

Knowledge of recommended isabgol production technology in jhalawar district of kota region of rajasthan

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Abstract: Isabgol (*Plantago ovata* Forsk) is one of the important medicinal and commercial crops in India. The seeds of Isabgol are mainly valued for mucilaginous rosy white husk. The mucilage comprises of reserve Carbohydrate mainly pentose. It has a high-water absorbing capacity and therefore, used as safe anti-diarrhoeal drug. In recent years, interest of this crop has increased in the western countries because of the blood cholesterol lowering property of its husk. Other than medicinal uses, it is used in dyeing calico printing and ice-cream industries as a stabilizer. Being natural medicine with no side effects, it is demand in USA and other west countries as a house-hold medicine. The present study was conducted in purposely selected Jhalawar district of Rajasthan. There is total eight tehsils in Jhalawar district of Rajasthan, out of which, two tehsils namely Pachpahar and Pirawa were selected on the basis of maximum area under cultivation of Isabgol. Two panchayat samities from district were identified based on area production of Isabgol and eight Isabgol growing villages were selected randomly from each panchayat samities. Eight Isabgol growing villages were selected randomly villages namely karanpura, khod, ghatod, alawa, sunel, kaliya kheri, kalotiya & Rajpura. From the list so prepared, 15 respondents were selected randomly from each identified village. Thus, in all 120 farmers were included in the sample of the study. The study clearly showed that majority of respondents i.e., 57.50 per cent fell in medium level knowledge group whereas 25.00 per cent Isabgol growers were observed in the low-level knowledge group and remaining 17.50 per cent respondents possessed high level of knowledge about recommended production technology of Isabgol.

Index terms: Knowledge, Isabgol growers, production, technology, cultivation. (Key words)

I. INTRODUCTION

Isabgol (*Plantago ovata* Forsk) is a winter season crop and about 200 species of *Psyllium* Are available in the world, out of which, 10 are commonly found in India. It Belongs to family Plantaginaceae and genus *Plantago*. Isabgol known for its superior quality husk is preferred over others. The seeds and husks of Isabgol are used in traditional and modern Forms of medicine. Isabgol could be used in the form of *Psyllium* husk, Seed, ripe seeds and powder. In recent years, interest of this crop has increased in the western countries because of the blood cholesterol lowering property of its husk (Taneja et al. 1989). The seeds without husk are used as cattle feed which contains 17 to 19% protein. Other than medicinal uses, it is used in dyeing calico printing and ice-cream industries as a stabilizer. (Upadhyay et al. 1978)

Isabgol is natural laxative that is rich in vitamins like A, C, D, E and K, minerals like Ca, Mg, P, Fe and K, Omega-6 and Omega-3. Chemical composition of Isabgol is Xylose 59%, Arabinose 22.3%, Uronic acid 6.1%, Galactose 3.7%, Glucose 3.5%, Rhamnose 3% and Mannose 1.6%. (Singh, 2016)

The total export value of medicinal and aromatic plants in India was 200894.08 lakhs in the year 2019-20. (Reference: Ministry of Commerce & Industry, New Delhi) India ranks first in Isabgol production and the sole supplier of seeds and husk in the international market. India is the largest exporter of Isabgol husk in the world. India exported Isabgol husk of 135366.34 lakh during the year 2019-20. At present Gujarat and Western Rajasthan, part of Madhya Pradesh and Northern belt and the Malwa tract are the major Isabgol growing areas in the India. Total area and production of Isabgol in Rajasthan was 4,17,109 ha and 2,26,480 tonnes respectively 2017-18. Total area and production of Kota region was 538 ha and 455 tonnes, respectively. In Kota region Kota, Bundi, Jhalawar and Baran district are included. In Jhalawar district area and production under Isabgol was 535 ha and 448 tonnes respectively. Successful Isabgol cultivation requires particular knowledge, skill and accuracy. This means technical knowledge-regarding the cultivation of Isabgol technology must reach to the Isabgol growers for adoption on their field. Knowledge of recommended Isabgol production technology by the farmers and how it is marketed are essential for the development of Isabgol cultivation package for our economy. This is not possible without enough knowledge of recommended practices.

