

## EFFICIENT FARM MANAGEMENT IN PAKISTAN: A CASE STUDY OF HYDERABAD DISTRICT

Sobho Khan Jamali

Assistant Professor, Department of Economics, University of Sindh, Jamshoro

Dr. Pervez A. Pathan

Professor, Sindh Development Studies, University of Sindh, Jamshoro

### 1. ABSTRACT

*The research is geared to co-relate the enhanced agricultural<sup>††</sup> productivity with efficient farm management. In order to test the validity of study objectives, a workable methodology was designed. In this regard, a sample of 127 farmers was selected. While selecting farmers an i.e. respondent, heed was paid to ensure that the farmers were representative in terms of land holding and their location on the water courses. Talukas Matiari, Hyderabad and Tando Allahyar in district Hyderabad (at the time of study design these taluka were the part of district Hyderabad and at present one of them is a separate district) were selected as the study area. The selected farmers were further divided by progressive and non-progressive farmers.<sup>††</sup>*

*Study reveals that the demographic trends in the study area are same as else where in Sindh. For example more than 55% respondents conclude to have joint family system.*

*Out of total 127 respondents, approximately 79% who succeeded in the progressive category and were efficient farm managers vindicated that they had very good knowledge about input and output price for crops. They had access over the use of modern technology such as precision land leveling, laser use, and harvesters. The progressive farmers reported significantly higher crop yields for all traditional crops such as wheat, cotton, vegetables and sugar cane etc.*

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<sup>††</sup> According to economic theory production is the function of various factors such as irrigation supplies; land; fertilizer and etc. In this study efficiency in managing land is used as major contributor towards productivity.

<sup>††</sup> Progressive farmers were those who opted for intercropping; exposure to farm management; land leveling and precision and etc. Non-progressive farmers mostly they are non-resident, absentee and part time growers. They have lack of knowledge due to the lack of knowledge there in puts costs are higher and out put less from his farm.

## **2. Introduction**

Farm management as an art originates with the civilization. It has developed through the ages, with the accumulation of experiences of many individuals in the production of crops and livestock. While analyzing the efficiency, farm management takes into account the individual farmers and the farm as a whole. The farmers know that profits depend on balancing his operations; to realize the optimal returns farmers must carefully plan or allocate their limited labor, capital funds and abilities among the diverse lines on the farm so that cumulatively maximum production and income could be obtained.

The efficient farm management is regarded as an important factor that leads to enhanced productivity and prosperity. Several researchers suggest that efficiency of resource use could be termed as efficient management of factors of production such as land, labor, and capital. Thus the efficient farm management involves correct and timely decision-making regarding allocation of resources for optimal benefits studies<sup>§§</sup> indicates that managerial ability of farmers that comprises farmer's attitude and category (i.e. small, medium, large) has significant impact on performance in terms of enhanced received much lower returns than those who were full time farmers and were dedicated towards farm related activities.

## **3. Research Method**

For study purpose a sample of 127 farmers was selected. While selecting farmers i.e respondents, care was taken to ensure that the farmers were representative in terms of their land holdings and their location on the water courses. Talukas Matari, Hyderabad and Tandò Allahyar in district Hyderabad were selected as the study area. The selection criterion was largely based on the rationale that all these talukas were similar in terms of the agro - economic zones, resulting in similar cropping pattern, land holding

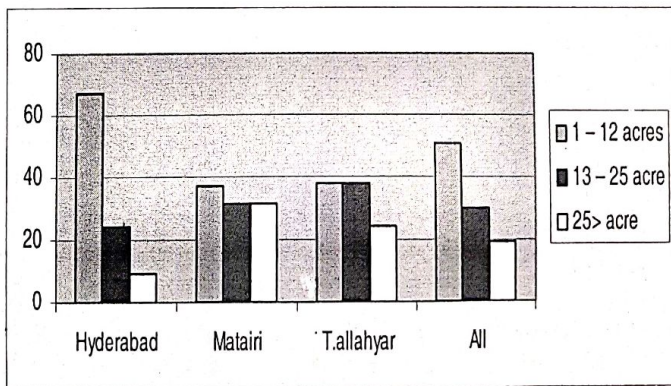
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<sup>§§</sup> Lurry, 1991, Jenson, 1954.

ownership and farmers activities in managing the farms. Besides for the study purpose it was relatively easier to locate progressive, non- progressive farmers which were one of the prerequisite for accomplishing study objectives. In addition, various other factors such as the trends in population growth rates, and literacy were also used as the selection criteria. Extensive survey using questionnaire, based on the checklists and pre-testing was used to collect primary data. The secondary data was collected from published reports.

