

## ADOPTION STATUS OF PEARL MILLET PRODUCTS BY RURAL WOMEN

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### ABSTRACT

*Pearl millets are the most important among millet species, accounting for approximately half of the total worldwide production of millets. It is mainly cultivated in India and Africa and is uniquely tolerant of hot and dry conditions. The present study on adoption status of pearl millets product by rural women was conducted in Hisar district on 200 women from four villages (Sundawas, Bichpari, Shikarpur and Shapur), adopted last four years under IAHS programme of College of Home Science. The overall adoption status was measured in stages of adoption (knowledge, persuasion, decision, implementation, confirmation). The high majority of the rural women had acquired the knowledge and interest in pearl millet products. More than half (61.5%) respondents took the decision for adoption of pearl millet products and around 51.0% respondents adopted these products and only 44.0% finally adopted the pearl millet products. 7% respondents rejected this technology. The major constraints reported in adoption of pearl millet products were lack of material, time and taste not preferred by family members.*

**KEYWORDS:** *Adoption Status, Pearl Millet Product, IAHS & Rural Women*

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### INTRODUCTION

Millets are one of the oldest known human foods and are believed to be the first domesticated cereal grain. Pearl millets are possibly the first cereal grain used for domestic purposes. They occupy a unique position amongst cereals on account of nutritional superiority and multi utility of being used as a grain, stover and green fodder. Pearl millets were used by our ancestors for human consumption, animal feed, religious and other auspicious purposes. Pearl millets are known to have a very high fiber content and contains elevated vitamin B levels and is also rich in minerals such as iron, magnesium, calcium, phosphorus, manganese, potassium, copper, zinc and chromium which makes it healthier. In present time, pearl millets and its products are recommended by health professionals, dieticians and nutritionists because of its various health and nutritional benefits. In addition to this, pearl millet is not an expensive food items, hence can be consumed by one and all without any extra expenditure. People are becoming more and more conscious about the fact of pearl millet having various positive effects on the body. In order to promote consumption of pearl millets at village level, the dissemination of various value added pearl millet products viz. chilla, cake and laddu were demonstrated through Internship/Industrial Attachment of Home Science (IAHS) programme of College of Home Sciences.

### METHODOLOGY

The study was conducted in Haryana state. The objective of study is to determine the adoption status of pearl millet products by rural women. Hisar district was purposively selected as the dissemination of recipe of pear millets products was being done through Internship/Industrial Attachment of Home Science (IAHS) programme of I C College of Home Sciences, CCSHAU, Hisar. Four villages were selected. A total 200 rural women/ adolescent girls

enrolled under IAHS programme were selected proportionately for the study and constituted the sample for present study. Adoption in terms of IDP stages Rogers (2003) articulated five stages through which an individual passes during the adoption of an innovation; IDP in present study was operationalized as the process through which the selected respondents passed from first knowledge of pearl millet products, to forming an attitude toward the technology, to a decision to adopt or reject, to implementation of the technology, and to confirmation of their decision. Specific questions were designed to assess whether the respondent reached a particular stage of adoption or not. Consequences in present study were defined as the changes that were reported to have occurred to rural women as a result of the adoption of pearl millets products and were mentioned spontaneously by them. Data were collected personally with the help of interview schedule. Statistical techniques like frequency, percentages and correlation were employed to analyze the data.

## RESULTS

**Distribution of respondents according to IDP stages of Pearl Millet Products :** Distribution of respondents according to IDP stages and with respect to adoption stages of pearl millets (Cake, laddu, khichdi, chilla) as included in table 1, it was indicated that huge majority of the respondents tried to adopt these product initially. 94.0 % respondents acquired knowledge of pearl millets products. Though the percentage of the respondents who got persuaded to adopt these pearl millets products showed the decreasing trend, 83.5 % of them were persuaded to adopt the pearl millets products.

**Table: Distribution of respondents according to IDP stages of Pearl Millet Products N=200**

| Stages of Innovation Decision Process | Frequency | Percentage |
|---------------------------------------|-----------|------------|
| Knowledge                             | 188       | 94.0       |
| Persuasion                            | 167       | 83.5       |
| Decision                              | 123       | 61.5       |
| Implementation                        | 102       | 51.0       |
| Confirmation                          | 89        | 44.5       |

Mental readiness of the adopter is the next stage of adoption after persuasion. With respect to this stage of adoption it was revealed that the respondents who got mentally ready to adopt pearl millet products i.e. those who fall under decision stage of IDP were the maximum number of respondent i.e. 61.5% crossing the decision stage for adoption of pearl millet products. With respect to fourth stage of IDP related to pearl millets products (51.0%) and only (44.0%) finally adopted the pearl millet products. Seven percent respondents were rejected this technology

### Factors for non-adoption of Pearl Millet Products

With regards to the factors for non-adoption of pearl millet products during different stages (Table 2), it was revealed that the most common factor indicated by the respondents for not getting knowledge of pearl millet was non consumption of pearl millet by family members (6.0%). Due to seasonal consumption of pearl millet, 10.5 percent of the respondents discontinued use of pearl millet products at persuasion stage of IDP. Costlier nature of pearl millet products due to addition of *desi* ghee, gram flour, *til* etc. was cited by 22.0 percent respondents as the main reason for not taking a decision to adopt pearl millet products even after small scale trial.

