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VIEWS OF SORGHUM GROWERS ABOUT CoFS 29 VARIETY REGARDING ITS USEFULNESS

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ABSTRACT

In Gujarat, sorghum is mainly cultivated for fodder purpose. Out of various zones of Gujarat, middle Gujarat is one of the remarkable zones of livestock population and farmers of this area grow various fodder crops to feed their animals. In middle Gujarat, farmers of Kheda district mainly grow sorghum, pearl millet and maize as a fodder crop. Due to nature of unavailability in some seasons of single cut variety of fodder sorghum and pearl millet, main forage research station, Anand Agricultural University, Anand recommended an improved multi cut variety CoFS 29 of sorghum. After understanding the importance of this variety, Krishi Vigyan Kendra, Kheda conducted the front line demonstrations of this variety in Kheda district from year 2017 with a view to long term fodder availability and to increase the area of production by increase the number of its adopters. To understand the actual usefulness of this variety among the users of it, the study on views of sorghum growers about CoFS 29 variety regarding its usefulness in Kheda district was conducted on those sorghum growers where KVK Kheda conducted FLD of CoFS 29 of fodder sorghum. A total of 200 CoFS 29 variety users were selected for the study. Ex-post-facto research design was used and interview schedule was prepared in light with objective. Usefulness in crop production, usefulness in animal husbandry and economic usefulness were three key indicators to measure the overall usefulness of this variety. Less number of ploughing is needed than other varieties of fodder sorghum, more number of cuttings and less seeds are needed were major perceived usefulness in crop production. Animal likes to feed and no poisoning effect after feeding of immature fodder were major perceived usefulness in animal husbandry. Less cost of cultivation and more profitable were major economic usefulness perceived by the users. Majority of the users had high perceived overall usefulness of this variety.

Keywords: *fodder sorghum, CoFS 29 variety, usefulness, crop production, animal husbandry, economic usefulness*

INTRODUCTION

In India sorghum is known as *jowar, cholam, or jonna*, in West Africa as Guinea corn, and in China as kaoliang. It is especially valued in hot and arid regions for its resistance to drought and heat. It is a source of food and fodder, mostly in the traditional, smallholder farming sector. Consumption of sorghum for food purposes is declining because of a change in food habits and consumer preference brought about by economic status, whereas use for animal feed and other industrial purposes is increasing. In India, area under the cultivation of sorghum was 3.84 million ha with 3.76 million tonnes production and in case of Gujarat, area under the cultivation was 0.08 million ha with 0.10 million tonnes production in year 2018-19 (Anonymous, 2020). The yield of sorghum was 979 kg/ha and 1265 kg/ha for India and Gujarat in year 2018-19, respectively. In Gujarat, sorghum is mainly cultivated for fodder purpose. Out of various zones of Gujarat, middle Gujarat is one of the remarkable zones of livestock population and farmers of this area grow various fodder crops to feed their animals. In middle Gujarat, farmers of Kheda district mainly grow sorghum, pearl millet and maize crop in summer season as a fodder crop but these crops are single cut and cannot available for long period. Due to that reason, main forage research station, Anand Agricultural University, Anand recommended an improved variety CoFS 29 of sorghum. This variety is multi cut in nature and gives 5-6 cut in one year and can be used as a green fodder for feed purpose, getting higher production and long term availability.

After understanding the importance of recommended variety of sorghum, Krishi Vigyan Kendra, Kheda decided to conduct the front line demonstrations (FLDs) of CoFS 29 variety of sorghum in Kheda district from year 2017 with a view to long term fodder availability and to increase the area of production of this variety by increase the number of its adopters. Here, only conducting the FLDs is not sufficient task to increase the number of adopters but it is necessary to

understand the actual usefulness of this variety among the adopters of this variety. Hence, this study was conducted with a view to get the views of CoFS 29 user sorghum growers regarding its usefulness with following objective;