#### 4. Results and Discussion

Figure-1 Indicates farm size in sample watercourse area. 51 percent of the farmers having the holding of 1-12 acres and the 30 percent hold 13-25 acres and the rest i.e. 19 percent have more than 25 acres of land holding. The land ownership pattern are similar in all these three talukas with no significant variation @95% CI\*\*\* in these talukas in terms of ownership pattern. This findings is further supplemented through figure 2 that shows farm size in all sample watercourse.



\*\*\* Confidence intervals.

Figure - 2: Farm Size in the Study area

N=127 Figure in %

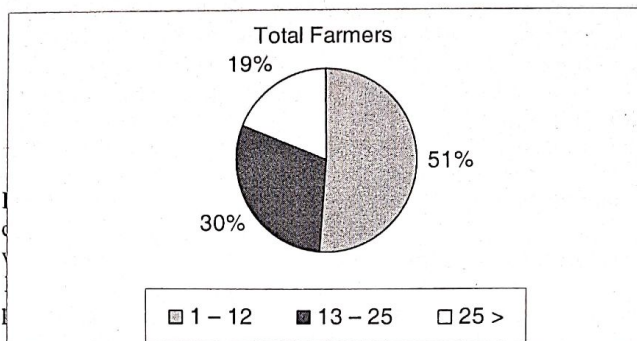


Figure - 3: Average Rental Charges on Annual Basis

N - 127

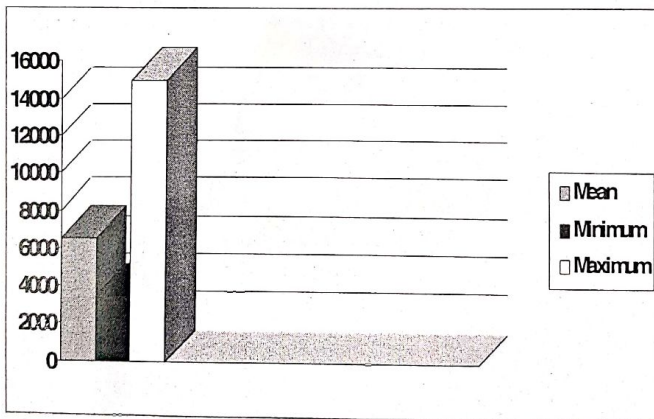


Figure - 3: provides data on land rents & leasing arrangements. The average rental charges were Rs.6862.00, with a minimum rent of Rs.3500 and maximum Rs.15000. This is quite understandable that the given quality of land along with an access

to the major inputs such as water availability which is adequate in the area. Leasing rates are the function of location of the land availability and adequate irrigation supplies. The land that is located near metal road, market & towns carry high price not only in terms of value per acre basis but also on the basis of higher leasing charges.

**Table -1: Intercropping<sup>†††</sup> Among Sample Farmers N = 127**

| Study Area        | Total Sample Farmers | % with Intercropping |
|-------------------|----------------------|----------------------|
| Hyderabad         | 58                   | 34 (20)              |
| Matari            | 32                   | 31(10)               |
| Tando<br>Allahyar | 37                   | 27(10)               |
| All Cases         | 127                  | 31(40)               |

**Note: Figures in () = Number of Cases**

Inter cropping is termed as one of the major factors for determining the farming status as progressive and non-progressive. Data indicates that only 40 percent of total 127 farmers opted for intercropping. Table 1 shows no statistical difference at 95 CI in patterns of farmers in all sample talukas adopting intercropping practices.

While probing into the benefits and decisions regarding adoption of the intercropping, the progressive farmers reported that the economic utility and viability of land in the study area has increased over past few years. Due to the in adequate availability of water for crops and pressure on land to grow crops round the year, it is important that land budgeting be planned for efficient utilization of land and for economic gains. The study shows that

<sup>†††</sup> Intercropping one acre is the land use where a farmer cultivates two crops or more than two crops in same piece of land. This method assist farmer to conserve inputs used for cultivation. Also, same input is used for more then one crop grown in same period of time.

only 34 percent of the total sample farmers in Hyderabad used intercropping. Similarly, out of total one 31 percent, 27 percent in Matiari and Tando Allahyar, farmers cultivated crops under intercropping. Tables 4 to 5 show the details about the profit margins derived by the progressive farmers with intercropping and non-progressive farmers without intercropping.

**Table – 2**  
**Comparison of Crop Yields and Net Incomes between**  
**Progressive and Non-progressive Farmers** N=127

| S. No. | Crops                    | With Intercropping |       |             | Without Intercropping |       |             | Net Differences in Incomes |
|--------|--------------------------|--------------------|-------|-------------|-----------------------|-------|-------------|----------------------------|
|        |                          | Yields             | Costs | Net Incomes | Yields                | Costs | Net Incomes | With intercropping         |
| 1      | Wheat with Oil seed #    | 173000             | 8656  | 6685        | 24600                 | 15175 | 5525        | 1160                       |
| 2      | Wheat with Sugar cane #  | 44800              | 27150 | 15700       | 50900                 | 32875 | 14125       | 1575                       |
| 3      | Sugar cane with Onion #  | 116900             | 44550 | 70400       | 106900                | 28225 | 44775       | 25625                      |
| 4      | Net Incomes from Crops # | -                  | -     | 92785       | -                     | -     | 64425       | 28360                      |

Source: Survey Data, 2004.

