A Farm Business Study of

100 COTTON, WHEAT, SUGARCANE FARMS IN MONTGOMERY AREA

GUY W. MILLER
and
Dr. A. A. KHAN

Why do some cultivators make more money than others in growing cotton in the Montgomery area of West Pakistan? This was the object of an investigation carried on 100 farms in that area. These farms were in the centre of what is called Canal Colony area of West Pakistan.

The farms were selected from 12 villages representing variations in soil type and farming practices of that area. Holdings near cities were avoided where growing vegetable or fodder crops is carried on extensively. From each of these villages tens farms were selected by the random sampling method. The 100 farms finally selected covered the usual 12.5 acre tract of that area.

A schedule of income from all sources and cash expenses of the farm and family was taken on each farm. A record of acreage and production of crops and numbers in the inventory of livestock was also secured. The record furnished information upon which a complete financial picture could be secured on each holding.

The type of farming as represented by the 100 records was the typical holding in Montgomery area. The 100 farms averaged 12 acres in size with the 10.66 acres in crops including double cropping and 2 acres fallow. There was an average of 7 members in the household. Livestock consisted of a pair of bullocks, 2 buffalo cows or milk cows and occasionally a few chickens. There was 24% of the cropped land in cotton, 37% in wheat, 8% in gram, and small areas of maize, sugarcane or rice as the cash or food grains. Twenty six percent of the area was devoted to fodder crop such as Berseem, Chari, Jowar, Guara and Turnips. There was an average of 2 full time man per farm throughout the year and one pair of bullocks to cultivate 12 acres of farm land.

For purposes of analysis the 100 farms were divided into 3 groups, the high third in income, the low third and a middle group of 34 records. The separation into groups was made on the basis of the income to the cultivator for the year's labour. The cultivators income was secured by deducting from his gross income such items of farm expenses as taxes, livestock purchases, farm supplies, repairs, to machinery, land, buildings, taxes, interest on the farmers own investment and wages for hired and family labour other than the operator.

The change in inventory due to depreciation and purchases was also considered. Agricultural products used in the home were treated as income to the farm. In this way the income for the operator of each farm was secured for a year period after he had paid these expenses and turned over a share of the crops to the Zamindar in case he was a tenant. The figures of each of the high income 33 farms were totalled and averaged in all the different items. The same was done to the low 33 farms in income while all the farms were thrown together into one group to get the average of all the one hundred farms. These will be designated hereafter as the high, low and average based on the income to the cultivator on his farm.

CAUSES OF GOOD INCOME REVEALED

In the first place we found that the cultivators in the high income group had Rs. 543 as pay for one year's labour. The average farm had Rs. 176 for the year's work while in the low group the cultivators had Rs. minus 165 for their year's labour. In other words they did not have enough money from their farm operation to pay them 6% interest on their investment and to pay a normal wage to the unpaid family labour. To present it in another way, the cultivator's lobour income plus 6% on his investment plus the wages of the unpaid labour in the family amounted to Rs. 952, in the high group Rs. 651, in the low group Rs. 713, the average of all 100 farms. In the analysis of these 100 records, the problem was to find why the good income group made more money than the others. Here are some of the reasons which the study revealed in favour of the high income group:—

(*i*) The farms averaged one acre, 9% more crop land, but due to double cropping they had 23% more acres in crops.

(*ii*) They had 24% of their crop land in cotton and 35% in wheat as compared to 22% and 27% in low group.

(*iii*) Fodder crops required only 23% of the total area as compared to 31% in the low group thus leaving more land for cash crops.

(*iv*) They had better bullocks, higher in value and with no death loss, cultivated 12 acres per pair bullock as compared to 10 in the low group with a death loss of 2 bullocks.

(*v*) The cultivators in the high group cultivated 6½ acres per man as compared to 4.2 in the low group.

(vi) The crop yields per acre were the most important factor causing higher incomes. The yield of seed cotton was greater by about 4 maunds per acre in the high than in the low group. The yield of wheat was practically 4 maunds per acre greater. The yield of sugarcane was 5 maunds of gur more per acre and of gram 2 maunds higher per acre.

We include here one table to show the difference in yields and value per acre of the different crops on these farms in the Montgomery area.

TABLE 1 – YIELD AND VALUES PER ACRE OF IMPORTANT CROPS

			High 33 Average	Low 33 per	All 100 farm
Cotton, Yield per Acre	…	Mds.	9.42	5.56	7.25
Cotton, Value per Acre	…	Rs.	206	115	154
Wheat, Yield per Acre	…	Mds.	17.1	13.5	14.7
Wheat, Value per Acre	…	Rs.	207	160	177
Wheat, Bhusa, Yield per Acre	…	Mds.	25.4	25.2	21.8
Wheat, Bhusa, Value per Acre	…	Rs.	38.1	21.6	27.4
Sugarcane, Yield per Acre	…	Mds.	33.2	27	30
Sugarcane, Value per Acre	…	Rs.	456	339	392
Rice, Yield per Acre	…	Mds.	20.1	–	23.2
Gram, Yield per Acre	…	Mds.	7.8	5.66	6.42
Maize, Yield per Acre	…	Mds.	15.3	–	15.6
FODDER CROPS					
Berseem, Value per Acre	…	Rs.	207	186	192
Turnips, Value per Acre	…	Rs.	164	156	151
Chari, Value per Acre	…	Rs.	124	118	120
Jowar, Value per Acre	…	Rs.	147	130	127
Guara, Value per Acre	…	Rs.	125	86	107
Chari-Guara, Value per Acre	…	Rs.	116	125	122
Food & cash crops, value per acre	…	Rs.	201	149	173
Fodder & feed crops, value per acre	…	Rs.	182	170	175
Fodder & feed crops, % of total corp value	…		23.4	30.6	25.2

What were some of the reasons for securing better crop yields? Here are some of the practices which brought results:—

(*a*) Eleven farms in the high income group used an acre of guara per farm as green manure.

(*b*) At least 14 cultivators line-sowed their cotton and used seed drills on their wheat crop.

(*c*) More than half of the cultivators in the high group used improved implements to plough the land and prepare the seed bed.

(*d*) The quality of the land was also better as indicated by 17% higher land value and 20% more double cropping.

(*e*) Better livestock played an important part in the higher incomes. The high group had 1/6 greater output of milk from 65 milk buffaloes than the low group had from 70 buffaloes. The production of milk per buffalo was worth Rs. 185 as compared to Rs. 148 in the low group.

To the cultivators interested in the growing of cotton, it can be pointed out that the larger area and higher yields of cotton per acre gave the high group more than twice as many maunds of cotton for sale as was available in the low group. The high group had also 46% more wheat to eat or for sale than the low group. As a result their consumption of food per person was one fourth larger than in the low group. In other words the better yields of crops and higher production of livestock enabled the cultivators to have more cotton to sell and more wheat and milk to consume.

——— - ———