OBJECTIVE

To study the views of CoFS 29 variety user sorghum growers about its usefulness

METHODOLOGY

Ex-post-facto research design was used for the study. The present investigation was conducted in Kheda district of the middle Gujarat. This district was selected purposively for a study because such type of study had not been yet undertaken in this district and this district comes under the jurisdiction of Krishi Vigyan Kendra (KVK), Kheda. Farmers of this district are comparatively more innovative, having with more number of livestock, cultivating green fodder to feed their animals and KVK, Kheda has conducted frontline demonstrations of CoFS 29 of fodder sorghum since 2017 with a view to popularize the variety in district. From ten talukas of Kheda district four talukas- Kheda, Kapadvanj, Mahemdabad and Kathalal where KVK-Kheda has conducted FLD were selected purposively for the study. A total of 200 CoFS 29 user sorghum growers were selected for the study as mentioned in the table 1. To study the views of sorghum growers about usefulness of CoFS 29 variety, structured schedule was developed consisting the statements of various properties of the CoFS 29 variety. A total of a three components namely; (1) usefulness in crop production, (2) usefulness in animal husbandry and (3) economic usefulness were selected for measurement of overall usefulness of CoFS 29 variety. The statements were scored as 5, 4, 3, 2 and 1 for strongly agree, agree, undecided, disagree and strongly disagree of the responses, respectively. Statement wise views regarding usefulness of CoFS 29 variety were studied, mean score was calculated for each statements and on the basis of mean scores, ranks were assigned to each statement. On the basis of measuring the usefulness for each statement, overall usefulness as perceived by the sorghum growers about CoFS 29 variety was calculated. Similar kind of studies of measurement of usefulness was carried out by Patel *et al.,* (2012a), Patel *et al.,* (2012b), Joshi *et al.,* (2015) and Soni *et al.,* (2015).

Table 1: Selected talukas, villages and number of respondents

Sr. No.	Name of taluka	Name of village	No. Of respondent
1	Kapadvanj	Kevadiya	45
		Antroli	25
		Hamirpura	25
		Jaloya	25
2	Kathalal	Bhagatnamuvada	35
3	Mahemdabad	Vanthvadi	25
4	Kheda	Govindpura	20
		Total	200

RESULTS AND DISCUSSION

Views of sorghum growers about CoFS 29 variety regarding its usefulness in crop production is presented in table 2.

Table 2: Usefulness in crop production (n=200)

Sr. No.	Usefulness	Mean Score	Rank
1	Less number of ploughing is needed than other varieties of fodder sorghum	4.41	1st
2	More number of cutting	4.31	2nd
3	Less seeds are needed	4.13	3rd
4	More number of tillers per plant	4.05	4th
5	Height of plant is more than other varieties	4.01	5th
6	More number of leaves per plant	3.99	6th
7	Less affected by hazardous animals	3.93	7th
8	More crop production than other varieties	3.89	8th
9	Early flowering than other varieties	3.84	9th
10	This variety can be tested in small area	3.84	9th
11	This variety is suitable in all type of land	3.83	10th
12	This variety can be sown in all seasons	3.78	11th
13	Less spacing is needed	3.67	12th
14	Width of tillers are more than other varieties	3.58	13th
15	Production technology is easy to understand	3.50	14th
16	Less numbers of weeding are needed	3.50	14th

Sr. No.	Usefulness	Mean Score	Rank
17	Less infestation of diseases	3.42	15th
18	Less fertilizer is needed	3.36	16th
19	Length and width of leaves are more than other varieties	3.30	17th
20	Suitable for storage as dry fodder	3.30	17th
21	Early harvesting than other varieties	3.20	18th
22	Short dormancy period of seeds	2.72	19th
23	Less irrigation are needed	2.72	19th

From the table 2, it can be seen that majority of the CoFS 29 user sorghum perceived usefulness in crop production was less number of ploughing is needed than other varieties of fodder sorghum with 4.41 mean score and which got 1st rank, followed by more number of cutting (4.31 mean score), less seeds are needed (4.13 mean score), more number of tillers per plant (4.05 mean score), height of plant is more than other varieties (4.01 mean score), more number of leaves per plant (3.99 mean score), less affected by hazardous animals (3.93 mean score), more crop production than other varieties (3.89 mean score), early flowering than other varieties (3.84 mean score), this variety can be tested in small area (3.84 mean score), this variety is suitable in all type of land (3.83 mean score), this variety can be sown in all seasons (3.78 mean score), less spacing is needed (3.67 mean score), width of tillers are more than other varieties (3.58 mean score), production technology is easy to understand (3.50 mean score), less numbers of weeding are needed (3.50 mean score) and less infestation of diseases (3.42 mean score). It was also observed that some statements possessed less usefulness for the growers' viz., less fertilizer is needed (3.36 mean score), followed by length and width of leaves are more than other varieties (3.83 mean score), suitable for storage as dry fodder (3.30 mean score), early harvesting than other varieties (3.20 mean score), short dormancy period of seeds (2.72 mean score) and less irrigation are needed (2.72 mean score).

