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SOME ASPECTS OF MANAGEMENT IN FARMING BUSINESS UNDER EGYPTIAN FARMING CONDITIONS

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INTRODUCTION

Management in farming business plays a vital role in the achievement of output from land resources. This role becomes of considerable interest when it is recognised that the small size farms predominate throughout Egypt and accordingly the majority of farmers are small holders owning five feddans and less. This fact can be illustrated by a reference to the number of landowners of the small size group, *i.e.*, five feddans and less. This group accounts for 94.4 per cent of the total number of landowners as will be seen in the Table below.

TABLE 1—CLASSIFICATION OF LANDOWNERS AND AREA OWNED BY NUMBER AND PERCENTAGE IN EGYPT, U.A.R., 1956

Farm Size-Groups per feddan	Landowners by No. (in thousand)	Per cent	Area owned (in thousand feddans)	Per cent	Average area per feddan owned by individual
5 Fed. and less	2,783	94.4	2,252	37.7	0.8
Over 5 to 10 Fed.	81	2.8	532	8.9	6.6
„ 10 „ 20 „	49	1.6	650	10.9	13.4
„ 20 „ 50 „	23	0.8	676	11.3	29.0
„ 50 „ 100 „	7	0.2	479	8.0	67.5
„ 100 „ 200 „	3	0.1	450	7.5	134.8
More than 200 „	2	0.1	937	15.7	537.6
Total	2,948	100.0	5,976	100.0	2.0

Source : Department of Statistics, Annual Pocket Statistics, Government Press, Cairo, 1958, pp. 80-83 (in Arabic).

From the management point of view farming is more or less similar to the small retail trade enterprise and the local shop or neighbourhood industries. However it is a unique industry in that it combines a mode of life with a business enterprise.

In view of the fact that small size farms predominate throughout the country, it is important to ensure the effectiveness of management on these farms with a view to increasing farm incomes particularly when it is known that the majority of farmers have to operate their farms irrespective of the return they achieve as farming is considered a way of life by many of them.

The essence of farm management is seen to be essentially the taking of decisions concerning the use of farm resources and the acceptance of the consequences of these decisions.[1] These decisions imply decisions of policy making or farm planning character (whether ?), *i.e.*, organisational function and decisions of executive character which refer to the carrying out of the farm plan (how ?), *i.e.*, managerial function. It is to be understood that farm management is focussed upon these two functions which are to be exercised on the individual farm by the farm operator or on the national farm through government policy.

FUNCTIONS OF ORGANIZATION AND MANAGEMENT

Organization refers to the selection of the various elements of production and to the proportion in which these elements are associated and combined into a farm system which is likely to give the best possible output per unit of input. In short, organization provides all the necessary procedure prerequisite to the actual operation of a farm.[2]

Management refers to the direction, control and execution of the given farm policy throughout the year, taking into account that all farm operations are to be performed in the most efficient way.[3] It follows from what has been mentioned that both organization and management are concerned with the process of harmonizing the factors of production with the object of securing the efficient and profitable use. However, a sharp line of demarcation cannot be drawn between these functions. While they are distinguishable in their essential nature, the two merge into each other.

In the practical conduct of farm management the responsibility for discharging these two functions rests upon one individual who is the farm operator, except to some extent on large farms. This is due to the lower degree of division of labour in the agricultural industry where the functions of the organizer and the manager are combined in one individual. Contrast may be made with the situation in other main industries where there are potentialities for a higher degree of division of labour, the functions are differentiated and allocated to different individuals. On the great majority of Egyptians farms and indeed the farms of many other countries these two functions of management are discharged by the farm operator. In addition to that he also furnishes a part, and often a substantial part of the manual labour services.

It is needless to stress that a successful farmer should have a sound knowledge of technological and economic sciences and more details concerning the physical make-up of his farm. Apart from that he must have the qualities of a good manager and should possess good manners and character.[4]

1. El Tonbary, A. A. : Comparative Standards in Farm Management Appraisal with special reference to Homogeneity of Farm Type, Ph. D. Thesis, University of Durham, Vol. I, 1954, Chapter I.
2. Forester, G. W. : Farm Organisation and Management, Prentice Hall Inc., New York, 1954, Chapter 4.
3. For a detailed discussion of the functions of management, refer to Forester, G. W. : *Ibid.*, Chapter 18.
4. See Wyllie, J. : Farm Management, Farm and Stock, Breeder Publications Ltd., London, 1950, Chapter 2 ; Hopkins, J. A. and Murray, W. J. : Elements of Farm Management, Prentice Hall Inc., New York, 1953, Chapter 2.

