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### Knowledge of drudgery reducing technologies among the farmers

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#### Abstract

The most of India's population works in the agricultural industry. At most of the places, traditional approaches are used. As a result, it is regarded a drudgery-prone occupation. Drudgery-reducing technologies aid in the prevention of long-term health problems and injuries. The present study was conducted in Marathwada region of Maharashtra state during the year 2023-24 with the objective to know the knowledge 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), Vasantao 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), Vasantao 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 findings and draw conclusions, statistical tools such as frequency, percentage, mean, standard deviation and coefficient correlation were used. Majority (50.00%) of respondents had a medium level of knowledge of drudgery reducing technologies.

**Keywords:** Knowledge, drudgery, technologies, women in agriculture (WIA), AICRP, developed by VNMKV

#### Introduction

Agriculture has important role in economy of India. Agriculture is the occupation of majority of people in India. At most of the places it is done by conventional methods. So that it is considered as drudgery prone. This perspective developed due to lack of modern technology, improved practises in daily working of agriculture. At most of the places farmers work manually which leads to wastage of manpower, time and money. Contribution of woman in agriculture is considerably very high. Out of India's three major farming communities male, female, and young only the group of the female farmers do over 60 per cent of farm related operations (Bindeshwari Pandro, 2020) [2].

The drudgery reducing technologies helps to prevent long term health issues and injuries. These technologies are important to reduce the time and physical effort required for essential tasks. This not only enhances farm productivity but also enables farmers to allocate more time for crop management and planning other allied activities. By increasing operational efficiency, these technologies can reduce production expenses and improve profitability, making agriculture a more sustainable livelihood.

The Vasantao 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, Vasantao 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.

Although the benefits are clear, the adoption of these technologies by farmers varies widely across different regions and demographic groups. Several factors impact adoption rates, including access to finances, educational attainment, the presence of technical support, and cultural views on 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 the knowledge of drudgery reducing technologies developed by College of Community Science,

Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani, among the farmers to reduce drudgery along with increase working capacity and production.

### Objective

To know the knowledge of drudgery reducing technologies developed by VNMKV, Parbhani among the farmers.

### Methodology

The present study was conducted in Marathwada region of Maharashtra state during the year 2023-24 with the objective to know the knowledge 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. 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 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

### Knowledge of drudgery reducing technologies

**Table 1:** Knowledge of drudgery reducing technologies. (n=120)

| Sr. No. | Category               | Frequency | Percentage |
|---------|------------------------|-----------|------------|
| 1)      | Low (Up to 9.01)       | 20        | 16.67      |
| 2)      | Medium (9.02 to 12.96) | 60        | 50.00      |
| 3)      | High (12.97 and above) | 40        | 33.33      |
|         | Total                  | 120       | 100.00     |

Table 1 shows that 50.00 per cent of farmers had a medium level of knowledge about drudgery reducing technology, 33.33 per cent had a high level of knowledge, and 16.67 per cent had a low level of knowledge about drudgery reducing technologies.

The use of communication with extension agencies impacts knowledge levels. The extent to which farmers use these sources and maintain extension contacts is closely linked to their understanding of drudgery reducing technology.

Similar findings were reported by Kavad *et al.* (2015)<sup>[3]</sup> and Vithalkar (2021)<sup>[8]</sup>.

