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Problem faced by the Niger growers in adoption of Niger production technology and suggestion to overcome

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Abstract

The study was carried out in Jashpur district of Chhattisgarh state in the years 2021–2022. Jashpur district consists of 8 blocks, out of which 2 blocks were selected purposefully because they covered the largest area under the Niger crop as compared to other blocks. For this study, a total of 140 farmers were chosen. A personal interview schedule was used to gather the data, which was then properly analyzed by utilizing statistical tools to provide desirable information. The problems faced by the Niger growers in the adoption of Niger production technology are such that the majority of the respondents (100.00%) reported a lack of knowledge about fertilizer and its accurate quantity of application on the Niger crop as the most important constraints. And the majority of the tribal farmers suggested that the government should establish a processing unit for Niger.

Keywords: Adoption, production technology, Niger growers, tribal farmers, Chhattisgarh, problems and suggestion

Introduction

The oilseed Niger (*Guizotia abyssinica*) is significant. It belongs to the Asteraceae family. It's an essential oilseed crop with healing powers that originated in India and Ethiopia. Niger (*Guizotia abyssinica*) is known in different regions of the country as *ramtil*, *jagni*, or *jatangi* (Hindi), *ramtal* (Gujrati), *karale*, or *khurasani* (Marathi), *uhechellu* (Kannada), *payellu* (Tamil), *verrinuvvulu* (Telugu), *alashi* (Oriya), and *sarguza* (Bengali). Madhya Pradesh, Chhattisgarh, Orissa, Maharashtra, Bihar, Karnataka, Andhra Pradesh, Uttar Pradesh, Rajasthan, Gujarat, and Tamil Nadu are among the states in India where Niger is grown. Niger, despite being a minor oilseed crop, is significant because it contains 32 to 40 per cent crude oil and 18 to 24 percent protein in the seed. Niger is largely cultivated in India on depleted soils in tribal regions where inputs are scarce. It's also the lifeblood of tribal agriculture and the economy. In terms of acreage, output, and exports, India leads the world in Niger. (Dastagiri and Jainuddin, 2017) [6] Without the use of insecticides, the Niger crop thrives. Under ideal growing conditions, it has a yield potential of 800-1000 kg/ha. This crop is good for contingent cropping in rainfed conditions because of its low seed rate, capacity to grow on a wide range of soils, and sowing time, which runs from the start of the monsoon in June to September–October. (Ranganatha *et al.*, 2013) [9] (<https://icar-iior.org.in/sites/default/files/iiorcontent/pops/niger.pdf>) In Chhattisgarh, Niger crops are grown in Sarguja, Jashpur,

and Baster. According to the ICAR (2011–14) [2] report, the area of Niger cultivation is Sarguja at 22.00 thousand ha, Jashpur at 21.33 thousand ha, and Baster at 11.00 thousand ha, whereas Jashpur district comes in second in area of Niger cultivation. (<https://icar-iior.org.in/sites/default/files/iiorcontent/pops/niger.pdf>) Baster, the main and only crop of oilseeds in Kharif, is from Niger. Its oil falls under the category of edible oil. Farmers used to produce it and use it directly for food, but for the last 10–12 years, the majority of the crop has been exported to America, where it is a special type. Its oil is not only used for eating, but it is also used for medical purposes. In tribal culture, it holds a very important place. When a mother gives birth to a baby, the powder of Niger and the juice obtained by boiling it are also used as the first meal.

The ramtil crop flourishes in the months of September and November in this district. Due to this, in these areas of Manora, Sanna, Pandarapat, Kunkuri, Bagicha, Pathalgoan, Farshabahr, etc., it seems that the earth has covered the yellow sheet. The maximum production of Ramtil in the district is in Jashpur, Kunkuri, Manora, and Bagicha. According to experts, every year, more than 50 to 60 lakh rupees of ramtil are exported abroad. The area of Ramtil has been recorded as 0.600 hectares in comparison to 0.547 in the years 2018–19. (Chaudhary, N.S. 2020) [1]. Due to the good price in the market for the remaining produce, this crop is prominent in these areas. Ramtil cultivation is the main crop among the oilseed crops sown in almost tribal-dominated areas. It is known as "Jatangi" in the local

language. It is used as an edible oil. Apart from this, oil is also used in making soaps, paints, varnishes, etc. Farmers cultivate this crop due to its good yield, drought resistance ability, and less damage by animals, birds, insects, and diseases even in adverse conditions.