It is, however, to be noted that the qualities necessary for a farmer managing, say, 100 feddan farm are not likely to be the same as those for a farmer managing a 200 feddan farm. This is because of the various factors which influence to a great extent the effectiveness of management. Important among these are discussed below.

INDIVIDUALITY OF FARMERS AND FARMS

The definitions and the outlines of what the scope of the respective functions of organization and management would cover, assume that all farmers are good organizers and good managers but they are actually not. For instance, there are excellent, good, fair and bad farmers. Some are good in some respects and poor in other respects. Farmers being individuals may be expected to differ in their managerial abilities because of differences in personal character, in age, in energy and physical powers, in education, in training, in organizing capacity, in likes and dislikes, preferences and so on.

At the same time, farms differ in their physical make-up and economic potentialities, *i.e.*, in respect of many features by which their economic results are determined. Such features are size by acreage, site and location, soil type, local climatic conditions, kind of products, amount of capital, availability of labour supply, water supply, drainage system, combination of enterprises, levels of prices and so on.

Because of these two sets of factors — individuality of farmers and farms, *i.e.*, the attributes of the operator and the context in which the attributes are exercised—it is expected that there will be great diversity of managerial efficiency among farmers and it is not surprising that a considerable range in economic results will be found to occur and hence individuality should be given due weight in the appraisal of the performance of individual farmers and farms.

From the management point of view, the factors by which economic results are determined can be classified as follows :

(1) Factors which operate independently of management such as influence of natural forces and environmental conditions (general and seasonal climatic conditions, heat, rain, draught, pests and diseases attack, farm size, shape and lay-out of farm and inherent soil fertility) and economic forces such as general price levels and labour problems.

(2) Factors within the control of management which will be either : (*i*) under partial control such as production pattern within certain limits and permanent equipment of farms as provided by the landlord; (*ii*) under complete control of management such as choice of crops and varieties, methods of cultivation, use of fertilizers and so on.

The economic results as a whole thus depend partly on the effects of factors which cannot be altered or materially changed by decisions of managements and partly on the decisions of managements as to the use of farming resources.

For example, changing the size of a farm is so hedged about with restrictions of one kind and another that it is not easy for operators to change their farm size.

This is partly true as farms are in fact changed in size by taking from or giving up land to neighbouring farms, though opportunities for such modifications of size may not be frequent.

Although the site and location of a particular farm are fixed, yet there is still choice of decisions open to the farmer to decide what type of farming is to be practised. Different individuals will have different ideas about the way a particular farm could be operated because of their varying degrees of managerial efficiency.

The basic geological character of soil still sets certain limits to the type of farming that can be successfully carried on. However, within these soil types the surface of the soil is continually being modified by farming practices.

The climatic conditions, however, need to be accepted as they are, but the good manager can select crops, livestock and rotational practices suitable to the conditions of an area.

Although farming has been carried on under a context of prescribed prices for some products such as wheat, rice and certain kinds of fruits, farmers growing such crops still have a wide range of choice in matters affecting quantity, kind and quality and seasonal selling of those products, and all these features have influence on the value of wheat, rice and certain fruits output. Also, insofar as farmers deal with intermediate products they still have a wide latitude of choice in bargaining for their prices. Hence, ample scope for exercising decisions of management has been left to individual farmers despite the prescription of prices by governmental order.

It is then obvious that farmers can still have influence on economic results through management despite the incidence of the uncontrollable factors such as natural forces, environmental conditions and economic forces, taking into consideration that individuality of farmers and farms must be recognised. That is, features in respect of all the factors by which farm profitability is determined need to be taken into account when the question of comparison in economic results is concerned.[5]

PREDOMINANCE OF SMALL SIZE FARMS

Amongst the factors which influence the effectiveness of management decisions is the predominance of small farms which do not help farmers to achieve a fuller utilization of their resources. The smallness of farm size is an obstacle to adopt new techniques insofar as it limits the possibilities for accumulating capital required for the implementation of new techniques and other improvements which may enable to raise efficiency in the use of the available resources such as man and animal power, thereby yielding a higher farm income.

To achieve a fuller utilization of farm resources on these farms, the farmer should include on his farm some types of productive livestock to convert the un-

5. El Tonbary, A. A. : *Op. cit.*, Chapter I; and El Tonbary, A. A: Principles of Farm Management, Dar Nashr El Sakafa Press, Cairo, 1959, p. 140 (in Arabic).

marketable crops such as roughage, damaged seeds and skim milk into saleable crops such as milk, meat and eggs, thus providing a better utilization of labour and land.

