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II

An Outline of
Economic Principles
in Farm Organization
and Management

A. H. MAUNDER

INSTITUTE FOR
RESEARCH IN AGRICULTURAL ECONOMICS

1950

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II

An Outline of
Economic Principles in
Farm Organization and
Management

BY
A. H. MAUNDER

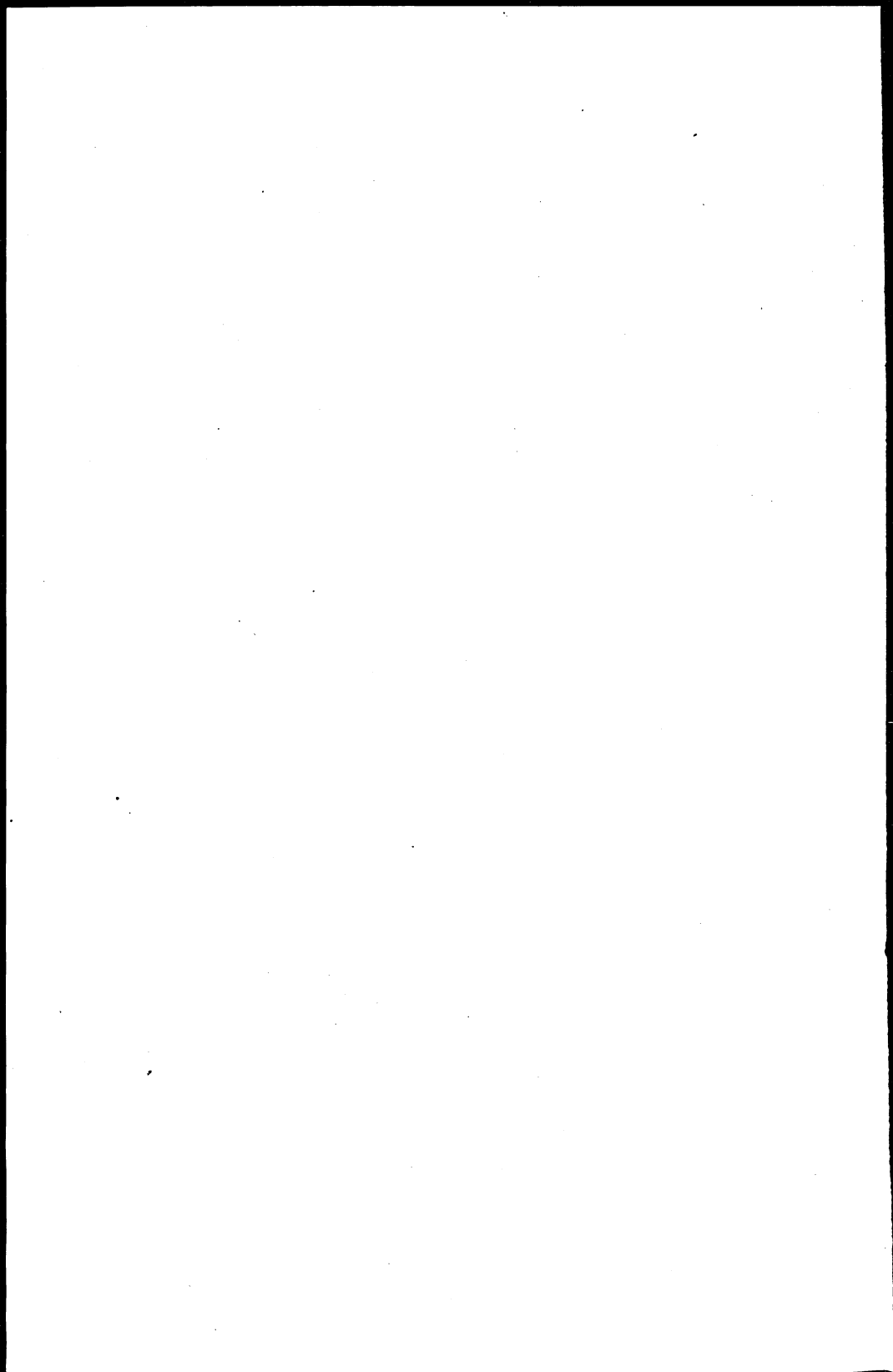
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I. The Distinction between Farm Organization and Farm Management

IN a precise sense management means the control of the process of executing a given policy and can be distinguished, as regards both the activities involved and the abilities required, from the formulation and determination of that policy. This latter function, together with the building up of a living structure to provide that the things which are to be done and the factors to do them are grouped for the most efficient working, is known as organization. This distinction between organization and management is at once apparent in most other businesses where there is greater division of function. The board of directors has a function quite separate and distinct from that of the manager who, depending on the size of the business, may delegate authority to foremen and heads of departments. Although the latter process may occur to a small degree on the larger farms, in the main the farmer is responsible for both organization and management.