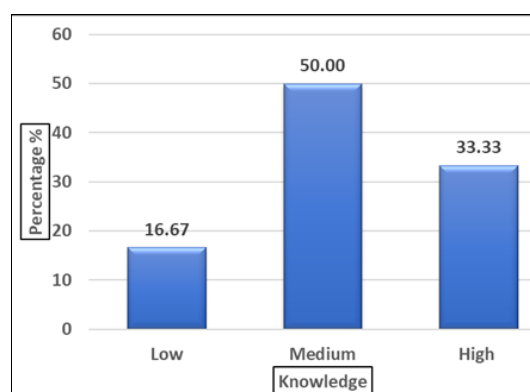


**Fig 1:** Distribution of respondents according to their knowledge

**Table 2:** Distribution of respondents based on their knowledge of drudgery reducing technologies.

| Sr. No. | Knowledge                                      | Responses |       |     |       |
|---------|------------------------------------------------|-----------|-------|-----|-------|
|         |                                                | Yes       |       | No  |       |
|         |                                                | F         | %     | F   | %     |
| 1)      | Do you know Cotton picking apron?              | 115       | 95.83 | 05  | 04.17 |
| 2)      | Do you know Trishul weeder?                    | 110       | 91.67 | 10  | 08.33 |
| 3)      | Do you know the Gopal Khore?                   | 106       | 88.33 | 14  | 11.67 |
| 4)      | Do you know Revolving milking stool and stand? | 40        | 33.33 | 80  | 66.67 |
| 5)      | Do you know Janai hatmoje (Harvesting mitten)? | 117       | 97.50 | 03  | 02.50 |
| 6)      | Do you know Sulbha bag?                        | 105       | 87.50 | 15  | 12.50 |
| 7)      | Do you know Sonai bag?                         | 89        | 74.17 | 31  | 25.83 |
| 8)      | Do you know Phuleri basket?                    | 55        | 45.83 | 65  | 54.17 |
| 9)      | Do you know Tikai bag?                         | 53        | 44.17 | 67  | 55.83 |
| 10)     | Do you know Gauri bag?                         | 64        | 53.33 | 56  | 46.67 |
| 11)     | Do you know digging tool Ukari?                | 116       | 96.67 | 04  | 03.33 |
| 12)     | Do you know digging tool Nakhalya?             | 117       | 97.50 | 03  | 02.50 |
| 13)     | Do you know wooden rake?                       | 108       | 90.00 | 12  | 10.00 |
| 14)     | Do you know Earthing up tool?                  | 114       | 95.00 | 06  | 05.00 |
| 15)     | Do you know multi-purpose tailoring table?     | 10        | 08.33 | 110 | 91.67 |

Table 2 shows the technology wise knowledge of drudgery reducing technologies developed by Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani. 95.83 per cent of respondents had knowledge about cotton-picking apron, while 04.17 per cent had no knowledge. 91.67 per cent of respondents had knowledge about Trishul weeder, while

08.33 per cent had no knowledge. 88.33 per cent of respondents had knowledge about Gopal Khore, while 11.67 per cent had no knowledge.

33.33 per cent of respondents had knowledge about Revolving milking stool and stand, while 66.67 per cent had no knowledge. 97.50 per cent of respondents had knowledge

about Janai hatmoje (Harvesting mitten), while 02.50 per cent had no knowledge. 87.50 per cent of respondents had knowledge about Sulbha bag, while 12.50 per cent had no knowledge. 74.17 per cent of respondents had knowledge about Sonai bag, while 25.83 per cent had no knowledge. 45.83 per cent of respondents had knowledge about Phuleri basket, while 54.17 per cent had no knowledge. 44.17 per cent of respondents had knowledge about Tikai bag, while 55.83 per cent had no knowledge. 53.33 per cent of respondents had knowledge about Gauri bag, while 46.67 per cent had no knowledge. 96.67 per cent of respondents had knowledge about digging tool Ukari, while 03.33 per cent had no knowledge. 97.50 per cent of respondents had knowledge about digging tool Nakhalya, while 02.50 per cent had no knowledge. 90.00 per cent of respondents had knowledge about wooden rake, while 10.00 per cent had no knowledge. 95.00 per cent of respondents had knowledge about Earthing up tool, while 05.00 per cent had no knowledge. 08.33 per cent of respondents had knowledge about multi-purpose tailoring table, while 91.67 per cent had no knowledge.

### Conclusion

The usage of contact with extension agencies influences knowledge levels. The amount of how the farmers use these resources and retain extension associations is largely related to their understanding of drudgery-reduction technologies. As a result, most farmers have a medium level of knowledge, followed by a high level. Some farmers had low knowledge of drudgery reducing technology, suggesting a need for more extension efforts to improve knowledge and a lower response rate from farmers seeking information.

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