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Constraints faced by dairy farm women and to obtain their suggestions to overcome them

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Abstract

The present study was conducted in Pune region of Maharashtra state. There are 4 districts in Pune region. Out of that 4 districts i.e. Ahmednagar, Pune and Solapur were selected purposively. The study "constraints faced by dairy farm women and to obtain their suggestions to overcome them". Was conducted in Ahmednagar, Pune and Solapur. Two talukas from each selected district were selected purposively for the study. The tehsil viz., Sangmner, Rahuri tehsil from Ahmednagar district, Shirur, Junner from Pune and Malshiras, Sangola from Solapur District were selected for the research study. From each selected taluka six villages were selected randomly for the study from each village 10 dairy women selected, total tune of 360 dairy women were selected for study. The ex-post facto research design was selected as an appropriate research design the data were collected by personal interview method with the help of structured interview schedule. The data were tabulated, analyzed and interpreted. Distribution of the respondents according to the constraints and suggestions faced by the respondents to gram cultivation.

Keywords: Climate, dairy, anestrans, vulnerability, indigenous

Introduction

The average weather patterns that persist over many years over a sizable area of the earth's surface are referred to as the climate. Climate change is the term used to describe changes in the average condition of the climate as well as changes in other characteristics (such as the frequency of extremes) on all time and space scales that go beyond the scope of particular weather occurrences. Various statistical measurements of the weather and climate components can be used to describe the climate of an area. Typically, mean or average values are calculated over a lengthy period of time, like 30 years. These means are frequently estimated for the entire year as well as for each month. The degree of climatic change can be expressed using extreme maximum and minimum values. India is one of the global hotspots identified in the IPCC report as well as domestic reports on the Climate Vulnerability Index (CVI) in terms of geographical and socio-economic vulnerabilities. National Action Plan on Climate Change (NAPCC) is the major climate action plan in India, which has eight sub-plans. Each mission is under a different ministry, there is no one statutory framework or body that deals with the issue of climate change. Similar to most countries, despite the measures to tackle climate change, India is going to fall short of the IPCC recommendations unless the policies let go of all development goals and focus solely on climate change. However, India is already in a vulnerable place as is evidenced not only by the IPCC report but also by regional studies from the country.

Objective

To study Constraints faced by dairy women and to obtain their suggestions to overcome them.

Materials and Methods

The research study was carried out in Solapur, Ahmednagar and Pune district of Maharashtra state. Two talukas from each selected district were selected purposively for the study. The tehsil viz., Sangmner, Rahuri tehsil from Ahmednagar district, Shirur, Junner from Pune and Malshiras, Sangola from Solapur District were selected for the research study. From each selected taluka six villages were selected randomly for the study and from each village ten dairy women were selected, total tune of 360 dairy women were selected for study. total tune of 120 respondents were randomly selected for study. The ex-post facto research design was selected as an appropriate research design.

The statistical methods and tests such as frequency, mean, percentage standard deviation and Karl Pearson's correlation coefficient were used for the analysis of data.

Constraints experienced by dairy farm women in adapting to changing climate

Constraint is characterized as everything that prevents dairy farm women from adapting to the changing climate, including socio-psychological, economic, technical, infrastructural and communicational elements. The following subheads are used to present the results:

1. Socio-psychological constraints

Show that the lack of information about the effects of climate change on dairy farm women was the most significant socio-psychological barrier. The majority of dairy farming women (82.22%) rated it as serious (9.34%), very serious, or not serious (8.34%). It's possible that this is a result of low educational standards and a lack of institutional support for the spread of knowledge about changing climatic elements. These were similar to those noted by Satish Kumar *et al.* in 2013. Majority (48.88%) of dairy farm women regarded it as very serious, although 42.77 per cent of dairy farm women experienced it as serious and 8.35 per cent of farm women

believed it to be not serious. Limited knowledge of adaptive strategies was the most serious limitation of this constraint. This could be explained by factors including decreased access to credit, media attention and extension agencies mixed with unfavorable geographic conditions restricting the reach of various agencies. The results of investigations by David (2007), Nhemachena and Hassan (2007), Thaddeus Chidi *et al.* (2011) and Farauta *et al.* (2011) are in agreement with this lack of knowledge regarding milch animal feeding recommendations. More over 70 per cent of the dairy farm women (71.38%) perceived it as a major constraint, 20 per cent as a very serious constraint and 8.35 per cent as a very seriously serious constraint. The explanation for the lack of knowledge among dairy farm women can be attributed to the fact that they have less interest in dairying due to the low productivity of the animals and the higher number of animals per household that generates income adequate to meet their needs. Lack of knowledge about climate change was rated as very serious by 67.22 per cent, serious by 25 per cent and not serious by the remaining 7.78 per cent. This result is consistent with research from Amy (2006) and Thaddeus Chidi *et al.* (2011). They listed ignorance of climatic issues as a key restriction.

