

# Perceived attributes of home stead technology among rural women

■ Jyoti Rani, Beena Yadav and Manju Dahiya

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■ **ABSTRACT :** Women play an important role in the development of a family and society. From last few decades, they have been actively participating in various economic and social activities, but their efforts remain unrecognized. Women in rural areas suffer from many grave disadvantages and are subjected to great deal of hardship and drudgery. The jobs done by them are often physically arduous, time consuming and repetitive, resulting in fatigue and drudgery. So women need new technologies and practices to improve upon the old ones. Technology transfer and adoption process work simultaneously. The rate of adoption depends on the evaluation of innovation in terms of its perceived characteristics such as relative advantage, compatibility, complexity, trialability and practicability. To study the perceived attributes of homestead technologies the present study was carried out hisar district of harayana state. The total sample size was 200 rural women. The study found that most of the respondents FRM related technologies were perceived relatively advantageous (39.7%) by the maximum of the respondents. In terms of compatibility, HDFS technologies were at top (40.6%). Simplicity and practicability of FN related technologies was perceived by maximum number of the respondents (41.9% and 48.9%).

■ **KEY WORDS:** Rural women, Social activities, Home stead technology

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See end of the paper for authors' affiliations →

**Jyoti Rani**

Department of Extension  
Education and Communication  
Management, C.C.S. Haryana  
Agricultural University, Hisar  
(Haryana) India  
Email : kholajyoti25@gmail.com

Rural women hold on three fold responsibilities of home, farm and management of livestock. In home she devotes endless time in preparing food, washing clothes, procuring fuel from forest, bringing water, storing food grains, cleaning and maintaining house, looking after children and adults, participating in social and religious ceremonies and the list is never ending. Beside this, she does a lot of work in agriculture and animal husbandry. Adding to the plight of these, women use age old customary methods for performing

all these tasks which make their work more drudgery ridden, tedious and sharp. An analysis of household activities carried out among women indicated that 26 per cent of their time was devoted for household chores and 17 per cent accounted for fuel wood collection with evidences of intergenerational changes in the pattern of gender work participation. A tendency was noticed among 15 per cent of farm women to shy away from wage earning activities in agriculture as influenced by level of education (ICAR Annual Report, 2009). Rogers

(2003) claimed that five attributes of innovation, namely relative advantage, compatibility, complexity, trialability, and observability, could explain 49-87 per cent innovation adoption. Each attribute and its sub dimension affect adoption differently and is influenced by the adopter perception of importance (Rogers, 2003). Attribute was operationlized as qualities or characteristics ascribed to the homestead technologies included under present study. The five attributes of technology given by Rogers (2003) provided the basis for inclusion of attributes with slight modification. In the present study last two attributes *i.e.* trial ability and observability were merged under one attribute *i.e.* practicability. Hence perception regarding four attributes (relative advantage, compatibility, complexity and practicability).

## ■ RESEARCH METHODS

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

## ■ RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

### Perception of respondents regarding FRM related technologies:

The data related to perception of the respondents regarding various attributes of FRM related technologies have been included Table 1. In terms of percentage of the respondents who perceived these technologies to be relatively advantageous, maximum number was observed with respect to flower making craft and macramé products as 52.5% respondents each perceived relative advantage of these two technologies followed by wealth

out of waste (45.5%), improved cot bag (43.5%), improved mud stove (38.0%) and vermin composting (6.5%).

In terms of compatibility, maximum respondents perceived macramé product to be compatible (50.5%) followed by flower making craft (45.5%), improved cot bag (42.5%), wealth out of waste (40.0%) and improved mud stove (38.5%).

Simplicity of macramé products was perceived by majority of the respondents (60.5%) followed by those who perceived simplicity of flower making craft (55.5%), wealth out of waste (41.5%), improved mud stove (38.0%) and improved cot bag (24.5%).

Comparatively less number of the respondents had positive perception in relation to practicability of FRM related technologies in comparison to the perception regarding rest three attributes *i.e.* relative advantage, compatibility and simplicity wherein more than half of the respondents had positive perception regarding these attributes of at least one technology. The maximum percentage of respondents practicability (42.5%) of wealth out of waste products. The other technologies in the decreasing order of positive perception of practicability were macramé products (38.0%), flower making craft (33.0%), improved cot bag (24.0%), improved mud stove (22.5%) and vermicomposting (7.0%).

