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Performance of crop varietal interventions of PJTSAU as perceived by the farmers of adopted villages

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Abstract
Professor Jayashankar Telangana State Agricultural University (PJTSAU) is the only farm university in Telangana State which provides quality education, location specific research and farmer outreach programs to address the needs of the industrious farming community of the state. The university played a key role in increasing food grain production in the state by developing appropriate technologies and effective mechanism for the transfer of technology to the farmers and agricultural organisations through different extension programmes. An attempt is made to study the profile characteristic, performance of the crop varietal interventions and their relation with the profile characteristics. Ex-post facto research design was adopted for the investigation, total of 60 farmers adopting crop varietal intervention promoted by the PJTSAU institutions were selected randomly from three villages. The results indicated that most the famers perceived that performance of crop varietal interventions was medium.

Keywords: Crop varietal interventions, performance, PJTSAU, adopted villages

Introduction
Agriculture is the most important sector of the Indian economy, employing more than half of the workforce and accounting for approximately 17% of the country's Gross Value Added (GVA) (Agricultural statistics 2018). The transfer of technologies to the farming community and their widespread adoption are critical for increasing output, optimising disposable income for households and raising farmers standard of living. At present, there are challenges such as doubling farmer income through optimal and environmentally friendly resources such as land, labour, capital and management. The development and promotion of new interventions by institutions is critical in increasing output, bringing prosperity to the rural poor, and accelerating the transformation of the Indian village economy.

Professor Jayashankar Telangana State Agricultural University (PJTSAU) is the only farm university in Telangana State which provides quality education, location specific research and farmer outreach programs to address the needs of the industrious farming community of the state. The University came into being on 3rd September, 2014 with Rajendranagar, Hyderabad as its headquarters. PJTSAU has played a key role in increasing food grain production in the state by developing appropriate technologies and effective mechanism for the transfer of technology to the farmers and agricultural organisations through different extension programmes.

The present investigation made an attempt study the profile characteristic of respondents of crop varietal interventions, performance of crop varietal interventions and relation ship between the profile characteristics and performance of crop varietal interventions.

Materials and Methods
Ex-post facto research design was adopted for the investigation. Telangana state was chosen for the study as the researcher also hails from the same state, familiarity with local language and culture to help build the good rapport with the farmers during data collection. Nagarkurnool district was selected purposively as it has three mandated institutes of PJTSAU (Professor Jayashankar Telangana State Agricultural University) that is KVK, RARS and Agricultural College. Two mandals from Nagar Kurnool district viz, Bijinapalle and Thimmajipet were selected purposively as the villages of these mandals were adopted by the Agricultural College, KVK and RARS, Palem. Total three villages from two mandals were selected purposively as these are the adopted villages of Agricultural College, RARS and KVK, Palem respectively and completed 3 years of adoption. A total of 60 farmers adopting crop varietal intervention promoted by the PJTSAU institutions were selected randomly from

three villages. The data was collected using a pre tested structured interview schedule and analysed using SPSS.

