

Attitude of Farmers Towards Henna Cultivation in Western Rajasthan

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Abstract: The present study was conducted in Pali District of Rajasthan to measure the attitude of farmers towards henna (*Lawsonia inermis*) production technology. Out of 10 administrative blocks of Pali District, two were selected considering the extent of acreage and production under henna cultivation. The respondents were divided into three groups of small, medium and large farmers and a proportionate sample from each group was drawn randomly to have a total sample size of 180 henna growers. Data were collected by personal interview technique through suitable structured schedule. Nearly three-fourth of the farmers (74.44%) had favorable attitude toward henna production technology, followed by 13.33 and 11.22% of them who expressed most favorable and least favorable attitude, respectively. The most important statements of highest degree of attitude were 'henna cultivation is the right step of CAZRI, KVK' and 'henna cultivation generates employment opportunities'. The least favorable attitude statements of 'credit and subsidy facilities are adequate for its cultivation'.

Key words: Attitude, favorable, henna production technology.

India is the largest producer of henna (*Lawsonia inermis*) with estimated annual production of 13.6 t, of which 70% is being consumed in India and 30% is exported to Middle East, USA, Turkey, UAE, etc. (Bechtold and Mussak, 2009; Singh and Sagar, 2011). In the year 2003-04 trade of henna leaves was 19430 t, which increased to 32431 t in the year 2009-10. In terms of rupees, the trade was worth Rs. 30 crore with an average price of Rs. 2400 per quintal in the year 2003-04, which increased to Rs. 69.76 crore with average price of Rs. 3400 per quintal in 2009-10. Henna occupies about 44000 ha area in the form of field crop, hedges on bunds and as ornamentals in the garden in India. Out of this, 39800 ha area lies in Pali District of Rajasthan. Recently increase in public awareness on the detrimental environmental impact of synthetic dyes, has led to increase in popularity of natural products (Lubbe and Verpoorte, 2011). Among natural dyes, henna is used to dye wool, silk (Hakeim *et al.*, 2003), and to dye hair prior to invention of synthetic dyes (Chand *et al.*, 2003; Lavhale and Mishra, 2007). The cultivation of this crop is a boon to the farmers of the hot arid region because it is drought hardy due to deep root system (Rao *et al.*, 2005).

Scientific technology of henna cultivation has not been fully adopted by farmers and the crop is mainly grown in traditional manner. There is need for positive attitude to the improved cultivation practices of henna so that production and income of the farmers can be raised. Therefore, the present study was undertaken with specific objective to measure the attitude of farmers towards henna production technology.

Materials and Methods

The present study was conducted in two administrative blocks namely Sojat and Raipur of Pali District of Rajasthan. These two blocks were selected because of higher acreage and production under henna cultivation in the district. Similarly four villages from each tehsil were chosen on the basis of maximum production of this crop. A comprehensive list of all the henna growers of selected villages was prepared with the help of Gram patwaries and agricultural supervisors. The listed farmers of each village were categorized into small (<1 ha land), medium (1-2 ha land) and large (>2 ha land). Then a proportionate sample from each category was drawn randomly to have a total sample size of 180 henna growers. Data were collected by personal interview technique through suitable structured schedule. The data

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Table 1. Distribution of farmers on the basis of their attitude toward henna cultivation

Category	Small farmers		Medium farmers		Large farmers		Total (N=180)	
	F	%	F	%	F	%	F	%
Most favorable	5	13.51	8	17.78	11	11.20	24	13.33
Favorable	26	70.27	30	66.67	78	79.59	134	74.44
Least favorable	6	16.22	7	15.56	9	9.18	22	11.22
Total	37	100.00	45	100.00	98	100.00	240	100.00

F=Frequency, N=Number of respondents.

were tabulated, analyzed and inferences were drawn in light of the objective.

Attitude in this study was operationally defined at the farmers' degree of favorable or unfavorable views, options, feelings, towards henna production technology. Such a favorable attitude helps in better adoption of henna cultivation practices. The productivity of henna is very low in Pali District. Generally, there is a time lag between origin of a new technology and its positive attitude of farmers.

Results and Discussion

Distribution of farmers on the basis of their attitude toward henna cultivation

To get an overview of the attitude toward henna cultivation, farmers were classified into three categories i.e., most favorable, favorable and least favorable on the basis of calculated mean and standard deviation of attitude score obtained by them. Data given in Table 1 revealed that nearly three-fourth of the respondents (74.44%) had favorable attitude towards henna cultivation followed by 13.33% who had expressed most favorable attitude. However, only 11.22% farmers expressed least favorable attitude toward henna cultivation. It was observed that 70.27% of small, 66.67% of medium and 79.59% of large henna farmers had favorable attitude toward henna cultivation. Besides, 13.51% small, 17.78% medium and 11.20% large henna farmers possessed most favorable attitude toward henna cultivation (Table 1).

However, 16.22% of small, 15.56% of medium and 9.18% of large henna farmers showed least favorable attitude toward henna cultivation. This might be due to the fact that farmers are realizing the importance of henna from the commercial angle. As new technology, i.e. henna cultivation provided an opportunity to the farmers to fulfill their needs by generating

more income. However, the least favorable attitude of farmers might be due to costly planting material, late establishment of plants and lack of knowledge about henna cultivation. Hence, it may be inferred that majority of the henna growers had positive attitude toward henna cultivation (Khajuria *et al.*, 2006).

