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Extent of adoption of moth bean production technology by ICT user and non-user farmers of Churu district of Rajasthan

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Abstract
Now a day's new technologies introducing in agriculture and it reduce the role of man power. This era is informative and Information and communication technology (ICT) play vital role to create awareness globally about new technologies in every fields as well in as agriculture. ICTs can make agriculture more remunerative and a fruitful occupation by providing latest information. In this study, ICTs is operationalized as the use of communication tools like, WhatsApp group, SMS, Telephone helpline. It saves money, time and efforts and reduces dependency on so many factors in the chain of extension. In this present studies it's found that Majority of respondents were having medium level of adoption of gram production technology.

Keywords: Agriculture, communication, helpline, ICT, knowledge and technology, adoption

Introduction
India holds second position among the countries with high population in the world having about 1.33 billion people. Amongst these, 70 per cent live in rural area and their main occupation is agriculture. The agriculture which continues to be the main occupation and way of life for more than half of Indian population even today making single largest contribution to the GDP 17.70 per cent (2019) of our nation. Sustainable prosperity of the farmers and the agricultural labours holds the key for improving the overall human resource development scenario in the country. There is a need to increase production and productivity of agriculture. Hence, the Indian farmers need to be updated and adopt the latest production technology about farming, new cultivars, farm machinery, market, trade situation regarding gram etc. The ICTs also provide the flexibility in providing information related to the various modes of farming practices including all the crops, specific commodities and enterprises, price information and all other information & regarding technological advances and tracking global competitiveness. Thus, the ICT play an increasingly important role in linking the research- extension-market continuum towards developing professional competencies and entrepreneurial capabilities among specialists and farming communities respectively. Information and Communication Technology (ICT) is a global term that includes all technologies for the manipulation and communication of information encompassing: radio,
Television, computers, internet, cell phones, network hardware, satellite systems and so on, as well as various services and application associated with them. ICTs can directly support farmers 'access to timely and relevant information, as well as empower the creation and sharing of knowledge of the farming community itself. ICTs in agriculture have the potential to facilitate greater access to information that drive or support knowledge sharing.
ICTs essentially facilitate the creation, management, storage, retrieval, and dissemination of any relevant data, knowledge, and information that may have been already been processed and adapted (Batchelor 2002; Chapman and Slaymaker 2002., Heeks 2002 and Rao 2007) [2, 3, 5].
In this study ICTs is operationalzed as the use of communication tools like, WhatsApp group, Text Messages, Telephone helpline So, ICTs can make agriculture more remunerative and a fruitful occupation by providing latest information and motivate the farmers for adopt new technologies regarding gram. It saves money, time and efforts and reduces dependency on so many factors in the chain of extension. Keeping in mind the above background, the present study entitled "Extent of Adoption of Moth bean Production Technology by ICT user and non-user Farmers of Churu District of Rajasthan" has been taken.

Materials and Methods

For selection of respondents, district wise list of registered farmers during the year 2015 to 2017 received from the ARS Bikaner, KVK Sardarsahar, Churu and IKSL Jaipur. From the list so prepared total 10 ICT users were selected randomly for each ICT tool from each selected panchayat samiti. This way 40 ICT users were selected from each panchayat samiti comprising a sample of 80 respondents from selected district to constitute other half of sample (i.e.80 ICT non-users) same number of farmers were selected from the selected panchayat samities. While selecting ICT non-user farmers, the personal characteristics of ICT users were taken into consideration.

Table 1: Distribution of respondents according to extent of adoption of moth bean production technology

N=160

S.N.	Category	Moth Growers					
		ICT users (n=80)		ICT non-users (n=80)		Total (n=160)	
		F	%	F	%	F	%
1	Low (below 34.84)	07	08.75	29	36.25	36	22.50
2	Medium (from 34.84 to 62.06)	53	66.25	45	56.25	98	61.25
3	High (above 62.06)	20	25.00	06	07.50	26	16.25

Mean=48.45, S.D. =13.61

Table 1. clearly depicted that 66.25, 25.00 and 08.75 per cent ICT user moth bean respondents belonged to medium, high and low adoption categories respectively. Whereas in case of ICT non-users 56.25, 36.25 and 07.50 per cent respondents belonged to medium, low and high adoption categories respectively about moth bean production technology. Further amongs pooled respondents (80 ICT users& 80 ICT non-users) 61.25, 22.50 and 16.25 per cent belonged to the medium, low and high adoption categories respectively about moth bean production technology.