Results and Discussions

Table 1: Profile characteristics of the crop varietal intervention respondents

S. No	Category	Crop varietal intervention (N=60)	
		F	%
	Age		
a.	Young (<33)	8	13.33
b.	Middle (33-64)	50	83.34
c.	Old (>65)	2	3.33
	Education		
a.	Illiterate (Never went to school)	31	51.67
b.	Read only	0	0.00
c.	Can read and write	0	0.00
d.	Primary Schooling (Up to 5th class)	7	11.67
e.	Upper Primary (Up to 8th class)	3	5.00
f.	Secondary Schooling(Up to 10th class)	6	10.00
g.	Intermediate	4	6.66
h.	Under graduation	3	5.00
i.	Post Graduation	3	5.00
j.	Others	3	5.00
	Land holdings		
a.	Marginal (<1.00ha)	27	45.00
b.	Small (1.00-2.00ha)	16	26.67
c.	Semi Medium (2.00-4.00ha)	12	20.00
d.	Medium 4.00-10.00ha	5	8.33
e.	Large (10.00ha to more)	0	0.00
	Farming experience		
a.	Low (<15.17)	10	16.67
b.	Medium (15.17-36.00)	39	65.00
c.	High (>36.00)	11	18.33
	Annual income		
a.	Low (<Rs.70,069)	7	11.67
b.	Lower middle (Rs.70,070- Rs.2,73,099)	24	40.00
c.	Upper-middle(Rs.2,73,100- Rs.8,45,955)	25	41.67
d.	High (>Rs.8,45,956)	4	6.66
	Information seeking behaviour		
a.	Low (<11.15)	9	15.00
b.	Medium (11.15-16.75)	36	60.00
c.	High (>16.75)	15	25.00
	Achievement motivation		
a.	Low (<17.31)	8	13.34
b.	Medium (17.31-21.55)	37	61.66
c.	High (>21.55)	15	25.00
	Economic motivation		
a.	Low (<16.19)	5	8.33
b.	Medium (16.19-21.03)	39	65.00
c.	High (>21.03)	16	26.67
	Extension contacts		
a.	Low (<8.05)	19	31.66
b.	Medium (8.05-13.35)	31	51.67
c.	High (>13.35)	10	16.67
	Extension participation		
a.	Low (<8.01)	16	26.67
b.	Medium (8.01-17.22)	33	55.00
c.	High (>17.22)	11	18.33
	Awareness on village adoption programme		
a.	Low (<12.34)	19	31.67
b.	Medium (12.34-17.60)	31	51.66
c.	High (>17.60)	10	16.67
	Group dynamics		
a.	Low (<16.19)	14	23.33
b.	Medium (16.19-24.51)	35	58.34
c.	High (>24.51)	11	18.33
	Sustainability of interventions		
a.	Low (<12.39)	9	15.00
b.	Medium (12.39-15.71)	41	68.33
c.	High (>15.71)	10	16.67

Profile characteristics of the respondents of crop varietal interventions

Characteristics representing the profile of the respondents like age, education, land holdings, farming experience, annual income, information seeking behaviour, achievement motivation, economic motivation, extension contact, extension participation, awareness on village adoption programme, group dynamics and sustainability of interventions are presented in Table 1.

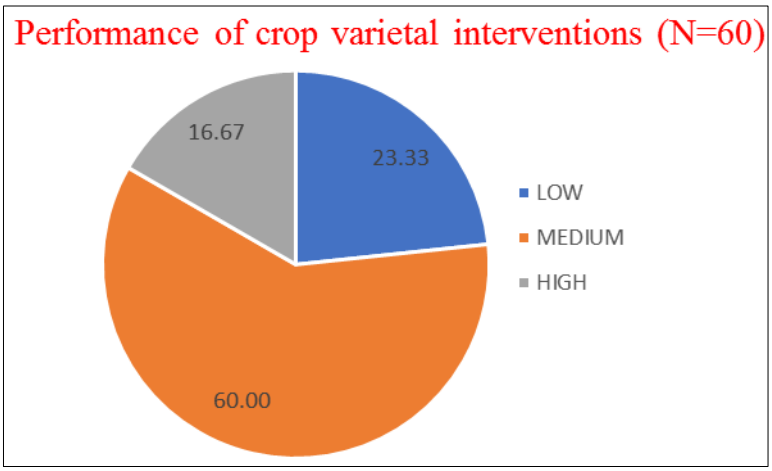
It was observed that majority of the respondents of crop varietal interventions belonged to middle age (83.34%), majority were illiterates (51.67%) with marginal land holdings (45.00%) and medium farming experience (65.00%). In case of annual income (41.67%) belonged to upper- middle annual income category with medium information seeking behaviour (60.00%). Majority had medium achievement motivation (61.66%), medium economic motivation (65.00%), medium extension contact (51.67%), medium extension participation (55.00%), medium awareness on village adoption programme (51.66%), medium group dynamics (58.34%) and medium sustainability of interventions (68.33%).

Performance of crop varietal interventions as perceived by the farmers

The results on performance of crop varietal interventions of PJTSAU presented in Table 2. Indicated that majority (60.00%) of the Crop varietal intervention farmers had medium level of performance followed by low (23.33%) and high (16.67%) performance respectively. This trend might be due to the fact that majority of the respondents had medium extension contact, medium extension participation and medium information seeking behaviour which ultimately resulted in medium performance.