Methodology

The study was conducted in Jashpur district of Chhattisgarh state because this district covered the maximum area under the Niger crop. Jashpur district consists of 8 blocks, out of which 2 blocks were selected purposefully because they covered the largest area under the Niger crop as compared to other blocks. From each selected block, seven villages were selected randomly. (2*7=14), and then 10 farmers were selected from each village; in this way, a total of 140

respondents were considered for this study. Data were collected personally through a pretested, structured interview schedule. The collected data were tabulated and processed using appropriate statistical tools and methods.

Results and Discussion

Problem faced by the Niger growers in adoption of Niger production technology

The problems faced in the adoption of new technology never came to an end. However, this can be minimized by the researcher. So that it is requested that the respondents express their problem faced by the Niger growers in the adoption of Niger production technology. Here are the frequency and percentage for each problem that were calculated and ranked in Table 1.

Table 1: Distribution of the respondents according to their problem faced by the Niger growers in adoption of Niger production technology. (n=140)

Sl. No.	Problems	Frequency	Percentage	Rank
1.	Lack of information about Niger production technology.	56	40.00	VIII
2.	Low price of Niger in local market.	98	70.00	III
3.	Non availability of extension officers at proper time.	110	78.57	II
4.	Lack of Niger processing unit.	89	63.57	V
5.	Lack of knowledge about fertilizer and its accurate quantity & time for application.	140	100.00	I
6.	Non-availability of proper government marketing channel for Niger crop.	90	64.28	IV
7.	Lack of transportation facilities to connect for secondary and tertiary market from remote areas.	88	62.85	VI
8.	Poor socio- economic condition of tribal farmers.	72	51.42	VII

*Frequency based on Multiple Responses

Regarding the challenges that Niger growers face in adopting Niger production technology, it was discovered that the majority of respondents (100.00%) cited a lack of understanding of fertilizer and its accurate quantity of application on Niger crops as the primary obstacles. A similar finding was made by Kumar *et al.* (2020) [8]. Chandravadia Kiran (2017) [5] found that the second most significant barrier was a lack of availability of extension officers at the appropriate time (78.57%). The results have some similarities to those of Dutta *et al.* (2022) [7] and Kumar Vishnu *et al.* (2018) [8]. Lack of transport facilities from remote places (62.85%), lack of a processing unit for Niger (63.57%), and similar findings were observed by Anamika *et al.* (2023) [3]. Tribal farmers' poor

socioeconomic circumstances (51.42%), Behera Bijaylaxmi and Millick Biswajit's (2023) [4] findings to a similar effect, and a lack of knowledge about Niger production technique (40%) are other issues. Similar result by Kiran Chandravadia (2017) [5].

Suggestions given by the Niger growers for minimizing the problems

In order to determine the suggestion, the respondents were asked to express their suggestion to overcome the problems faced by the Niger grower in the adoption of Niger production technology. So, based on the frequency and percentage of each suggestion that were calculated and ranked in Table 2.

Table 2: Distribution of the respondents according to their suggestions given by the Niger growers for minimizing the problems. (n=140)

Sl. No.	Suggestions	Frequency	Percentage	Rank
1.	Market facilities should be increased.	105	75.00	III
2.	Training should be organized about Niger production technology for the Niger growers.	123	87.85	II
3.	Processing unit should be established by the govt. for the processing of Niger.	128	91.42	I
4.	More numbers of training programme should be organized for bee keeping among the Niger growers for Niger crop.	94	67.14	IV

*Frequency based on Multiple Responses

The responses offered a variety of solutions to deal with the issues and increase the yield of the Niger crop. According to Table 2, the majority of Niger growers (91.42%) proposed that the government establish a processing facility for Niger. The next step is to organize training regarding Niger production technique for Niger producers (87.85%); similar findings were revealed by (Kumar Vishnu *et al.* 2018) [8], expand market facilities (75%); and organize more training

programs for beekeeping among Niger growers for the Niger crop (67.14%). These were the recommendations made by respondents to increase crop productivity in Niger.

Conclusion

It is concluded that lack of knowledge about fertilizer and its accurate quantity of application on the Niger crop were the most important problems, followed by the non-

availability of extension officers at the proper time. Many responses were received from tribal farmers regarding knowledge and adoption of Niger production technology. It shows that the majority of respondents suggested that the government establish a processing unit for the processing of Niger and that training programs for beekeeping among Niger growers should be organized.

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