The organizer must select the factors of production which are available and decide on their combination in each enterprise. When this has been done it is the manager's function to ensure that the various operations are performed in the most efficient way; he must also make small day-to-day adjustments in the combinations of the factors of production and, while controlling and directing in detail these factors, he must notice any major adjustments necessary as a result of changing conditions. For example, as an organizer the farmer will decide the crop rotation of the farm and will decide generally the type of treatment each crop will require; but it is as a manager that he will observe the condition of a particular crop, the condition of the soil, the present and expected weather conditions, &c., and from his knowledge and experience will decide when to cultivate, or whether to top-dress with fertilizer.

On the one hand the organizer will make provision for the purchase of resources and the sale of farm products, on the other the manager has the direct job of buying and selling. The organizer

will decide general policy with respect to the use of purchased concentrates or production of home supplies. He will decide in general terms where the purchased feed shall be bought. As a manager it is his duty to see that this policy is carried out and that a sufficient store of food is held on the farm. At the same time he must have latitude enough to vary the ration fed where his knowledge and experience tell him that this is necessary and where it does not involve a major change in the farm organization. The organizer sets up a system of records and accounts which it is the duty of the manager to keep or have kept. In other words, management is the execution of the plans and policies of organization. But in agriculture it is normal for the functions of organization and management to be combined in the same person—the farmer or farm-manager. In some cases there may be uncertainty whether the specific entrepreneurial function in question involves organization or management. While in their essential nature they are distinguishable, the two merge into one another.

It seems possible that the increasing importance attached to farm organization is a result of the continuing growth of commercial as opposed to subsistence farming. The mainly subsistence farmer will pay most attention to farm management; the same may be true, to a lesser degree, of the family farmer. In other words, where a high proportion of farm costs is fixed and where there is relative freedom from contacts with economic conditions and movements of the outside world, the emphasis is on farm management. Where there is a growth of commercial agriculture, the problems of farm organization assume increasing importance. It cannot, of course, be said that farm organization is of no importance under near-subsistence conditions but from the farmer's point of view it appears to have less importance because the farm organization under these conditions is one that has evolved over a long period of time and, due to small contact with the outside economy, is likely to show relatively little change. On the other hand, farm management is continually affected by natural factors, the influence of which the farmer cannot avoid, and it therefore requires constant attention.

2. Farm Organization

THE problems of farm organization can be solved by the proper application of two sets of laws—the law of comparative advantage, and the laws of increasing and diminishing returns. It is convenient, however, to consider various aspects of farm organization separately.

A. *Principles relating to choosing what products and combinations of products to produce*

Each farmer has to decide what enterprise or combination of enterprises promises to maximize his income.¹ Whether these decisions are made consciously or not, all farmers are influenced by a complex of physical, biological, and economic factors which usually compels them to choose within a rather narrow range. The prevailing pattern of farming in an area is not always in accordance with the economics of the situation, and in this case the farmer who departs from the prevailing uneconomic pattern in the right direction will make a larger profit than his neighbours.

It is possible that the desirable change will not come about with the existing population of farmers. The change may be brought about by their next generation or, more drastically, as a result of the failure of the original farmers and a subsequent influx from other areas, where the appropriate system of farming is already practised. A well-known historical example of this latter process was the migration to Essex of livestock farmers from Scotland, the north, and the south-west, who introduced the more profitable dairying to the area, in place of the arable farming which had ruined its proponents.²

In order to determine the production which is likely to be the most profitable, it is necessary to understand the principle which decides the types of production which have the advantage under given conditions on a particular farm in a particular area. The principle is that of *Comparative Advantage*. The whole structure of modern commercial society is the result of the application of this principle, with its two necessary components—specialization and exchange. This is equally the basis of a commercial agriculture.

¹ Always subject to the principle of continuity.

² Cf. Smith, E. Lorrain, *Go East for a Farm*, A study of Rural Migration, Oxford, 1932.

The principle of comparative advantage may for convenience be divided into the concepts of a buying advantage, a physical production advantage, and a selling advantage. Both buying and selling advantages are functions of the economic location of the farm. On one hand the wages of hired labour will tend to be higher for farms which are near to industrial towns; on the other hand, the prices of some of the other farm inputs, such as fertilizer, may be lower. Selling advantage will depend mainly on the cost of transport to the ultimate consumer. This will vary with the distance, the relative bulk value of the product, and its perishability. In general, a bulky and perishable product will tend to be produced close to the market. Physical production advantage will depend mainly on the suitability of the natural environment for the type of production under consideration.

