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Constraints faced among farming community during waste management

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Abstract

Agriculture plays a vital role in the economies of many regions. Farmers face several challenges when it comes to managing farm waste. In view of this the study was conducted during the year 2021 to 2023 with a sample size of 240 farm families with an objective to know the problems faced by the famers during waste management. Self-structured interview schedule was used to elicit the information from the farmers. Appropriate statistical tools were computed to present the data. Results revealed that, majority (40.00%) of respondents belonged to old (>50 years) age group followed by 36.67 percent of the respondents belonged to middle (36-50 years) age group With respect to the landholding, about 50 to 55 percent of the farmers were belonged to small landholding (0-5 acres). Further the data with respect to the problems, the labour problem was the first rank of preference (mean score of 68.00) while management of farm waste followed by second preference to Inadequate Transportation with mean score of 63.00 and third rank was given to Lack of Infrastructure (mean score of 67.00). On the other hand, ninth and tenth rank with a mean score of 42 and 41 were given to lack of capital and lack of insurance. Lastly irrigation related problems were given eleventh rank with mean score of 40.00. Hence the combination of education, access to appropriate technologies, financial support and community involvement would solve the problems of farmers during the waste management.

Keywords: Problem, waste, management, environment, quality of life

Introduction

Agriculture forms the backbone of rural India, and the socio-demographic characteristics of farm families play a pivotal role in shaping the landscape of agricultural communities. Indian agriculture is a diverse and vital sector that plays a pivotal role in the country's economy and sustenance of its vast population. Characterized by a rich history, varied climatic conditions, and a wide array of crops and practices, Indian agriculture is a reflection of the nation's cultural and geographical diversity. This sector is marked by a blend of traditional farming methods and modern agricultural technologies, making it a dynamic and evolving field. In this introduction, we will explore some key characteristics that define Indian agriculture, shedding light on its significance and challenges (Oladipo *et al* 2017) [3].

There are many kinds of farm waste generated in the farm field. Crop waste contains animal waste (cow dung, horse manure, pee, animal bodies, etc.), crop waste (leaf litters, corn stalks, paddy straw, husk, sugarcane bagasse, natural product drops, pruning, etc.), household waste (both biodegradable and non-biodegradable), and hazardous waste (fungicides, insect sprays, and herbicides) are all included in crop waste. However, waste can also be categorized according to how it spontaneously decomposes in the environment. They fall into two categories: biodegradable waste and non-biodegradable garbage. Non-biodegradable garbage does not decompose rapidly when released into the environment due to microbial contamination, whereas biodegradable waste does. Waste that decomposes naturally includes human waste, animal waste, plant waste, and household garbage. The majority of non-biodegradable waste is made up of domestic waste items such plastic bags, covers, and other items. Management of this farm waste is the biggest challenge for the farmers these days.

The current study provides valuable insights into the socio-demographic characteristics and challenges faced by farm families in Dharwad, Kundgol, Kittur, and Bailhongal taluka. Understanding these dynamics is essential for crafting effective policies and support mechanisms that can empower rural communities and drive sustainable agricultural development.

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Materials and Methods

The present investigation entitled “Constraints faced by the farming community while making waste management” was executed in the Department of Family Resource Management, College of Community Science, University of Agricultural Sciences, Dharwad during the year 2021-2023. The research design used for the present investigation was exploratory design and considered as appropriate to collect the required information about the existing situation. The total sample size is a sample size of 240 farm families under the study.

Variables for the study

Considering the objective in view, following independent variables assumed to be related with the dependent variables were identified by review of relevant and supportive literature were selected for the present study. The independent variables were, Age, Education, Family Size, Land holding, Farming experience, Cropping Pattern, Livestock, Farm Waste generated, Social Participation. The dependent variable considered for the study are Farm Waste Management Practices, Knowledge

Results and Discussion

The socio-demographic characteristic of selected farm families was presented in Table 1. The study covered 240 farm families i.e. each 60 farm families from Dharwad, Kundgol, Kittur and Bailhongal taluka. The socio demographic characteristics were classified into age, education, and marital status, type of family, Religion, caste, occupation, family size, and income of the family.

