PERCEPTION OF MANAGERIAL STAFF AND WORKERS ON LABOUR MOTIVATION AND TIMING OF OPERATION FACTORS IN AGRICULTURE PRODUCTIVITY IN LIBYA

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A thesis submitted in fulfillment of the requirement for the Award of the Doctor of Philosophy

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ABSTRACT

This study considered the most important factors determining the success of any agricultural projects. These include planning; follow up, job satisfaction, organisation environment, training and scheduling. The major problems in this study are low productivity in agricultural projects due to low performance. The objectives of the study are (i) to determine the perspective of workers on labour motivation and timing of operations factors in agricultural projects in Libya. (ii) to study the perspective of managerial and supervisors on labour motivation and timing of operations factors in agricultural projects in Libya. (iii) to analyse the relationship between the elements in labour motivation and timing of operations in this study. (iv) to develop the agricultural projects productivity framework in Libya. Meanwhile, the research method used consists of secondary information through library study and primary data collected through questionnaire. The study had chosen five agricultural projects in Libya to conduct this research. The total collected sample size was 231 participants, 52 of them were managers and supervisors, and 179 workers. Two sets of questionnaire were used, the first includes 59 questions for the managers and supervisors and the second includes 35 questions for workers and staff. The results obtained from the reliability test, arithmetic mean, standard deviation and percentages showed that the biggest problem was the follow-up factor followed by training factor, in addition to the weakness was evident in other factors. Finally, the findings of this study suggests that these factors (job satisfaction, organisation environment, training, planning, scheduling and follow up), should be improved in order to increase the efficiency and the performance of Libyan agricultural projects, which will lead to increasing agricultural production.
ABSTRAK

Kajian ini mengambil kira faktor-faktor penting dalam menentukan kejayaan mana-mana projek pertanian. Ini termasuklah perancangan, susulan, kepuasan kerja, persekitaran organisasi, latihan dan penjadualan. Masalah utama yang dikenalpasti dalam kajian ini adalah produktiviti yang rendah dalam projek pertanian yang disebabkan oleh prestasi yang rendah. Objektif kajian ini adalah (i) menentukan perspektif pekerja tentang faktor-faktor motivasi buruh dan masa operasi dalam projek-projek pertanian di Libya. (ii) mengkaji perspektif pengurus dan penyelia tentang faktor motivasi buruh dan faktor masa operasi dalam projek-projek pertanian di Libya (iii) untuk menganalisis perhubungan antara elemen-elemen dalam motivasi buruh dan masa operasi dalam projek-projek pertanian di Libya; (iv) untuk membentuk rangka kerja produktiviti projek-projek pertanian di Libya. Manakala metod kajian yang telah digunakan dalam kajian ini terdiri daripada maklumat data sekunder seperti data dari perpustakaan dan data primer yang telah dikutip melalui borang kaji selidik. Sehubungan dengan itu, kajian ini telah memilih lima projek pertanian di Libya. Keseluruhan saiz sampel terdiri daripada 231 responden, 52 daripada jumlah tersebut adalah pengurus dan penyelia serta 179 orang pekerja. Dua set borang soal kaji selidik telah digunakan, yang pertama merangkumi 59 buah soalan untuk pengurus dan penyelia manakala yang kedua melibatkan 35 buah soalan untuk pekerja dan staf. Keputusan daripada ujian kebolehpercayaan, purata aritmetk, sisihan piawai dan peratusan menunjukkan masalah terbesar ialah faktor susulan dan diikuti oleh faktor latihan ditambah pula dengan kelemahan yang nyata untuk faktor yang lain. Akhir sekali hasil daripada dapatan kajian mencadangkan faktor-faktor (kepuasan kerja, persekitaran organisasi, latihan, perancangan, penjadualan dan susulan) perlu ditambahbaik untuk meningkatkan kecekapan dan prestasi projek-projek pertanian di Libya, yang akan meningkatkan produktiviti pertanian.
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<td>HR</td>
<td>Human Resource</td>
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<tr>
<td>FAO</td>
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<td>CIA</td>
<td>Central Intelligence Agency</td>
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<td>USDA</td>
<td>United States Department of Agriculture</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>CIDA</td>
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<td>OECD</td>
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<td>AOAD</td>
<td>The Arab Organization for Agricultural Development</td>
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<tr>
<td>GDP</td>
<td>Gross domestic product</td>
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<td>MMR</td>
<td>Man-Made River</td>
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CHAPTER 1

INTRODUCTION

1.1 Introduction

Agriculture is a cultivation of life forms for food and other products which are used to maintain life whether it is through animals or plants. In a global perspective, industrial agriculture which is known as a modern farming using techno-scientific, economical and also political methods is based on a wider extent in the developing world today. According to International Labor Organization (1999), one third of the workers in the world were of those who worked in agriculture sector. Therefore agriculture is one of the dominant factors which make up the economy in the world. Taking into consideration the high competition from perspective of an individual company and the market as a whole, various methods are implemented in order to gain competitive advantage by reducing costs and increasing productivity. One of the essential methods of doing so is by adapting a management in production processes of the organizations.

