

Engagement of men and women in different dairy activities in Haryana

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Abstract

Collective efforts are recommended in order to ensure that dairy workers have equal employment opportunity and a comparable wage structure. The government should provide support in terms of technology upgrade and services infrastructure. There is high level of participation among women in indoor activities such as feeding animals, providing water, cleaning sheds, milking, and processing milk products. Nevertheless, their participation in outdoor activities, including fodder cutting and marketing milk and milk products, is low since mobility is restricted, technical skill is limited, patriarchal, social, cultural, and religious constraints are present. There was a wide variation in the participation of men and women in dairy activities based on household categories (apart from landholding sizes). Family members across the households had difficulty communicating with one another. Among participants in the study, there was a weak correlation between their participation in the study and the improvement of their livelihoods.

Introduction

In India, Haryana, called "the home of milk," contributes nearly 5% of the total milk production. Aside from providing additional income to livestock owners, dairy farming has gained popularity among farm families. Designed to increase income and employment opportunities for men and women, especially smallholders, landless, and other resource-poor people, the National Dairy Plan (NDP) was implemented in 18 selected states by implementing a variety of initiatives, including genetic improvement, breeding policy implementation, and infrastructure development at the village level. Agricultural production contributed primarily to the development of economies, generating employment, reducing poverty, and providing food to the population. World estimates, however, indicate 1.2 billion rural residents whose livelihood is agriculture are extremely poor. These people are primarily found in developing countries (Naz and Khan, 2018; Naz et al., 2020). In spite of the fact that dairy production has long been a practice of indigenous systems, women and men have gradually become more involved in the industry. Haryana's women farmers received lower monthly incomes than male farmers in the 73rd round of the National Sample Survey (NSS), based on the 73rd round. Additionally, Haryana livestock recorded a 47.2% share of working women in 2011; in a male-dominated sector, it was a 49.2% share. According to another study, 33 of 57 operations undertaken by women improved milk animal breeding through artificial insemination.



India is the world's largest milk producer. In developing countries, agricultural growth, development, and poverty reduction are closely linked. This sector, comprised of four subsectors, played a major role in reducing poverty in developing countries (Asaan, 2014). A significant part of these sub-sectors consists of livestock, which is reared by three-fourths of the poorer households to support their livelihoods (Smith et al., 2013). Due to the high level of capital invested in the dairy industry in India, major dairy activities have traditionally been dominated by men. It has become increasingly common for women to participate in dairy production and marketing, traditionally considered gender-neutral occupations. The majority of dairy-related activities are carried out by women in the informal unorganized sector, in which their contributions remain invisible and undervalued since they are not paid for their efforts. It has imposed work pressure and led to drudgery and suffering for rural women because of gender-based division of such activities.

Background of Dairy Activities in Haryana

A major source of milk production in the country is Haryana, which has a strong dairy sector. Milk production and consumption in India are among the highest in the world, and Haryana is a region with a history of thriving dairy farming (Garima et al., 2023). In Haryana, a state characterized by strong traditions and strong statistics regarding women and men participating in family employment, the number of female-headed families has increased over time. Haryana's culture strongly emphasizes the role of women in agriculture. Farm women not only work in the households, but also in the fields, carrying out a wide range of agricultural activities. While farm women contribute equally to agricultural work with men and shoulder equal or greater responsibilities for dairying activities, they are not often recognized in research studies, particularly when they participate in agriculture-related dairy activities and own them. Research and policy documents do not adequately emphasize the role of farm women in the development of dairy industries through various dairy activities. However, women are not contributing as much to important dairy activities in the state as they should, even though they are essential to them. Identifying the major areas where women participate in different activities is of paramount importance, as well as whether there is any significant difference in their participation in different activities. Women are often underrepresented in dairy development, despite several efforts made at the micro level to connect farm women organizations to dairy extension. Women on dairy farms in India are predominantly involved in taking care of newborn calves, milking, cleaning animal sheds, cleaning utensils, weaning and managing calves, preparing cow dung cakes and building animal sheds. However, their involvement in maintaining farm records was minimal. There was 100% involvement of farm women in caring for newborn calves and cleaning utensils and sheds (Uma Sah et al., 2006; Chayal et al., 2009 and Lahoti et al., 2012).