The farmer has to consider all these components of comparative advantage; but in a particular situation their relative importance may vary. While the advantage enjoyed by the Scilly Islands in the production of early spring flowers is, compared to the rest of England, a physical production advantage, that enjoyed by, say, Cambridgeshire over the Scilly Islands in the production of late spring flowers is mainly a buying and selling advantage.

The factors determining advantage can be roughly classified as:

- (i) Physical, e.g. climate, topography, soils.
- (ii) Biological, e.g. disease, results of plant-breeding (in as far as different districts are unequally affected).
- (iii) Economic, e.g. (a) External—prices of products and supplies at the farm, labour supply, and wage rates.
(b) Internal—family labour available, farmer's ability, capital available.

The result of this interplay of factors is that 'a product tends to be produced in those areas where its ratio of advantage over other areas is higher, or its disadvantage is lower, than for any other product'.¹ The idea of comparative advantage thus involves a two-way comparison: a comparison between types of production within an area, and a comparison between areas of the same type of production.

When comparing different combinations of crops and livestock the above principle can be applied by considering the alternative

¹ Black, J. D., *et al.*, *Farm Management*, p. 376.

combinations as if they were separate individual enterprises. In the Downland country, for instance, the comparison might be between the combined production of sheep and barley on the one hand, and the production of liquid milk, calves, and cast cows, and some cereals on the other.

B. *Principles relating to making the best combination of the factors of production*

1. *Variable proportions.* In some circumstances technical considerations may limit the proportional combination of certain factors to a set and rigid relationship. An example is the combination of one shepherd with a fairly constant number of arable sheep which in turn will need a fairly definite acreage of land. In most cases, however, the relative proportions of the factors of production can be changed in response, for the most part, to changing economic conditions. An example of this condition can be taken from wheat production. Given the normal range of physical conditions for wheat production in any territory, a given quantity of wheat will on the average require a given acreage of land for its production; but this production can be accomplished as the result of very different input combinations of labour and machinery. The determination of choices when proportions are variable involves consideration of conditions of substitution. Within certain limits the organizer may substitute one factor for another in the productive combination and still obtain the desired product. Capital, in the form of machinery, can be substituted for some of the labour required in milk production. An investigation by the Department of Economics of Bristol University into milk production costs in 1947-8 showed that, on the average, the farms with milking-machines used 52 hours of labour per cow per annum less than those without.¹ Whether such a substitution is economical or not will depend, other things being equal, on the relative costs of labour and the costs of running and maintaining the machine plus a charge for depreciation and for the use of capital.

The smallest knowledge of agriculture is sufficient to show that the material inputs in a process cannot be perfectly substituted for one another. There is one combination which will give the 'best' results and too great a proportion of any input will give worse

¹ Beynon, V. H., *Report on Milk Production Costs 1947-48*, Notes on Farm Economics, Department of Economics, University of Bristol, 1949.

results than this 'best' combination. This has been expressed by Boulding as the law of 'eventually diminishing marginal physical productivity'.¹ When a variable input is *first* added to a fixed amount of the other inputs, total returns increase at an increasing rate as the point of best proportions is approached; i.e. this is the phase of increasing marginal productivity. After the point of 'best' proportions has been reached, total returns still increase but at a decreasing rate; i.e. this is the phase of decreasing marginal productivity. Eventually a point is reached where the total return actually declines and where the marginal productivity is negative.

So much for the idea of diminishing productivity in its physical form; but it is the economic application which will give the answer to the problem of finding the most *profitable* combination of the factors of production. Within the physical framework it is the relative *costs* of the factors of production and the *prices* of the products which determine the most profitable combination. The solution to the problem can be found in the proper application of the principle of marginal returns.² For every farm business there is a highest total profit combination of the factors of production; this is the point where the last unit of each of the variable factors just pays for itself. In general this leads to the use of as few inputs of the more expensive factors of production and as many inputs of the cheaper factors as may be possible in the total combination required for production of the desired product.

The visible result of a farmer's decision as to the most profitable combination of the factors of production is the degree of intensity of his farming operations. The term intensity can apply to the amounts of the other factors of production which are combined with a fixed amount of *any* one factor. It is usual, however, to treat land as the fixed factor, and intensity commonly means the intensity of land use.

2. *Capacity, efficiency, and size of business.* So far it has been assumed that all units of a given factor were alike and of equal effectiveness in production. Such is not the case, and there are two economic characteristics, common to all factors, which affect their productivity. These are capacity and efficiency.

¹ Boulding, K. E., *Economic Analysis*, p. 491.

² Although the idea of marginal returns has no significance unless some factors in the combination are assumed to be fixed.

