ROLE OF TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURE IN ROHILKHAND REGION OF U.P.

ABSTRACT

THESIS

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ABSTRACT

Agriculture constitutes an important activity of the people living in the Rohilkhand region. New agricultural strategy provides a base for further research in technological application in increasing the quantum of production and productivity per unit area and per person.

The objectives of the sustainable development of agriculture in the region are i.e., to produce the crops in harmony with the nature without doing the loss to the environment, improve income and living standards of the people living in the rural areas. Social justice and attainment of equal opportunities are the corner stones in the development strategies.

The Rohilkhand region forms a part of the state of Uttar Pradesh (U.P.) and covers an area of 30,257 sq.km. (10.27 per cent) of the state, and lies in between latitudes 27°35′N and 29°58′N and longitudes 78°0′E and 80°27′E.

The entire region comprises 7 districts namely, Bijnore, Moradabad, Rampur, Budaun, Bareilly, Shahjahanpur and Pilibhit. Each district is further sub-
divided for administrative purposes into a number of tehsils, development blocks and villages as that district consists. There are 37 tehsils, 90 development blocks and 15,058 villages in the Rohilkhand region. The region contains a total population of 16.6311 million persons, given an average density of 550 persons per sq.km. (1991 census).

The following are some of objectives to take the study:

1. To take a stock of physical characteristics of the region which provides a basic frame for the cultivation of land and performance of agriculture in Rohilkhand region.

2. To examine the extent of land utilization and crop landuse patterns in the Rohilkhand region.

3. To analysis the agricultural productivity and demarcate productivity regions in the Rohilkhand region.

4. To examine the role of technological factors and to establish their relation with agricultural development in the Rohilkhand region.
5. To undertake an analysis of output and input in crop productivity regions, and to determine the levels of agricultural development in the Rohilkhand region.

6. To suggest suitable measures for the future agricultural development in a sustainable manner in the region.

The present work is based on secondary sources of data published in the statistical bulletins for each district namely, Bijnore, Moradabad, Rampur, Budaun, Bareilly, Shahjahanpur and Pilibhit for the period of five successive years 1994-95 to 1998-99 on an average basis. The required data are collected and kept in records by the concerned District Statistical Office in each district.

Considering the equality of size and homogeneity and contiguity of the socio-economic and physical composition, development block is considered as a viable unit of analysis.

The agricultural productivity indices for 90 development blocks were computed with the help of
area and production of 18 major crops grown in the region. These crops were grouped into as: cereals (rice, wheat, barley, jowar, bajra and maize); pulses (blackgram (urd), greengram (moong), lentil (masoor), gram, peas and pigeon-pea (arhar/tur); oilseeds (mustard, sesame (til), groundnut and sunflower) and cash crops (sugarcane and potatoes).

Productivity indices for the crops concerned and for each block were calculated on the basis of Yang's Crop Yield index. Some of the technological factors were selected so as to establish the correlation with agricultural development. Factor Analysis techniques was applied by selecting a set of 14 variables. The computation of data was done on SPSS Programme on ALPHA System at the Computer Centre, A.M.U. Aligarh. Finally, the levels of agricultural development were determined with the help of computed Composite Index.

The overall assessment of the study reveals that the agricultural development in Rohilkhand region is more dependent upon the management of technological
factors which are shared in the cultivation in the form of irrigation, fertilizers, High-Yielding Varieties (HYV) of seeds and mechanization. The development blocks which show a concentration of high degree of agricultural innovations are agriculturally advanced than the blocks in which the farming is traditional and nature's role is dominant.

However, the present level of agricultural development in the region needs improvements in order to meet the demands of populations by adopting certain strategies for sustainable development of agriculture in the development blocks of the Rohilkhand region.