Age of selected respondents from Dharwad taluka was found that, majority (40.00%) of respondents belonged to old (>50 years) age group followed by 36.67 percent of the respondents belonged to middle (36-50 years) age group and 23.33 percent of the respondents belonged to young (<35 years) age group. Whereas in Kundagol taluka higher (51.67%) percent of the respondents belonged middle (36-50 years) age group followed by 26.67 percent of the respondents belonged to young (<35 years) age group and 31.67 percent of the respondents belonged to old (>50 years) age group. The results are in line with Badarinath *et al.* (2006) [1].

While in Kittur taluka, majority (51.66%) of respondents belonged to middle (36-50 years) age followed by 25.00 percent of the respondents belonged to young (<35 years) age group and 23.33 percent of the respondents belonged to old (>50 years) age group. Further in Bailhongal taluk, more than 50.00 percent of the respondents belonged to middle (36-50 years) followed by 25.00 percent of the respondents belonged to old (>50 years) age group and 20.00 percent of the respondents belonged to young (<35 years) age group. Irrespective of Districts maximum (46.25%) number of the respondents belonged to middle age (36-50 years) followed by 30.00 percent of the respondents belonged to old age (>50 years) and 23.75 percent were belongs to younger age (<35 years).

It is clear from the table that majority (30.00%) of the respondents were studied up to middle school level (5th to 7th) in Dharwad taluka, followed by about 20.00 percent of the respondents completed their graduation, high school (16.67%), PUC (15.00%), primary school (13.34%) and only 8.34 percent were Illiterate in Dharwad taluka.

While, 28.34 percent of the respondents in Kundagol taluka completed their high school level of education followed by

23.34 percent of them were completed their Graduation. Majority of the respondents in Kittur taluka (23.34%) completed their PUC education followed by 21.67 percent completed their middle school and Graduation level (18.34%). Further in Bailhongal taluka, maximum (26.67%) percent of the respondents were Graduated followed by 18.34 percent of the respondents were completed PUC followed by equal (15.00%) percentage of respondents completed high school and middle level education.

Whereas, irrespective of Districts, majority of the respondents (21.67%) completed their graduation followed by 20.00 percent of them completed their middle school and PUC (19.58%).

Regarding the marital status, more than 90.00 percent of the respondents were married followed by unmarried (6.67%) in Dharwad and Kundagol taluka. Similar trend was observed in Kittur and Bailhongal taluka. Whereas, irrespective of districts, majority (92.92%) were married followed by unmarried (7.08%).

With regard to the type of family more than 90.00 percent of the respondents were belonged to nuclear type of family followed by joint type of family (8.33%) in Dharwad and Kundagol taluka. Similar trend was observed in Kittur and Bailhongal taluka. Whereas.

It is clear from the table that, in Dharwad and Kundgol taluka majority (more than 90.00%) of the respondents were belonged to Hindu religion followed by 3-8 percent were belonged to Muslim and Jain religion responsible. Similar trend was observed in Kittur and Bailhongal taluka. The results are similar with the findings of Minooei and Mokshapathy (2017) [2].

With respect to the caste, maximum respondents in Dharwad (81.67%) belonged to Other backward class (OBC) followed by 10.00 percent belonged to upper caste (GM), 5.00 percent belonged to Schedule caste (SC) and 3.33 percent were Schedule Tribe (ST). Similar trend was found in Kundagol taluka. Whereas, respondents in Kittur taluka, 65.00 percent of them were belonged to other backward class (OBC) followed by 15 percent of them belonged to Schedule caste (SC). Further in Bailhongal taluka 73.33 percent belonged to other backward class (OBC) followed by upper caste (15.00%).