Capacity has been defined as the 'power to receive, absorb, take into, or associate with'. The economic capacity of any factor of production may be defined as its ability to combine with other factors at the point of maximum profit. In the economic processes of agriculture capacity is the measure of what the factor will absorb and return with incremental value. Thus the economic capacity of a given area of land is measured in terms of the number of units of labour and capital which can be associated with it with optimum results at a given stage of agricultural knowledge. More concretely, in primary crop production it is measured by the value of fertilizers, cultivations, &c., on which it will return incremental and equivalent values. 'Good land' will absorb and return more and 'poor land' will absorb and return less. The economic capacity of a cow is measured in terms of the feed and labour units which can be applied to her with expectation of a return of incremental and equivalent values.¹ The economic capacity of a man is measured by the task he can accomplish in the 'normal' or 'accepted' working day of the locality and period. But one man may have a high capacity for one purpose or set of purposes and a low capacity for others.²

Efficiency has been defined as 'the ratio of results achieved to the means used'. The economic efficiency of any factor of production is the effectiveness with which the other factors are used, when they are combined with it at its maximum economic capacity. Thus the economic efficiency of a given area of land is measured in terms of the value of the product per unit of labour and capital expended upon it at its particular level of economic capacity. The economic efficiency of each of a number of cows at a given time and price-level is measured by the ratios of the values of outputs to the costs of inputs, when these are applied at the individual cow's level of economic capacity.

Suppose the point of maximum profit or highest net returns for one cow is reached when 12 lb. S.E. (starch equivalent) is used to produce 2 gallons of milk daily. For another cow this point is reached when 19 lb. S.E. is used to produce 4 gallons of milk. The economic capacity of each cow to use *food* is 12 and 19 respec-

¹ In all livestock production, which involves physical loss in conversion of feed into products, inputs and outputs must be measured in money values.

² A condition which has always been recognized by English farmers in their selection of employees for specialist posts, e.g. shepherds and cowmen.

tively. The economic efficiency of food utilization by each cow will be the output per unit of food input at the appropriate individual capacity level.

Cow A uses 12 lb. S.E., costing 20*d.*, to produce 2 gallons of milk worth 48*d.*

Cow B uses 19 lb. S.E., costing 32*d.*, to produce 4 gallons of milk worth 96*d.*

The efficiency of Cow A is $48/20 = 2.4$.

The efficiency of Cow B is $96/32 = 3.0$.

The most profitable and efficient combination is probably that which is founded on a basis of combining like grades, such as high capacity cows with high capacity pastures and other foods. The most efficient organizer and manager cannot obtain maximum profits unless each of the factors of production he uses has maximum economic capacity under the conditions of use imposed by their own essential characteristics and by the environment.

The levels of capacity in each of the factors, and in the forms in which labour-power and capital are embodied, are the bases on which the size of business rests. A high level of capacity in the farmer is only the initial condition of increase in the size of business. A high level of capacity per unit of land provides alternate ways of increasing the size of business. As with low capacity land, size can be increased by farming a larger area; but in this case it can also be increased by intensification. When units of capital are free and unembodied (as £ sterling) each unit is of equal capacity at a given time and price-level. But when free units are embodied, and fixed in various degrees, then capacities begin to vary. High levels of capacity in different forms of embodied capital operate in different ways. A high capacity in machinery may require an extensive scale of operation for its full contribution, but a high capacity in cows may be most effectively used on the relatively intensive scales common to small or medium-sized herds.¹ The chief consideration in the use of capacity in units of human labour is their indivisibility and the necessity of using optimum capacity in each unit over defined periods of time. High capacity in labour may lead to an increase in size of business on either the intensive or the extensive scale.

The significance of low or high capacities is that they determine

¹ In at least certain cases medium capacity cows may be appropriately associated with high capacity in machinery or other equipment.

the bases on which the farmer operates and the highest capacity in each sets a limit to operations.

For a given rate of efficiency the farmer having the larger capacities in organization and management and using a combination of factors of production of larger capacities, will receive greater total net returns and will also have an advantage over the lower capacity farmers in competing for the factors of production.¹

From the economic point of view the problem of the optimum size of farm business is only a particular aspect of the problem of the optimum combination of land, labour, and capital.

'The factors (of production) . . . are used in units, some of which are indivisible while others may be used in any quantities however small. The optimum size under any set of conditions must, therefore, have some relation to the ratio between the indivisible and the divisible units used. In particular, farms should be large enough to give full scope to the most expensive indivisible unit of any one factor of production used.'²

Farms must be large enough to give full-time employment to every unit of labour permanently employed and in the general case to give optimum employment for the most expensive single unit of capital; e.g. a rule of thumb estimate of the acres of grain needed for full economy in the use of a combine-harvester is 24 acres per foot of cutter-bar.

