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ABSTRACT

Pulses constitute an important ingredient in predominantly vegetarian Indian diet. On an average, pulses contain 20-25% protein on dry seed basis, which is almost 2.5-3.0 times of the value of cereals. India has the highest area & production of pulses in the world. The country is blessed with agro-ecological conditions favourable for growing major pulse crops. It occupy 68.32 million hectare area and constitute 57.51 million tones to the world food basket. India shares 35.2% area and 27.65% of the global production. Pulses are equally important for maintaining soil health and sustainability of different cropping systems. The rise in pulses imports between 1980 and 1988 was over ten fold from 54,000 to 7.24 lakh tones and during 2002-2003, the total import of pulse rose to 1880 thousand tones in the country. The overall production of pulses in India has increased considerably since the first five year plan, but the country has yet to witness a breakthrough and establish the production of such an important and cheap source of protein energy, minerals and vitamins which has been stagnating in the last five years. This segment needs strengthening when it is realized that the per capita availability of pulses has declined from 70g a day in the mid-fifties to nearly 35 gm/day now (2001-2002). Therefore, there is an urgent need to step-up the production on a sustainable basis. Substantial scope for harnessing the potential of pulses exists both in terms of increase in the area and productivity. Realising
this fact, the ICAR, launched the Front Line Demonstration Programme on pulses through its Krishi Vigyan Kendras in the country.

The country wide experiment through front line demonstration on pulses for the last ten years under varying conditions clearly indicates the possibility of increasing pulse production. In the state of Bihar the FLD on pulses is being implemented through 16 KVKs. Through these KVKs a number of front line demonstrations on pulses are being organized every year.

With the broad objective of assessing the effectiveness of FLD on pulses the present study has been undertaken. The specific objectives of the study are:

(i) To assess the differential impact of FLD on the knowledge of demonstrating and non-demonstrating farmers in relation to Rabi pulse production technology.

(ii) To find out the differential impact of the FLD on the adoption behaviour of both the categories of farmers in relation to rabi pulse production technology.

(iii) To measure the differential impact of FLD on making change in the attitude of both the categories of farmers in relation to rabi pulse production technology.

(iv) To study the relationship between selected socio-economic and psychological variables of both the categories of the farmers and the differential impact of FLD in relation to rabi pulse production technology.

(v) To ascertain the direct and indirect effect of selected variables on differential impact of FLD for both the categories of farmers.

(vi) To ascertain the constraints as perceived by the demonstrating and non-demonstrating farmers in adoption of rabi pulse production technology.

Methodology

This study has been conducted in experimental research design. For that purpose, a multistage sampling procedure have been followed. At first, 4 KVKs located in the districts of Munger, Nalanda (Hareraut), Begusarai (Khodawandpur) and Muzaffarpur (Saraiya) have been purposively been selected. There after fifteen demonstrating farmers in each KVK in the field of whom the FLD programme on pulse was conducted by these four KVKs during rabi 2003-04 have been chosen. In the third stage equal number of pulse growing non-demonstrating farmers from the same villages of the four KVKs have also been chosen following the random sampling technique. In this way the sample of the present study consisted for 60 demonstrating farmers and 60 non-demonstrating farmers. The demonstrating farmers have been considered as experimental group and the non-demonstrating farmers have been considered as controlled group.
Salient findings

The study revealed that

(i) The majority of the respondent in the two categories i.e. demonstrating, non-demonstrating as well as in the case of total farmers belonged to middle age group falling between 31 to 50 years followed by the respondent in young and old age group.

(ii) The majority of demonstrating farmers were literate possessing medium cropping intensity, high fertilizer consumption behaviour whereas majority of the non-demonstrating farmers had above high school education, possessing medium cropping intensity and medium fertilizer consumption behaviour.

(iii) The majority of demonstrating farmers possessed medium annual family income, high risk proneness, medium degree of contact with the extension agency, high innovations proneness, high attitude towards pulse productions technology, medium economic motivation as compared to the non-demonstrating farmers who possessed medium annual family income, high risk preference, medium degree of contact with the extensions agency, high innovation proneness, medium attitude towards PPT, medium economic motivation.

(iv) The majority of demonstrating farmers did have the high adoption and knowledge towards pulse productions technology as compared to the non-demonstrating farmers.

(v) The t-value that is 7.036 in respect of the difference in the knowledge of demonstrating and non-demonstrating farmers towards the pulse productions technology was highly significant. Hence, the study concluded that the knowledge has played a significant role in gaining the knowledge of pulse production technology disseminated through FLD programme.

(vi) The t-value that is 3.682 in respect of the difference in adoption of demonstrating and non-demonstrating farmers related to the pulse productions technology were also found to be significant. Hence, the study indicated that the FLD programme had been effective in influencing the adoption behaviour of pulse production technology among the farming community of the area of study.

(vii) Out of ten independent variables as many as six variables were found to be significantly correlated with the knowledge toward pulse production technology in case of demonstrating farmers. These variables were age, education, annual family income, cropping intensity fertilizer consumption behaviour and attitude towards PPT.

(viii) The multiple regression analysis of independent variables with the knowledge of demonstrating farmers towards the pulse production technology revealed that out of the ten variables only three variables,
age, annual family income and fertilizer consumption behaviour were found to be significant. The calculated ‘F’ value in this case was also found to be highly significant.

(ix) The path coefficient values revealed that annual family income, fertilizer consumption behaviour and economic motivation were the most influential factors directly influencing the demonstrating farmers for having the knowledge towards pulse productions technology. The other factor which yielded substantial direct effect was education.

(x) Out of ten independent variables as many as seven variables were found to be significantly correlated with the level of adoption toward pulse production technology in case of demonstrating farmers. These variables were age, education, annual family income, cropping intensity, fertilizer consumption behaviour, degree of contact with the extension agency and attitude towards PPT.

(xi) The multiple regression analysis of independent variables on adoption towards pulse production technology in case of demonstrating farmers revealed that out of ten variables, two variables, age and annual family income were found to be significant. The calculated ‘F’ value was found to be highly significant.

(xii) The path coefficient analysis revealed that annual family income, fertilizer consumption behaviour and economic motivation were directly affecting the adoption of demonstrating farmers regarding pulse production technology. The other factor which yielded substantial direct effect was education.

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