

Full Length Research Paper

Family Farm Inputs and Dynamics: A Case Study of Olive Farming Operations

Jawad Atef Al-Dala'een

Department of Agricultural Economics, Karak University College, Al Balqa Applied University, Karak, Jordan.
E-mail: jawad.papers@gmail.com. Tel: 00962-78-6264002.

Accepted 16 March, 2025

This study is aimed at studying the input patterns of farming practices in family agricultural business. Olive farms were used as example for agricultural family business. Simple random sample was selected including 150 farmers in Karakgovernorate in Jordan. Out of these farmers about 89 farmers were included in the analysis practicing the agricultural family business. The questionnaire included parts reflecting the use of external work labor through the growing season. The results showed that the famers concentrate on minimizing the expenses to maximize the profit.

Key words: Agricultural family business, olive production, input patterns.

INTRODUCTION

Jervell (1999) defined family farming as: "a farm where the family derives most of its income from agriculture, excludes a major and growing part of the farm-owing to rural families." This makes the agricultural family business to be considered as one of the activities that is encouraged by governments to alleviate poverty rates in rural areas. Family agribusiness is adopted as part of long run sustainable development strategic policies (Meijerink and Roza, 2007). Agribusiness varies from area to another according to the available resources and infrastructure that support these activities. Agricultural production is one of the family businesses practiced to increase family income. Different authors indicated that agricultural family business is affected by different socio- economic factors depending on the type of agricultural activities managed (Sani and Danwanka, 2011; Bechman, 2001). One of the major characteristics of the agricultural family business is the disinvestment performance (Errington, 2002). In Jordan, like many other developing countries, the agricultural family business is characterized by socio-economical characteristics of the area. In traditional family system societies, fathers are considered the main decision makers and the other family members are followers. The general attitudes of farmers in agricultural family business are to minimize the running costs to maximize the profit of this business. One of the major practices used to minimize the running cost

is the reliability on family members to execute the daily agricultural activities. The most critical part that would affect the family business is the cost of inputs pattern which is mostly determined by family man.

Family men are applying either traditional farming systems or searching for plants that requires minimum work and cost. In family business, family members are considered basic workers at their farm under the supervision of family man (Hanson, 2008). Cost issues of farming input practices are determined mostly by family man who is in charge of running the farming activities. Mostly, working labor is saved through the family members. In high seasons, the family man would rent daily workers to follow the overload of extra agricultural activities (Hanson, 2008). In agricultural family business, the attitude is utilizing the rainfed crops even to minimize the cost of irrigation. The wide variation of agricultural family business in Jordan initiates this paper which is objected to investigate the input patterns of agricultural family business using olive planting as an example of this kind of agriculture.

METHODS

Agricultural family business is familiar in Jordan. The objective of this paper is to investigate the effect of this type of business on input patterns. Olive production farming was selected to accomplish

Table 1. Frequencies and percentage of agricultural family business practices.

| Character | Frequency | Percentage |
|----------------------------------|------------------|-------------------|
| Type of planting | | |
| Irrigated | 9 | 10.1 |
| Rainfed | 24 | 27.0 |
| Supplement irrigation | 56 | 62.9 |
| Source of irrigation | | |
| Wells | 1 | 6.3 |
| Transported water | 7 | 43.8 |
| Others | 8 | 50.0 |
| Method of irrigation | | |
| Surface | 16 | 94.1 |
| Drip irrigation | 1 | 5.9 |
| Using water harvest | | |
| Yes | 75 | 86.2 |
| No | 12 | 13.8 |
| Method of crop harvesting | | |
| Manual | 88 | 98.9 |
| Other | 1 | 1.1 |
| Weeds control | | |
| Yes | 88 | 98.9 |
| No | 1 | 1.1 |

the objective of this paper as this agricultural activity is highly practiced through agricultural families business in different areas in Jordan. A questionnaire was designed for this purpose. The questionnaire included four parts. The first part was asking about the socio-economical characteristics of olive farmers, while the second part was devoted for the assets of olive production. The third part of the questionnaire was devoted for the running cost of olive production in agricultural family business and the last part was asking about the returns and family use of olive production. Simple random sample of olive producers was selected from rainfed olive production in Karak governorate. Karak governorate was selected as being considered one of the agricultural governorates in Jordan. The number of respondents included 150 farmers. From these respondents, 89 farms were achieving the agricultural family business. The collected questionnaires were entered to Statistical Package for Social Sciences (SPSS) version 19. The running cost of farming practices include: weeding, modern technology practices, adding fertilizers and harvesting.