II. RESEARCH METHODOLOGY

The present study was conducted in Jhalawar district of Rajasthan. There is total 8 tehsils in Jhalawar district of Rajasthan, out of which Pachpahar and Pirawa tehsils were selected on the basis of maximum area under cultivation of Isabgol. A complete list of all the major Isabgol growing villages was prepared in consultation with the personnel of revenue and agriculture department from the identified tehsils. The list so prepared, 4 villages from each tehsil were selected on the basis of maximum area under Isabgol cultivation. Thus, total 8 villages were selected for the present investigation. For selection of respondents, a comprehensive list of marginal, small, semi-medium, medium and large farmers of Isabgol growers was prepared with the help of village Patwari and agricultural supervisor of respective village. From the list so prepared, 15 respondents were selected randomly from each identified village. Total 120 Isabgol growers were included in the sample of study.

III. RESULTS AND DISCUSSION

Knowledge level of farmers about recommended production technology of Isabgol

Under this section, it was tried to find out the level of knowledge of farmers about recommended production technology of Isabgol. Knowledge as a body of understood information possessed by an individual is one of the important components of behavior and plays an important role in adoption of an innovation. Keeping this view in mind, the level of knowledge of farmers about recommended production technology of Isabgol was assessed. The results are presented in subsequent tables.

Distribution of respondents according to their knowledge about recommended production technology of Isabgol

Table.1 Distribution of respondents on the basis of level of knowledge about recommended production technology of Isabgol. n=120

Sr. No.	Knowledge categories	Total respondents	
		F	%
1.	Low level of knowledge (Below 22.08 score)	30	25.00
2.	Medium level of knowledge (22.08 to 44.02 score)	69	57.50
3.	High level of knowledge (Above 44.02 score)	21	17.50
	Total	120	100

Mean - 33.05, S.D. - 10.97, F= Frequency, % = Per cent

The data in Table 1 shows that out of 120 respondents, majority of respondents 57.50 per cent fell in medium level knowledge group whereas 25.00 per cent Isabgol growers were observed in low level knowledge group and remaining 17.50 per cent respondents possessed high level of knowledge about recommended production technology of Isabgol.

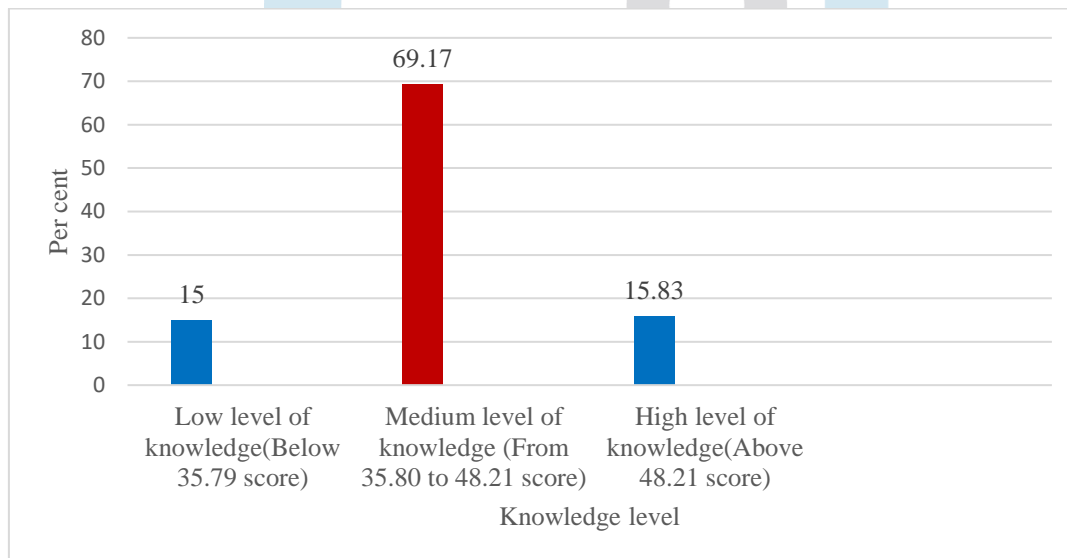


Fig.: 1 Distribution of farmers according to knowledge level about Isabgol production technology

Practice wise knowledge of respondents about recommended production technology of Isabgol

Table.2 Extent of knowledge of farmers about recommended production technology of Isabgol n=120

Sr. No.	Package of Practices	Total respondents	
		MPS	RANK
1.	Use of high yielding varieties	66.66	VII
2.	Soil & field preparation	71.38	VI
3.	Seed treatment	73.91	IV
4.	Time of sowing	75.20	III
5.	Seed rate and recommended spacing	73.54	V
6.	Fertilizer application	66.58	VIII
7.	Irrigation management	85.66	I
8.	Weed management	57.22	X
9.	Plant protection measure	60.00	IX
10.	Harvesting	84.50	II

MPS: Mean per score

For this mean per cent scores for each practice was calculated and ranks were accorded. The results of the same have been presented in Table 2.