Above results clearly shows that ICT user respondents had higher extent of adoption of recommended production technology of moth bean as compared to ICT non-user respondents.

The similar results found in study of Vashishtha *et al*. (2011) [7], Kumar (2013) and Ghaswa (2018) [4].

Practice wise extent of adoption of ICT user and ICT non-user respondents about moth bean production technology

The production technology of moth bean related to the field preparation, use of high yielding varieties, seed sowing seed rate & spacing, seed treatment, manure & fertilizer application, weed management, plant protection measures & harvesting, threshing & storage were studied. An effort was made to assess the practice-wise extent of adoption among ICT user and ICT non-user moth bean growers. The results were as given in table 2.

Table 2: An effort was made to assess the practice-wise extent of adoption among ICT user and ICT non-user moth bean grower

N=160

S.N.	Moth bean production practices	IT users (n=80)		ICT non-users (n=80)		Overall (n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Field Preparation	59.06	IV	39.58	V	49.32	IV
2	Use of High Yielding Varieties	72.27	I	56.25	I	64.26	I
3	Seed Sowing, Seed rate and Spacing	66.04	II	42.70	III	54.37	III
4	Seed Treatment	47.58	VIII	30.35	VIII	38.96	VIII
5	Manure and Fertilizer Application	54.16	V	40.20	IV	47.18	V
6	Weed Management	49.75	VII	37.41	VI	43.58	VI
7	Plant Protection Measures	51.79	VI	32.57	VII	42.18	VII
8	Harvesting, Threshing and Storage	63.59	III	48.59	II	56.09	II
	Pooled	58.03		40.96		49.49	

r_s = Rank Correlation
MPS= Mean Percent Score
Significant at 0.01% level of probability r_s = 0.928
t = 11.848**

The extent of adoption of ICT users and ICT non-user respondents regarding moth bean production technology was calculated in terms of Mean Percent Score (MPS). Table 3 predicts that ICT user respondents had very good extent of adoption (Above 70.00 MPS) in practice like, "use of high yielding verities" with 72.27 MPS and occupied first rank. ICT users had good extent of adoption in practices like "seed sowing, seed rate and spacing", **"**harvesting, threshing and storage", "field preparation", "manure and fertilizer application" and **"**plant protection measures" with 66.04, 63.59, 59.06, 54.16 and 51.79 MPS and occupied second, third, fourth, fifth and sixth, ranks respectively.

The table further shows that ICT user had poor extent of adoption in practices like "weed management" and "seed treatment" with 49.75 and 47.58 MPS and occupied seventh and eighth ranks respectively.

The ICT non-user respondents had good extent of adoption about "use of high yielding verities" with 56.25 MPS. They had poor extent of adoption of practices like, **"**harvesting, threshing & storage", "seed sowing, seed rate & spacing", "manure & fertilizer application", **"**field preparation", "weed management" **"**plant protection measures" and "seed treatment" with 48.59, 42.70, 40.20, 39.58, 37.41, 32.75 and 30.35 MPS and occupied second, third fourth, fifth, sixth, seventh and eighth ranks respectively.

Based on the above discussion, it can be concluded that the most of the ICT user farmers adopted more practices of moth bean production in comparison to ICT non-user farmers. The table further reveled that the range of extent of adoption in ICT user farmers was ranging from 47.58 to 72.27 MPS,

while in case of ICT non-user user farmers it was 30.35 to 56.25 MPS in all aspects production technology of moth bean. To improve adoption level in both (ICT users & ICT non users) categories of farmers, we have to create more awareness through different ICT sources and approach must be location specific.