Table 2: Distribution of respondents according to their performance

S. No	Category	Class interval	Crop Varietal interventions(N=60)	
		CVI	F	%
1.	Low	<0.12	14	23.33
2.	Medium	0.12-0.56	36	60.00
3.	High	>0.56	10	16.67
		Total	60	100.00



Distribution of respondents according to their performance

Relationship between the profile characteristics and performance of crop varietal interventions

An attempt has been made to find out the association between independent variables through correlation coefficient (r) values. The results are presented in Table 3.

Table 3: Influence of profile characteristics of respondents on performance of crop varietal interventions.

S. No	Independent variables	Correlation coefficient (r)
		Crop varietal interventions
1.	Age	-0.092^{NS}
2.	Education	0.434**
3.	Land holdings	0.522**
4.	Farm Experience	-0.181^{NS}
5.	Annual Farm Income	0.508**
6.	Information seeking behaviour	0.259*
7.	Achievement motivation	0.343**
8.	Economic motivation	0.476**
9.	Extension contacts	0.408**
10.	Extension participation	0.304*
11.	Awareness on village adoption programme	0.409**
12.	Group dynamics	0.427**
13.	Sustainability of interventions	0.456**

The results in the table 3. indicated that the correlation coefficient (r) values for farmers of crop varietal interventions of land, education, income, extension contact, group dynamics, achievement motivation, economic motivation, awareness on village adoption programme and sustainability of interventions had positive and significant influence on performance of PJTSAU interventions at 0.01 level of significance. Extension participation and information seeking behaviour had positive and significant influence on performance of PJTSAU interventions at 0.05 level of significance. Whereas age and experience had negative and non significant influence on performance of PJTSAU interventions.

Age vs Performance

From the Table 3 it is evident that computed correlation coefficient (r) value -0.092 of age was found negatively and non-significantly related with performance of crop varietal interventions. Hence, null hypothesis was accepted and empirical hypothesis was rejected. It could be, therefore inferred that the younger farmers are more likely to adopt the interventions. but as far as the study is concerned, age was not a variable that influenced the performance because of the non significant relationship between the two variables. So, all the sample farmers are more or less alike as far as the performance of the crop varietal interventions is concerned.

Education vs Performance

From the it is evident Table 3 that computed correlation coefficient (r) value 0.434 of education was found positively and significantly related with performance of crop varietal interventions. Hence the null hypothesis rejected and empirical hypothesis is accepted. The probable reasons for above results might be due to individuals with education are open to new ideas. Farmers with more education will be aware of different sources of information and were efficient in evaluating and interpreting information about new interventions. Hence education level had a positive impact on the performance of crop varietal interventions.

Land holdings vs Performance

It is identified that the computed correlation coefficient (r) value 0.522 indicated that land holding had positive and significant relation with the performance of crop varietal intervention. Hence the null hypothesis rejected and empirical hypothesis is accepted. Land holdings is an indicator of wealth and social status and influence within a community. This means the farmer with relatively larger land holding will be more initiated to try new technologies/varieties. Land holding thus had a positive and significant relation with the performance of crop varietal interventions.

Farming experience vs Performance

Computed correlation coefficient (r) value -0.181 of farming experience and performance of crop varietal interventions was found negatively and non-significantly related to each other. Hence, null hypothesis was accepted and empirical hypothesis was rejected. The possible trend might due to the fact that the performance of the interventions was good even to the farmers with low farming experience as the farmers may be having good extensions contacts, therefore increased extension participation helped farmers to break the monotony of conventional practices and shift towards modern farming. Hence farming experience has shown negative relationship with the performance of crop varietal interventions.

Annual income vs Performance

From the Table 3. it is clear that the correlation coefficient (r) value 0.508 depicted positive and significant association between annual income and the performance of crop varietal interventions this might be is because annual income obtained through crop varietal interventions improved socio economic and living standards of the farmers. Farmers with high annual income would not find it difficult to invest on inputs, labour etc. and also can afford to contact different sources of information, travel to different institutions to acquire and enhance knowledge on different interventions. Hence, null hypothesis was rejected and empirical hypothesis was accepted.