Table 1: Distribution of respondents according to socio-psychological constraints (n=360)

Sr. No.	Constraints	Very serious (%)	Serious (%)	Not serious (%)
1.	Lack of knowledge about climate impacts	34 (9.44)	296 (82.22)	30 (8.34)
2.	Lack of knowledge on feeding practices for milch animals	73 (20.27)	257 (71.38)	30 (8.35)
3.	Lack of awareness about climate variability	242 (67.22)	90 (25)	28 (7.78)
4.	Limited knowledge on adaptation measures	176 (48.88)	154 (42.77)	30 (8.35)

Figures in parenthesis indicate percentage

2. Economic constraints

Results are shown in (Table 4.31). Dairy farm women stated that the high cost of concentrate was a serious economic constraint (52.77%) and that it was very serious for 36.11 per cent of them and not serious as all for 11.12 per cent. Lack of credit opportunities for adaptation to climate change Women working on dairy farms made up 62.5 per cent of the group. 6.9 per cent of women were not serious, compared to 30.55

per cent of highly serious women. Less financial assistance from the government: Of the dairy farm women, 44.72 per cent were serious and 38.61 per cent were very serious. The remaining 16.67 per cent were not serious. Lack of market access for inputs was a major barrier for 12.77 per cent of dairy farm women and not seriously for 28.88 per cent of them.

Table 2: Distribution of respondents according to economic constraints (n=360)

Sr. No.	Constraints	Very serious (%)	Serious (%)	Not serious (%)
1.	Lack of market access for inputs	104 (28.88)	46 (12.77)	210 (58.33)
2.	Non-availability of credit facilities for Adaptation to climate variability	110 (30.55)	225 (62.5)	25 (6.9)
3.	Less financial support from the government	139 (38.61)	161 (44.72)	60(16.67)
4.	High cost of concentrate	130 (36.11)	190 (52.77)	40 (11.12)

(Figures in parenthesis indicate percentage)

3. Technical constraints

The results indicate that the lack of a government policy on climate problems was the most significant technical challenge faced by dairy farm women. The majority of these women (77.5%) rated this challenge as very serious, while 16.94 per cent rated it as serious. Effective climate change has continued to be severely constrained by policy on the subject. 5.5 per cent were not serious, as well. Because of the issue's recent emergence, the government may devise the ideal strategy soon. This indicates that the government should make greater efforts to implement effective climate change policy. Again, more research is needed to develop adaption strategies, so that farm women can be exposed to a range of possibilities and choose the one that best fits their situation. The findings

of Thaddeus Chidi *et al.* (2011), Farauta *et al.* (2011) and Chukwudumebi and Agwu (2013), who confirmed the lack of government adaptation, are in agreement with this finding. Most farm women (77.77%) regarded extension service irregularities as "very serious" 16.11 per cent as "serious" constraints, respectively, while just 6.11 per cent of dairy farm women not serious constraint.

It might be a result of the extension workers being given different tasks, an ineffective supervision system, fewer incentives for field staff, ineffective transportation, a shortage of operational staff and needless political intervention. As a result, some sort of system for disseminating information is necessary. This result is in line with earlier studies, which discovered that poor/low extension services and a lack of

extension's capacity to increase farm women's ability to resist climate change (Farauta *et al.*, 2011; Ajieh and Okoh, 2012). According to a different study conducted in Nigeria (Egbule, 2010), inconsistencies in extension operations and services were seen as a barrier to climate change adaptation. Government funding is insufficient for climate information systems like autonomous weather stations and early warning systems. The majority of the dairy farm women (78.33%) found it to be extremely serious, while 14.72 per cent found it to be a serious restraint. Yet, 6.9 per cent felt to them It's not a serious constraint. Majority (75.00%) of the dairy farm women rated the lack of local staff for spreading scientific dairy farm women practises as very severe (19.16% serious, while 5.88% not serious). This may be the result of poor hiring practises and a lack of measures to increase the capabilities of the current staff. About 46.11 per cent of the dairy farm women felt it was very serious, 37.22 per cent saw it as a serious constraint and 16.66 per cent did not think it