**Table 2: Factors for non-adoption of Pearl Millet Products**

| Factors   | Stages of Adoption |                     |                   |                         |                       |
|---|--------------------|---------------------|-------------------|-------------------------|-----------------------|
|   | Knowledge<br>F (%) | Persuasion<br>F (%) | Decision<br>F (%) | Implementation<br>F (%) | Confirmation<br>F (%) |
| Non consumption of pearl millet by family members | 12(6.0)            | -                   | -                 | -                       | -                     |
| Seasonal consumption of pearl millet              | -                  | 21(10.5)            | -                 | -                       | -                     |
| Costlier to adopt                                 | -                  | -                   | 44(22.0)          | -                       | -                     |
| Non acquisition of complete skill                 | -                  | -                   | -                 | 21(10.5)                | -                     |
| Seasonal nature of the products                   | -                  | -                   | -                 | -                       | 13(6.5)               |

Non acquisition of skill of preparing various pearl millet products was the main factor for not reaching the implementation stage or not going for actual adoption (10.5 %). Seasonal nature of the products (6.5 %) was reported as the main factor for discontinuing the adoption of pearl millet products even after adopting it for the first time.

**Consequences of Adoption of Pearl Millet Products:** Whether a technology impacts positively or negatively, depends on the viewpoint of the stakeholders regarding its consequences.

Maximum five indirect - desirable in case of pearl millet products adoption were reported. These were increased consumption of pearl millet in winters (56.1%), consumption of pearl millet throughout year (49.4%), increase in family celebrations (42.6%), consumption of pearl millet by non pearl millet eaters (11.2%) and inclusion of pearl millet in dietary pattern (7.8%). Only one direct desirable consequences i.e. Increase in variety of pearl millet products (55.0%) were reported by the respondents

**Table 3: Consequences of Adoption of Pearl Millet Product**

| Types of consequences  | Pearl Millet Products (n=89)                     | F (%)    |
|------------------------|--|----------|
| Direct –Desirable      | Increase in variety of pearl millet products     | 49(55.0) |
| Direct –Undesirable    | --   | --       |
| Indirect- Desirable    | Increased consumption of pearl millet in winters | 50(56.1) |
|                        | Consumption of pearl millet throughout year      | 44(49.1) |
|                        | Increase in family celebrations 38(42.6%)        | 38(42.6) |
|                        | Consumption of pearl millet by non eaters        | 10(11.2) |
|                        | Inclusion of pearl millet in dietary pattern     | 7(7.8)   |
| Indirect – Undesirable | --   | --       |

## DISCUSSIONS

More than 90% respondents acquired knowledge of pearl millet products which indicated the relevance of products for rural women and their families. Drastic reduction in the number of respondents who reached from knowledge stage to confirmation stage was reported for pearl millet products. Another major reduction in number of respondents was observed at decision stage. Such observations are indicative of the fact that though the respondents considered pearl millets products to be need and interest based, they did not make the mental as well as actual decision due to lack of use consistency on account of seasonal nature of the pearl millet products. The findings are in accordance with Mandowara (2005). In her study on adoption of fruit and vegetable preservation technologies by rural women, pickle making was adopted by maximum (89.5 % adoption index) and *murabba*, sauce and *chuteny* making by minimum number of rural women (5.5% adoption index). A further drastic reduction in the number of respondents who reached from knowledge stage to

confirmation stage of pearl millet products was observed. In case of pearl millet products, additional time required for processing was also reported as the major factor for discontinuation of IDP process. For increasing shelf life of pearl millet flour to preparing various products, processing technique is recommended. As the respondents perceived this as time consuming and pre requisite for adoption of pearl millet products, hence more number of left the IDP process during different stages.

## CONCLUSIONS

The percentages of the respondents falling under the initial knowledge stage of innovation decision process were more than 90% of pearl millet products. Drastic reduction in the number of respondents who reached from knowledge stage to confirmation stage was reported by the respondents. Most prominent reasons for non-adoption of pearl millets products were related to non consumption of pearl millet by family members, seasonal consumption, non-acquisition of the prefect skills, seasonal of complete skill, high initial cost of adoption, lack of family support, etc. No direct and undesirable consequences were observed. Maximum five desirable consequences of pearl millet products were reported by the rural women.

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