Farmer's landholding and their experience in farming were indicated in table 2. Out of total sample of 120 selected farmers in Dharwad district 50.00 to 55.00 percent of farmers were belonged to small farmers (0-5 acres) and marginal farmers (5-10 acres) 35.00 to 45.00 percent. Similar trend was observed in Belagavi district also. Over all irrespective of districts more than 50.00 percent of the farmers were belonged to small land holding (0-5 acres) followed by marginal land holding (5-10 acres) 39.58 percent and less than 8 percent belonged to large land holding (> 10 acres). The results are contradictory with results of Rautaray *et al* (2020) [4].

Good percentage (> 70.00%) of the selected farmers in Dharwad district had more than 6 years of experience in farming followed (>11.00%) 4-6 years of farming experience and 2-4 years (>3.00%) of farming experience. With regard to Belagavi district more than 80.00 percent of the respondents were having more than 6 years of farming experience followed by 4-6 years (6-13%) and 2-4 years of experience by 5.00 percent.

Table 1: Socio-demographic characteristics of selected farmers from Dharwad and Belagavi District, N=240

Variables	Category	Dharwad district (n=120)		Belagavi district (n=120)		Grand Total N=240
		Dharwad (n=60)	Kundagol (n=60)	Kittur (n=60)	Bailhongal (n=60)	
Age (years)	Young(< 35)	14 (23.33)	16 (26.67)	15 (25.00)	12 (20.00)	57 (23.75)
	Middle (36-50)	22 (36.67)	25 (41.67)	31 (51.66)	33 (55.00)	111(46.25)
	Old (above 50)	24 (40.00)	19 (31.67)	14 (23.33)	15 (25.00)	72(30.00)
Education	Illiterate	5 (8.33)	4 (6.66)	7 (11.66)	6 (10.00)	22 (9.16)
	Primary School (1st to 4th)	7(11.66)	6(10.00)	8(13.33)	7(11.66)	28(11.66)
	Middle school (5th to 7th)	17(28.33)	11(18.33)	10(16.66)	10(16.66)	48(20.00)
	High school (8th to 10th)	10 (16.66)	15 (25.00)	12 (20.00)	9 (15.00)	46(19.16)
	PUC (11st to 12th)	09 (15.00)	11 (18.33)	13 (21.66)	12 (20.00)	45(18.75)
Marital Status	Graduation (Degree)	12 (20.00)	13 (21.66)	10 (16.66)	16 (26.66)	51(21.25)
	Married	54 (90.00)	56 (93.33)	58 (96.67)	55 (91.67)	223(92.92)
Type of Family	Unmarried	6(10.00)	4(6.67)	2(3.33)	5(8.33)	17(7.08)
	Nuclear	55 (91.67)	54 (90.00)	51 (85.00)	53 (88.33)	213(88.75)
Religion	Joint	5 (8.33)	6 (10.00)	9 (15.00)	7 (11.67)	27(11.25)
	Hindu	56 (93.33)	55 (91.66)	53 (88.33)	56 (93.33)	220(91.66)
Caste	Muslim	2(3.33)	5 (8.33)	3 (5.00)	4 (6.66)	14(5.83)
	Jain	2(3.33)	0(0.00)	3(5.00)	1(1.66)	6(2.50)
	Upper caste(GM)	6(10.00)	11(18.33)	8(13.33)	9(15.00)	34(14.16)
Caste	OBC	49(81.67)	44(73.33)	39(65.00)	44(73.33)	176(73.33)
	Schedule caste (SC)	3(5.00)	4(6.67)	9(15.00)	5(8.33)	21(8.75)
	Schedule Tribe(ST)	2(3.33)	1(1.67)	4(6.67)	2(3.33)	9(3.75)