One of the most significant sources of production derivation on which an organization should rely is the workforce. When it comes to the fields concerning the process of productivity and eventually the management, it is commonly known that private sectors are relatively better compared to public sectors as they are more efficient in production when there is often a lack of efficiency in processes of production in public sectors. However, it is also important to note that most of the private sectors are unable to operate without the support of public sector. As much as there is a need to rely on the public sector for private sectors, public sectors also to a large extent rely on the economic power of the private sector. Hence there is a bound that ties both sectors. Despite the fact that Libya consists of large areas made of
dessert, it has an estimated 2.2 million hectare of which 239,000 hectare specially devoted for agriculture. Instead of depending on foreign sources for food, Libya aims to make its food production at the level of self-efficiency by utilizing its cultivation. However there are certain difficulties facing Libyan farms with regards to agriculture. Some of the major problems faced by agriculture sector in Libya consist of shortage of water supply, the unstable climate, desertification, lack of technology, and development of agricultural projects (Nwer, 2005).

According to FAO (2002), the extension organizations face several challenges in Libya including: lack of knowledge and skills among employees, high cost of buying and maintaining hardware and Software and Legislative, policy and regulatory hurdles.

It is highly important to conduct researches regarding the potential methods in order to improve the effectiveness and efficiency in agriculture sector especially in the case of Libya as this country is highly dependent on its private sector to source its food and other products to sustain life of its population. One of the important methods is through employing management especially in public agriculture sector in Libya. This is because the population in Libya is expected to grow significantly in the coming years. Hence, food security is a very important matter to satisfy the demand of Libyan population and should be sufficient for the consumption of growing population. There are some services and products in which the public and private sectors compete. One of these industries is the agriculture sector in Libya. Agriculture sector is known to be the second highest contributory sector in the country’s economy. However Libya still relies on outsourcing of particularly food. As defined by Nwer (2005), the major agricultural products in Libya include wheat, barley, vegetable and fruits, and dairy products. Libyan agriculture therefore is subject to a number of constraints. One of these constrains beside the climatically conditions is the shortage in water supply as Rajab (1995), attempted to explain that Libya was highly depending on underlying aquifers for its water needs. Has presented various measurements concerning water-management which include water transfer; reduction of irrigated areas; desalinization of seawater; and complementary measures, and claimed that if an extensive program for managing the country’s finite water resources is not implemented, future generations may face serious water-resource problems. This would also reflect on the agriculture of the country. As mentioned above, Libya has limited sources therefore it is very important to put more
value into these sources when they are transformed into process of production. This study takes into account the agricultural project management, to study the factors that led to poor agricultural production in Libya. Because there is barely any research conducted concerning this topic thereby it can be highly beneficial for the agriculture sector as well as the economic situation of the country which also affects the society of Libya in general.

The agriculture in Libya is still an important sector although its contribution in national income has declined. Where its contribution in national income was 26% in 1954 (Gandeel, 1978 & Helen, 1987). This percentage reduced to 5.6% in 1997, and 2.1% in 2007. Libya was spent 5.5 billion Dinars on the agricultural sector and the Libyan government has set a five-years plan from 2006 to 2010 which allocated 3.3 billion dinars to support the agricultural sector (General People's Committee for Agriculture, (Livestock & Marine, 2009). Although Libyan government is sending billions of dinars on agricultural sector, the sector is suffering from a low agricultural productivity because a lack of experts in management that lead to inefficient management to scarce resources, moreover making inefficient decision related to investment in technology and irrigation equipments (Porter & Yergin, 2006). The research was designed to answer objectives and questions associated with the topic of the study and to identify deficiencies in the production process in agricultural projects in Libya and how to create effective management of agricultural projects in Libya to increase agriculture production.

1.2 The Background of the Study

The agricultural sector in Libya is a key source in providing some of the needs of the market of fruits and crops, whether from the private or public sector. In addition to that agriculture in Libya provides an important income to the national economy.

This study specified the factors contributed to these problems, which are low production efficiency and an increase in the cost of the productions of agricultural products as a result of low performance by managers and staff and workers in public agricultural projects. Studies also indicated that the agricultural sector in Libya
suffers from the misuse of human and material resources, efficient irrigation methods, high costs in harvesting that lead to continuous decrease in production levels Taher Azzabi (2009) & Abdul-Latif (2007) and Ahmed Laytimi (2002).

The agriculture sector in Libya is dominated by unskilled labor, which increased the costs and loss of huge volume of agricultural products. The lack of human resources in general and skilled labor should be the focus to effectively benefit from the expertise and constant encouragement and motivation of staff cycle to improve poor performance and productivity.

One of the most important factors that contributed to increased costs and lack of production efficiency in agricultural projects is in proper timing of operations in the farms, and weak commitment to time and poor time management. Moreover, failure to set specific timetables for agricultural operations to comply in accordance with the management plan would obviously lead to a delay in the production process and thus the lack of customer satisfaction with the quality of produced products from these farms and the lack of productivity and raising the cost of production in general. This research addresses some of the important factors that have a role in improvement of agricultural projects management are (job satisfaction, organization environment, training, planning, scheduling, follow up). In order to find appropriate solutions to raise the efficiency of the performance of these projects and thereby increase agricultural production in Libya in general.

