

Abstract

The endeavor on the development of various farmer-friendly technologies has been prioritizing for the benefit of the farmer. Still the gap has been identified in literature on farmer's capacity development. This farmer-centric research identifies the indicators of capacity development of Indian farmers through reducing the challenges of technology transfer training (TTT) by redesigning resource deployment mechanism. Field survey research has been adopted to collect qualitative and quantitative data. Small/ marginal individual farmer is the unit of analysis. The final sample size is considered to be 402. Data were analyzed using exploratory factor analysis (EFA) on the three constructs, viz., 'challenges in technology transfer training (TTTC)', 'capacity development of Indian farmers (CDF)', and 'redesigning resource deployment (RRD)' to identify the factors whereas impact of RRD and TTTC on CDF was investigated by using regression analysis.

Extraction in EFA results two factors, viz., challenges in technology transfer training comprehension (TTTC_{COMP}), and customization (TTTC_{CUST}) under TTTC; three factors, viz., efficient market linkage (EML), effective resource utilization (ERU), and safe and healthy farming (SHF) under CDF; and four factors under RRD, viz., structural development (RRD1), appropriateness of socio-political environment (RRD2), institutional integration at different levels (RRD3), and training delivery mechanism (RRD4) for technology adoption. Regression models are run with three factors of CDF as dependent variables, and factors of TTTC and RRD as the independent variables. Interaction effect has also been examined by interaction of TTTCs and RRDs.

The key finding of this research is identification of various farmer-centric indicators (factors) of agricultural technology transfer training challenges and exploration of their role in capacity development of a farmer. The factors under CDF reveal the components of capacity development and under RRD explore various redesigning options to reduce technology transfer training challenges. Interaction results reveal, for the first time, some serious dichotomy in agriculture. When farmers are encouraged for higher yield this study indicates various negative impacts due to higher crop productivity. This study suggests many redesign options which will upgrade farmers' performance and will lead to betterment of farmers' livelihood by contributing in capacity building of Indian farmers.

Keywords

Agricultural education and extension, Technology transfer training, EML, CDF, RRD, Sustainable agriculture, Agro-ecosystem.