was serious. Field level staffs are less experienced in climate management. This may be because of the issue's human resource development policies. Inadequate training on climate information was viewed as very serious by 58.33 per cent of the dairy farm women, serious by 27.50 per cent and not serious by 14.16 per cent. The lack of highly effective trainers and disregard for the practical training aspect of capacity building may be the cause of this circumstance. The limitation was that indigenous techniques were ineffective. Only 5.83 per cent of dairy farm women believed it to be a "not serious constraint", while 69.44 per cent of them found it to be very serious and 24.72 per cent to be serious. The indigenous traditions have been developed over a lengthy period of time and the climate back then was different. The climate is changing more quickly today, making indigenous technology less effective. According to Thaddeus Chidi *et al.* (2011), the inefficiency of indigenous practices was a barrier to the farm women's adaptation to climate change.

Table 3: Distribution of respondents according to technical constraints (n=360)

Sr. No.	Constraints	Very serious (%)	Serious (%)	Not serious (%)
1.	Inadequate training regarding climate information	210 (58.33)	99 (27.5)	51 (14.16)
2.	Field level staff are less expertise in climate management	166 (46.11)	134 (37.22)	60 (16.66)
3.	Non-availability of local staff for scientific Dairy farming practices	270 (75.00)	69 (19.16)	21 (5.88)
4.	Insufficient funds from government for climate information like early warning system, automatic weather station etc.	282 (78.33)	53 (14.72)	25 (6.9)
5.	Irregularities of extension services	280 (77.77)	58 (16.11)	22 (6.11)
6.	Absence problems of Government Policy on climate	279 (77.5)	61 (16.94)	20 (5.55)
7.	Ineffectiveness of indigenous strategies	250 (69.44)	89 (24.72)	21 (5.83)

Figures in parenthesis indicate percentage.

4. Infrastructural constraints

According to (Table 4.33) the lack of pasture land was rated as the most serious infrastructural constraint by dairy farm women, with the majority of respondents (43.61%) assessing it as very serious, 39.72 per cent assigning it as serious and 16.66 per cent valuing it as not serious. It can be because extreme weather conditions are common and restrict growth and development. This could also be a result of the dairy farm women's lack of interest for pasture development and uncontrolled grazing. The limitation was a lack of reliable sources of clean water. The majority of dairy farm women (58.33%) and 38.61 per cent perceived it as a very serious constraint, whereas 3.05 per cent of them adjusted to it as a not-so-serious constraint. The development of water sources is hampered by insufficient rainfall impairing the level of ground water and geographical factors. Many dairy farm women (57.22%) believed that the lack of a water harvesting structure was a major constraint and 35.55 per cent felt that it

was a very serious constraint. However, 7.22 per cent of the dairy farm women felt that the constraint was not serious. This might be the result of the high expense of cement-based water harvesting structures and the inadequacy of kachcha structures for the region's sandy soil for water retention. In addition, these rural women lack resources and are unable to make significant investments. Lack of proper irrigation facilities for growing fodder is a limitation that the majority of dairy farm women (47.50%) perceive as serious and 35.83 per cent as very serious, but only 16.66 per cent of them experience as not serious. The region's geography makes it difficult to install irrigation systems because the water level is so high. Lack of availability to better fodder crop varieties was viewed as a serious constraint by (49.72%) dairy farm women and a very serious constraint by (36.38%), while it was viewed as a minor barrier by 13.88 per cent of dairy farm women. The lack of input supply agencies could be responsible for this.