1.2.1 The Land of Libya

Libya has a small population about 6.5 million comparing with its vast land area of 1.8 million square kilometers. The nation's population is highly concentrated about 90% along its Mediterranean coast, where land is arable and therefore densely inhabited strip includes all of its major cities, including the capital, Tripoli (population 1.1 million). The land is largely barren, and about 93% of the country's land is classified as either arid or semi-arid. Four percent is classified as suitable for pasture, and only 2% is categorized as arable and suitable for agriculture, with the absence of permanent rivers, only small and scattered oases interrupt the vast human and agricultural void throughout the country's central and southern expanse. The
largest and most important oasis is Kufra, in the southeast region. The arable areas is bounded between the Mediterranean Sea and the Sahara desert, where the climate in Libya along the coast is of Mediterranean type, other areas outside this boundary are dry and extreme desert type. The major climatic regions as reported by FAO (2010) include:

- The Mediterranean coastal strip with dry summers and relatively wet winters
- The Mountain Nafusah and Green Mountain highlands that experience a plateau type climate with higher rainfall and humidity and lower winter temperatures, including occasional snow on the hills
- The southern and the interior zones where pre-desert and desert climatic conditions prevail with scorching temperatures, large daily temperature extremes, and practically zero rainfall.

1.2.2 The Agricultural Production

The country's crops are always paltry due to moisture scarcity and marginal soils. Wheat averages just 0.8 tons per hectare and barley averages 0.5 tons per hectare. Both wheat and barley are harvested on about 170,000 hectares each. Wheat, however, is typically grown on better land and produces about 125,000 tons per year, while barley yields just 80,000 tons. Other grains produced include less than 10,000 tons of millet yearly, and 2,000 tons of irrigated corn. Other non-grain production is minor comparing to grains as shown in Figure1.1. Statistics for Libyan agriculture production. FAO (2010).
1.2.3 The Agricultural Arable Land

The 2,150,000 hectares is the total arable land used for agriculture from 1999-2010, therefore the agricultural area makes approximately 1.2% of Libya’s total land area, and this area was not improved and increased during 2 decades. A yearly average of about 1.82 Million hectares is cultivated for annual crops; only about 0.34 Million hectares is for permanent crops. Permanent pasture area accounts for about 13.3 Million hectares the total arable area suitable for agriculture and labour force in Libya as shown in Table 1.1; which shows the land use from 1979-2010.
Table 1.1: Libya’s population, agricultural labour force, and land use in agriculture
(FAOSTAT, 2005)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population &amp; Agricultural Labor Force</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population, 1000 person</td>
<td>3,047</td>
<td>4,305</td>
<td>5,136</td>
<td>5,237</td>
<td>5,340</td>
<td>5,445</td>
</tr>
<tr>
<td>Population annual growth, %</td>
<td>4.6</td>
<td>2.1</td>
<td>2.0</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Rural / Total Population, %</td>
<td>31</td>
<td>18</td>
<td>13</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Density Inhabitant/km²</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Labor Force, 1000 person</td>
<td>234</td>
<td>143</td>
<td>110</td>
<td>108</td>
<td>104</td>
<td>101</td>
</tr>
<tr>
<td>Agricultural Labor /Total Labor Force, %</td>
<td>25</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Land Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Land, 1000 HA</td>
<td>175,954</td>
<td>175,954</td>
<td>175,954</td>
<td>175,954</td>
<td>175,954</td>
<td>175,954</td>
</tr>
<tr>
<td>Arable Land + (Permanents Crops, 1000 HA)</td>
<td>2,080</td>
<td>2,153</td>
<td>2,150</td>
<td>2,150</td>
<td>2,150</td>
<td>2,150</td>
</tr>
<tr>
<td>Arable Land, 1000 HA</td>
<td>1,754</td>
<td>1,807</td>
<td>1,815</td>
<td>1,815</td>
<td>1,815</td>
<td>1,815</td>
</tr>
<tr>
<td>Irrigated Land, 1000 HA</td>
<td>223</td>
<td>435</td>
<td>470</td>
<td>470</td>
<td>470</td>
<td>470</td>
</tr>
</tbody>
</table>

1.2.4 The Agricultural Land Use

Agricultural land refers to the share of land area that is arable, under permanent crops, and under permanent pastures. Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded. Land under permanent crops is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest.

The Land area (sq. km) in Libya was last reported is 175,954 in 2010, according to a World Bank report published in 2012. Land area is a country's total area, the land used for agriculture in Libya. Figure 1.2 shows the statistics of the land use and other areas in Libya, it is clear that the arable land is very small comparing to the total land area of Libya. The study emphasizes that the arable land in Libya could be improved and increased significantly if the principles of project management
applied and improve the situation of labour force that will be reflected on the productivity and increase the land use for agriculture in Libya.

![Land used statistics in Libya](image)

**Figure 1.2: Land use statistics in Libya (World Bank 2012)**

As shown in Fig-4 above that the used land in Libya for agriculture is very small and equal to 1.22% cultivated area from the total area of Libya. This shows that the use of land for agriculture is efficient and agricultural projects in Libya did not achieve the desired goals and objectives due to many factors that will be discussed in this study.