Views of sorghum growers about CoFS 29 variety regarding its usefulness in animal husbandry is presented in table 3.

Table 3: Usefulness of CoFS 29 variety in animal husbandry (n=200)

Sr. No.	Usefulness	Mean Score	Rank
1	Animal likes to feed	4.33	1st
2	There is no poisoning effect after feeding of immature fodder	4.10	2nd
3	Easy to digest for animal	3.95	3rd
4	More milk production	3.71	4th
5	The animal leaves less fodder residues	3.66	5th
6	Available for longer period as green fodder	3.58	6th
7	Suitable for preparation of silage	3.24	7th
8	Increase in fat in milk	2.80	8th

From the table 3, it can be seen that in case of usefulness in animal husbandry, majority of the farmers perceived usefulness as animal likes to feed with 4.33 mean score, followed by there is no poisoning effect after feeding of immature fodder (4.10 mean score), easy to digest for animal (3.95 mean score), more milk production (3.71 mean score), the animal leaves less fodder residues (3.66 mean score), available for longer period as green fodder (3.58 mean score), suitable for preparation of silage (3.24 mean score), and increase in fat in milk (2.80 mean score).

Views of sorghum growers about CoFS 29 variety regarding its economic usefulness is presented in table 4.

Table 4: Economic Usefulness of CoFS 29 Variety

Sr. No.	Usefulness	Mean Score	Rank
1	Less cost of cultivation	4.00	1st
2	More profitable than other varieties of sorghum	3.53	2nd
3	More market price of fodder of this variety	2.83	3rd

From the table 5, it can be observed that major economic usefulness for the farmers was less cost of cultivation with 4.00 mean score, followed by more profitable than other varieties of sorghum (3.53 mean score) and more market price of fodder of this variety (2.83 mean score). They got rank 1st, 2nd and 3rd respectively on the basis of their mean scores.

On the basis of above mentioned three components of usefulness, overall usefulness of CoFS 29 variety was measured. The data presented in table 5 indicates the overall usefulness of CoFS 29 variety among the

Table 5: Overall Usefulness of CoFS 29 variety for sorghum growers (n=200)

Sr. No.	Category	Number	Percent
1	Very Low (0 – 61.2)	00	00
2	Low (61.3 – 88.4)	00	00
3	Medium (88.5 – 115.6)	57	28.50
4	High (115.7 – 142.8)	130	65.00
5	Very High (142.9 – 170.0)	13	06.50

From the table 5, it can be observed that majority (65.00 per cent) of the sorghum growers had high level of usefulness regarding CoFS 29 variety, followed by medium (28.50 per cent) and very high (6.50 per cent) level of usefulness. It was also observed that not a single sorghum user came under the category of low or very low level of overall usefulness of CoFS 29 variety of fodder sorghum.

CONCLUSION

On the basis of entire study, it can be concluded that majority of the CoFS 29 user sorghum growers were perceiving higher level of overall usefulness about CoFS 29 variety. Major usefulness in crop production for CoFS 29 users were less number of ploughing is needed than other varieties of fodder sorghum, more number of cutting is possible and less seeds are needed. In case of views about animal husbandry related usefulness, major usefulness observed by users were animal likes to feed, no poisoning effect after feeding of immature fodder to animals and easy to digest for animal. Less cost of cultivation and more profitable than other varieties of sorghum were major economic usefulness for the CoFS 29 users.

IMPLICATION

The findings of the study would facilitate in knowing the existing level of usefulness of CoFS 29 variety in the farmers of Kheda district. The results of the study suggested that overall perceived usefulness of this variety among the users was high so on the basis of that this variety should be popularized more by conducting more awareness programs and demonstrations by line departments.

CONFLICT OF INTEREST

No conflict of interest among researchers.

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