When, under a given set of conditions, the optimum size of *unit* has been decided, multiplication of this size will give increasing profit to the farmer, up to the margin of his organizing and managing capacity. Thus it may be found that under certain conditions the optimum size of poultry enterprise is 1,000 birds employing one full-time man; but when labour specialization is required, any increase in size should be in units of 1,000 birds, as otherwise the labour force will either be underemployed or have more work than can be done properly. The upper limit of size will depend on the managerial capacity of the farmer.

c. *Principles relating to the combination of enterprises in agricultural production*

While in any study of the farm business it is important to consider the farm as a complete unit, it is possible to distinguish within it three types of enterprise:

¹ For further discussion cf. Black, J. D., *et al.*, *Farm Management*, chap. XVIII. ² Thomas, E., *An Introduction to Agricultural Economics*, p. 145.

1. *Competitive enterprises.* These compete for available resources of land, labour, and capital. Some enterprises, such as the production of winter wheat and winter oats, compete at almost all stages for land, labour, and capital. Others, such as wheat and spring oats, compete fully for land but are partly supplementary for labour and capital.

2. *Supplementary enterprises.* These do not compete at the same time for the available factors of production; e.g. double (successive) crops, such as early potatoes and broccoli, are completely supplementary. Most side-lines, such as poultry on general farms, supplement the major enterprises by making use of some parts of the factors of production which would otherwise be idle and so add to the profits of the farm as a whole.

3. *Complementary enterprises.* These enterprises contribute to each other's existence and success. In the case of the sheep and barley combination which was widespread in England for more than a century, the sheep built up fertility for the barley and the barley and associated crops rested the land from sheep. While conditions of labour supply were favourable both enterprises inter-dependently added to the profits of the whole farming system.

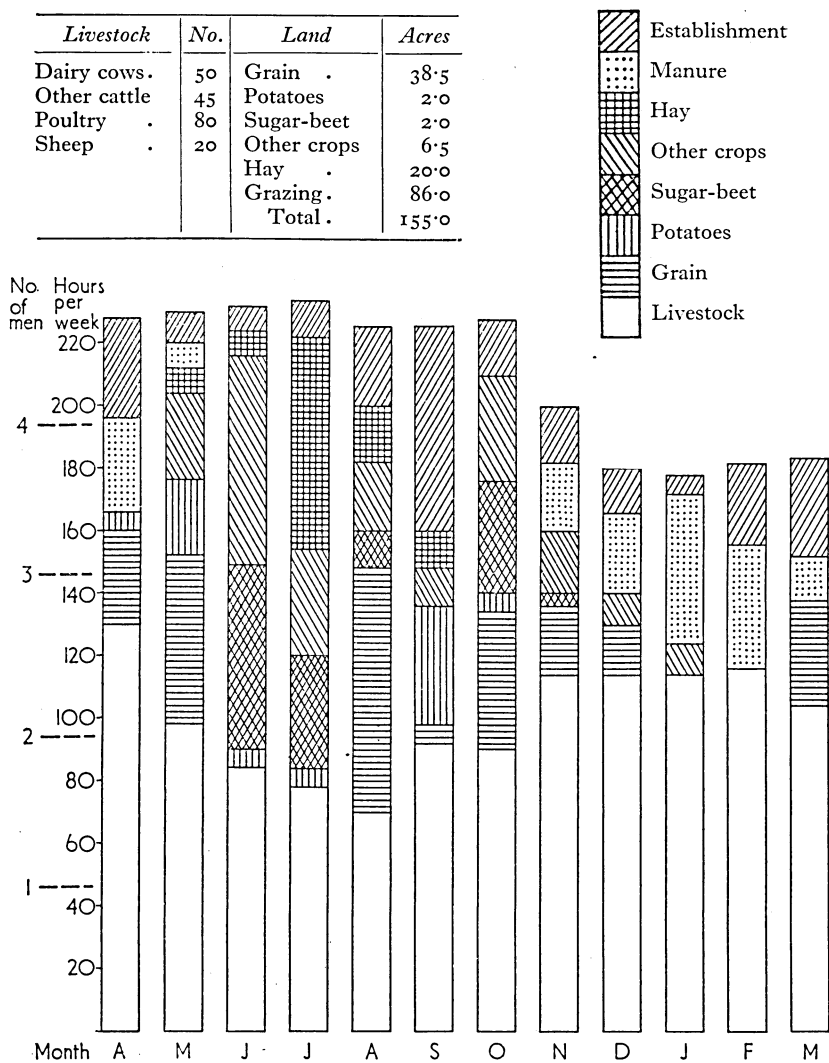
The problem of combination of enterprises is closely associated with the problem of the degree of specialization desirable. An enormous variation in the degree of specialization is possible, ranging from concentration on the production of a single product to the most complete diversity. While specialization of production is advantageous in most industries it has usually been suggested that in agriculture the advantages of specialization are offset, to a greater or lesser degree, by requirements which tend to favour diversification. Postulated reasons for diversification are:

(i) The need for the most continuous employment and the fullest utilization of the factors of production, and for the best use of by-products. The farm illustrated includes several enterprises which have very variable monthly labour requirements, but by combining several enterprises in suitable ways a fairly level demand for labour is obtained.