Gender Roles in Dairy Activities

The majority of the women reported having no personal income from dairying activities, which accounted for approximately 83 percent of the total women. Among small, medium, and large group holders, the author also observed increased stress, strain, AILDs, chronic fatigue, and high fatigue among the women, along with a rise in women's participation in dairying, particularly in areas such as dairying activities themselves. The study was conducted in Okara district of Pakistan by Tahir Munir Butt et al., (2010), which examined the roles of both male and female rural workers in agriculture. It appears that, despite their strong potential for contributing to crop and livestock production and cottage industries, they were faced with obstacles due to inadequate access to resources and a lack of knowledge regarding agriculture technology and innovation. Women in rural areas face fundamental obstacles, such as patriarchal cultural norms and superstitious beliefs. A significant inverse relationship was found between the age and participation of females in dairying activities. The findings indicated that ninety-five percent of the female workload in



households increased from 9 AM to 12 Noon, which resulted in greater stress among adult females, and thus fewer attempts to initiate and resist dairying activities. Furthermore, while coping with a large number of other household responsibilities, this was found to increase symptoms of stress and strain, which in turn caused chronic fatigue among farm women households in general. Arshad (2010) conducted a research study on the topic "Role of Rural Women in Decision-Making Regarding Livestock Management. This research was conducted in the Tehsil Jhang. The results indicated that women make up almost 100 percent of milk processing. There was a greater contribution by women to other relevant livestock activities, including making and storing dung cakes, collecting manures, caring for diseased animals, watering them, making feed concentrates and feeding them to livestock, cleaning of animal sheds, cutting fodder and rearing calf. There was a great deal of male contribution to grazing activities, but all other activities such as cleaning sheds, milking, harvesting, and transporting grass for livestock were exclusively performed by women (Johnson et al., 2013). It has been identified that milk price fluctuations in Haryana play a significant role in respondents rushing to the farm field in the morning and just relaxing in the evening hours after working heavy and monotonous household duties all day. In Haryana, a group of women were found to be experiencing chronic fatigue and body aches due to spending more than 7 hours a day engaged in dairying activities that involve mixed types of heavy and easy work.

Furthermore, it has been found that dairying activities, such as milking, feeding, and cleaning, produce more stress than other household activities. In the survey of the total number of respondents, about 12 percent preferred to perform activities that allowed them to sit while engaging in other household activities, suggesting some specific discouraging factors for dairying. Female counterparts reported restrictions upon visiting their parents after marriage in approximately five percent of cases. It is clear from these results that in North India, particularly Haryana, women have been forced to work on dairying activities from birth to death, leading to high levels of fatigue on a day-to-day basis.

Factors Influencing Men's Participation

Developing an understanding of the factors that influence men's participation requires treating husbands as an independent social entity that plays an important role in utilizing new opportunities in dairy farming and in developing the industry. As a result of the study, some select dairying activities, including milking, were significantly positively correlated with the level of education of men. We are responsible for the cultivation and preparation of green fodder, the distribution of feed and cleaning of the day care area, the milking of the cows, the cleaning of the utensils after they have been milked, the churning of milk, the preparation of ghee, training, extension meetings, and mass media exposure. The age of men has a highly significant negative correlation with aristocratic contrivance, dry fodder preparation, pregnancy care, monitoring cow heat, vaccination, feeding concentrate mixtures to milking animals, churning milk, assessing the fat content of raw milk provided, preparing buttermilk and cold drinks for the family, and assisting in sales. When men are engaged in milk churning, and feed concentrated mixture to the animals that are milked, there is a strong association between their occupation and aristocratic contrivance. In training and extension meetings, men's occupation was significantly associated with dry fodder cultivation and milk churning. A significant positive relationship exists between the size of men in a family and the preparation of grass and sales assistance, among other activities. Training exposure can also enhance the abilities of men to cultivate dry fodder, clean day care areas, distribute feeds, and churn milk. Further, exposure to mass media and cosmopolitanism can enhance their ability to sell milk and milk-related products. There is also a need for ensuring the involvement of men in family support activities at the DAESIIP-DGM Dairy cell level, as well as making available the needed literature and printed material and books concerning dairy management,