From the above Table 2 it is evident that all the farmers (85.66 MPS) were having knowledge about “irrigation management” and hence this practice was ranked first. The second highest (84.50 MPS) was about “harvesting” followed by “time of sowing” (75.20 MPS) and “Seed treatment” (73.91 MPS) which were ranked third and fourth respectively.

The knowledge of different aspects like “Seed rate and recommended spacing”, “Soil & field preparation”, “Use of high yielding varieties”, “Fertilizer application”, “Plant protection Measure”, “Weed management”, were moderately known by the farmers as 73.54, 71.38, 66.66, 66.58, 60.00, 57.22 their score was respectively and were assigned rank fifth, sixth, seventh, eighth, ninth and tenth, respectively.

The findings of the study indicated that majority of Isabgol growers had adequate knowledge regarding irrigation management followed by harvesting, time of sowing, seed treatment, seed rate and recommended spacing and soil & field preparation, whereas they had less knowledge regarding Use of high yielding varieties, fertilizer application, Plant protection measures and weed management.

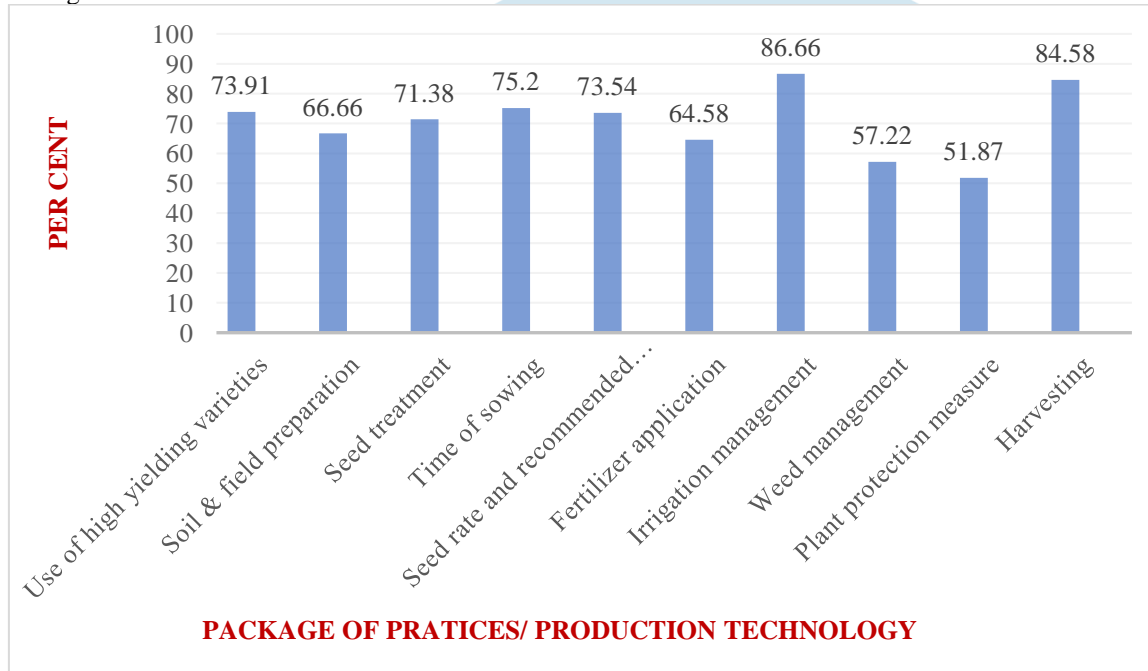


Fig.:2 Farmers knowledge about recommended cultivation Isabgol production technology

IV. CONCLUSION

It has been concluded from the present study that the Jhalawar District of Rajasthan that knowledge level of farmers about Production Technology of Isabgol majority of 57.50 per cent of Isabgol growers were having medium knowledge about recommended Isabgol production technology. The study indicated that farmers had maximum knowledge about “irrigation management” (86.66 MPS) and “harvesting” (84.58 MPS), while minimum knowledge about “Plant protection Measure” (60.00 MPS) and “Weed management” (57.22 MPS).

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