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### Extent of adoption of homestead technologies among rural women

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#### Abstract

Home Science is a broad subject that includes of positive attitude towards developing the family, acquiring knowledge, skill and service concerned with all available resources by adopting developed technologies. Home Science strengthens every area of women life, to support her family and empower herself in all aspects by adopting livelihood technologies. The present study was conducted in Hisar districts of Haryana state with sample size of 200 rural women with an objective to study extent of adoption of home science technology among rural women. Adoption level was measured in four departments of home science i.e. family resource management, food and nutrition, human development and family studies and textile & apparel designing. The findings revealed that extent of adoption maximum of respondent found the medium level of adoption followed by low and high.

**Keywords:** home science, adoption, technology, rural women

#### Introduction

Women comprise of more than 50 percent of the world's population. They play a central and catalytic role towards achievement of transformational, economic, environmental and social changes required for sustainable development. Total 1.7 billion women and girls live in rural areas making up 43 per cent of the agricultural force in developing countries (IFAD, 2018) [5]. They make significant contributions to agricultural production, food security and nutrition, land and natural resource management, and building climate resilience (GWI, 2019) [4]. As per Census of India (2011) [2], women constitute 48 percent of India's population out of which 78 per cent are engaged in agriculture which is the mainstay of the rural Indian economy. Although women represent only 50 percent of the total population, they contribute 75 percent to the development of our society while men contribute only 25 percent (Khatri *et al* 2017) [6]. Majority of rural women suffer not only from economic poverty but also from information poverty especially related to improved household technologies for better performer as home manager. Technology has the potential to address a wide spectrum of areas where women are disadvantaged i.e. knowledge and information, reproductive health, infrastructure, livelihoods, mobility and communications, among others. Technologies can empower women on multiple levels and spheres circles of change can be sparked by women's use of a seemingly simple technology. (Malhotra *et al.*, 2009) [8]. Technological innovations and their reach to the rural women can result in enhancing women's welfare and their empowerment. Low cost, reliable homestead technologies related to nutrition, health and sanitation, drudgery reduction, post harvest technologies etc. can provide a great leap forward for meeting rural women's practical needs for reducing their drudgery, increasing their efficiency and improving family's health condition (Choudhary and Solanki, 2018) [3]. Home science technologies trainings helps rural women to sustain themselves through self employment and to make them self-reliant economically and thus discourages them to migrate to the urban areas. Profile characteristics certainly plays a key role to adopt the technologies by the rural women. With all these issues and frame work in mind the present study was conducted in Hisar district to measure the extent of adoption of home stead technology among rural women.

#### Methods and Material

The study was conducted Hisar district of Haryana. Hisar district was purposively selected as the dissemination of complete package of homestead technologies is being done through

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Internship/Industrial Attachment of Home Science (IAHS) programme of I C College of Home Sciences, CCSHAU, Hisar. Four villages viz; Sundawas (Hisar- II block), Bichpari (Barwala block), Shikarpur (Hisar- I block) and, Shahpur (Hisar II block) adopted under IAHS programme, College of Home Sciences during. 2015, 2016, 2017 and 2018, respectively were selected purposively. Total 200 rural women/ adolescent girls enrolled under IAHS programme who were selected proportionately for the study. Constituted the sample for present study.

**Extent of adoption of technologies:** Extent adoption refers to the number of respondents who were using the selected technologies at the time of data collection. In the present study extent of adoption of selected fifteen home stead technologies after a period of 1, 2, 3 and 4 years of first adoption was ascertained in terms extent of adoption. On the basis of percentage adoption rate low, medium and high extent of adoption categories as mentioned below were formulated

Extent of adoption	Adoption rate
Low	Up to 33%
Medium	34- 67%
High	Above 67%

Variables of the study were extent of adoption of homestead technologies. Data were collected personally with the help of interview schedule. Statistical techniques like frequency, percentages were employed to analyse the data.

## Results

### Extent of adoption of homestead technologies:

Accordingly, the technologies were grouped under high, medium or low adoption extent over the year. On basis of percentage of the respondents who adopted particular technologies, extent of adoption was measured.

**Extent of adoption of FRM related technologies:** Data in table 1 reveal that irrespective of the technologies extent of adoption of flower making craft and wealth out of waste technologies was found to be medium all over the four years. In macramé products, medium extent of adoption was found after three year of adoption, however high extent of adoption was reported after one year of the adoption of macramé products. Improved cot bag adoption was of high during first year, then medium after two and three years and low after four years of adoption. Extent of adoption of improved mud stove was observed low after four and three years of adoption, medium after two and one year of adoption. In vermin composting technologies the Low extent of adoption of vermi composting irrespective of the years of adoption

