Profile Charecterstics of the Beneficiaries of NFSM-Rice Programme in Guntur District of Andhra Pradesh

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ABSTRACT

The present study was formulated during the year 2016 in Guntur district of Andhra Pradesh, with a sample of 120 beneficiaries from selected 12 villages by proportionate random sampling method. Results revealed that out of selected fourteen independent variables, eleven and nine variables had showed positive and significant relationship with direct and indirect changes experienced by beneficiaries respectively. While observing regression values, it was acknowledged that variables viz., mass media exposure and scientific orientation were found to be positively significant at 0.01 level of probability. Whereas achievement motivation was found to be positively significant at 0.05 level of probability. Whereas, in case of indirect changes independent variables such as decision making and innovativeness were found to be positively significant at 0.01 level of probability. Whereas mass media exposure was found to be positively significant at 0.05 level of probability.

Key words: *Association, Direct changes, Indirect changes, NFSM-Rice programme, Profile.*

The total food production in India during 2015-16 is 253.16 mt. The targeted food production by 2030 is 300 mt. In order to meet this target food production, the National Development Council (NDC) launched a centrally sponsored scheme "National Food Security Mission (NFSM)" in October 2007 to increase the annual production of rice, wheat and pulses. The National Food Security Mission (NFSM) during the 12th Five Year Plan have five components NFSM- Rice, NFSM-Wheat, NFSM-Pulses, NFSM -Coarse cereals and NFSM-Commercial Crops. In Andhra Pradesh, NFSM-rice is being implemented in the districts of Guntur, Krishna, Srikakulam, Vijayanagaram and Visakapattanam. NFSM rice in Guntur has started during the year 2007-08. As NFSM-Rice completed nearly nine years, to know the impact in terms of both direct and indirect changes the present study was conducted. Direct changes are the changes that occur in a immediate response to an innovation but indirect changes are the changes that occur as a result of the direct changes.

Keeping the above facts in view, a study on "Impact of National Food Security Mission (NFSM-rice) Programme on Rice Farmers in Guntur district of Andhra Pradesh" has been articulated with the following objectives: to know the extent to which the NFSM-Rice programme has brought desirable changes among beneficiaries in terms of direct and indirect changes and their association.

MATERIAL AND METHODS

The investigation was carried out during the year 2016 in Guntur district of Andhra Pradesh by adopting ex-post facto research design duly following the proportionate random sampling has taken up in selected villages. A sample of 120 beneficiaries selected from 12 selected villages. The data was collected through well structured interview schedule, which was coded, tabulated and analysed in computer and presented in tables to make findings meaningful and easily understandable.

Direct and indirect changes were taken as dependent variables. Direct changes like yield, net income, net sown area under HYV's, cropping pattern and adoption and indirect consequences like change in use of high yielding varieties, pesticides, fertilizers, nutritional and health habits, self confidence, decision making, communication behaviour, economic status, socio-politico participation and reduction in cost of cultivation etc. that the beneficiaries experienced as a result of participation in the NFSM-Rice programme.

Fourteen selected independent variables viz., age, education, land holding, farming experience, training received, socio-politico participation, extension contact, mass media exposure, decision making, achievement motivation, risk orientation, market orientation, scientific orientation and innovativeness were selected as independent variables. The data were statistically analysed to workout correlation coefficient and multiple linear regression coefficients to draw the meaningful inferences.

RESULTS AND DISCUSSION

From the Table 1, it was observed that computed 'r' values of independent variables such as age, education, training received, extension contact, mass media exposure, decision making, achievement motivation, market orientation, scientific orientation,

innovativeness in relationship with direct changes undergone by the beneficiaries were found to be positively significant at 0.01 level of probability and independent variable such as socio-politico participation was found to be positively significant at 0.05 level of probability, whereas risk orientation was negatively significant. Similar results were reported by Jyothi (2006), Manoj (2008), Nayak *et al.* (2014), Nagendra Babu (2015), Archana (2016). Whereas the independent variables like land holding and farming experience were found to be non-significant and negatively non-significant with the direct changes of beneficiaries. This result was in agreement with the result of Nagendra Babu (2015).