In order to explore overall perception regarding FRM related technologies individually, perception indices were calculated on the basis of total perception score. On the basis of index value, maximum self-perception index (.75) of macramé was observed followed by wealth out of waste and improved cot bag (.70 each); flower making craft (.65); improved mud stove (.55) and least perception index (.10) of vermin composting technology was observed.

### Perception of respondents regarding FN related technologies:

The data related to the attributes of FN related technologies as perceived by the respondents have been included Table 2. In terms of relative advantage, maximum respondents perceived pickle making as relatively advantageous (64.5%) followed by pearl millet products (36.5%) and nutritious recipe (28.0%). None of the respondents perceived relative advantage of sauce making.

More than half of the respondents perceived pearl millet products (56.5%) and pickle making (51.5%) as compatible technologies, however, compatibility of nutritious recipes was (49.0%) and sauce making was perceived by around one fourth of the respondents (24.0%).

In terms of percentage of the respondents who perceived FN related technologies as practically applicable it was revealed that, majority of the respondents (62.0%) perceived the practicability of nutritious recipes followed by pickle making (53.0%), pearl millet products (46.5%) and sauce making (35.0%).

Irrespective of the individual attributes, overall perception of respondents regarding FN related technologies was calculated in terms of perception indices on the basis of total perception score. On the basis of index value it was indicated that maximum self-

perception index (.75) of pearl millet products was observed followed by nutritious recipes (.70), pickle making (.50) and sauce making (.25).

### Perception of the respondents regarding HDFS related technologies:

Perceived attributes of HDFS related technologies as perceived by the respondents have been included in Table 3. It was found that more number of the respondents (47.0%) perceived the soft toys more advantageous than teaching aids making (30.0%). Maximum three reasons *i.e.* monetary benefits, multiple use potential and consistency of use were expressed by the respondents for their positive perception regarding relative advantage of soft toy making. Teaching aids making were perceived relatively advantageous in terms of low cost of adoption and monetary benefits.

Table 1 : Perception of respondents regarding FRM related technologies						
Attributes and dimensions	Flower Making craft F (%)	Macramé Products F (%)	Wealth out of waste F (%)	Improved Mud Stove F (%)	Vermi Composting F (%)	Improved cot bag F (%)
<b>Relative advantage</b>	105(52.5)	105(52.5)	91(45.5)	76(38.0)	13 (6.5)	87 (43.5)
Low cost of adoption	-	✓	✓	-	✓	✓
Monetary beneficial	-	✓	✓	✓	-	-
Time saving	-	-	-	✓	-	✓
Multiple use potential	✓	✓	✓	✓	-	-
Consistency of use	✓	✓	✓	-	-	-
<b>Compatibility</b>	91(45.5)	101(50.5)	80 (40.0)	77(38.5)	-	85(42.5)
Physical	✓	✓	✓	✓	-	✓
Cultural	✓	✓	✓	-	-	✓
Social	✓	✓	-	-	-	✓
Relational	-	✓	✓	-	-	-
Situational	✓	-	-	✓	-	✓
<b>Simplicity/Complexity</b>	111(55.5)	121(60.5)	83(41.5)	76(38.0)	-	49(24.5)
Easy to understand	✓	✓	✓	✓	-	-
Easy to use	-	✓	-	✓	-	✓
Reversible	✓	✓	✓	✓	-	✓
Resources required are easily available	-	-	✓	-	-	✓
Increases efficiency	-	-	-	✓	-	✓
<b>Practicability</b>	66(33.0)	76(38.0)	85(42.5)	45(22.5)	14 (7.0)	48(24.0)
Communicable	✓	-	-	-	-	✓
Demonstrable	✓	✓	✓	✓	-	-
Trial able	✓	✓	✓	-	✓	✓
Visibility of results	✓	✓	✓	-	-	✓
Scope of modification	✓	✓	✓	✓	-	✓
<b>Positive perception score</b>	13	15	14	11	2	14
<b>Positive Perception index</b>	.65	.75	.70	.55	.10	.70

Compatibility of soft toy making was perceived by more than half *i.e.* 54.0 per cent of the respondents and compatibility of teaching aids making was perceived by 26.0 per cent.