In order to overcome the low productivity of land, the soil fertility should be maintained by establishing a definite crop rotation suitable to the soil type. The farmer should also use the right type and adequate dressing of fertilizers so as to cut down total expenses, thus increasing farm income. Also the purchase of good seeds is of vital importance to the farmer because the growing of bad seeds may result in a low crop yield thus giving a low income. The seeds should be obtained from either the Agricultural Institutions or through co-operatives in order to ensure its good qualities. Land could be better utilized by growing the more profitable crops and this can be initiated by farm managers provided that they should be aided to become familiar with the cultivation of these crops.

The shortage of many of these requisites is of course a major impediment in the attainment of high income on these farm units.

SHORTAGE OF CAPITAL REQUIREMENTS

The provision of capital requirements particularly on small farms is limited. Without the intervention of the government the problem of financing capital will continue to exist as possibilities of financing the farming business out of the farm income are absolutely scarce. Also, the change in the pattern of land tenure as a result of the Agrarian Reform Act of 1952 made it necessary for the government to intervene particularly after the disappearance of the big landowners from the capital market since capital sunk in land became less productive owing to the lowering of rents which were previously incentive for capital inflow into agriculture. The role played by the government in the provision of capital cannot be disregarded especially since the Military Regime got to power on the 23rd of July, 1952. Through the Agricultural Credit and Co-operative Bank which is sponsored by the government, farmers can be provided with loans on the mortgage of their products on condition that the bank markets their crops so as to ensure the reimbursement of loans and to secure favourable prices for their crops[6] (Table II). In this connection it might be useful that farmers should be aided to forecast the needs of markets and consequently they can adjust their production to the anticipated demand.

TABLE II—LOANS OFFERED BY THE AGRICULTURAL CREDIT AND CO-OPERATIVE BANK TO INDIVIDUALS AND AGRICULTURAL CO-OPERATIVES, EGYPT, U.A.R. (IN THOUSAND POUNDS.)

	Loans		
Year	Individuals	Co-operatives	Total
1952	12,560	3,400	15,960
1954	12,899	4,549	17,448
1956	10,966	6,729	17,695
1957	11,576	8,270	19,846
1958	12,195	12,280	24,475
1959	8,815	20,598	29,413

Source : El Tonbary, A. A. : Principles of Farm Management, *Op. cit.*

6. Marei, S.: Agrarian Reform in Egypt, First Edition, 1957, Part IV.

The present national drive for increased farm production together with the adoption of new techniques and modern machinery apart from the disappearance of big landowners from the capital market give rise to the urgent need for more capital requirements for the farming industry. It should be emphasised that the provision of credits is not only the solution for this problem but also the best use of credits which can be secured by good management. Co-operation can play a positive role in this respect, provided there is good supervision and guidance so that farmers through association in co-operatives would be able to overcome many of the handicaps which arise from the smallness of the farm sizes.

EFFICIENCY IN THE USE OF FARM RESOURCES ON SMALL FARMS

The national drive calls for higher output from our limited land resources. In pursuit of this goal, a national planning for farming programmes and large state funds are used to maintain economic inducements with a view to assisting farmers to pursue high output policies. Such high output must be obtained with the minimum use of farm resources or inputs, *i.e.*, efficiency in the use of farming resources. But the existence of large number of small farms hampers the achievement of high efficiency in farming business. Hence, economy in the use of resources becomes very imperative. Such economy may be sought along two main lines : (1) reducing input without reducing output or with loss of output in lesser proportion than the fall in input factors ; and (2) increasing output without adding to input factors or adding input factors in lesser proportion than the increase in output.

Efficiency in the use of resources under Egyptian farming conditions is likely to be low particularly as regards man-power and animal power as shown in Table III.

TABLE III—EFFICIENCY IN THE USE OF LABOUR ON SOME GROUPS OF FARMS, MENOUFIA PROVINCE, U.A.R., 1953-54

Farm Size-Groups	Average labour force* per farm (man year)	Standard labour (man days)	Actual labour (man days)	Excess labour (man days)	Labour efficiency Per cent
1 Fed. and less	2.0	448	164	284	36.6
Over 1 to 2 Fed.	2.5	560	207	353	37.0
„ 2—3 „	3.1	694	278	416	40.0
„ 3—4 „	3.8	851	354	497	41.6
„ 4—5 „	3.7	829	404	425	48.7

Note : Labour force here does not include casual labour.
* A farm worker works 224 days per year.

Source: Adapted from Saad, H. A.: An Economic Study of Some Small Size Farms in Menoufia Province, M.Sc. Thesis, University of Ain Shams, Cairo, 1957, p. 23. (in Arabic).

