

## CHAPTER VI

### AGRICULTURE AND MODERNIZATION

High agricultural development has been associated with agricultural modernization. The introduction of high yielding varieties, availability of water, application of chemical fertilizers, plant protection material and improved implements have been the most important agricultural inputs in bringing about agricultural modernization in the developing countries of the world<sup>1</sup>.

A household agricultural development, in the context of this study, is taken to mean a household leveling its land, applying chemical fertilizers and plant protection measures such as pesticides, breeding high yielding varieties, using improved tools and implements, making use of artificial insemination in breeding animals, and bringing the land increasingly under irrigation.

In this chapter an association between the agricultural development and modernization variables has been thoroughly examined in the light of the hypotheses outlined earlier.

#### 1) Measurement of Agricultural Modernization:

On the basis of the index of the household agricultural modernization the position of each household on agricultural modernization has been measured in terms of (i) " static, " (ii) " low transitional ", (iii) " high transitional ", and

(iv) " modern " household.

'Static household', on agricultural modernization, is taken to mean a household with no agricultural modernization, i.e., zero per cent agricultural modernization.

'Low transitional household' is referred to mean a household with less agricultural modernization, i.e., modernization from 1 to 33 per cent.

'A high transitional household' means a household with more agricultural modernization, i.e., modernization from 34 to 66 per cent.

'A modern household' is defined as a household with high agricultural modernization, i.e., modernization from 67 to 100 per cent.

2) Agricultural Modernization in the Selected Village:

From Table No.16 and figure 3 it will be seen that out of the 50 sample households in the selected village, none was static, i.e., no agricultural development at all, almost 14 per cent were low transitional, i.e., less developed in agriculture, 32 per cent were high transitional, i.e., more developed in agriculture and remaining 54 per cent were modern, i.e., highly developed in agriculture.

2.4) Agricultural Modernization and Caste:

From Table No.17 it is evident that out of the 50 sample households in the selected village, 80 per cent

belonged to the upper caste group, and the remaining 20 per cent belonged to the lower caste group.

In the 80 per cent upper caste group households from the selected village, none was static, 8 per cent were low transitional, 24 per cent were high transitional and the remaining 48 per cent were found to be modern in agriculture.

And in the 20 per cent lower caste group households from the selected village, none was static, 6 per cent were low transitional, 8 per cent were high transitional and remaining 6 per cent were found to be modern in agriculture.

Thus, agricultural modernization appears to be positively associated with upper caste group in the selected village.

## 2.2 Agricultural Modernization and Landholdings:

It is clear from Table No.18 that out of the 50 sample households from the selected village, a little above 58 per cent belonged to the smaller landholding group of households and the remaining 42 per cent belonged to larger landholding group.

In the 58 per cent smaller landholding group of households from the selected village, none was static,

10 per cent were low transitional, 22 per cent were high transitional and the remaining 26 per cent were found to be modern in agriculture.

In the 42 per cent larger landholdings group of households from the selected village, none was static, 4 per cent were low transitional, 10 per cent were high transitional and the remaining 28 per cent were found to be modern in agriculture.

Almost all the totally undeveloped households, i.e., static households, appear to be associated with the smaller land holdings group in the selected village.

Thus, agricultural modernization appears to be positively associated with the larger landholdings group of households in the selected village.

### 2.3) Agricultural Modernization and Income-Groups:

It will be seen from Table No.19 that out of the 50 sample households from the selected village, a little over 20 per cent belonged to the lower income group, 60 per cent belonged to the middle income group, and the remaining 20 per cent belonged to the higher income group.

In the 20 per cent lower income group households from the selected village, zero per cent were static, 4 per cent were low transitional, 6 per cent were high

transitional and the remaining 10 per cent were modern in agriculture.

In the 60 per cent middle income-group households from the selected village, none was static, 8 per cent were low transitional, 26 per cent were high transitional and the remaining 26 per cent were found to be modern in agriculture.

In the 20 per cent higher income-group households from the selected village, none was static, 2 per cent were low transitional, none was high transitional and the remaining 18 per cent were found to be modern in agriculture.

In general, middle income groups and more particularly higher income groups, from the selected village appear to be highly developed in agriculture.

Thus, agricultural modernization appears to be relatively more associated with either middle or higher income group of the selected village.

#### 2.4) Agricultural Modernization and Cropping Pattern:

It is evident from Table No.20 that out of the 50 sample households from the selected village, 40 per cent belonged to cash crop producing group of households, while 60 per cent belonged to non-cash crop producing group.

In the 40 per cent cash crop producing group of households from the selected village, none was static,

2 per cent were low transitional, 10 per cent were high transitional, and remaining 28 per cent were modern.

In the 60 per cent non-cash crop producing group of households from the selected village, none was static, 12 per cent were low transitional, 22 per cent were high transitional and remaining 26 per cent were found to be modern in agriculture.

The only static households in agriculture appears to be from cash producing group of households from the selected village, and in all the other categories of agricultural development i.e., low, more or high, cash crop producing households appear to correspond with agricultural development in the selected village.

Thus, agricultural development appears to be positively associated with the cash crop producing group of households in the selected village.

#### 2.5) Agricultural Modernization and Irrigation:

From Table No.21, it will be seen that out of the 50 sample households from the selected village, 28 per cent belonged to the perennially irrigated group of households, almost 72 per cent belonged to the seasonally irrigated group.

In the 28 per cent perennially irrigated group of households from the selected village, zero per cent were

static and low transitional, 8 per cent were high transitional and the remaining 20 per cent were found to be modern.

In the 72 per cent seasonally or rainfall irrigated group of households from the selected village, none was static, 14 per cent were low transitional, 24 per cent were high transitional and the remaining 34 per cent were modern.

Agricultural modernization appears to be positively associated with irrigation, either perennial or seasonal, in the selected village.

#### 2.6) Agricultural Modernization and Education:

It is clear from Table No.22 that out of the 50 sample households from the selected village, 2 per cent were totally uneducated, 36 per cent were less educated, 58 per cent were more educated and the remaining 4 per cent were highly educated or found to be modern in agriculture.

In the 2 per cent totally uneducated households from the selected village, all were found to be low transitional.

In the 36 per cent less educated households from the selected village, none was static, 6 per cent were low transitional, 18 per cent were high transitional and the remaining 12 per cent were found to be modern.

In the 58 per cent more educated households from the selected village, none was static, 6 per cent were low transitional, 14 per cent were high transitional and the remaining 38 per cent were found to be modern in agriculture.

In the 4 per cent high educated households from the selected village, none was static, low transitional and high transitional, only 4 per cent were found to be modern.

The extent to which education appears to be linked with agricultural modernization, it is clear that agricultural modernization does not appear to be linked with education.

Thus, in general, agricultural modernization appears to be relatively more associated with education.

Conclusion:

Agricultural modernization appears to be relatively more associated with the upper caste-group, larger landholdings, middle and higher income-groups, cash crop producing households, irrigation either seasonal or perennial, and high education.



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