Efforts were also made to laid down the relationship between the ranks assigned by ICT user and ICT non-user moth bean growers by enforcing rank order correlation. The value of rank correlation (r_s) was 0.928 which shows positive correlation, the significance level of r_s was tested through 't' test and it was indicated that calculated 't' value (11.848) is higher than its tabulated value. In the case of similar ranks occupied by ICT users and ICT non-users about extent of adoption of practices of moth bean production, there was difference in magnitude of Mean Percent Score of ICT user and non-user respondents with respect to adoption of moth bean production technology.

The results of present study were similar with the results of Vashishtha *et al*. (2011) [7] and Ghaswa (2018) [4].

Practice wise comparison between ICT user and ICT non-user respondents about extent of adoption of moth bean production technology

To find out the differences or similarity in the adoption of recommended moth bean production technology between ICT user and ICT non-user respondents, 'Z' test was applied. The results were presented in table 3.

In table 5.31 the data shows that extent of adoption for both ICT user and ICT non-user respondents of moth bean shows that calculated 'Z' value was higher from the tabulated value at 0.01 per cent level of probability for all eight packages of practices of moth bean production technology, it shows that for all eight package of practices, ICT user and ICT non-user respondents had wide distinctions in extent of adoption. It means, ICT user respondents had more adoption level compared to ICT non-users. The 'Z' test was found highly significant in adoption level among practices.

Table 3: Practice wise comparison between ICT user and ICT non-user respondents about extent of adoption of moth bean production technology

N=160

S. N.	Moth bean production practices	ICT users (n=80)		ICT non-users (n=80)		Z' Value
		Mean ±	S.D.	Mean ±	S.D.	
1	Field Preparation	07.08	01.95	04.75	01.13	11.89**
2	Use of High Yielding Varieties	07.95	01.82	06.18	01.76	8.31**
3	Seed Sowing, Seed rate and Spacing	07.92	01.61	05.12	01.79	13.56**
4	Seed Treatment	06.66	01.55	04.25	01.43	12.46**
5	Manure and Fertilizer Application	06.50	01.21	04.82	01.06	9.92**
6	Weed Management	07.46	02.06	05.61	01.14	9.24**
7	Plant Protection Measures	08.28	02.63	05.21	01.87	12.95**
8	Harvesting, Threshing and Storage	05.10	00.96	03.88	00.99	7.75**
	Overall	07.12	01.72	04.98	01.40	10.76

** Significance at 0.01 percent level of probability

SD. = Standard Deviation

The mean value also indicated that ICT user respondents had higher extent of adoption comparative to ICT non-user about production technology of moth bean. This difference in extent of adoption of moth bean technology might be due to the reason that ICT user respondents had more contact with different sources of information through use of different ICT tools and also aware about the benefits of new technologies, which inspired them to adopt new technologies for increased production. The significant difference between ICT user and ICT non-user respondents about extent adoption of recommended production technology of moth bean clearly indicated that there was positive effect of use of ICT tools on ICT user respondents with regard to enhanced adoption of recommended production technology of moth bean in the study area. Similar findings are reported by Vashishtha *et al.* (2010), Kumar (2013) and Ghaswa (2018) [4].

References

1. Anonymous, 2019. Economic Survey of India, 2019-20
2. Batchelor S. Using ICTs to Generate Development Content. IICD Research Report 10. The Hague: International Institute for Communication and Development, 2002.
3. Chapman R, Slaymaker T. ICTs and Rural Development: Review of the Literature, Current Interventions, and Opportunities for Action. ODI Working Paper 192. London: Overseas Development Institute, 2002.
4. Ghaswa R. Impact of National Food Security Mission with special Reference to Recommended Pulse interventions in Bikaner District of Rajasthan Ph.D. Thesis submitted to SKRAU. Bikaner, 2018.
5. Heeks. Information Systems and Developing Countries: Failure, Success and Local Improvisations. The Information Society. 2002;18:101-112.
6. Kumar A, Chand R, Singh R, Yadav VK. Impact of TAR-IVLP on Crop Cultivation. Ind. Res. J Ext. Edu. 2007;**7**(2&3):1-5.
7. Vashishtha U, Sharma FL, Sisodia SS. Adoption of pigeonpea production technology in Udaipur district of Rajasthan. J of Progressive Agri. 2011;2(3):88-90.