Table 2: Distribution of farmers based on their landholding, N=240

Sl. No.	Landholding	Dharwad district (n=120)		Belagavi district (n=120)		Grand Total (N=240)
		Dharwad (n=60)	Kundagol (n=60)	Kittur (n=60)	Bailhongal (n=60)	
Landholding						
1	Small Farmers (0-5acres)	34 (56.67)	31 (51.67)	29 (48.33)	33 (55.00)	127 (52.91)
2	Marginal Farmers (5-10acres)	21 (35.00)	27 (45.00)	24(40.00)	23(38.33)	95 (39.58)
3	Large Farmers (More than 10acres)	5 (8.33)	2 (3.33)	7(11.67)	4 (6.67)	18 (7.50)
Experience in farm waste management activities (years)						
1	1 to 4 yr	2 (3.33)	6 (10.00)	1 (1.67)	3 (5.00)	12 (5.00)
2	4 -6yr	7 (11.67)	11 (18.33)	4 (6.67)	8 (13.33)	30 (12.50)
3	More than 6yr	51 (85.00)	43 (71.67)	55 (91.67)	49 (81.67)	198 (82.50)

Note: Figures in parenthesis indicates percentage

Table 3: Water source for irrigation and domestic purpose N=240

Sl. No.	Sources	Particular	Dharwad district (n = 120)		Belagavi district (n = 120)	
			Dharwad (n=60)	Kundagol (n=60)	Kittur (n=60)	Bailhongal (n=60)
1.	Well	Domestic	4 (6.67)	10 (16.67)	9 (15.00)	8 (13.33)
		Agriculture	3 (5.00)	7 (11.67)	2 (3.33)	11 (18.33)
2.	Bore well	Domestic	56 (93.33)	50 (83.33)	51 (85.00)	58 (96.67)
		Agriculture	57 (95.00)	53 (88.33)	49 (81.67)	52 (86.67)

Note: Figures in parenthesis indicates percentage

Source of water supply for domestic and agriculture was observed in table 3 and shows that, more than 80.00 percent of the selected farmers using tube well water for domestic and agriculture in Dharwad and Belagavi district followed by well water by 6.00 to 18.00 percent. The findings are on par with the findings of Kwaghe *et al* (2011) [5].

Common problems faced by the farmers in farm waste management are shown in table 4. The problems considered based on mean scores of preferential order of problems considered by the farmers. Preferential order of problems was obtained based on Garrett's mean score.

While management of farm waste, farmers considered labour problem as the first rank of preference (mean score of 68.00) followed by second preference was given to Inadequate

Transportation with mean score of 63.00 and third rank was given to Lack of Infrastructure (mean score of 67.00). The respondents preferred fourth rank for Uncertain water supply mean score of 55.00 and fifth rank was given to soil erosion (mean score of 56.00). Sixth rank was given to Less knowledge about agriculture marketing with a mean score of 53.00 and seventh preference was given as Electricity problem with a mean score of 43 and eight preference was given less knowledge about farm waste with mean score 44.00. On the other hand, ninth and tenth rank with a mean score of 42 and 41 was given to lack of capital and lack of insurance. Lastly irrigation related problems were given eleventh rank with mean score of 40.00.

Table 4: Rank matrix of common problems faced by the farmers in farm waste management, N=240