Reasons for the above findings might be due to majority of the beneficiaries were young and middle aged and having 20 to 30 years of farming experience. There is a chance for cultivating new practices by young and middle aged beneficiaries which cause changes in direct changes like yield and net income of beneficiaries. Higher the education wider will be the exposure of the individuals with different sources of information such as farm magazines, farm bulletins, books on agriculture *etc*. and their increased ability to grasp, analyze and interpret the facts in proper way. Further, educated people have more exposure to extension agencies, scientists, and research stations *etc*. Most of the beneficiaries were having marginal and small land holdings which, does not cause much change in direct changes like yield and net income of beneficiaries. The beneficiaries of NFSM-Rice programme in the study area were high in media exposure which effects the direct changes but not the land holding. Beneficiaries with good farming experience were having medium adoption rates in rice regarding cultivational practices, which, does not effect the direct changes like yield and net income of beneficiaries. Trainings provides the knowledge and understanding of all the available agricultural information which in turn leads to the adoption of innovative technologies. It also helps in building of self-confidence and achievement of their goals.

Beneficiaries who experienced more direct changes through their participation in co-operatives and welfare associations as a member are likely to have more information gathered regarding NFSM-Rice activities than the beneficiaries with less social participation. So, they can go for cultivating new practices which in turn increases direct changes like yield, net income and adoption. Beneficiaries getting more information from the extension agents and Subject Matter Specialists (SMSs) at the time of demonstrations, training programmes, study tours and exhibitions regarding the improved technologies. Hence, those who had more extension contacts undergo more direct changes. High mass media consumption enhances the beneficiaries to undergo direct changes like knowledge and adoption on several aspects of farm technology to get more income through high yield. Beneficiaries who takes good decisions regarding cultivation of HYVs and new technologies by consulting extension agencies or scientists results in increase in direct changes like yield and income of beneficiaries. Their enthusiasm and zeal to become economically sound. It is assumed that achievement motivation makes the beneficiary to get direct changes in terms of increasing yield, net income.

Majority of the beneficiaries were belonged to low risk orientation means they do not want to take much risk, though, they will cultivate the High Yielding Varieties (HYVs) which in turn increase the direct changes like yield and net income because most of the beneficiaries were marginal farmers. Beneficiaries who pay attention to market information on prices in order to get high income, also try to improve their knowledge on production technology which helps in getting good yields. Beneficiaries with more scientific orientation will follow new production technologies which in turn increase the direct changes like yield and net income. Ability of innovative beneficiaries use the new ideas before most of the other farmers of the system adopt it. More innovativeness of the beneficiaries would have resulted in many direct changes in the way of increasing higher yields and net income.

From the Table 2, it was observed that Whereas, in case of indirect changes the computed 'r' values of independent variables like education, training received, extension contact, mass media exposure, decision making, achievement motivation, market orientation, scientific orientation, innovativeness were found to be positively significant at 0.01 level of probability whereas risk orientation was negatively significant. Similar results were reported by Manoj (2008), Ashok Kumar (2011), Nagendra Babu (2015). Whereas independent variables like age, land holding, socio-politico participation were found to be non-significant and farming experience was found to be negatively non-significant with the indirect changes experienced by the beneficiaries. Similar results were reported by Meshram *et al.* (2006), Nagendra Babu (2015).

The reasons for the above findings might be due to most of the beneficiaries being middle aged with more farming experience, on other side of the beneficiaries as the age passes there is decreasing recalling ability. This might be the reason to show non-significant association with the indirect changes. Higher education of the beneficiaries permits their minds to be free to learn new information which enhances their communication behaviour, self confidence and keen decision making to get more changes in their livelihood.