### 1.2.5 Agriculture value added in Libya

Agriculture corresponds to International Standard Industrial Classification (ISIC) divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the (ISIC). The following table and chart illustrates a comparison of agriculture value added of Libya and its neighbors in Billions of dollars as shown in Table-1.2.
Table-1.2: Agriculture (value added) of Libya and its neighbors, billions dollars, 1998-2011 (ISIC, 2013)

<table>
<thead>
<tr>
<th>Year</th>
<th>Libya</th>
<th>Algeria</th>
<th>Egypt</th>
<th>Tunisia</th>
<th>Niger</th>
<th>Chad</th>
<th>Sudan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>2.8</td>
<td>5.5</td>
<td>12</td>
<td>2.3</td>
<td>0.82</td>
<td>0.68</td>
<td>4.3</td>
</tr>
<tr>
<td>1999</td>
<td>3</td>
<td>5.4</td>
<td>13</td>
<td>2.4</td>
<td>0.82</td>
<td>0.58</td>
<td>3.9</td>
</tr>
<tr>
<td>2000</td>
<td>2.7</td>
<td>4.6</td>
<td>12</td>
<td>2.1</td>
<td>0.67</td>
<td>0.56</td>
<td>4.7</td>
</tr>
<tr>
<td>2001</td>
<td>2.2</td>
<td>5.3</td>
<td>11</td>
<td>2.1</td>
<td>0.81</td>
<td>0.69</td>
<td>5.6</td>
</tr>
<tr>
<td>2002</td>
<td>1</td>
<td>5.2</td>
<td>10</td>
<td>1.9</td>
<td>0.94</td>
<td>0.75</td>
<td>6.8</td>
</tr>
<tr>
<td>2003</td>
<td>1</td>
<td>6.6</td>
<td>9.1</td>
<td>2.6</td>
<td>1.2</td>
<td>0.88</td>
<td>8.1</td>
</tr>
<tr>
<td>2004</td>
<td>1</td>
<td>8</td>
<td>10</td>
<td>3.1</td>
<td>1.2</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>2005</td>
<td>1.1</td>
<td>7.9</td>
<td>13</td>
<td>3</td>
<td>1.4</td>
<td>1.2</td>
<td>12</td>
</tr>
<tr>
<td>2006</td>
<td>1.3</td>
<td>8.7</td>
<td>14</td>
<td>3.2</td>
<td>1.6</td>
<td>1.3</td>
<td>14</td>
</tr>
<tr>
<td>2007</td>
<td>1.5</td>
<td>10</td>
<td>18</td>
<td>3.4</td>
<td>1.8</td>
<td>1.4</td>
<td>21</td>
</tr>
<tr>
<td>2008</td>
<td>1.8</td>
<td>11</td>
<td>21</td>
<td>3.5</td>
<td>2.3</td>
<td>1.7</td>
<td>23</td>
</tr>
<tr>
<td>2009</td>
<td>1.9</td>
<td>13</td>
<td>24</td>
<td>3.6</td>
<td>2.1</td>
<td>1.6</td>
<td>20</td>
</tr>
<tr>
<td>2010</td>
<td>2</td>
<td>14</td>
<td>29</td>
<td>3.2</td>
<td>2.4</td>
<td>1.8</td>
<td>24</td>
</tr>
<tr>
<td>2011</td>
<td>0.69</td>
<td>16</td>
<td>32</td>
<td>3.6</td>
<td>2.5</td>
<td>1.8</td>
<td>21</td>
</tr>
</tbody>
</table>

The future of agriculture in Libya will primarily depend on solving the constraints of arable land and water scarcities in order to add value to agricultural production and supply quality vegetables and fruits to the domestic market. Other constraints that will have to be addressed are the factors related to structural and demographic aspects as well as the lack of well prepared and informed technicians and farmers (Ahmed Laytimi, 2012). Government efforts in agriculture development
have been characterized by sizable investments and subsidies. During the last two decades, Libya’s policies have made progress toward the development of its agriculture, but these efforts were not enough to lift agriculture production in the same level of neighboring countries in North Africa as shown in Figure-1.3. Libya came at the bottom with regards agricultural production comparing to North African countries and needed huge development in the agricultural sector to lead Egypt, Sudan, and Algeria in agricultural production. However, it seems that those efforts have not yet resulted in meeting the government ultimate objective of full food self-sufficiency as can be seen from the increasing food imports by the country rather exporting food as the case in Egypt and Libya. World Bank national accounts data and OECD National Accounts data files (2011).

![Figure 1.3: Agriculture (value added) of Libya and its neighbors, (%) (OECD, 2011)](image)

1.2.6 Labor force and employment in agriculture

Since the discovery of oil, total employment in Libya has more than tripled from about 434 000 in 1970 to about 1 575 000 in 2002. Although the total number of agriculture labor has also increased, its share in the total employment has diminished
from about 25% in 1981 to about 5% by 2002. The fisheries sector employs about 14,000 workers, a small fraction - around 1% - of the total national labor force.

Like many other oil producing countries with small populations, Libya has attracted a significant number of workers from other countries. Since 1983 when it was at its highest, the number of foreign workers has been gradually decreasing; it did radically decrease in specific years because of mass deportations of workers from certain countries. Although data on agricultural labor wages are not available, the fact that a large number of foreign workers participate in agriculture indicate that the level of salaries is relatively higher than in their native countries; mostly from Tunisia, Morocco, and Egypt. An estimated 70% of all salaried Libyans work for the public sector and are paid by the State. (The Arab Organization for Agricultural Development AOAD, 2005).