Note: #Differences are significant at 95 percent CI

At table-2 analysis of data demonstrates that the progressive farmers who use minimum two crops on one acre of land significantly gain higher net crop incomes as compare with non progressive farmers who chooses minimum two acre of land to grow two different crops. The intercropping on largely assists the progressive farmers to economize the use of land; it also helps him to efficiently use inputs such as fertilizers, pesticides and irrigation

supplies. Although average crop yields reported by the progressive farmers is low to that of non-progressive farmers. However, the cost production between two farmers is major differences, as cost to produce two crops in two acres of land by non-progressive farmers is significantly high to that of progressive farmers. This difference ultimately helps the progressive farmers to report higher crop incomes. The data indicates that one acre basis in a season using various combination of intercropping. This significantly registers higher net return (in Rs.28360) of progressive farmers to that of non-progressive farmers. Comparatively efficiency of progressive farmer is significantly high as almost 100 percent of total one acre is utilized by cultivated crops. Where as, the non-progressive farmers sets a side two access for two crops. The progressive farmers adopting intercropping is highlighted by cropping his activities with non-progressive farmers @ table 6.20.

**Table: - 3**

**Efficiency of Farm Management of Sample Watercourses Area**

| Research area     | Progressive |         | Non / progressive |         |
|-------------------|-------------|---------|-------------------|---------|
|                   | Rabi        | Kharif  | Rabi              | Kharif  |
| Land Utilization  | 100%        | 100%    | 80%               | 70%     |
| Cash Crops        | 50%         | 80%     | 30%               | 60%     |
| Management Skill  | 80%         | 80%     | 40%               | 35%     |
| Water maintenance | 3 times     | 3 times | 1times            | 1 times |
| Pesticides        | 3 times     | 4 times | 1 times           | 2 times |
| Technology Access | 100%        | 100%    | 60%               | 70%     |
| Formal loans      |             | 50%     |                   |         |
| Informal loans    |             |         | 60%               | 70%     |
| Relationship      | 75%         | 75%     | 20%               | 25%     |
| IPD               | 80%         | 70%     | 25%               | 30%     |

Table-3 highlights the efficiency status of sample farmers in managing farms by progressive and non-progressive methodologies. Data shows that progressive farmers tend to cultivate higher acreage to that of non-progressive ones. All after indicates of efficiency at table 2 the (i.e. cultivation of cash crops, management skills, and etc) are depicted indicating significantly high efficiency of progressive farmers as compared to non-progressive farmers. These differences are statically significant at 95 percent confidence intervals.

## 5. Conclusion and Recommendations

The study clearly demonstrated that, the progressive farmers were comparatively more literate and technically equipped to that of non – progressive farmers. The symmetrical distribution of land ownership patterns in all three sample talukas was observed, whereas, these patterns confirmed the inequity in the ownership patterns. As 67 percent farmers owned less than 20 percent of land in the area. The progressive farmers through efficient resources management obtained higher net crop incomes as compared to non – progressive farmers. The analysis of various variables such as farm size, land use, cropping pattern, yield, access of inputs, access to technology and education levels of efficiency criteria for farm management show that efficient farmers utilize land to the extent of 100% both in Rabi & Kharif<sup>†††</sup>, where as the non progressive farmers due to efficient farm management practices, utilize 80% of land in Rabi season and 70% in the Kharif season. The results indicate the significance and importance of good farm management practices. Farmers' training is regarded as an effective means of optimizing benefits from the agriculture. The study has demonstrated that progressive farmers who are experienced to farm related training/ workshops tend to record higher gains. Therefore, there is need to initiate policy for

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<sup>†††</sup> Rabi is crop season starts from October to March. Crop grown in this season include Wheat, Vegetables, Sugar cane and Fodders. Kharif summer crop season starts from April to October. In this season mostly cash crops Cotton, Rice, Vegetables and different types of Fodders are grown.

providing / encouraging farmers training programs in managing their lands. Multi cropping & intercropping shows significant gains in profitability. The multi cropping is largely adopted by those who fall under category of progressive farmers. Efforts be made to encourage such progressive farmers in motivating other farmers to adopt multi cropping & intercropping practices. It is suggested that a close liaison between the farmers & non-government organization could play an effective role.

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