Table 4: Distribution of respondents according to infrastructural constraints (n=360)

Sr. No.	Constraints	Very serious (%)	Serious (%)	Not serious (%)
1.	Inadequate irrigation facilities for growing fodder	129 (35.83)	171 (47.5)	60 (16.66)
2.	Lack of access to improved fodder crop varieties	131 (36.38)	179 (49.72)	50 (13.88)
3.	Lack of pasture	143 (39.72)	157 (43.61)	60 (16.66)
4.	Inadequate good quality water sources	139 (38.61)	210 (58.33)	11 (3.05)
5.	Lack of water harvesting structure	128 (35.55)	206 (57.22)	26 (7.22)

(Figures in parenthesis indicate percentage)

5. Communicational constraints

According to (Table 4.34), the most significant communicational challenge faced by dairy farm women was the lack of access to weather information. The majority of these women (70.83%) found this challenge to be extremely

serious, whereas 16.66 per cent did not find it to be a problem. However, only 12.5 per cent of them have adapted to it as a serious constraint. It might be because communication infrastructure hasn't developed as much. The results of David (2007) and Nhemachena and Hassan (2007)

were comparable. Poor access to information sources relevant to adaptation was perceived as a serious constraint by a majority of the dairy farm women (63.33%), a very serious constraint by 30.55 per cent and a not-so-serious constraint by 6.11 per cent. This may be because local media outlets like

newspapers, periodicals and radio don't do a good job of covering information about adaptation measures. The majority (63.88%) of the dairy farm women's adaptability to crises connected to climate variability was poor. It is serious (24.44% very serious, 11.66% not serious).

Table 5: Distribution of respondents according to communicational constraints (n=360)

Sr. No.	Constraints	Very serious (%)	Serious (%)	Not serious (%)
1.	Non-availability of weather information	255 (70.83)	45 (12.5)	60 (16.66)
2.	Poor response to crises related to climate variability by government/NGO/KVK	88 (24.44)	230 (63.88)	42 (11.66)
3.	Poor access to information source relevant to adaptation	110 (30.55)	228 (63.33)	22 (6.11)

(Figures in parenthesis indicate percentage)

6. Constraints related to dairy farming practices

Repeat breeding was the most serious constraints, which the majority of dairy farm women (66.66%) adapted as very serious and 19.44 per cent as a serious while, 13.88 per cent

of them experienced it as not serious constraint, according to a detailed review of Table 4.35. Improved fodder is not always available round the year.

Table 6: Constraints related to Dairy farming practices (n=360)

Sr. No.	Constraints	Very serious (%)	Serious (%)	Not serious (%)
1.	Non-availability of improved fodder seeds round the year	74 (20.55)	246 (68.33)	40 (11.11)
2.	Shortage of feed and fodder	100 (27.77)	150 (41.66)	110 (30.55)
3.	Repeat breeding	240 (66.66)	70 (19.44)	50 (13.88)
4.	Non-availability of good animal breed	109 (30.27)	55 (15.27)	76 (21.11)
5.	Anoestrous problem in animals	80 (22.22)	216 (60.00)	64 (17.77)

(Figures in parenthesis indicate percentage)

Only 11.11 per cent of dairy farm women thought it was a not a serious constraint, compared to 68.33 per cent who found it serious and 20.55 per cent who found it very serious. 60 per cent of the dairy farm women reported that anoestrous issues with animals were serious constraint. However, 17.77 per cent of dairy farm women rated it as not a serious constraint, while 22.22 per cent of them rated it as very serious. A substantial portion of dairy farm women (41.66%) viewed the lack of

feed and fodder as a serious problem, compared to 30.55 per cent who did not serious and 27.77 per cent who did, who adapted it as a very serious constraint. Lack of good animal breed availability was a serious constraint for 68.33 per cent of people, a very serious constraint for 20.55 per cent of people and a not-so-serious barrier for 11.11 per cent of people.

Table 7: Suggestions received from the respondents to overcome the constraints in dairy farming for mitigating to changing climate (n=360)

Sr. No.	Suggestions	Frequency	Percentage
a.	Breeding		
1.	Provision of good quality indigenous bull.	320	88.88
2.	Establishment of well-equipped AI centers.	170	47.22
3.	Castration of the street bulls so they cannot deteriorate quality breeds	200	55.55
b.	Feeding		
4.	Establishment of fodder banks to get fodder during drought situation/scarcity period on reasonable price	340	94.44
5.	Development and protection of community pasture land	230	63.88
6.	Growing of improved and drought resistant grasses on pasture land	260	72.22
7.	Demonstrations on silage making	310	86.11
8.	Supply of improved fodder seeds in time	290	80.55
9.	Supply of good quality water for drinking and Irrigation purpose from nearby canal	320	88.88
c.	Health care		
10.	Animal health services at nominal rate should Be made available by the government	330	91.66
11.	Adequate availability of veterinary medicine for dairy animals should be ensured	280	77.77
d.	Management		
12.	Organization of training program for dairy farm women regarding coping strategies on adverse climatic conditions	200	55.55
13.	Organization of awareness campaign about Climatic problems	270	75.00
14.	Establishment of water harvesting tanks	240	66.66
15.	Organization of training program on improved dairy farming practices,	305	84.72