1.3 Low Agricultural Productivity

Agricultural Productivity has been defined by several scholars with reference to their own views and disciplines. Agriculturalists, agronomists, economists and geographers have interpreted it in different ways. Agricultural productivity is defined in agricultural geography as well as in economics as "output per unit of input" or "Output per unit of land area", and the improvement in agricultural productivity is generally considered to be the results of a more efficient use of the factors of production, viz. physical, socioeconomic, institutional and technological (Lal Mervin, 2009).

Sels et al (2006) demonstrated a strong and positive relationship between HRM intensity and productivity, controlling for past performance and using one-year lagged financial performance indicators (although the measures were recorded contemporaneously). This beneficial effect was greatly outweighed by the cost increases associated with higher HRM intensity. Focusing agriculture of Libya there are many problems the country is facing. Libya is heavily dependent on the imports of food. Libya’s agriculture is also suffering because of water shortage, desertification, unfavorable weathers and lack of technology and research. Another dilemma is rare rainfalls and poor soil of the country, as all these factors are natural
and one can’t do much about it, but the technology can make the difference. The
agricultural research plays a vital role in resolving the major problems and barriers as
the proper consulting and research makes the difference. The quality of Libyan
agriculture is very poor and the agricultural production has to be advanced, research
is very essential for decision making. Despite the greater attention to agriculture,
however this sector only accounted for about 3.5 percent of GDP (CIA, 2004).
The principal agricultural products of Libya are: cereals, fruits (citrus), dates,
tomatoes, potato and grapes. However Libya imports more than 90% of its food
needs. The imbalance in food trade is increasing over time largely because of
increasing population and low agricultural productivity (Ali Abidar, 2002).

The land is a very important factor of agriculture because it is the most
permanent and fixed factor among the three categories of input; land, labor and
capital. Basically, land as a unit basis articulates yield of crop in terms of output to
provide the foodstuff for the nation and secure employment opportunities for the
rural community. Productivity of land may be raised by applying input of agricultural
(Fladby, 1983). The low agricultural productivity of most of the crops cultivated
together with rising demand for food has turned Libya into a net food importer.
Therefore development of improved seed and propagation material and of improved
Production systems to raise productivity of food crops especially cereals, olives
and date palm was accorded high priority. Due to limited technical capacities. (FAO,
2011).

1.4 Managerial process

According to TAM (2004) project management is a structured, systematic and
analytical process that seeks to achieve all the necessary functions at the lowest total
cost consistent with required levels of quality and performance. Underlying the
management theory is the principle that there is always more than one way to
achieve project objectives.

Prakash Prabhakar (2008) pointed out that there are five characteristics of
most a project management as follow:
(i) A start and a finish  
(ii) A time frame for completion  
(iii) An involvement of several people on an ad-hoc basis  
(iv) A limited set of resources  
(v) A sequencing of activities and phases

According to Admin (2011) explained three main measureable elements of a project: time, cost and quality of the outcome and showed that project management helps to optimize these three deliverables in order to ensure the overall success of the project. The main benefit of implementing improved cropland management practices is expected to be higher and more stable yields, increased system resilience and, therefore, enhanced livelihoods and food security, and reduced production risk (Conant et al, 2010).

There is no doubt that management practices are linked to the productivity and performance of an organization. However, research findings are mixed. Some studies have found a positive relationship between the adoption of management practices and productivity, some negative and some no association what so ever. (Giuliana, 2008) believe that the lack of universal consensus on the effect of the adoption of complementary management practices might be driven either by measurement issues or by the level of analysis. There is projects-level of analysis is essential to assess the impact of management practices upon the productivity of projects. The increased pressure of global competition has forced managers and authorities to put even greater emphasis on productivity improvements. Widespread discussions have resulted in multiple interpretations of the concept of productivity; despite the fact that the term is commonly used by both academics and practitioners, it is often confused or used interchangeably with similar terms such as profitability and performance (Aki et al, 2011).

The researcher emphasizes that management can be a significant factor that may reduce or increase productivity. Managers who are too controlling and firm without flexibility can unwittingly slow down workflow in farms by requiring many tasks that can’t be fulfilled by workers and employees in agricultural projects. A hands-off management style also can be a problem. When managers are uninvolved or absent, employees and workers have no one to turn to for direction or guidance and this reflect negatively on the overall performance in the farms, which decrease the productivity. Managers also set the tone for the department. Managers who adopt
a positive attitude help foster the same attitude in their employees can increase the productivity. Therefore, the study concludes that effective management style in agricultural projects affect the size and volume of productivity.

