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Constraints faced and suggestions given by the farmers in adoption of drudgery reducing technologies

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Abstract
The present study was conducted in Marathwada region of Maharashtra state during the year 2023-24 with the objective to know constraints faced and suggestions given by the farmers in adoption of drudgery reducing technologies developed by VNMKV, Parbhani among the farmers. For the study, Parbhani district was selected from Maharashtra state as, the work of All India Coordinated Research Project (Women in agriculture), Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani was carried out in this district. 10 villages were selected randomly from the respective talukas from Parbhani district and 12 respondents from each village were selected randomly from the list of beneficiaries of AICRP (WIA), Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani constituting the sample size of 120. Ex-post-facto research design was used for the study. Data was gathered using a well-structured interview schedule. To interpret constraints faced and to draw conclusions, statistical tools such as frequency, percentage, mean, standard deviation and coefficient correlation were used. Respondents were asked through interview schedule to provide their thoughts on constraints faced and suggestions given while adopting drudgery reducing technologies. The primary constraint faced by respondents was the strong emphasis on traditional practices (87.50%) and primary suggestion given by respondents was that the farmers should be informed about updated technologies (83.33%).

Keywords: Adoption, AICRP, constraints, drudgery, suggestions, technologies, women in agriculture (WIA)

Introduction
Agriculture has important role in economy of India. Agriculture is the occupation of majority of population in the country. At majority of the places, it is done by conventional methods. So that, it is regarded as drudgery prone occupation. This viewpoint emerged because of the absence of modern technology and better agricultural practices in day-to-day operations. Farmers work on themselves in most locations, wasting labor, money, and time. The amount of work that women do in agriculture is tremendous. Of the three main agricultural populations in India—male, female, and young—only the female farmers account for more than 60% of all farm-related activities (Bindeshwari Pandro, 2020) [2].

Drudgery-reducing technologies contribute to the prevention of long-term health problems and accidents. These technologies are critical in reducing the time and physical effort necessary for essential work. This not only increases agricultural output, but also allows farmers to devote more time to crop management and other related operations. These technologies, by enhancing operational efficiency, can lower production costs and increase profitability, giving agriculture a more sustainable lifestyle.

The Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani had developed drudgery reducing technologies like Cotton picking apron, Gopal khore, Revolving milking stool and stand, Janai hatmoje (Harvesting mitten), Trishul weeder, Sulbha Bag, Sonai Bag, Phuleri basket, Tikai Bag, Gauri Bag, digging tool Ukari and Nakhalya, wooden rake, Earthing up tool, multi-purpose tailoring table etc. All these tools alleviate physical strain and labour. By reducing the manual working and labour, these equipments allow the farmers to work on larger area in less time and more efficiently. This will indirectly help to reduce physical strain and retain the health. All India Coordinated Research Project (Women in agriculture) and College of Community Science,

Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani had developed various ICTs like mobile app in the name Technologies for farm women, blogs, YouTube etc to create awareness and increase the adoption level of drudgery reducing technology.

Despite the obvious benefits, the adoption of these technology varies greatly between regions and demographic groups. Several variables influence adoption rates, including financial access, educational attainment, the availability of technical support, and cultural attitudes toward innovation. Therefore, adoption of drudgery reducing tools has very much importance in Indian agriculture sector. By the way of awareness and training, farmers will adopt these technologies which indirectly performs so many beneficial functions. Therefore, the study aims to know constraints faced and suggestions given by the farmers in adoption of drudgery reducing technologies developed by VNMKV, Parbhani among the farmers.

Objective

To know constraints faced and suggestions given by the farmers in adoption of drudgery reducing technologies developed by VNMKV, Parbhani.

Methodology

The present study was conducted in Marathwada region of Maharashtra state during the year 2023-24 with the objective to know the constraints faced and suggestions given by farmers in adoption of drudgery reducing technologies developed by VNMKV, Parbhani. For the study, Parbhani district was selected from Maharashtra state as, the work of All India Coordinated Research Project (Women in agriculture), Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani was carried out in this district. Three tehsils from Parbhani district *viz*., Parbhani, Purna and Manwath were selected for the purpose of study as major work of AICRP (WIA) VNMKV, Parbhani was carried out in three talukas. Previously and currently adopted 10 villages were selected randomly from the respective talukas and 12 respondents from each village were selected randomly from the list of beneficiaries of AICRP (WIA) VNMKV, Parbhani constituting the sample size of 120. Ex-post-facto research design was used for the study. Data was gathered using a well-structured interview schedule. To interpret findings and to draw conclusions, statistical tools such as frequency, percentage, mean, standard deviation and coefficient correlation were used.

The independent variables were age, education, size of family, occupation, land holding, annual income, extension contact, social participation, risk orientation, knowledge of drudgery reducing technology. Adoption was the only dependent variable.

Results and Discussion

The objective of the study was to know the constraints faced and suggestions given by farmers in adopting drudgery reducing technologies. Detailed information on these constraints and suggestions given is presented in Table 1 and Table 2 respectively.

Table 1: Constraints faced in adopting drudgery reducing technologies.

Sr. No.	Constraints	Frequency	Percentage	Rank
1)	More emphasis on traditional practices	105	87.50	I
2)	Less contact with extension agent	83	69.17	IV
3)	Lack of capital to purchase tools	77	64.17	VI
4)	Cost of product is high	74	61.67	VII
5)	Lack of technical knowledge	72	60.00	VIII
6)	Difficult to handle	89	74.17	II
7)	It is difficult to repair tools in village	79	65.83	V
8)	Lack of skilled labour	86	71.67	III
9)	Lack of risk bearing ability	71	59.17	IX

Table 1 shows that the primary constraint faced by respondents was the strong emphasis on traditional practices (87.50%). The next significant constraint, reported by 74.17 per cent of respondents, was difficulty in handling various technologies.