Table 1: Relationship between selected independent variables with direct changes of NFSM-Rice beneficiaries   (n=120)

S. No.	Profile Characteristics	'r' value
1	Age	0.270**
2	Education	0.778**
3	land holding	0.110NS
4	Farming experience	-0.027NS
5	Training received	0.776**
6	Socio-politico participation	0.211*
7	Extension contact	0.809**
8	Mass media exposure	0.871**
9	Decision making	0.250**
10	Achievement motivation	0.816**
11	Risk orientation	-0.534**
12	Market orientation	0.288**
13	Scientific orientation	0.891**
14	Innovativeness	0.826**

Table 2: Relationship between selected independent variables with indirect changes experienced by the NFSM-Rice beneficiaries   (n=120)

S. No.	Profile Characteristics	'r' value
1	Age	0.143NS
2	Education	0.861**
3	Land holding	0.067NS
4	Farming Experience	-0.153NS
5	Training received	0.867**
6	Socio-politico participation	0.145NS
7	Extension contact	0.876**
8	Mass media exposure	0.911**
9	Decision making	0.417**
10	Achievement motivation	0.784**
11	Risk orientation	-0.490**
12	Market orientation	0.335**
13	Scientific orientation	0.877**
14	Innovativeness	0.903**

NS = Non significant   ** Significant at 0.01 level of probability
*Significant at 0.05 level of probability

Table 3: Multiple linear regression analysis of profile characteristics of NFSM-Rice beneficiaries with their direct changes (n =120)

S. No.	Profile Characteristics	Regression coefficient	Standard error	't' value
1	Age	0.017	0.007	2.444
2	Education	-0.288	0.147	-1.966*
3	Land holding	0.029	0.037	0.785
4	Farming experience	-0.008	0.007	-1.113
5	Training received	-0.115	0.145	-0.793
6	Socio-politico participation	-0.45	0.058	-0.778
7	Extension contact	-0.261	0.133	-1.965
8	Mass media exposure	0.756	0.139	5.430**
9	Decision making	-0.007	0.043	-0.152
10	Achievement motivation	0.377	0.178	2.121*
11	Risk orientation	-0.084	0.04	-2.107*
12	Market orientation	-0.012	0.022	-0.552
13	Scientific orientation	0.576	0.081	7.074**
14	Innovativeness	-0.319	0.095	-3.340**

a = -8.58 R^2 = 0.885

NS = Non significant   * Significant at 0.05 level of probability

                                    **Significant at 0.05 level of probability

Y= -8.58+ 0.017x1 + -0.288*x2 -0.029x3 -0.008x4 -0.115x5 - 0.045 x6 - 0.261 x7 + 0.756** x8 - 0.007x9 + 0.377*x10 -0.084* x11 -0.012 x12 + 0.576**x1 3 -0.319**x14

Table 4: Multiple linear regression analysis of profile characteristics of NFSM-Rice beneficiaries with their indirect changes (n =120)

S. No.	Profile Characteristics	Regression coefficient	Standard error	't' value
1	Age	0.01	0.003	0.041
2	Education	-0.053	0.07	-0.764
3	Land holding	-0.005	0.018	-0.272
4	Farming Experience	-0.003	0.003	-1.015
5	Training received	0.089	0.069	1.29
6	Socio-politico participation	-0.037	0.028	-1.336
7	Extension contact	0.072	0.063	1.144
8	Mass media exposure	0.136	0.066	2.055*
9	Decision making	0.071	0.021	3.471**
10	Achievement motivation	-0.128	0.085	-1.508
11	Risk orientation	-0.05	0.019	-2.625*
12	Market orientation	0.004	0.01	0.344
13	Scientific orientation	0.01	0.039	0.269
14	Innovativeness	0.169	0.045	3.721**

a = 10.235   NS = Non significant

R^2 = 0.886   * Significant at 0.05 level of probability

                                    **Significant at 0.01 level of probability

Y= 10.235+ 0.001x1 -0.053x2 -0.005x3 -0.003x4 + 0.089x5 - 0.037 x6 + 0.072 x7 + 0.136* x8 + 0.071**x9 - 0.128x10 -0.050* x11 + 0.004 x12 + 0.010x1 3 +0.169**x14

Education implied indirect changes in behaviour which favoured better living conditions of the beneficiaries. There was no increase or decrease in indirect changes like use of high yielding varieties, pesticides and fertilizers, communication behaviour and reduction in cost of cultivation with the increase or decrease in land holding. There was no increase or decrease in indirect changes like use of high yielding varieties, pesticides and fertilizers, communication behaviour and reduction in cost of cultivation with the increase or decrease in farming experience.