(ii) The need for the maintenance of soil fertility and for the preservation of crop and animal health. Sanders, in his consideration of the principles underlying rotations, states that 'there is an area of greensand in Bedfordshire eminently suited by its soil and situation to market gardening and, in particular, to the production

FARM A. *Monthly utilization of labour*¹

<i>Livestock</i>	<i>No.</i>	<i>Land</i>	<i>Acres</i>
Dairy cows .	50	Grain .	38.5
Other cattle .	45	Potatoes	2.0
Poultry .	80	Sugar-beet	2.0
Sheep .	20	Other crops	6.5
		Hay .	20.0
		Grazing .	86.0
		Total .	155.0



¹ Information supplied by I. G. Reid.

of early potatoes, and that crop has been taken continuously on the same fields by a number of farmers; the potato eelworm has increased on some of these fields so much that it is now quite impossible to grow a crop of potatoes at all.¹

(iii) The need for the production of supplies required by the converting enterprises of the farm. In certain cases this may be the only means of obtaining such supplies; but there may also be an advantage in the farmer being less dependent on external conditions of supply and prices and in eliminating transport costs of supplies which could be obtained from outside the farm.

(iv) The need for the spreading of income and risks. The diversified farm will *tend* to produce a regular income throughout the year² and the hardship which might result from the failure, for economic or natural reasons, of any one enterprise is minimized.

(v) The need for easy adjustment of the production of different products in response to changes in their cost-price relationships. A diversified system of farming may provide greater flexibility.

By reason of advances in equipment and in production techniques it has become necessary to suggest other considerations. The necessity of balancing the regular labour force against the production requirements of crops and livestock or, under particular circumstances of crop production, of ensuring a special supply of seasonal labour, will always remain. But a successful outcome to the continual search for special equipment for seasonal tasks such as potato planting and lifting, and sugar-beet lifting, will reduce the advantage of diversification in this respect. In the sphere of management, the requirements in technical and business knowledge of different enterprises are now so high and so specialized that much of the other advantages of diversification may be lost through the application of low capacity in management, and the achievement of only a low level of technical or business efficiency. The individual manager of two main enterprises, or of one main and one subsidiary, may reach high levels of capacity in both. This will enable him to avoid risks of disease or pests in crops or stock, or to control their effects. It may also enable him to overcome initial difficulties regarding circulating capital, and may even

¹ Sanders, H. G., *An Outline of British Crop Husbandry*, p. 6, Cambridge University Press, 1939.

² Milk and egg production are two cases of specialization with continuous revenue.

enable him effectively to meet changing conditions in supply-cost relationships. In some cases he may be better equipped to meet market changes than the operator of a diversified farm.

The farmer has so to plan his organization as to obtain the best balance between specialization and diversification, with the object of avoiding the disadvantages of each. A large farm business can often have the advantages both of diversification and of specialization. It may include several enterprises each large enough individually to enjoy some of the benefits of specialization, including some degree of specialized management. The farm is departmentalized rather than diversified. An optimum combination of enterprises is just another aspect of the problem of the combination of the factors of production. The farmer's action when proportioning the factors of production results in the emergence of different farm enterprises. The relative importance of each enterprise is decided in the same way. Because a farmer's resources are limited, he must choose between enterprises when they compete for any of the factors of production. Should he, for instance, be able to use capital and labour for increasing the poultry enterprise only by reducing the pig enterprise, his decision will be based on whether the loss he sustains by reduction of pigs is more or less counterbalanced by the increased profit on poultry. At any one time the optimum combination of pigs and poultry will occur when the marginal net return from each factor of production is the same, whether it be used on the poultry or the pig enterprise.

D. Principles relating to the adjustment of farm production to changing prices

Up to this point the organization of farm production has been considered as though it occurred in a static economy; but in reality economic structures and conditions are subject to varying degrees and rates of change. Under conditions of free competition the guides to economic production policies are found in the price structure and relative price movements, and it is the function of the price mechanism, by means of individual price movements, to maintain an equilibrium between supply and demand; consumers' demands ultimately being made known to producers through the relative price movements of different commodities. Even when conditions of free competition no longer exist, so long as some form of price system exists, the farmer's

production choices will be governed by the relative prices of different farm products and their costs. The farmer's problem is to balance marginal costs and marginal returns and to do this he may need to adjust his business to a greater or a lesser degree, having in mind the prospective prices for agricultural products and the prices of the factors used in production. Such adjustments may be made from year to year or from one rotation cycle to another.