Other constraints faced by respondents were as follows: 71.67 per cent encountered difficulties due to a lack of skilled labour; 69.17 per cent faced issues with limited contact with extension agents; 65.83 per cent struggled with the difficulty of repairing tools locally; 64.17 per cent had constraints related to a lack of capital; 61.67 per cent experienced problems with high product costs; 60.00 per cent faced challenges due to insufficient technical knowledge and 59.17 per cent dealt with a lack of risk-bearing ability.

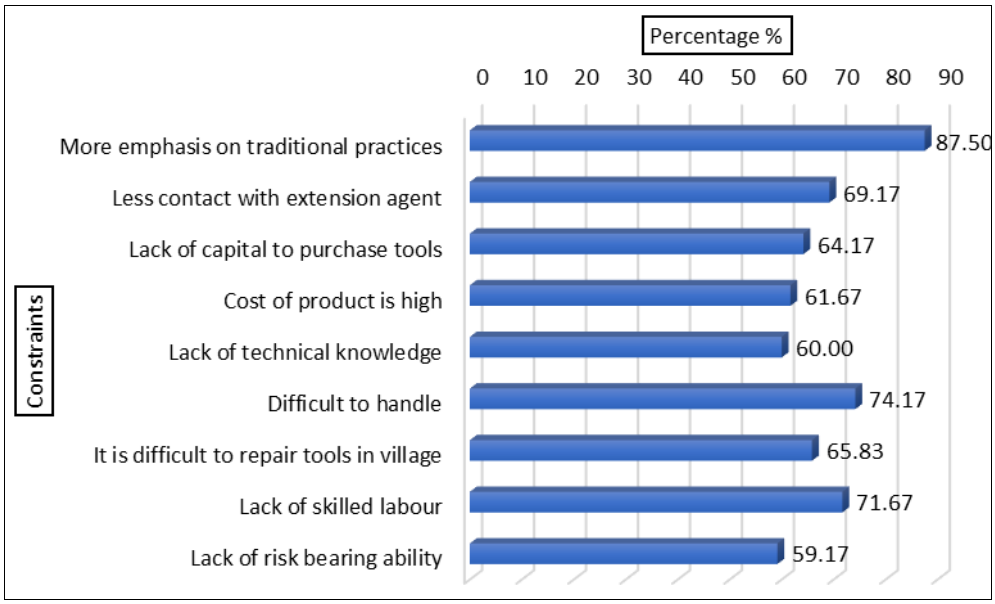

Fig 1: Constraints faced in adopting drudgery reducing technologies

Table 2: Suggestions to overcome the constraints in adopting drudgery reducing technologies.

Sr. No.	Suggestions	Frequency	Percentage	Rank
1)	Provide information about utility.	98	81.67	II
2)	Decrease cost of equipment.	95	79.17	III
3)	Made the tools easily available at taluka place.	94	78.33	IV
4)	Provide the knowledge about maintenance of tools.	87	72.50	VI
5)	Farmer should be informed about updated technology.	100	83.33	I
6)	Organize training camps and programs about the use of various tools.	92	76.67	V

Table 2 reveals that the majority of respondents offered several suggestions to overcome constraints in adopting drudgery reducing technologies. A significant 83.33 per cent recommended that farmers be informed about updated technologies. Additionally, 81.67 per cent suggested providing information on the utility of these technologies. To address cost issues, 79.17 per cent advised decreasing the cost of equipment. Furthermore, 78.33 per cent proposed making tools more accessible at the taluka level. Training and education were also emphasized, with 76.67 per cent recommending the organization of training camps and programs on the use of various tools and 72.50 per cent suggesting that knowledge about tool maintenance be provided.

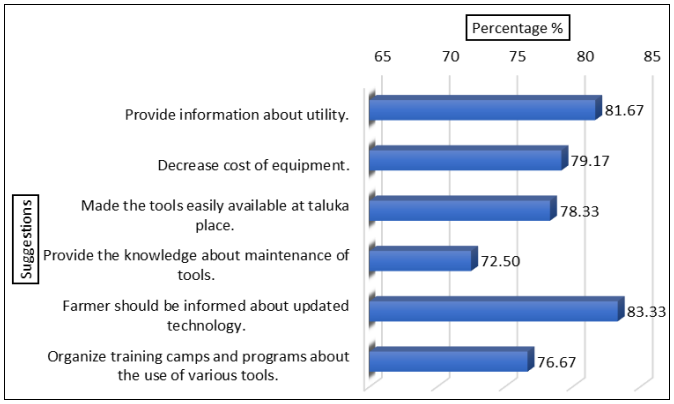

Fig 2: Suggestions to overcome the constraints

Conclusion

The primary constraint faced by respondents was the strong emphasis on traditional practices. The other significant constraints reported was, difficulty in handling various technologies, lack of skilled labour, limited contact with extension agents, difficulty of repairing tools locally, lack of capital, high product costs, insufficient technical knowledge and lack of risk-bearing ability.

The suggestions given by farmers in adopting drudgery reducing technologies were that, the farmers be informed about updated technologies, providing information on the utility of these technologies, decreasing the cost of equipment, making tools more accessible at the taluka level, the organization of training camps and programs on the use of various tools, knowledge about tool maintenance should be provided.

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