veterinary practices, clean milk production, channel-prescribed medicines, and feed supplements through advocacy and awareness programs within a few up dairy extension organizations and departments. A special emphasis should be placed on women's education in the future, and various dairy scales, programs, and women-oriented extension activities should also be established and implemented.

Challenges Faced by Women in Dairy Activities

The dairy industry faces volatile market conditions, similar to other agricultural products (Weber *et al.* 2012). The availability of crop residues for fodder is an erstwhile welfare facility for livestock. However, we have now reached a point where these very cattle are facing survival difficulties due to the pressure anthropogenic activity is placing on these crop residues. In agricultural and livestock industries, the importance of stubbles has been neglected and their role in ensuring that crop damage is recognized through unscientific burning has been neglected. When going to animal grazing, women are restricted from allowing young children to stay home with them. Ninety out of 100 women have children under six years of age, and the ability to take them to distant sites for grazing is difficult. Grazing time has also decreased. Consequently, women have begun to feed their livestock with fodder obtained from their households. Only those animals capable of consuming dried leaves and chaff are given grazing, as well as other inferior feed. Consequently, women have begun to feed their livestock with fodder obtained from their households. Only those animals capable of consuming dried leaves and chaff are given grazing, as well as other inferior feed. The participation of farm women was the least in economic activities such as taking loans, purchasing and selling animals and selecting animals for dairy production. Due to traditional Indian culture, economic decisions have traditionally been made by males. Furthermore, farm women have limited interactions with progressive farmers, officials, and banks. This explains why they are not actively involved in decision-making (Upadhyay and Desai, 2011).

Grazing animals is a common practice in rural areas. Women perceive the problem as an increase in distances between animal flocks, a trivialization of grazing, animals getting trapped in crop fields, ditches, and drains, and cattle being involved in accidents. A number of Indian companies have expressed an interest in exporting ethnic sweets and milk products. Although they have implemented a system for export inspection, they are unable to export due to issues relating to sanitary and phytosanitary conditions (Mukherjee *et al.*, 2019). There is a decrease in the area available per cattle as the population increases. As such, there is little grass nearby, which results in a shortage of fodder and water for livestock. Women encountered a variety of challenges when performing various dairy activities. The following sections describe some of their most significant constraints.

Government Initiatives to Promote Gender Equality

Overall, the overall report of gender participation in dairy activities indicates that women participate mainly at the household level in dairy animal care and support activities throughout the country, as they play a predominant role as caregivers. In addition, women's participation in dairy-related activities is also emphasized as a means of encouraging women to participate in dairy cooperative societies. Providing women with well-articulated policy support related to access to and control of natural and productive resources, such as land, leases of rural waterbodies, livestock, microcredit, veterinary services, and assured markets, will contribute to the strengthening of women's influence and socio-economic empowerment (Kumar *et al.*, 2012). Moreover, the present scenario demonstrates that even after the fullest involvement of women in dairy-related businesses, when women contribute more to and participate in both men and women activities, their contributions are greater. When individuals involved in such activities prevail in