Statement-wise attitude of respondents toward henna cultivation

The statement-wise attitude of farmers as measured on five point continuum has been presented in Table 2. It is obvious that the most important statements of highest degree of attitude were 'henna cultivation is the right step of CAZRI', 'henna cultivation generates employment opportunities', 'henna plants help to control harmful insects and pests' and 'henna cultivation is good source of income for farmer's economy' owing to the per cent score 95.56, 93.44, 92.11 and 90.78, respectively. The reason was that respondents possessed comprehensive knowledge of henna cultivation and henna cultivation contribute good return in their income.

The statements having high degree of attitude were 'it thrives well in poor soil', 'seedling and cutting of henna are cheap', 'henna cultivation is highly technical skill and knowledge intensive' and 'value addition of this crop increases its production' with score 87.22, 85.44, 82.56 and 87.11%, respectively. The high agreement expressed by the respondents about these aspects may be due to the fact that propagation materials sold by farmers are on low cost and they possessed good skill about henna cultivation practices. The table further indicates moderate attitude toward the statements like henna is gainful enterprise in new emerging areas of agriculture sector, less manpower investment is required for cultivation, henna is less fertilizer intensive, there is demand of henna in dye and medicinal

Table 2. Attitude of respondents toward henna cultivation (N=180)

Statements	Number of respondents					% level of agreement
	SA	A	UD	DA	SDA	
Henna cultivation is good source of income in farmers economy	130	30	10	7	3	90.78
Henna cultivation is highly skill and knowledge intensive	103	35	10	26	6	82.56
It is a gainful enterprise in new emerging areas of agricultural sector	85	46	19	21	9	79.67
Henna cultivation is suitable in arid and semi-arid regions	63	48	12	34	23	70.44
Seedlings and cuttings of henna are very cheap	102	43	21	10	4	85.44
Proper advise and training for its cultivation is timely available from CAZRI, KVK	43	53	51	24	9	70.77
There is demand of henna in dye and medicinal industries	72	51	32	18	7	78.11
Credit and subsidy facilities are adequate for its cultivation	27	32	3	35	83	47.22
Any farmer (big/small/marginal) can venture for henna cultivation	68	52	34	17	9	77.00
Marginal land is properly utilized for henna cultivation	80	40	11	26	23	74.22
Value addition of this crop increases its production	104	50	17	4	5	87.11
Less manpower and less investment is required for cultivation	95	41	7	24	13	80.11
Henna cultivation generates employment opportunities	146	20	6	5	3	93.44
Low cost for henna cultivation and higher return	43	34	9	55	39	58.55
It thrives well in poor soils	103	52	17	3	5	87.22
Henna is fertilizer intensive	56	65	43	10	6	77.22
Henna plants are less prone to insect-pests and diseases	135	31	5	6	3	92.11
Henna cultivation is the right step of CAZRI, KVK	150	20	10	0	0	95.56

SA=Strongly agree, A=Agree, UD=Undecided, DA=Disagree, SDA= Strongly disagree.

industries, any farmers can venture for henna cultivation and waste land is properly utilized for henna cultivation had scored 79.67, 80.11, 77.22, 78.11, 77.00 and 74.22, respectively. The reason behind such an attitude may be due to the reason that market demand of henna is currently known by the farmers and waste land is used in henna by the respondents and also they know that henna requires less fertilizers (Ramakrishana and Rathakrishanan, 2012).

Respondents expressed good level of attitude towards the statements viz., proper advice and training for its improved cultivation is timely available from CAZRI, KVK and henna cultivation is suitable to arid and semi-arid regions owing the per cent score 70.77 and 70.44, respectively. This might be due to the fact that CAZRI, KVK provided proper advice and training to farmers and farmers also grow henna in arid zone of Rajasthan. The respondents expressed slightly favorable attitude towards statement, cost is less in its cultivation as compared to benefit (58.55%). This might be due to the reason that cost of propagation material is slightly more than arable crops. However, the statement, credit and subsidy facilities are opined as adequate for

its cultivation, this shows low level of attitude because the credit facilities and subsidy are complex procedure, which provide the negative response of farmers.

Conclusions

It may be concluded that three-fourth of farmers (74.44%) had favorable attitude toward henna cultivation followed by 11.22 and 13.33% of them, who expressed least favorable and most favorable attitude, respectively. The most important statements of highest degree of attitude were henna cultivation is the right step of CAZRI, KVK, and henna cultivation generates employment opportunities. The least favorable attitude statements of credit and subsidy facilities are adequate for its cultivation. The findings that emerged in this evaluation suggest that future henna cultivation need better training in some areas of henna production including nursery management, seed treatment, transplanting and harvesting. Thus, there is a need to organize training programs to stimulate higher participation of farmers and farmwomen in henna cultivation practices so that farmers are economically more independent and improve socio-economic

status of their families. There is also a need for better marketing of the product to motivate more farmers to adopt henna cultivation.

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