According to the World Bank (2005) that the effectiveness of management performance indicators for management in Libya had obtained low values in the effective management of public institutions within the index effectiveness of International Government Management where the values ranged (-0.79 to-1.51) on the ladder of degrees of international achievement in the field of successful management as Table1.3

Table 1.3: Effectiveness of management performance in Libya (World Bank, 2005)

<table>
<thead>
<tr>
<th>Year</th>
<th>Effectiveness of the Libyan State management</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>- 0.82</td>
</tr>
<tr>
<td>1998</td>
<td>- 1.51</td>
</tr>
<tr>
<td>2000</td>
<td>- 1.29</td>
</tr>
<tr>
<td>2002</td>
<td>- 0.92</td>
</tr>
<tr>
<td>2003</td>
<td>- 0.93</td>
</tr>
<tr>
<td>2004</td>
<td>- 0.79</td>
</tr>
<tr>
<td>2005</td>
<td>- 0.96</td>
</tr>
</tbody>
</table>

1.5 Problem Statement

This study discusses the problem of low productivity in Libyan agricultural projects. Due to poor performance of workers and timing issue during operational stage, which led to close many of agricultural projects and reduce the annual income to the national economy of Libya from the production of these projects. Food security is
one of the top issues of Libyan Agricultural policy and any large decrease in the local production of fruits and crops would affect the life of population in Libya and also the national income. However, the government of Libya was always focusing to achieve self-sufficiency from some agricultural products in order to minimize reliance on foreign sources for food supply but all government efforts was not successful to eliminate the inherited problems in public farms and develop the agriculture in Libya because of many obstacles and difficulties that hinder any development plan in the country, such as: water shortage, unfavorable weather conditions, desertification, lack of technology transfer, a weak linkage between research and extension (Azzabi, 2000).

Currently there are huge problems facing agricultural projects in Libya that lead to significant decrease in productivity in last decades. The agriculture sector who was contributing to the country’s Gross Domestic Product during the 80’s and 70’s in Libya was declining in last decades and the agriculture sector share to the economy of Libya has rapidly fallen to less than 5% (Ahmed Laytimi, 2002).

It was confirmed by previous studies Issa (2007) that the agricultural sector in Libya suffers from many difficulties, including the misuse of human and material resources, low productivity and poor labour efficiency, and many other factors that caused high costs of production and continuous decrease in production. According to FAO (2011), agriculture in Libya employs around 6% of the workforce. The country imports about 80% of its consumption because of low yields and production despite the agricultural technology provided to these projects. Barley crop productivity in Libya does not exceed 1.3 ton hectors for the year 2005, (Khaled Ramadan et al, 2007).

The statistics data of agriculture production in Libya is a clear indication that the efficiency of agricultural projects is not high and therefore the used land for agriculture is very small comparing to the available arable area.

The study discusses all factors that cause series problems and obstacles towards high productivity. One of the main problems facing the agricultural projects in Libya is the poor labour motivation that was reflected on the productivity of agricultural projects. Workers are generally not satisfied and their job satisfaction was very low, also the study emphasize on the importance of timing of operations in agricultural projects, and assume this is one of the main problems that lead to low crops production. Workers and managers in public agriculture projects are highly
affected by the environment of their organization and their response towards their farms is a mirror of their organization environment. Most of the workers in public agriculture projects in Libya declare their intention to work in organization that provides open dialogue and allows people to express their opinions freely without boundaries. The Training factor was another issue that led to low productivity and inefficient performance, while the performance of workers is series matter to produce quality crops. It is clear that without solving the main issues associated with low productivity in agricultural projects and in particular Labour motivation and Timing of Operation, the productivity will remain low and the cultivated areas in Libya will not be improved to cover wider arable areas that will definitely lead to higher production comparing to previous decades facing the agriculture in Libya.

1.6 Research Questions

This study is intended to answer the following questions which are relevant to the problem of the study:

i. What are the factors that affect on management of labour motivation and timing of operation factors among workers and staff in agricultural projects in Libya?

ii. What are the factors that can have an impact in labour motivation and timing operation factors among managers and supervisors in the agricultural projects in Libya?

iii. What are the relationships of these factors and what are the most influential factors in the production in agricultural projects?

iv. How to develop the agricultural projects productivity framework in the agricultural projects in Libya?

1.7 Research Objectives

The objectives relevant to research questions of this study include;
1.7.1 General objectives

To study the factors which led to low productivity in agricultural projects in Libya.

1.7.2 Specific objectives

i- To determine the perspective of workers on labour motivation and timing operation factors in agricultural projects in Libya.

ii To study the perspective of managerial and supervisors on labour motivation and timing operation factors in agricultural projects in Libya.

iii. To analyze the relationship between the factors of labour motivation and factors of timing operations in performance of agricultural projects in Libya.

iv. To develop the agricultural projects productivity framework in Libya.

1.8 Scope of the study

The field of this study is the agricultural projects in Libya, five agricultural projects were selected; four of them located in Sirte province in central Region, Bai Valley, Allood Valley and Greenhouses, and the fifth project is located in Tsawh in Sabha province, southern Libya, which is specialized in the production of improved seeds. The respondents are managers, supervisors, staff and workers, to determine their perspective on labor motivation and timing of operations in these agricultural projects in Libya in order to fulfill the objectives of this study and conclude proper solution that can increase productivity and efficiency of agricultural production in Libya.
1.9 Significance of study

