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### Constraints and suggestions faced by the farmers in adoption maize cultivar GAYMH 1

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#### Abstract

The Anand Agricultural University produces quality seeds of various crops for the farming community every year. The investigation was conducted in the Panchmahals district comprises seven talukas out of these three talukas viz. Godhra, Sahera and Morvahadaf were selected purposively. There are four villages were selected purposively. After the selection of villages, 10 maize cultivars GAYMH 1 from each village were selected purposively. The investigation was conducted in 2020- 2021 on 120 randomly selected beneficiaries of Anubhav brand seed GAYMH 1 adopted farmers. Slightly less than half (45.00 percent) GAYMH 1 farmers belongs to old age group, Slightly less than half (46.67 percent) of GAYMH 1 farmers had higher secondary to college and above level of education, Majority (72.50 percent) of GAYMH 1 farmers had experience above ten years, Vast majority (89.16 percent) of GAYMH 1 farmers had medium to marginal size of land holding. Major constraints faced by the farmers in adopting maize cultivar GAYMH 1 were the high cost of fertilizer and pesticide (65.83 percent), high cost of seed (60.00 percent), lack of technical knowledge regarding the proper application of plant protection chemicals (55.83 percent). The majority (65.83 percent) of the beneficiaries suggested the need to lower the price of the Anubhav seed, Seeds/ planting material should be provided on a subsidiary basis (62.50 percent) and farmers should be protected by a crop insurance scheme in case of failure of season (60.00 percent).

**Keywords:** GAYMH 1, constraints, suggestions

#### 1. Introduction

Seed is the most crucial input in agriculture. An essential component of crop production is seed. The farming community receives high-quality seeds for a variety of important crops from Anand Agricultural University. Maize is the most significant crop of all grain crops. Despite the significant growth in human population, the adoption of green revolution cultivars enabled several countries to boost their food output. Approximately 65% of the total crop area in India is used for food grains. Maize is grown as the main crop in Panchmahals districts of Gujarat State and it is cultivated in approximately 2.70 lakh hectare area in *kharif* season. It is the duty of research scientists, extension specialists, and farmers to increase the yield and productivity of maize per unit area. The productivity of maize in the state at present is 1300 kg/ha. It is less than the national Average (2300 kg/ha) and world average (5500 kg/ha), respectively (Anonymous). Nowadays farmers faced many constraints regarding maize cultivation. Therefore, keeping all these views the research study "Constraints and suggestion of farmers about the technological traits of maize cultivar GAYMH 1" was chosen.

#### 2. Objectives

- To study the profile of GAYMH 1 farmers

- To identify the constraints faced by the farmers in adoption maize cultivar GAYMH 1
- To explore the suggestions from beneficiaries to improve services of Anubhav brand seed

#### 3. Methodology

Gujarat state has 33 districts and out of these Panchmahals district was purposively selected for this study. Panchmahals district comprises seven talukas out of these three talukas viz. Godhra, Sahera, and Morvahadaf were selected purposively. There are four villages were selected purposively. After the selection of villages 10 maize cultivars of GAYMH 1 from each village were selected purposively, Thus, in all 120 maize cultivars GAYMH 1 constituted the sample for this investigation. The data of this study were collected by arranging personal interviews. The data was analyzed and interpreted with frequency, percentage, mean score and rank.

#### 4. Results and Discussion

##### 4.1 Age

Slightly less than half (45.00 percent) of GAYMH 1 farmers belong to the old age group followed by 43.33 percent and 11.67 percent of GAYMH 1 farmers belong to middle and young age group, respectively.

**Table 1:** Profile of GAYMH 1 farmers

(n=120)

Sr. No.	Category	Frequency	Percent
1.	<b>Age</b>		
	Young (Up to 35 years)	14	11.67
	Middle (36 to 50 years)	52	43.33
	Old (above 51 years)	54	45.00
2.	<b>Category of Education</b>		
	Illiterate (didn't go to school)	19	15.83
	Primary (1 <sup>th</sup> to 7 <sup>th</sup> standard)	18	15.00
	Secondary (8 <sup>th</sup> to 9 <sup>th</sup> standard)	27	22.50
	Higher secondary (10 <sup>th</sup> to 12 <sup>th</sup> standard)	35	29.17
	Collage & Above education	21	17.50
3.	<b>Experience in farming</b>		
	Low (Up to 5 years)	07	05.83
	Medium (6 to 10 years)	26	21.67
	High (Above 10 years)	87	72.50
4.	<b>Social Participation</b>		
	No Membership in any organization	59	49.17
	Membership in one organization	41	34.17
	Membership in more than one organization	16	13.33
	Position holder	04	03.33
5.	<b>Land holding</b>		
	Marginal (Up to 1.0 ha)	27	22.50
	Small (1.1 to 2.0 ha)	46	38.33
	Medium (2.1 to 4.0 ha)	34	28.33
	Large (4.1 & above)	13	10.84
6.	<b>Extension contact</b>		
	Very low (Up to 8 score)	09	07.50
	Low (9 to 10 score)	23	19.17
	Medium (11 to 12 score)	45	37.50
	High (13 to 14 score)	31	25.83
	Very high (15 to 16 score)	12	10.00
7.	<b>Mass-Media exposure</b>		
	Very low (Up to 7 score)	18	15.00
	Low (8 to 9 score)	26	21.67
	Medium (10 to 11 score)	47	39.17
	High (12 to 13 score)	21	17.50
	Very high (14 to 15 score)	08	06.66

#### 4.2 Education

Slightly less than half (46.67 percent) of GAYMH 1 farmers had higher secondary to college and above level of education followed by 22.50, 15.83 and 15.00 percent of GAYMH 1 farmers had secondary, illiterate and primary level of education.