The other part of the questionnaire included information about the production of olive oil in farms including the following variables: farm area, the rate of number of trees per dunum, the age the trees start to produce, the production per dunum and the total production, the productivity and family consumption of production. Variables were included to collect complete and comprehensive information about total cost in farms' production. For the analysis purpose, descriptive statistics using mean, standard deviation, frequency and percentages to describe the different parameters. Logistic regression was used to test the effect of practices on production and productivity.

RESULTS

Out of 150 farmers, about 89 farmers were practicing olive production as agricultural family business. The conventional farming methods were used widely in olive agricultural family business. The practice of olive farming as family business was reliable on family man to use the family human resources to save most of the running cost. The farmers use their families for weeding, crop harvesting and pesticides spraying. Most of the farms depend on rainfall and using irrigation as supplement source if available with percentage of 62.9% followed by the number of farms depend on rainfed with percentage of 27.0% (Table 1). Farmers use water harvest technique as a procedure to provide water for the supplemental irrigation. The method of irrigation used is the surface irrigation because it is cheaper but it is not economically regarding water safe. Most of these practices will decrease the cost of production. Most farmers use the manual harvest of crop as its' depends on the family members and minimize the harvesting cost. Weed control whenever is practiced, the manual control is used because of the rely on family members and the decrease of cost to control weeds. The production of olive and olive oil shows wide variation depending on the farming

Table 2. Some production and productivity characteristics of olive farms.

| Character | Means | Standard dev. | Min | Max |
|--|-------|---------------|------|--------|
| Average area (du) | 33.1 | 14.7 | 20.0 | 90.0 |
| No. of trees per dunum | 19.2 | 5.2 | 9 | 30.0 |
| Production per dunum | 166.9 | 232.8 | 8 | 2003.0 |
| Family consumption per year (olive) (kg) | 96.6 | 47.6 | 8 | 200.0 |
| Family consumption per year (olive oil) | 51.9 | 24.6 | 15.0 | 120.0 |

Table 3. The effect of farming practices on olive productivity.

| Model component | B | T | Prop. |
|---------------------------------------|---------|-------|-------|
| Constant | -140.45 | 0.687 | 0.506 |
| Kind of planting | 19.7 | 0.344 | 0.737 |
| Source of water in irrigated planting | 72.975 | 0.633 | 0.028 |
| Using water harvesting | 79.41 | 0.751 | 0.468 |
| R ² | 0.383 | | |