This study provides valuable evidence that low productivity in public agricultural projects in Libya was mainly due to Labour motivation and Timing of Operation, and therefore, the study enhances the literature in this field in a time when Libya is facing dramatic transformation changes in all sectors including agriculture. The previous studies that cover the topic of this study are limited and did not discuss the main factors that affect productivity in agricultural projects. Therefore, this study contributes to the development of agriculture in Libya by analyzing the issues and problems facing the management of agricultural projects in Libya and makes recommendations for officials who take the responsibility to manage and allocate funds for these projects. The researcher finds that previous literatures and studies did not evaluate and measured the impact of all variables together (Job satisfaction, Organizational Environment, Training, Planning, Scheduling and Follow-up) on the labour motivation and timing of operations in public workplace, also most previous studies evaluated one or two of these variables and analyzed the relationship of these variables with productivity without extending to other factors that affect productivity and labour motivation in public organizations in general and particularly in agricultural projects. This study evaluates the correlation between these variables and measures the impact of each variable on the output of the model (productivity), which extends the knowledge on each variable in public organization. However, this is the first study to achieve a comprehensive analysis on (Job satisfaction, Organizational Environment, Training, Planning, Scheduling and Follow-up) in Libya according to the knowledge of the researcher, and this is the main significance and difference with other studies.

1.10 Conclusions

During the last two decades, Libya’s policies have made progress toward the development of its agriculture. However, it seems that those efforts have not yet
resulted in meeting the Government ultimate objective of full food self-sufficiency as can be seen from the increasing food imports by the country.

The future of agriculture in Libya will primarily depend on solving the constraints of arable land and managerial problems in agricultural projects. Other constraints that will have to be addressed are the factors related to structural and demographic aspects as well as the lack of well prepared and informed technicians and farmers. Government efforts in agriculture development have been characterized by sizable investments and subsidies.

The management is a very important process that is formed to implement solutions to multifaceted problems by employing different procedures such as cost reduction, incremental productivity, employee motivation and control management system to increase effectiveness and efficiency of the work performance and saving time. This study aims to investigate the main factors which lead to low agricultural production and have significant effect in management of public agricultural projects in Libya. These factors are Labour Motivation and Timing of Operations including (Job Satisfaction, Environment of Organization, Training, Scheduling, Planning and Follow-up). In addition to that the study highlight on the need to make fast action and give more focus to these factors due to their strong impact on the overall performance and production.

The research was designed to answer questions associated with the topic of the study and to identify deficiencies in the production process in agricultural projects in Libya and how to create effective management of agricultural projects in Libya to increase productivity and reduce cost. The researcher will evaluate the results of the survey by conducting some critical analysis to determine the efficiency and performance of these projects and to develop appropriate solutions and recommendations in order to improve and develop agricultural project management and thereby increase agricultural production in Libya. An ecologically sound and economically viable use of the country’s all available resources, especially those of the nonrenewable and renewable water resources, not to forget its vast oil wealth, applied from production and marketing to processing and consumption is the key to improve productivity and help establish a sustainable agriculture scheme. Along with an adequate education-research to develop adaptable farming techniques and management, and vigorous extension, agricultural productivity in the country will have a good future.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Agriculture fulfills a foremost mortal necessity which disturbs and rest on all other ecological support systems. Human population progress and attaining advanced levels of consumption as the economy enlarges worldwide continues to exist. This will pressure the ability of agriculture to fulfill nourishment demands without giving up the environmental uprightness both locally and globally. Agriculture’s focal encounter in the recent future is to produce enough food and roughage for the increasing population worldwide without disturbing the balance of the ecosystem. This challenge involves an environmental methodology to agriculture that is almost omitted from present organization and research groups. In this regard agricultural sectors must be managed using best methods, and management pronouncements may take place only if they are fully aware of the pros and cons that the environmental will be affected with (Smith et al, 2007).

According to Sharma et al (2010), the awareness about the importance of ecological dealings in main agricultural schemes and landscapes including the economic importance of the ecosystems’ services related with agriculture are yet very poor in many countries. To generate agricultural landscapes that are accomplished for numerous services excluding food and roughage will involve integrative exploration, in both fields of ecological and socioeconomic, and also including the policy improvement and public awareness. Hence with the existing natural resources of Libya, incremental productivity, reduction of cost and better labour performance are essential through one of the most important management
types, particularly for agriculture sector And the time management of agricultural operations for the better in Libya..

In this chapter the study will give describe the different aspects of agricultural projects, in which explaining the previous and current situations and related statistics about agricultural projects in different parts of the world and highlight the importance of development and contribution of agriculture to the economy of any country in the world. The main focus of the study will be on Libya. In addition to that the different factors that affect projects management in agricultural projects will be described in details, especially those factors that affect labour motivation and timing of agricultural operations, and explain how those factor could increase the effectiveness of the production process and to reduce cost in agricultural projects, besides that discussing how those factors could play an important role in the productivity of agricultural projects by demonstrating the previous literatures on this topic.

2.2 Concept of labour motivation

Motivation is a psychological and sociological concept as it relates to human behavior and human relations. It is the most fundamental and all pervasive concept of psychology. Motivation basically relates to human needs, desires and expectations. In other words, these factors suggest the measures which can be used for the motivation of employees. In motivation, efforts should be made to satisfy the different needs of employees so that they will be satisfied, happy and away from tensions. This creates favorable environment because of which employees take more interest and initiative in the work and perform their jobs efficiently. Motivation is a technique of creating attraction for the job. It is encouraging employees for better performance in order to achieve the goals of an Organization. The process of motivation is a continuous one (circular one) and is beneficial to both - employer and employees. It is a key to improve work performance of employees Gaurav Akrani (2010). Motivation can be defined as the result of processes, internal or external to the individual that arouses enthusiasm and persistence to pursue a certain course of action. Motivation is a reason or incentive to achieve something (goal) or also the
interest in or enthusiasm to make the effort to achieve something (Deepak Pore, 2013).