#### 4.3 Experience in farming

Majority (72.50 percent) of GAYMH 1 farmers had experience above ten years followed by 21.67 and 05.83 percent had experience six to ten years and up to five years, respectively.

#### 4.4 Social participation

Slightly less than half (49.17 percent) of GAYMH 1 farmers had no membership in any organization followed by 34.17, 13.33 and 03.33 percent of them had membership in one organization, more than one organization and position holder, respectively.

#### 4.5 Land holding

Vast majority (89.16 percent) of GAYMH 1 farmers had medium to the marginal size of land holding. Only 10.84 percent of GAYMH 1 farmers had the large size of land holding.

#### 4.6 Extension contact

More than three-fifth (63.33 percent) of the GAYMH 1 farmers had medium to a high level of extension contact followed by 19.17, 10.00 and 07.50 percent of them had low, very high and very low levels of extension contact, respectively.

#### 4.7 Mass-Media exposure

More than half (56.67 percent) of the GAYMH 1 farmers had medium to high mass media exposure, followed by 21.67, 15.00 and 06.66 percent of them low, very low and very high mass media exposure, respectively.

**Table 2:** Constraints faced by the farmers in adoption maize cultivar GAYMH 1

(n=120)

Sr. No.	Statement	Frequency	Percentage	Rank
1.	High cost of seed	72	60.00	II
2.	Non availability of Anubhav seed locally at times when needed	31	25.83	X
3.	Lack of knowledge of recommended package of practices	59	49.17	V
4.	High cost of fertilizer and pesticide	79	65.83	I
5.	Lack of trainings on scientific maize crop production technologies	55	45.83	VI
6.	Lack of technical knowledge regarding proper application of plant protection chemicals	67	55.83	III
7.	Non-remunerative price of produce	47	39.17	VII
8.	Unavailability of fertilizer at peak season	61	50.83	IV
9.	High rental charge of tractor and high labour cost	39	32.50	IX
10.	Lack of knowledge about university recommended varieties	41	34.17	VIII

The data presented in table 4 reveal that constraints faced by GAYMH 1 farmers were high cost of fertilizer and pesticide had assign first rank, followed by high cost of seed (Rank II), lack of technical knowledge regarding proper application of plant protection chemicals (Rank III), unavailability of fertilizer at peak season (Rank IV), lack of knowledge of recommended package of practices (Rank V),

lack of trainings on scientific maize crop production technologies (Rank VI), non-remunerative price of produce (Rank VII), lack of knowledge about university recommended varieties (Rank VIII), high rental charge of tractor and high labour cost (Rank IX), non availability of anubhav seed locally at times when needed (Rank X).

**Table 3:** Suggestions from beneficiaries to improve services of Anubhav brand seed

(n=120)

Sr. No.	Statement	Frequency	Percentage	Rank
1.	Seed production of GAYMH 1 variety needs to be done on wider scale for more availability to farmers	39	32.50	VIII
2.	Advertisement should be given in all the newspaper and local news channel regarding the selling of available seed	45	37.50	VII
3.	Needs to lower the price of the of Anubhav seed	79	65.83	I
4.	Seeds/ planting material should be provided on subsidiary basis	75	62.50	II
5.	Transportation services should be provided for home delivery in case of bulk purchase	68	56.67	IV
6.	Sound marketing network for Anubhav seed should be established	61	50.83	V
7.	Farmers should be protected by crop insurance scheme in case of failure of season	72	60.00	III
8.	Sufficient training programs should be organized	55	45.83	VI

The data given in Table 3 revealed that Suggestion made by GAYMH 1 farmers to overcome the constraints were ; Needs to lower the price of the of Anubhav seed (Rank I), Seeds/ planting material should be provided on subsidiary basis(Rank II), farmers should be protected by crop insurance scheme in case of failure of season (Rank III), transportation services should be provided for home delivery in case of bulk purchase(Rank IV), sound marketing network for Anubhav seed should be established (Rank V), sufficient training programs should be organized (Rank VI), advertisement should be given in all the newspaper and local news channel regarding the selling of available seed (Rank VII), seed production of GAYMH 1 variety needs to be done on wider scale for more availability to farmers (Rank VIII).

### 5. Conclusion

Slightly less than half of GAYMH 1 farmers had higher secondary to college and above level of education, Majority of GAYMH 1 farmers had experience above ten years, Vast majority of GAYMH 1 farmers had medium to marginal size of land holding. Major constraints faced by the farmers in adopting maize cultivar GAYMH 1 were the high cost of fertilizer and pesticide, high cost of seed, lack of technical knowledge regarding the proper application of plant protection chemicals. The majority of the beneficiaries

suggested the need to lower the price of the Anubhav seed, Seeds/ planting material should be provided on a subsidiary basis and farmers should be protected by a crop insurance scheme in case of failure of season.

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