It is possible to distinguish two important causes of change in price relationships:

(i) Changes in the price relationships of agricultural products due to changes in demand. These bring about changes in production which favour the products most favoured in the price change. The more unfavourable the economic location of production, the more unstable is the balance between different types of production and the more easily and rapidly will the farming system be affected by price changes. The supply of all food products of agriculture taken together tends to be inelastic; but this is not the case with individual products, due mainly to the fact that the mobility of the factors of production within agriculture is greater than their mobility between agriculture and other industries. In the same way, within agriculture, responses to changes in prices and costs will be more rapid where there is greater mobility of the factors of production and where the time element in the productive process is of less importance. Thus, according to Thomas, 'a rise in wheat prices is reflected in the acreage planted in the next season and the effect is discernible a year later; low sheep prices result in diminished sheep flocks some three or four years later; changes in the price of fat cattle show their effect on supplies some eight or nine years later'.¹

(ii) Changes in price associated with development in techniques:

1. Development of transport facilities.
2. Development in farm production technique.

In the first case the tendency is to level out regional differences in production due to geographical location, and agricultural production tends to become more adjusted to the natural conditions of location. The second kind of development tends to change the advantages and disadvantages of farms or areas in respect of production of one product or combination of products and some-

¹ Thomas, Edgar, *An Introduction to Agricultural Economics*, p. 210.

times to lessen the effect of physical and biological differences between areas.

In many cases farm production is only slowly adjusted to changing price relationships.¹ The reason for this insensitiveness can in the end be traced back to two basic characteristics of the agricultural industry: its biological nature and the dominant family nature of much of its production organization.

3. Farm Management

AFTER the farmer has determined the basic organization of his business he has still a succession of operating decisions to make throughout the year. This immediate and detailed direction, control, and execution of the plans and policies of farm organization is the function of farm management.

A. *Labour management*

The successful control and direction of farm labour (of all kinds) depends on the fulfilment of the following requirements:

1. *The selection of labour* which will perform the tasks most efficiently and can be paid for with the money available for this purpose. This selection will also be made with a view to counterbalancing any weaknesses in the farmer's own experience or capacity. The possibility of delegation of responsibility to the worker in certain instances must also be taken into account. It is necessary to select workers with capacities that are suited to particular tasks. This is particularly important at the present time due to the increased responsibility of the worker for the care and operation of expensive equipment.

2. *The day-to-day planning of labour utilization.* This will also involve the planning of alternative tasks and making day-to-day adjustments in response to changes in environment. These will be mainly of a physical and biological nature. Changes in weather conditions, and other changes consequent thereon, are of particular importance.

¹ For an account of certain farmers who successfully changed their farm organization in response to changing economic conditions, cf. Orwin, C. S., *et al.*, *Progress in English Farming Systems*, i-viii.

3. *The assignment of tasks and the supervision and training of labour*, together with the provision of incentives to work, so that each task is performed in the best manner available.

4. *The fostering among workers* of initiative, good-will, adaptability, co-operation, respect, and other miscellaneous intangibles.

B. *Managerial responsibilities with working capital*

Working capital includes any goods used in production, apart from labour and the fixed capital items such as land and buildings.

1. *Plans for the use of working capital*. Such plans must allow for as full utilization of working capital throughout the year as possible, but must be flexible enough to allow for changes in the natural environment. Because of the agricultural industry's relative exposure to these changes, the plans will be subject to necessary modifications from day to day and, where enterprises compete for the use of available working capital, the adjustments should be made in such a way as to favour the enterprise which adds most to the profit of the farm as a whole.

2. *The supervision of working capital*. This managerial function is closely associated with the supervision of labour (which may in many cases achieve the same end); but the emphasis here is on efficiency in the use of all forms of embodied capital. It is necessary to keep a strict watch over all classes of working capital at all times and this, together with proper care and maintenance, is essential to ensure maximum efficiency in its use.

3. *The purchase of supplies and materials*. Decisions have to be made as to where, when, how, how much, and what quality to buy and there is opportunity for the exercise of judgement in each of these decisions. The decisions made may greatly affect farm costs and so influence the profit from the whole farm.

C. *Managerial responsibilities for good farm practice*

This involves:

1. *The selection of suitable methods and practices* to be used in various farm operations.

2. *Minor adjustments in the farm organization* in response to changes in the cost-price structure.

3. *The planning of the production processes* so that their various interdependent parts operate with a minimum of friction. Hay-

making is one example where careful planning in the use of labour and equipment is essential for the smooth operation of the process.