society, they can become powerful social phenomena that will be able to combat any upcoming challenges that may be faced by any technological/applied/management decisions made at the national and international levels. As a result of these findings, we can imbibe and identify fact finding solutions to achieve a variety of policy practices in the dairy industry, providing a variety of opportunities to improve the overall utilization of nutritional competence, as well as ensuring gender equality through active participation of both men and women in dairy activities at the household and cooperative level in all regions. Governments have taken a number of steps to promote gender equality. Under this self-reliant India initiative, 1.5 crore dairy farmers will receive Pashu Kisan Credit Cards. A working capital loan will be provided for dairy farmers in order to cover the cost of feeding, fodder, animal health, animal husbandry services, etc., which dairy farmers may need to purchase. NREA (National Rural Employment Guarantee Act), a government-sponsored social security measure, primarily promotes women's participation in rural development. In case of women's employment, priority and preference shall be accorded to them, with at least 33% of the beneficiaries female. It is intended to increase the productivity of milch animals and the rural economy of villages by implementing a National Dairy Plan for Sustainable Dairy Development. The rural dairy farmers in Haryana receive many extension services/livestock health care centers/typical care services to promote dairy farming within their village communities. As part of the National Cooperative Development Corporation (NCDC) scheme, cooperative development is promoted and village occupations are diversified. The program will emphasize the formation and promotion of women's dairy cooperatives and small and disadvantaged groups. A women-specific dairy cooperative society may be formed in order to increase the participation of women in dairy cooperatives.

Impact of Gender Participation on Dairy Industry

Resources and labor are heavily reliant on women. As dairying is an indoor activity, the majority of districts have observed that female participation is highest in dairying activities, since it is an indoor activity and therefore females play an important role as input providers (a significant share of the dairy industry is occupied by women). The highest percentage of women were observed in Haryana. Their participation in dairy work was primarily motivated by the desire to complete their daily dairy tasks as well as to provide support to their husbands and other family members in the remaining activities and works of their cunning results and family economy for the rural women respondents. The traditional complementary role played by pastoral women (herdswomen) in the dairy sector has been marginalized in another study, and the pastoral woman (herdswoman) is now also able to participate in a greater range of dairy activities. As part of this study, we explored the opportunities available to women through various activities such as providing milk to a milk plant and milking villagers, containing many dairy-related support activities.

There are 125.7 million cattle in India, which is the highest number in the world. India is the global leader in milk production, as well as the leader in the dairy industry. Women are taking on a significant role in dairying in the emerging competitive era. While women used to be limited to producing milk, in the emerging market-oriented dairy economy, they are now participating in a number of dairy activities as well, including processing, marketing, and exporting dairy products. In relation to women's participation in various activities, it is noteworthy that the majority of women were involved in dairying activities when compared to other activities. A great platform for women empowerment and employment creation in rural areas is the Indian dairy industry. Through the use of innovative technology to improve productivity and efficiency, women are reintroducing the value chain of dairy products.



Strategies for Enhancing Women's Participation

Among the women, very few participate in animal healthcare activities. However, very few women prepare remaining feed for animals during illness, particularly when the animals are ill. Furthermore, it is noted that most literate women do not participate directly in the preparation of feed mixtures. The reason for this is the lack of time they have for their education and their use of tutors from neighboring educated women. In order to improve the involvement of agriculture in agricultural activities, the lack of labor needs to be addressed; otherwise, the number of small dairy farmers will increase, which will reduce the income of the small dairy farmer. In order to facilitate vocational trainings and off-campus trainings for women, government extension officials should establish institutional arrangements with animal and dairying institutes. Having experience in animal husbandry activities, especially dairying, may enhance women's confidence in animal husbandry. This, in turn, may lead to an increase in women's involvement in dairying. Increasing the level of education, increasing the size of a dairy herd, and reducing the distance to markets can significantly improve profitability of small dairy enterprises (Mumba et al. 2012)

Strategies for enhancing the participation of women. In order to achieve the goal of dairy development, an innovative approach needs to be implemented, emphasizing the involvement of women who play a crucial role in dairy production. The level of participation of women is highly dependent upon factors such as personal knowledge and confidence, practical involvement, landholding, savings, decisions made, and the support of others. Indian women actively participate in dairy farming with an average of 10.77 hours of working time in a day. The responsibility of cleaning the animal shed also falls to the woman. In addition, they help to feed the livestock and provide general care for the livestock, focusing primarily on lactating animals. In dairying households, cleanliness of the cow, particularly the udder, is maintained. Animal management is also handled with the assistance - if necessary - of the male members of the farm families.