**Table 1:** Extent of adoption of FRM related technologies

Technologies	Tenure of adoption			
	4 year n <sub>1</sub> =53 %	3 year n <sub>2</sub> =30 %	2 year n <sub>3</sub> =59 %	1 year n <sub>4</sub> =58 %
Flower making craft	35.7(M)	66.7(M)	52.8(M)	68.5(M)
Improved Cot bag	31.5(L)	38.4(M)	55.7(M)	74.0(H)
Improved Mud Stove	26.0(L)	29.6(L)	34.0(M)	49.0(M)
Macramé product	62.5(M)	46.4(M)	64.8(M)	82.4(H)
Vermicomposting	4.3(L)	7.4(L)	5.7(L)	15.6(L)
Wealth out of waste	43.9(M)	66.7(M)	53.5(M)	64.1(M)

L: Low, M: Medium and H: High

**Extent of adoption of FN related technologies:** Data included in table 2 reveals that extent of adoption of pickles and nutritious recipe was observed high after three, two and one year of adoption and medium after four years of adoption. Adoption of sauce making was reported to be of medium extent after one, two and three years of adoption and after four years adoption was of low extent. Extent of adoption of pearl millet products was found to be medium after one and two years followed by the low after three and four years of adoption.

**Table 2:** Extent of adoption of FN related technologies

Technologies	Tenure of adoption			
	4 year n <sub>1</sub> =53 %	3 year n <sub>2</sub> =30 %	2 year n <sub>3</sub> =59 %	1 year n <sub>4</sub> =58 %
Pearl millet products	32.0 (L)	37.0(L)	52.7(M)	60.7(M)
Nutritious recipes	62.2(M)	69.2(H)	70.0(H)	81.8(H)
Pickles	62.5(M)	75.0(H)	71.9(H)	84.2(H)
Sauce making	38.7(L)	44.0(M)	36.3(M)	55.3(M)

L: Low, M: Medium and H: High

**Extent of adoption of HDFS related technologies:** The data included in table 3 indicated that irrespective of the technologies extent of adoption of concerning the soft toys technologies there was the medium extent of adoption was observed in the early three years. However high extent of adoption was reported in after one year of the adoption. In the teaching aids there was the low adoption was found in all the four year of adoption.

**Table 3:** Extent of adoption of HDFS related technologies

Technologies	Tenure of adoption			
	4 year n <sub>1</sub> =53 %	3 year n <sub>2</sub> =30 %	2 year n <sub>3</sub> =59 %	1 year n <sub>4</sub> =58 %
Soft toys making	56.2(M)	46.4(M)	59.2(M)	73.5(H)
Teaching aids making	4.7(L)	12.0(L)	12.7(L)	32.0(L)

L: Low, M: Medium and H: High

**Extent of adoption of TAD related technologies:** Data contained in table 4 described the extent of adoption irrespective of the technologies i.e. in garments construction high adoption was found in all the four years of adoption.

**Table 4:** Extent of adoption of TAD related technologies

Technologies	Tenure of adoption			
	4 year n <sub>1</sub> =53 %	3 year n <sub>2</sub> =30 %	2 year n <sub>3</sub> =59 %	1 year n <sub>4</sub> =58 %
Fabric painting	17.0(L)	29.4(L)	40.0(M)	48.0(M)
Garments construction	76.1(H)	89.2(H)	81.4(H)	92.5(H)
Tie and dye	15.5(L)	29.4(L)	38.4(M)	51.8(H)

L: Low, M: Medium and H: High

Extent of adoption concerning the fabric painting technologies was found low in four and three years followed by medium extent of adoption in two and one year of adoption. In the tie and dye technologies the low extent of adoption was observed in four and three years followed by the medium extent of adoption in the early two years. However high extent of adoption was reported in after one year of the adoption.

## Discussion

Extent of adoption of various technologies by the women, farmers or youth was found medium to high after one or two year of adoption and low to medium after three and four year of adoption. These results are matching with results of Borua and Brahma (2012) [1] mentioned that majority of the rural youth (53.75%) trained at KVK in Assam had medium extent of adoption on recommended practices of *Sali* rice cultivation, while 26.5% and 20.0% of trained rural youth had high and low extent of adoption, respectively. The percentages of adopters were more than 80% in 5 practices out of 13 while the percentages of adopters were in the range of 50 to 80% for 6 practices.

Vani (2007) also revealed that majority of the respondents had high level of education, from nuclear family and had low social participation. Total 40.22 per cent rural women adopted the health and nutritional practices partially, 20.66 per cent fully and 36.67 per cent did not adopt the health and nutritional practices.

Kumari and Solanki (2015) [7] also reported that majority of the respondents were in medium adoption category of homestead technologies with overall adoption index of 55.12 per cent. Adoption was found highest in health care (100%) followed by nutrition (77.22%), drudgery reduction (58.18%), grain storage (41.12%), environmental sanitation (36.92%) and was least in the preservation and processing component with adoption index of 20.25 per cent.

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