7. Suggestions from the respondents to solve the challenges in dairy farming to mitigate the effects of climate change

Lists the recommendations made by dairy farm women for overcoming the challenges faced by dairy farm women in adapting to the changing climate.

a. Breeding

Table 4.36 is referred to. It was noted that the majority of dairy farm women (88.88%) said that good quality indigenous bulls must be provided and 47.22 per cent of women suggested that there is a need to construct fully functional AI centers. However, 55.55 per cent of the women

who worked on dairy farms urged castrating the stray bulls so they could not reproduce and harm the breed's quality.

b. Feeding

Table 4.36 shows that 72.22 per cent of the dairy farm women ranked cultivating better, drought-resistant grasses on pasture land as their most significant recommendation. This was likely caused by a lack of rainfall, a hot environment, a high rate of evaporation and sandy soil, which inhibited the growth of typical grasses. After that, it was necessary to obtain good-quality water from a nearby canal for irrigation and drinking (88.88%). The community pasture property has to be

developed and protected, according to 63.88 per cent of the dairy farm women. The creation of fodder banks was recommended by 94.44 per cent of the farm women as a way to obtain fodder during times of drought or scarcity at a reasonable price. This was most likely caused by the shortage of feed and fodder, the lack of drought-resistant fodder varieties, the lack of suitable irrigation systems for growing fodder and the lack of improved fodder seeds throughout the year. Other recommendations made by the dairy farm women included demonstrations of silage production (86.11%) and on time distribution of improved fodder seeds (80.55%).

Table 8: Suggestions received from the respondents to overcome the constraints in dairy farming for mitigating to changing climate (n=360)

Sr. No.	Suggestions	Frequency	Percentage
a.	Breeding		
1.	Provision of good quality indigenous bull	320	88.88
2.	Establishment of well-equipped AI centers.	170	47.22
3.	Castration of the street bulls so they cannot deteriorate quality breeds	200	55.55
b.	Feeding		
4.	Establishment of fodder banks to get fodder during drought situation/scarcity period on reasonable price	340	94.44
5.	Development and protection of community pasture land	230	63.88
6.	Growing of improved and drought resistant grasses on pasture land	260	72.22
7.	Demonstrations on silage making	310	86.11
8.	Supply of improved fodder seeds in time	290	80.55
9.	Supply of good quality water for drinking and irrigation purpose from nearby canal	320	88.88
c.	Health care		
10.	Animal health services at nominal rate should be made available by the government	330	91.66
11.	Adequate availability of veterinary medicine for dairy animals should be ensured	280	77.77
d.	Management		
12.	Organization of training program for dairy farm women regarding coping strategies on adverse climatic conditions	200	55.55
13.	Organization of awareness campaign about Climatic problems	270	75.00
14.	Establishment of water harvesting tanks	240	66.66
15.	Organization of training program on improved dairy farming practices,	305	84.72

c. Health care

According to suggestions provided by the dairy farm women (Table 4.36), the government should provide animal health services to the dairy farm women at a low cost. It was determined to be the most significant recommendation made by 77.77 per cent of the dairy farm women, followed by the need to ensure appropriate access to veterinary medicine for dairy animals (91.66%).

d. Management

Looking at Table 4.36 reveals that the majority of dairy farm women (75.00%) suggested that awareness campaigns about climate problems be organized, followed by the organization of training programs on improved dairy farming practices (84.72) and 55.55 per cent suggested that training programs for dairy farm women be organized to inform them of coping mechanisms for combating climate change. However, 66.66 per cent of the dairy farm women recommended that water harvesting tanks be established there. From the discussion above, it can be seen that the solutions offered by the dairy farm women to solve their everyday issues were reasonable. These villages need to be looked after by both government and non-governmental organizations.

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