practice related to use cow dung and urine in agriculture.
- ❖ **Knowledge of Using Cow's Dung and Urine in Proper Method:** 81 percent of the farmers use cow dung or urine as fertilizer in their farming practices. 73 percent of the farmers used cow-buffalo dung and urine in their current farming. 59 percent of the farmers have knowledge about the proper methods to how used cow dung and urine upon crops and land. 57 percent of the farmers have traditional knowledge or belief about the benefits of cow's dung and urine in agriculture.
- ❖ **Awareness of the Benefits of Using Cow's Dung and Urine:** 80 percent of the farmers are aware about the benefits of using cow's dung and urine in agriculture. 54 percent of the famers were aware about the benefits associated with using cow based inputs in farming. 60 percent of the famers had observed positive effect on crop after used cow dung and urine. 65 percent of the farmers believed that cow's dung and urine had positive impact on the land and crops. 74 percent of the farmers think that cow based natural farming aligns with environmentally friendly and organic farming. 86 percent of the farmers believed that traditional agriculture practice involving cow dung and urine are still relevant today.

Suggestions

Natural farming or regenerative agriculture offers a solution to these problems by adopting a holistic approach that enhances the resilience of agro ecosystems and promotes sustainable agriculture.

- Cows are not going to be slaughtered. Demand for cow-based products would not only improve the financial situation of farmers and cattle owners, but it will also enable cow shelters to become self-reliant.

- Natural farming is environment-friendly and sustainable. It is low cost in production with high productivity/profitability.
- Chemical farming requires high monetary investment for the purchase of key inputs like fertilizers and plant protection chemicals from the market. In natural farming, all inputs are used from one's own farm itself.
- Farmer should keep more desi cows in animal husbandry, as dung and urine of this cows are very useful for agriculture and cow's milk and food products made from it are very good for human health.
- Water conservation in agriculture has become increasingly crucial for the health of the environment and the sustainability of agriculture. By adopting techniques such as drip irrigation, capturing and storing water, crop rotation, conservation tillage, and organic farming, farmers can optimize water use, maximize crop yields, and promote long-term sustainability in agriculture. With these techniques, farmers can achieve higher yields while using less water, fertilizers, and energy. It is vital to recognize the importance of water conservation in agriculture to ensure a sustainable future for all.
- Majority of the farmers already used cow's dung and urine to their current farming so I would like to suggest to the farmers they should use more of desi cow's dung and urine to their farming rather than pesticides and chemicals.
- Majority of the farmers spray their crops with pesticides to control the pests. The pesticides kill the pests but the effect of the pesticide remains on the crops and when humans use these crops for their food, it has a very negative impact on human health. So farmers should stop the use of chemical in agriculture and turn to cow-based natural farming, which will improve the health of people and farmers will also get good returns from crops.
- Majority of the farmers observed/heard about the positive outcome and success stories related to cow based natural farming and also they have information about how important the cow's dung and urine for soil and crop and also familiar with the nutrition present in cow's dung and urine so, I would like to suggest to those farmers that they should try to do cow based natural farming on some of the land they are currently farming in.
- Cow-based natural farming draws upon traditional farming wisdom passed down through generations. By embracing these indigenous practices, farmers can preserve cultural heritage and foster community resilience while adapting to changing environmental conditions.
- There is a growing consumer demand for natural and sustainably produced food products. Farmers practicing cow-based natural farming may be able to tap into niche markets and command premium prices for their natural produce, providing an additional incentive for adoption.
- In addition to using cow dung and urine as fertilizers, farmers practicing cow-based natural farming may derive additional income streams from selling cow products such as milk, ghee, and dung-based biogas. Diversifying income sources can enhance the economic sustainability of farming operations.

Conclusion

Moreover, cow based natural farming also incorporates the use of other cow-related byproducts, such as cow milk, cow curd, and cow ghee. These products are utilized in various ways, including as inputs for nutrient-rich composting, as natural pest repellents, or as additives to enhance microbial activity in the soil. The core principles of cow based natural farming revolve around maintaining the balance and harmony of the farming ecosystem. It emphasizes the reduction or elimination of chemical inputs, synthetic fertilizers, and pesticides. Instead, it encourages the use of natural resources and techniques, such as crop rotation, mixed cropping, mulching, and intercropping, to ensure long-term soil fertility and plant health. By adopting cow based natural farming practices, farmers aim to achieve sustainable agriculture that not only preserves the environment but also enhances the nutritional value and safety of the crops produced. Additionally, it promotes the well-being of cows by recognizing their integral role in the farming process and providing them with a conducive and ethical environment. Our agriculture-based economy thrived alongside cow welfare; thanks to a bounty of natural gifts such as dairy products, manure, crops, vegetables, fruits, and medicinal and natural products derived from cow dung and urine. Economical optimization of stray cow by-products: cow dung derivatives like cakes, compost, briquettes, incense sticks, etc., and cow dung as such along with urine can be sold to the biogas/bio fertilizer generation plants for further economic benefits. The real-world application of the model also demonstrates how a community biogas plant can help sustainable energy transitions for our villages and even the cities to become self-reliant and lower their dependency on LPG, which can save millions of dollars per year for the government through lower oil imports for LPG generation. In the long run, the proposed model relies more on internal revenue generation and phasing out the donation part to enable the GAU-based sustainability model for an economy.

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