Trainings impart the knowledge and understanding of all the available agricultural information which in turn leads to the adoption of innovative technologies. Knowledge and practice gained through trainings could help respondents to go for high yielding varieties to gain higher yields. There was no relation between socio-politico participation with the indirect changes of beneficiaries. Beneficiaries experienced more indirect changes through participation in extension activities like demonstrations, group discussions, field days, exhibitions and training programmes conducted by A.O, A.E.Os and agricultural departments. As contacts increases, the indirect changes of beneficiaries will also increase. The beneficiaries who had exposed to mass media like television, newspapers, magazines, bulletins more frequently would have got more and detailed information on cultivation, which might be helping them to increase their indirect changes.

Beneficiaries who takes good decisions, automatically their indirect changes like change in use of high yielding varieties, pesticides and fertilizers, communication behaviour and reduction in cost of cultivation will increases. Higher achievers could get more indirect changes to achieve the difficult goals like reduction in the cost of cultivation by using recommended practices in cultivation with high self confidence. Majority of the beneficiaries were low risk orientation and marginal farmers which results in increase in indirect changes like use of HYVs to get more yield to live happily.

Beneficiaries who pay attention to market information could face indirect changes like correct decision making and information on prices could get high income that helps in increasing their economic status. More scientific orientation increases the indirect changes like change in use of HYVs, pesticides, fertilizers and also increases the decision making and self confidence. Beneficiaries who are earlier in the use of improved varieties, recommended doses of pesticides and fertilizers, adopting the new ideas and methods before most of the beneficiaries adopt it. More innovativeness of the beneficiaries would have resulted in many indirect changes in terms of change in their social status, self confidence and decision making by increasing the yield and income.

From the Table 3, revealed that all the fourteen variables put together explained the variance in the direct changes to the extent of 88.50 per cent undergone by the beneficiaries. Independent variables like mass media exposure, achievement motivation and scientific orientation contributed significantly to the direct changes experienced by the beneficiaries.

The profile characteristics namely mass media exposure, scientific orientation were found to be positively significant at 0.01 level of probability. Whereas, achievement motivation was found to be positively significant at 0.05 level of probability.

From the Table 4, revealed that all the fourteen variables put together explained the variance in the indirect changes to the extent of 88.60 per cent undergone by the beneficiaries. Independent variables like mass media exposure, decision making and innovativeness contributed significantly to the indirect changes experienced by the beneficiaries.

The profile characteristics namely decision making, innovativeness were found to be positively significant at 0.01 level of probability. Whereas, mass media exposure was found to be positively significant at 0.05 level of probability.

CONCLUSION

From the above findings it is concluded that 'r' values of some independent variables showed positive and significant relationship with the both direct and indirect changes experienced by the beneficiaries. It was also acknowledged from the study that the regression coefficient values of mass media exposure, achievement motivation and scientific orientation contributed significantly to the direct changes experienced by the beneficiaries. Whereas, mass media exposure, decision making and innovativeness contributed significantly to the indirect changes experienced by the beneficiaries. Hence, it is a good sign that NFSM-Rice programme has been doing an enormous role in bringing new ideal technologies and motivating beneficiaries to improve personal and socio-economic conditions and facilitating adoption of innovative technologies. To maintain its stand, NFSM-Rice programme need to give further due importance for the other attributes along with the above significant attributes with suitable changes by the staff to promote desirable changes in a consistent manner among the beneficiaries in years to come.

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