

ABSTRACT

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The concept of plant clinic is a relatively new approach in global agriculture extension which was introduced in Nepal in 2008 and mainstream in government extension system since 2011. This study was conducted during 2012-2016 by taking 350 sampled farmers from 5 villages of Chitwan district. The pre-tested questionnaire was used to collect the primary information on plant health issues and rice cultivation. Out of the total sampled farmers, fifty percent (175) were clinic attendants and another fifty percent (175) were non-attendants. Descriptive statistics, inferential statistics and econometric models were used to analyze and interpret the data collected. The average household size was significantly higher among the attendants (5.11) than non-attendants (4.58). The majority (60.6%) of the attendant was male and that of non-attendant (58.3%) were female. The literacy rate was found to be 89.1% among attendant and 74.9% among non-attendants. Agriculture was found to be a major family occupation for the 79.4% attendant household, whereas only for 68% of non-attendants. The average land holding size was found to be significantly higher (0.54 ha) among the attendants than non-attendants (0.43ha). The study found 84% of clinic attending and 60% of non-attending farmers were affiliated with the farmer's organization. Whereas 64% attendants and 33.7% non-attendants had participated in training related to agriculture. This study revealed that 61.4% of the total respondent have access to extension services which is very close to attending and non-attending. Only 17.7% of the attendants and 31.1% of non-attendant had frequent contact with public extension. The study found a positive increment amount of organic fertilizer and chemical fertilizer used in rice cultivation among both categories of farmers, but the increment was higher among non-attendants. The seed rate was found to decrease significantly by attendants but increased by non-attendants. The average dose of herbicide among clinic attendant was found to decrease significantly after the clinic participation but increased significantly among the non-attendants. The number of chemical pesticide users in rice was increased by 9% and 3% among attendants and non-attendant respectively. The average dose of chemical pesticide was found to be increased significantly among clinic attendants, but insignificantly among non-attendants. The average cost of cultivation among clinic attending farmers was Rs.50,175.3/ha before the clinic, which has increased significantly to Rs.59,771.8/ha. Similarly, the average cost of cultivation among non-attending farmers were Rs.48,021.6/ha during the pre-clinic period that also increased significantly to Rs.62,242.0/ha during the post-clinic period. The increment in the cost of production was significantly lower (Rs.4,623.9/ha) among clinic attending farmers. The average farm gate price was found to be Rs. 18.4 in both categories of farmers, which was increased significantly to 22.05 and 21.96 among clinic attendant and non-attendant in post clinic period. The average revenue was Rs.63,215.0/ha and Rs.63,037.2/ha among clinic attending and non-attending farmers respectively during the pre-clinic period that has increased significantly to Rs.84,506.6/ha and Rs.78,378.4/ha

respectively during the post clinic period. It was higher among the attendants during both periods, but only significantly higher during the post-clinic period. The difference in difference was significant and higher among clinic attendants. The productivity of rice before the clinic period was 3.42 mt/ha among both categories of the farmers, which was increased to 3.83 mt/ha among attendants and 3.57 mt/ha among non-attending farmers with an incremental change of 0.41 mt/ha and 0.15 mt/ha among attendants and non-attendants respectively. The difference in the increment in productivity was significantly higher (0.26 mt/ha) among the attendants. The average profit of rice cultivation before the clinic was Rs.13,039.8/ha and Rs. 15,015.6/ha among clinic attendant and non-attendant respectively, which were increased to Rs. 24,734.9/ha and Rs. 16,136.8/ha respectively during the post-clinic period. The increment was significant only among the attendants. This difference-in-difference was found significant with an absolute value of Rs.10,574.2/ha. The study revealed the distinct and wider changes in knowledge, attitude, and practices of clinic users than non-users. The changes, particularly in their skill to recognize the crop pest and diseases; the probable season of occurrence of diseases and pests; the economic threshold level; preventive and curative measures of pest and disease control; knowledge and adoption of recommended doses of fertilizers and pesticides; adoption of waiting period after pesticide application was found remarkably high among the clinic users than non-users. The study found gender of household head, education, membership with farmers group or cooperative, training number of visits to public extension, number of visits to NGO and agriculture as major occupation was found to be significant positive determinants to affect the farmer's decision on participation on clinics while the distance to plant clinic and number of visits to agrovets were found to be significant negative factor.