More percentage of the respondents perceived simplicity of soft toy making (47.0%) than those who perceived simplicity of teaching aids making (25.0%).

As far as positive perception regarding practicability of HDFS related technologies is concerned, it was indicated that more percentage of the respondents (43.5%) perceived soft toy making as practically applicable technology than teaching aids making (22.5%).

Perception indices were calculated in order to explore overall perception regarding HDFS related technologies. The index values indicated better positive perception index (.65) of soft toy making as compare to teaching aids making (.60).

**Perception of respondents regarding the TAD related technologies:**

Perceived attributes of TAD related technologies as perceived by the respondents have been included Table 4. It was found that maximum number of the respondents (52.0%) perceived the garments construction as relatively advantageous followed by fabric painting (34.0%) and tie and dye (25.5%).

Compatibility of garments construction was perceived by more than half and maximum of the respondents (61.5%) followed by those who perceived compatibility of fabric painting (28.5%) and tie and dye (25.5%).

Maximum percentage of the respondents perceived simplicity of garments construction (68.5%) followed by those who perceived simplicity of tie and dye (31.5%) and fabric painting (22.5%).

As far as positive perception regarding practicability

Attributes and dimensions	Pearl millets products F (%)	Nutritious recipe F (%)	Pickle making F (%)	Sauce making F (%)
<b>Relative advantage</b>	73(36.5)	56(28.0)	129(64.5)	
Low cost of adoption	✓	-	-	-
Monetary beneficial	-	-	-	-
Time saving	-	-	-	-
Multiple use potential	✓	✓	✓	-
Consistency of use	-	✓	✓	✓
<b>Compatibility</b>	112(56.0)	98 (49.0)	103 (51.5)	48 (24.0)
Physical	✓	✓	✓	✓
Cultural	✓	✓	✓	-
Social	✓	✓	-	-
Relational	-	✓	-	✓
Situational	✓	✓	✓	-
<b>Simplicity/Complexity</b>	85(42.5)	103(51.5)	128(64.0)	-
Easy to understand	✓	✓	✓	-
Easy to use	✓	✓	✓	-
Reversible	✓	✓	✓	✓
Resources required are easily available	✓	✓	-	-
Increases efficiency	--	-	-	-
<b>Practicability</b>	93(46.5)	124(62.0)	106(53.0)	70(35.0)
Communicable	✓	-	-	-
Demonstrable	✓	✓	✓	-
Trial able	✓	✓	-	-
Visibility of results	✓	-	✓	✓
Scope of modification	✓	✓	-	-
<b>Positive perception score</b>	15	14	10	5
<b>Positive Perception index</b>	.75	.70	.50	.25

of TAD related technologies is concerned, it was indicated that the maximum percentage of the respondents (61.5%) perceived garments as practically applicable technology followed by tie and dye (29.5%) and fabric painting (27.0%).

Perception indices were calculated in order to explore overall perception regarding TAD related technologies. The index values suggested highest positive perception index of garments construction (.70) was observed followed by fabric painting and tie and dye with equal value of positive perception index *i.e.* (.65 each).

### Perception of the respondents regarding homestead technologies:

Data included in Table 5 showed that FRM technologies were perceived relatively advantageous (39.7%) by the maximum of the respondents followed by TAD (38.5%), HDFS (33.1%) and FN related technologies (32.7%). In terms compatibility, maximum

of the respondents (40.6%) perceived HDFS as compatible followed by TAD (38.5%), FN (37.2%) and FRM related technologies (36.1%). Simplicity of FN related technologies was perceived by maximum number of the respondents (41.9%) followed by TAD (40.1%), HDFS (38.2%) and FRM (36.6%) related technologies. FN related technologies were also perceived to have practicability by highest number of respondents (48.9%) followed by TAD (39.3%), HDFS (33.0%) and FRM (27.8%).

In department wise overall perception index was maximum TAD related technologies topped the list with highest index (.66) followed by HDFS (.62), FRM (.57) and FN related technologies (.55).