Strategies for Enhancing Men's Participation

Men's participation in dairy farming should be increased through a partnership approach that identifies socio-ecological and cultural influences, and then tailors interventions to suit their lifestyle and the nature of the dairy. Eleven sociocultural barriers are addressed, including milking, feeding, veterinary and health care, repairs and maintenance of dairying-related equipment and premises, account and record keeping, marketing surplus milk, and their various skills may be enhanced by participating in ICAR sponsored courses and workshops in order to enhance their income. Atul Patil et al., (2021) developed an automatic animal dung cleaner that is solar-powered and operated automatically. An animal waste purifier is designed to collect semi-solid animal waste from a passageway and to do so in an environmentally friendly manner without harming animals and maintaining hygienic conditions. An operator with the necessary skills is required to control operation. The mechanism is proposed in order to assist farmers in cleaning waste from their cowshed by reducing the difficulty associated with it. Typically, these types of projects will be implemented with dairy farms for quick and efficient cleaning of the farm's environment, thus saving both water and human labor. In certain instances, they may be permitted to participate in every session at the appropriate field within all the residential areas of Karnal districts in Haryana. Due to the socio-cultural and religious involvement of both males and females in dairy activities, it is noted that females are more likely to communicate verbally or nonverbally in dairy activities. It has also been found that females participating in dairy activities perform better at work. Extension agencies should plan and conduct activities designed to build knowledge, such as meetings, discussions, mass media, etc., in order to increase knowledge and, hence, increase the adoption of recommended practices (Chandrasekar et al., 2017).



It is evident from the findings that improving male participation in dairying activities and providing information about innovative technologies and efficient dairy management for participants is essential. Without mass social participation and a part-time status for males, the industry would not be able to progress. Training should therefore be provided at their convenience, and training venues can be located close to dairying skilled men's homesteads, or at appropriate positions, so that men from the surrounding areas can at least make an effort to attend training venues due to their part-time involvement in dairy. The participation of men in the training program must be increased in order to increase the number of men involved in dairy activities. Households participating together in educational programs is particularly valuable. Sessions should also be scheduled at times that are convenient for both men and women. According to P.J. Galama et al., (2020), dairy cow housing systems have changed recently and are anticipated to change further in the future. In addition to creating an environment conducive to high-quality dairy cows, these new changes will also assist in improving management, agrotechnology, and dairy farming equipment. Due to the need to increase labor efficiency, tie-stall barns (or free-stall barns) evolved. The development of new ideas beyond cubicle barns is necessary to meet future needs. Examples of such ideas include free walk housing, which consists of loosely wrapped housing units

Conclusion

It is proposed that a policy of employment security be applied to each member of the dairy industry family. Priorities should be developed with regard to its compatibility with the welfare of the entire family. All categories of members should be offered focused extension activities in order to enhance their skills and upgrade their educational qualifications. PPT 06 will be broadcast once a week through electronic media since it pertains to strengthening the participation of members in the dairy industry. A diversity of livestock activities, including goat rearing, could also be introduced to the region that would encourage the involvement of a larger number of family members while increasing the nutritional value of the investments. To reduce the workload of women dairy workers and improve their economic conditions, proportional employment support in dairy development is required. It is imperative to empower the female members of the family. Once this is achieved, the enhanced role of the family members can be achieved by embracing those activities that attract the women and offer economic benefits. Individuals in different family groups played different roles in the performance of activities. In addition to landholding-size categories, male and female participation in dairy activities varied depending on the household category. The immediate need is to empower the family members, and if this is achieved, then members may be able to enhance their roles willingly by engaging in those activities which offer economic benefits. The family members of different groups performed different roles in different activities. There were reports of an improvement in wage employment among men and women. When compared to men, women respondents working as non-wage workers had improved livelihoods. The use of women in farming allied sectors was generally viewed as a consequence of the scarcity of men, and therefore an exploitation (durkha) condition was plausible in Haryana.

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