Information seeking behaviour vs Performance

From the Table 3. it is evident that computed correlation coefficient (r) value 0.259 of information seeking behaviour and performance of crop varietal interventions was found to have positive and significant relation. Hence, null hypothesis was rejected and empirical hypothesis was accepted. The farmer with high information seeking behaviour has great desire and interest to get information from different sources to improve their farming practices. So, as the information seeking behaviour increases the performance of crop varietal interventions increases.

Achievement motivation vs Performance

From table 3 it was inferred that computed correlation coefficient (r) value 0.343 of achievement motivation and performance of crop varietal interventions was found to have positive and significant relation. Hence, null hypothesis was rejected and empirical hypothesis was accepted. Individual with high achievement motivation were determined to reach their destination and they knew the importance of interventions. Hence performance of crop varietal interventions increases with achievement motivation.

Economic motivation vs Performance

The correlation coefficient (r) value 0.476 depicted positive and significant association between economic motivation and the performance of crop varietal interventions (Table 3) this might be due to the facts that the farmer with high economic motivation tends to try more interventions, tries to use available resources efficiently and tries to reduce the cost of cultivation. Hence they explore ways to increase their farm yields and income by gathering information on new interventions and improved technologies. Hence, null hypothesis was rejected and empirical hypothesis was accepted.

Extension contact vs Performance

From the Table 3, it was inferred that, it correlation coefficient (r) value 0.408 shown positive and significant relationship between extension contact and performance of crop varietal interventions. Hence the null hypothesis rejected and empirical hypothesis is accepted. The probable reasons were that the frequency of contact between the farmer and the extension personnel is the potential force that influences farmers decision to adopt the varieties. Hence by contacting extension officials the farmers get necessary information, appropriate knowledge and special skills. So, more the extension contacts more is the performance of crop varietal

interventions. Thus, extension contact is positively and significantly related to performance of the PJTSAU interventions.

Extension participation vs Performance

The correlation coefficient (r) value 0.304, depicted positive and significant association between extension participation and the performance of crop varietal interventions (Table 3) this is due to the fact that participation in extension activities is one means by which the farmer acquires knowledge and skill. Hence Extension participation expected to positively influence the performance of crop varietal interventions. Hence the null hypothesis rejected and empirical hypothesis is accepted.

Awareness on village adoption programme vs Performance

From the Table 3 it is identified that the computed correlation coefficient (r) value 0.409 indicated that awareness on village adoption programme was positively and significantly related with the performance of crop varietal interventions. As the awareness increases farmer would learn about the relative worth of the institutions, adopt technologies promoted by them and there by awareness on village adoption programme increases the performance crop varietal of interventions. So, the null hypothesis was rejected and empirical hypothesis was accepted.

Group dynamics vs Performance

From the Table 3 it is identified that the computed correlation coefficient (r) value 0.427 indicated that group dynamics was positively and significantly related with the performance of crop varietal interventions. Hence, the null hypothesis was rejected and empirical hypothesis was accepted. The farmers were interested to participate in various meetings for the purpose of getting more information regarding the farming practices. Interaction with fellow farmers and scientists will create the motivation and develops confidence in the respondents to adopt latest production technologies thereby increasing the performance of the crop varietal interventions and hence this trend has been noticed.

Sustainability of interventions vs Performance

The coefficient correlation (r) value 0.456 depicted in the Table 3 indicate the positive and significant association between sustainability of intervention and the performance of crop varietal interventions. Hence, null hypothesis was rejected and empirical hypothesis was accepted. As the long term benefits of the intervention increases performance of the crop varietal interventions also increases. Hence the trend is observed.

Conclusions

The present study revealed that majority of the farmer are in the medium category for their profile characteristics. The results indicated that performance of the crop varietal interventions were categorised majorly under medium category. To increase the performance more number of trainings, capacity building programmes and awareness programmes should be conducted at village level. Profile characteristic of the farmers should be given importance while developing and promoting the interventions. Farmers to farmer extension should be promoted for wide spread of crop varietal interventions of PJTSAU.

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