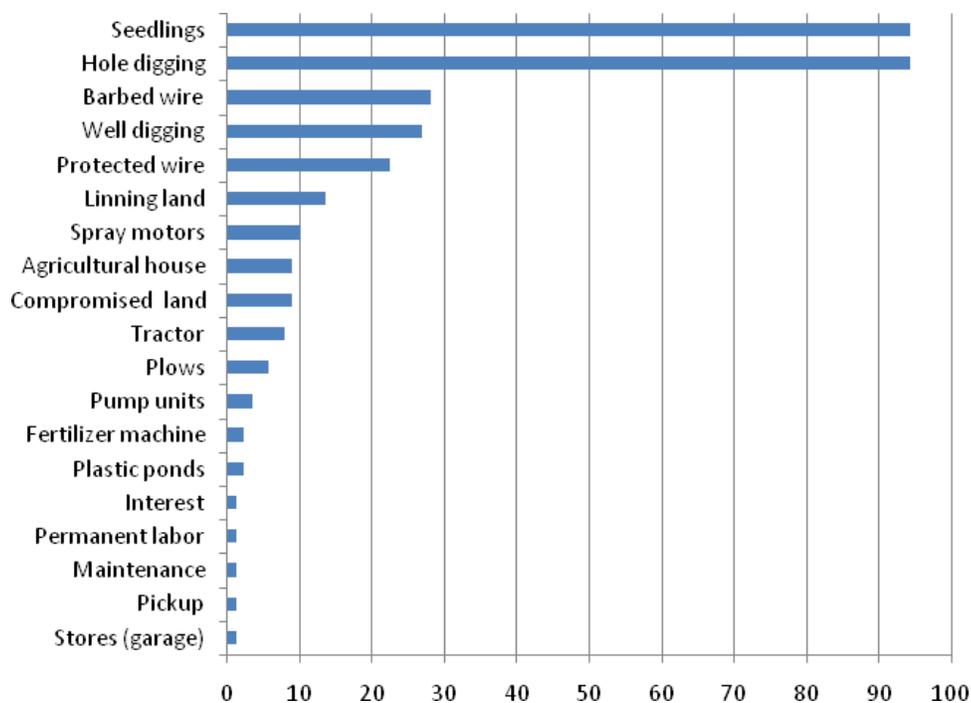


Figure 1. The expenses on the farming practices inputs.

practices applied in each according to judge of farmers. The results show that the practices affect the feasibility of olive farming. As agricultural family business, producing olive is considered economical for the family as a source of income in one aspect and providing the family annual needs of olive and olive oil (Table 2). The only effect that appears on the feasibility of olive production is the source

of water used in irrigation method with $p < 0.05$. This indicates that the use of water harvest will improve the production in one aspect and decrease the cost of production (Table 3).

Figure 1 shows the pattern of expenses in agricultural family business for olive production. The highest percentage of farms limit input expenses on seedlings

and hole digging for planting (Figure 1). Very small percentage of farmers has additional activities depending on the size of the farm and inputs needs for the production method.

DISCUSSION

The objective of this research is to study the input pattern of agricultural family business using olive production as a case study. Olive production was chosen as being one of the most popular agricultural family businesses in Jordan. The pattern of expenses concentrated on urgent inputs including olive seedlings for planting and the whole digging for planting. These two activities are taken over at the time of planting through the production life of the farm. The labor of current agricultural activities is saved through the family working activities, while the need for external labor occurs once a year at harvesting times. Farmers consider this family business as a source to save the family needs of olive fruit and oil for the coming years which save part of the family expenses on household needs. The percent of farmers that practice more activities to meet the modern planting requirements are very small in agricultural family business in Jordan. The percent of farmers that expend on irrigation are very small that most farmers depend on rainfed agriculture to minimize cost and maximize the profits. These findings approves that agricultural family business is a disinvestment one similar to Errington (1999). The agricultural family business in olive production lacks profitability plans of farmers. The family consumption of product makes the farmers lack the attitude to maximize the profit of production. In this regard, the family use of their agricultural production is considered a vital tool in eliminating poverty in developing counties (British Columbia Agriculture Plan, 2005). The large family sizes make the decision exclusive to the family man (Longtau, 2003).

Conclusion

The pattern of expenses in family agricultural businesses is limited to the most urgent agricultural inputs, while the other activities of farming are saved by the family and the supervision is limited to the family man.

REFERENCES

- Bechman J (2001). Farm and family connections: Taking control of farm-family living expenses. Purdue University, USA.
- British Columbia Agriculture Plan (2005). Growing a Healthy Future for B. C. Families.
- Errington A (2002). Handing over the reins: A comparative study of intergenerational farm transfers in England, France and Canada. EAAE.
- Hanson R (2008). Farm family business ownership succession: "You can buy the family farm but remember I still own it". Tennessee Farmland Legacy Conference.
- Jervell A (1999). Changing Patterns of Family Farming and Pluriactivity. Euro. Soc. Rural Sociol., 39(1): 110-116
- Longtau S (2003). Multi-agency partnership for technical change in West African Agriculture: Nigeria Case Study Report on Rice Production.
- Meijerink G, Roza P (2007). The role of agriculture in economic development. Markets, Chains and Sustainable Development. Strategy and Policy, paper 4.
- Sani M, Danwanka H (2011). Economic analysis of women soap making agri-business enterprises and family sustenance in Kogi State, Nigeria. Asian J. Rural Develop., 1(1): 54-62.