Employee performance is frequently described as a joint function of ability and motivation, and one of the primary tasks facing a manager is motivating employees to perform to the best of their ability (Moorhead & Griffin, 1998). Motivation is represented as a resulting vector of partial motivation generated by specific groups of needs. Vroom’s model is included in the proposed model as instant motivation. A correlation between the expenses on motivation, the level of motivation and the level of productivity is established Ivan Kotliarov (2008). Motivating employees is becoming progressively more compound and complicated, as people become enhanced educated and economically more independent; the conventional means of motivation, such as official authority and monetary incentives, become less efficient. However, managers still have the responsibility of motivation their workers toward the attainment of organizational goals. To meet this responsibility, they should understand how and why people are motivated to work in organization and be equipped with a set of principles that can be applied to employee motivation. (Irishka, 2008).

2.3 Concept of timing of operation

The managers must decide what to do, when, where, how, and by or with whom. Time management is the process of monitoring, analyzing, and revising your plan until it works. Effective planning is a skill that takes time to acquire. It is difficult to implement because you have no one but yourself to monitor how effectively you are using your time. Effective time management involves philosophy and common sense. Time is not a renewable resource - once it is gone, it is gone forever. To function effectively, managers have to be able to prioritize and replace less important tasks with more important ones. Goals should be specific, measurable, attainable, realistic, and timely (SMART). Once the goals are known, it is important to think about how they can be achieved. Effective time managers facilitate planning by listing tasks that require their attention, estimating the amount of time each task will take to complete, and prioritizing them - deciding what tasks are most important to
do first and numbering them in rank order. It is essential to know what is crucial and what is not (Waldron, 1994).

Project management concerns the scheduling and control of activities in such a way that the project can be completed in as little time as possible (Chen et al 2007). The problems of raising the productivity of the source and of inputs are matter for the agricultural expert. The techniques of work study described in it can, however, be used with success wherever work is done in industry and even in agricultural enterprise. Therefore, good analysis of systems can increase productivity of resources. Analysis and evaluation of agricultural systems use these criteria: energy, economic, agronomy, environmental conservation and time. Because of importance of time indicator, project scheduling techniques and work study are used for reducing work content and ineffective time (Witney, 1988). The importance of project management techniques becomes more important in agriculture sector because of ever-present high amount of risk and uncertainty associated with this sector. The purpose of project management is to plan, organize and control the activities so that the projects are completed in the best possible manner within the prescribed time and budget, in spite of all the risks (Kriti Bardhan, Sanjeev Kapoor, 2009). Some activities of project are critical in the sense that delay in their commencement will delay the overall project completion time. Therefore, management and scheduling of projects is inevitable (S.M. Fahimifard and A.A. Kehkha, 2009)

2.4 Agriculture from Global Perspective

Agriculture is part of the economy, to be managed with the goal of increasing production to meet growing demand. In economic models, technological progress in agriculture is the key to continual growth in output (Jonathan, 2001).

Agriculture is essential for reducing hunger and promoting sustainable agricultural production. In those parts of the world where agricultural capital per worker and public investments in agriculture have stagnated are the epicenters’ of poverty and hunger today. Demand growth in the future will place increasing pressure on the source. Eliminating hunger sustainably will require a marked increase in agricultural investments, but also an increased in their effectiveness.
Farmers are the most important in developing country agriculture and must be the basic for increasing investment in the sector, authorities also have a special task to help smallholders overcome the limitations and difficulties in their productive assets and to ensure that investments in agriculture are beneficial and environmentally sustainable. Government investment in agriculture is a crucial component of providing an enabling environment for private investments in the sector. Governments need to provide limited public funds towards the provision of essential public goods with high economic and social returns (FAO, 2012).

2.5 Agricultural projects policies in Arab countries

Agricultural policy is embodied in an integrated system of procedures and legislation enacted by the State in order to achieve specific goals included in the agricultural development plans. These goals are often designed to encourage increased production to achieve food security and therefore achieve the maximum degree of self-sufficiency and increase revenue from exports and intensify efforts to narrow the gap between food demand and production. These goals require the State also help farmers to overcome the obstacles clause also requires the State budget is also a range of different goals. Despite all these efforts, the Arab countries were unable to narrow the gap between food demand and production, Development of Arab agricultural politics (Mohamed, 2004).

Without the necessary investment it is difficult to develop and improve Arab agriculture. To progress in agriculture more investment is needed, but the agricultural sector is not one of the attractions for investments. The reasons for this are slow and low returns of the invested capital, low turnover in certain agricultural activities, and uncertainty. Arab agriculture does not only need investment, but a large fund to help change it from the present to be on par to compete in the advanced world. Also, the taxes imposed on agricultural activities need to be revised, providing enough guarantees to investors, maintaining political stability and security, and offering suitable facilities for export promotion will be the prime responsibility of Arab governments (Arab Organization for Agricultural Development, 2007).
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