Sl. No.	Common Problems	Ranks											WAR	RANK
		1	2	3	4	5	6	7	8	9	10	11		
1	Labor Problem	35 (14.58)	15 (6.25)	25 (10.41)	33 (13.75)	58 (24.16)	54 (22.50)	10 (4.16)	7 (2.91)	10 (4.16)	4 (1.66)	0 (0.00)	68	I
2	Inadequate Transportation	50 (20.83)	18 (7.50)	70 (29.16)	18 (7.50)	12 (5.00)	24 (10.00)	9 (3.75)	0 (0.00)	19 (7.91)	28 (11.66)	0 (0.00)	63	II
3	Lack of Infrastructure	15 (6.25)	25 (10.41)	31 (12.91)	22 (11.00)	19 (7.91)	18 (7.50)	11 (4.50)	5 (2.08)	15 (6.25)	24 (10.00)	62 (25.83)	57	III
4	Uncertain water supply	18 (7.50)	20 (8.33)	11 (4.58)	16 (6.66)	21 (8.75)	36 (15.00)	40 (16.66)	13 (5.41)	40 (16.66)	16 (6.66)	9 (3.75)	55	IV
5	Soil Erosion	28 (11.66)	20 (8.33)	27 (11.25)	33 (13.75)	14 (5.83)	8 (3.33)	39 (16.25)	12 (5.00)	9 (3.75)	61 (25.41)	0 (0.00)	56	V
6	Less knowledge about agriculture marketing	17 (7.08)	24 (10.00)	22 (9.16)	31 (12.91)	18 (7.50)	7 (2.91)	10 (4.16)	62 (25.83)	25 (10.41)	15 (6.25)	18 (7.50)	53	VI
7	Electricity problem	111 (46.25)	18 (7.50)	20 (8.33)	12 (56.00)	23 (9.58)	9 (3.75)	15 (6.25)	9 (3.75)	11 (4.58)	9 (3.75)	9 (3.75)	43	VII
8	Less knowledge about farm waste	10 (4.16)	43 (17.91)	12 (5.00)	7 (2.96)	7 (2.96)	6 (2.50)	44 (18.33)	8 (3.33)	39 (16.25)	9 (3.75)	31 (12.91)	44	VIII
9	Lack of Capital	25 (10.41)	18 (7.50)	15 (6.25)	23 (9.58)	12 (5.00)	37 (15.41)	14 (5.83)	34 (14.16)	15 (6.25)	29 (12.08)	25 (10.41)	42	IX
10	Lack of insurance	18 (7.50)	26 (10.83)	14 (5.83)	10 (4.16)	48 (20.00)	8 (3.33)	34 (14.16)	42 (17.50)	19 (7.91)	9 (3.75)	29 (12.08)	41	X
11	Irrigation related Problems	21 (8.75)	37 (15.41)	19 (7.91)	14 (5.83)	18 (7.50)	13 (5.41)	24 (10.00)	32 (13.33)	33 (13.75)	11 (4.58)	24 (10.00)	40	XI

Note: Figures in parentheses indicate percentage. **WAR:** Weighted average score

Conclusion

This study provides valuable insights into the Problems faced by the farmers during waste management in Dharwad and Belagavi districts, shedding light on their age, education, marital status, family type, religion, caste, occupation, family size, and income. The findings highlight the prevalence of small-scale farming and the challenges faced by farmers in managing farm waste. Understanding these demographic and socio-economic factors is crucial for policymakers and agricultural experts to tailor interventions and support programs effectively. It is evident that most farmers in the region have limited resources and face challenges related to labor, infrastructure, and transportation in farm waste management. Therefore, targeted efforts to address these issues and improve access to resources and knowledge can help enhance the livelihoods and sustainability of these farm families.

References

1. Badarinath KVS, Kiran RK, Krishan P. A study on Agriculture crop residue burning in the Indo-Gangetic Plains – A study using IRS-P6 AWiFS satellite data. *Current Science*. 2006;91(8):85-92.
2. Minooei O, Mokshapathy S. Agricultural Waste Management in order to sustainable agriculture in Karnataka. *International Journal of Environmental & Agriculture Research*. 2017;3(3):2454-1850.
3. Oladipo FO, Olorunfemi OD, Adetoro OO, Oladele OI. Farm waste utilization among farmers in Irepodun Local Government Area, Kwara State, Nigeria: Implication for extension education service delivery. *Ruhuna Journal of Science*, 2017, 8(1).
4. Rautaray SK, Dubey R, Raychaudhuri S, Pradhan S, Mohanty S, Mohanty RK, *et al.* Sustainable agriwaste management at farm level through self-reliant farming system. *Waste Management & Research*. 2020;38(7):753-761.
5. Kwaghe PN, Gwary MM, Abdulsalam RY, Opong

Yeboah A. A study on economic analysis of agricultural waste management among rural households in Jere local government of Borno state, Nigeria. *Journal of Agriculture and Biological Sciences*. 2011;2(6):193-198.