Table III indicates that efficiency in the use of labour tends to increase as farms get larger. The reason for this general tendency is that labour force on the farm is often determined by the size of the family rather than the labour require-

ments of the farm. As this is the position, it is likely to get a better fit of labour force to labour requirements as the size of the farm increases.

Hence it may be advantageous to make use of the excess of labour already existing on small farms by the inclusion, for example, of a poultry flock or keeping more dairy cows within the production pattern.

TABLE IV—EFFICIENCY IN THE USE OF ANIMAL POWER ON SOME GROUPS OF FARMS, MENOUFIA PROVINCE, U.A.R., 1953-54

Farm Size-Groups	Average animal unit per farm	Standard animal power* (animal day)	Actual animal power (animal day)	Excess of animal power (animal day)	Animal power efficiency Per cent
1 Fed. and less	1.3	237	12	225	5.1
Over 1 to 2 Fed.	1.7	309	23	286	7.4
„ 2—3 „	2.5	455	43	412	9.5
„ 3—4 „	2.6	474	56	418	11.8
„ 4—5 „	3.0	546	63	483	11.5

* On the assumption that the standard animal power is estimated at 182 animal days per year and the rest of the year is computed against productive purposes.
Source : Saad, H. A.: *Op. cit.*, p. 39.

It may be noted from Table IV that efficiency in the use of animal power was in general very low. However, the animal power performance rises as the size of the farm increases. Hence it is not economical to keep animals for attaining such low work output as long as the size of the farm is small. This indicates the need for a reorganization of the production pattern in order to utilise livestock at the best advantage. It may be advisable in this respect to keep livestock for only one purpose, *i.e.*, the production of milk or meat and that mechanization should substitute for livestock power.

It should be pointed out that if the farm resources on these small farms are to be used in the most effective way, the size of the farm should be extended but this is practically beyond the decisions of farmers as land is a scarce factor under our farming conditions.

Seeking an alternative method to enhance efficiency, improvement of management efficiency, as a factor of economic input, might be looked at. This can be achieved by the adoption of training centres and by the constant advices offered freely to farmers by the National Agricultural Advisory officers.

CONCLUSION

The actions exercised over the farm resources by the farm operator who is responsible for the farm organisation and management are to some extent a consequence of managerial decisions. These decisions rely heavily on the natural and

physical sciences as well as on practical experience, including business administration. Therefore, the more the farmer understands the contributions of the agricultural sciences and the greater his direct experience in the practical operations of farming and business administration, the better equipped he is likely to attain high standards of efficiency in the use of farm resources, land, capital, labour, knowledge and managerial capacity.

Consequently, the farmer's knowledge of agricultural sciences is of paramount importance and the need for means to overcome the farmer's lack of knowledge with regard to technological and social sciences becomes of considerable interest. Such knowledge can be achieved by adequate training programmes which may be undertaken by co-operatives or vocational centres. In recent years extension service and vocational training have added much to the farmer's knowledge of the technical side of business but his knowledge of business principles as depended upon economics is still meagre and ought to receive more attention.

Successive drives have been inaugurated to increase output by the use of all farm resources the country can command. At the same time the country expects efficient management in the use of farming resources : land, labour and capital. But the existence of large number of small scale units of production in the agricultural industry sets limits to the efficiency required to the extent that there is little scope for higher efficiency in the use of farming resources. And it is for the government through the national agricultural policy to ensure that the limited area of agricultural land in the country is neither used inadequately nor misused through incompetence. In pursuit of this aim it may be advisable that the country must take vigorous action against bad land management. To cite an example, the Agricultural Act of 1947 in England and Wales has given statutory force to this requirement and provided legal sanctions against bad management whether by landowners or tenant farmers and it seems logical if the Agrarian Reform Act can imply such progressive procedure.[7]

It is generally agreed that efficiency of agricultural undertakings increases with size as it may be expected that large scale undertakings will have advantages in buying, selling and other services. Optimum combination of input factors is likely to be found on the larger than on the smaller scale undertakings.

It can be further stated that the achievement of efficiency is easier on the larger farms because of their very nature. But increasing the size of the farm is practically beyond the sphere of management. Management can however bring other small farms into a higher level of efficiency by consolidating these small units through some form of co-operative effort. Such an association will help farmers to make use of the many benefits of co-operation which through good supervision and guidance, *i.e.*, sound management can render various services to farmers. These will in turn raise the efficiency in the use of farm resources and thereby increase farm incomes.

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7. Ministry of Agriculture, Fisheries and Food : Agriculture Act, 1947, 10 and 11, Geo 6, Ch. 48, H. M. S. O., Pt. II, Section 16, p. 15.