Irrespective of the technologies, total 20 indicators of self perception the respondents about home stead related technologies were reported. Technologies were perceived relatively advantageous in terms of low cost, monetary benefit, time and energy saving, multiple use

**Table 3 : Perception of the respondents regarding HDFS related technologies**

Attributes and dimensions	Teaching aids making F(%)	Soft toys making F(%)
<b>Relative advantage</b>	60(30.0)	94(47.0)
Low cost of adoption	✓	-
Monetary beneficial	✓	✓
Time saving	-	-
Multiple use potential	-	✓
Consistency of use	-	✓
<b>Compatibility</b>	52 (26.0)	108(54.0)
Physical	✓	✓
Cultural	✓	✓
Social	-	✓
Relational	✓	-
Situational	✓	✓
<b>Simplicity/Complexity</b>	50(25.0)	94(47.0)
Easy to understand	-	-
Easy to use	✓	✓
Reversible	✓	✓
Resources required are easily available	✓	--
Increases efficiency	✓	✓
<b>Practicability</b>	45(22.5)	87(43.5)
Communicable	-	-
Demonstrable	-	✓
Trial able	✓	✓
Visibility of results	-	-
Scope of modification	✓	✓
<b>Positive perception score</b>	12	13
<b>Positive Perception index</b>	.60	.65

**Table 4 : Perception of respondents regarding the TAD related technologies**

Attributes and dimension	Fabric painting F(%)	Garments construction F(%)	Tie and dye F(%)
<b>Relative advantage</b>	76(34.0)	104(52.0)	51(25.5)
Low cost of adoption	✓	-	✓
Monetary beneficial	✓	✓	✓
Time saving	-	-	-
Multiple use potential	✓	✓	✓
Consistency of use	-	✓	-
<b>Compatibility</b>	57(28.5)	123(61.5)	51(25.5)
Physical	✓	✓	✓
Cultural	✓	✓	✓
Social	-	✓	✓
Relational	-	-	-
Situational	✓	✓	-
<b>Simplicity/Complexity</b>	45(22.5)	137(68.5)	63(31.5)
Easy to understand	-	✓	✓
Easy to use	✓	✓	✓
Reversible	✓	-	✓
Resources required are easily available	✓	✓	✓
Increases efficiency	-	✓	-
<b>Practicability</b>	54(27.0)	123(61.5)	59(29.5)
Communicable	✓	✓	✓
Demonstrable	✓	✓	✓
Trial able	✓	✓	✓
Visibility of results	-	-	-
Scope of modification	✓	-	-
<b>Positive perception score</b>	13	14	13
<b>Positive Perception index</b>	.65	.70	.65

**Table 5: Perception of the respondents regarding homestead technologies (n= 200)**

Attributes	Family resource management %	Foods and nutrition %	Human development and family studies %	Textile and apparel designing
Relative advantage	39.7	32.7	33.1	38.5
Compatibility	36.1	37.2	40.6	38.5
Simplicity / Complexity	36.6	41.9	38.2	40.1
Practicability	27.8	48.9	33.0	39.3
Positive perception index	.57	.55	.62	.66

potential and consistency of use. The technologies were perceived to have physical, cultural, social, relational and situational compatibility. In terms of simplicity, application and cognitive simplicity and reversibility, resources availability and increasing efficiency features were perceived and practicability of these technologies were observed in terms of communicability, visibility of results, demonstrability, trialability and the scope of modification. Yadav *et al.* (2009) also indicated that majority of rural

women had positive perception regarding the attribute of the solar bed. Similar study were supported by the Khambra *et al.* (2011); Asrani *et al.* (2012) and Gupta (2012).

**Conclusion:**

Differential perception of the respondents in terms of various attributes as well as total perception score of technologies from four departments was observed. FRM

related technologies were perceived relatively advantageous by the maximum of the respondents. In terms of compatibility, HDFS technologies were at top. Simplicity and practicability of FN related technologies was perceived by maximum number of the respondents.

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Authors' affiliations:

**Beena Yadav and Manju Dahiya**, Department of Extension Education and Communication Management, C.C.S. Haryana Agricultural University, Hisar (Haryana) India

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