4. *The realization and reporting of needed major changes* in farm organization (which the 'farm organizer' has to deal with), due to any maladjustment of the present farm organization with present or expected economic conditions.

D. *Managerial responsibilities in selling farm products*

The question of how far down the marketing channels the producer should go is one of farm organization and can only be answered for a particular product of a particular farm at a particular time. The operating decision of when and where to sell has still to be made in order to achieve the objective of realizing a maximum return from the output of the farm. A correct answer to this question is an important factor in increasing farm returns.

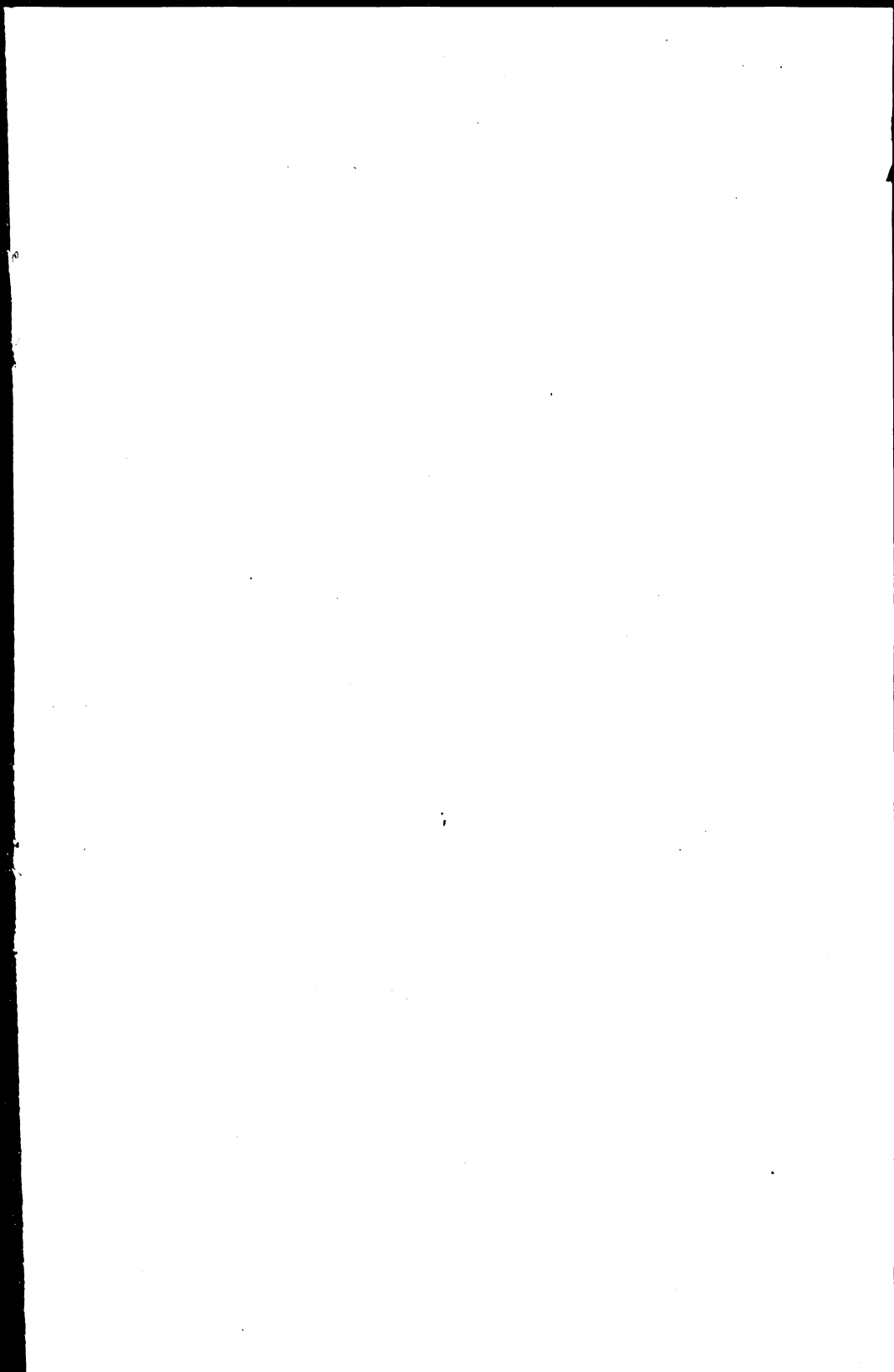
Organizers and managers in farming are concerned with processes of synthesizing and harmonizing the factors of production with the object of securing efficient and profitable use. The purpose of all analyses of processes in organization and management is that of clarifying and assisting the activities of synthesis.

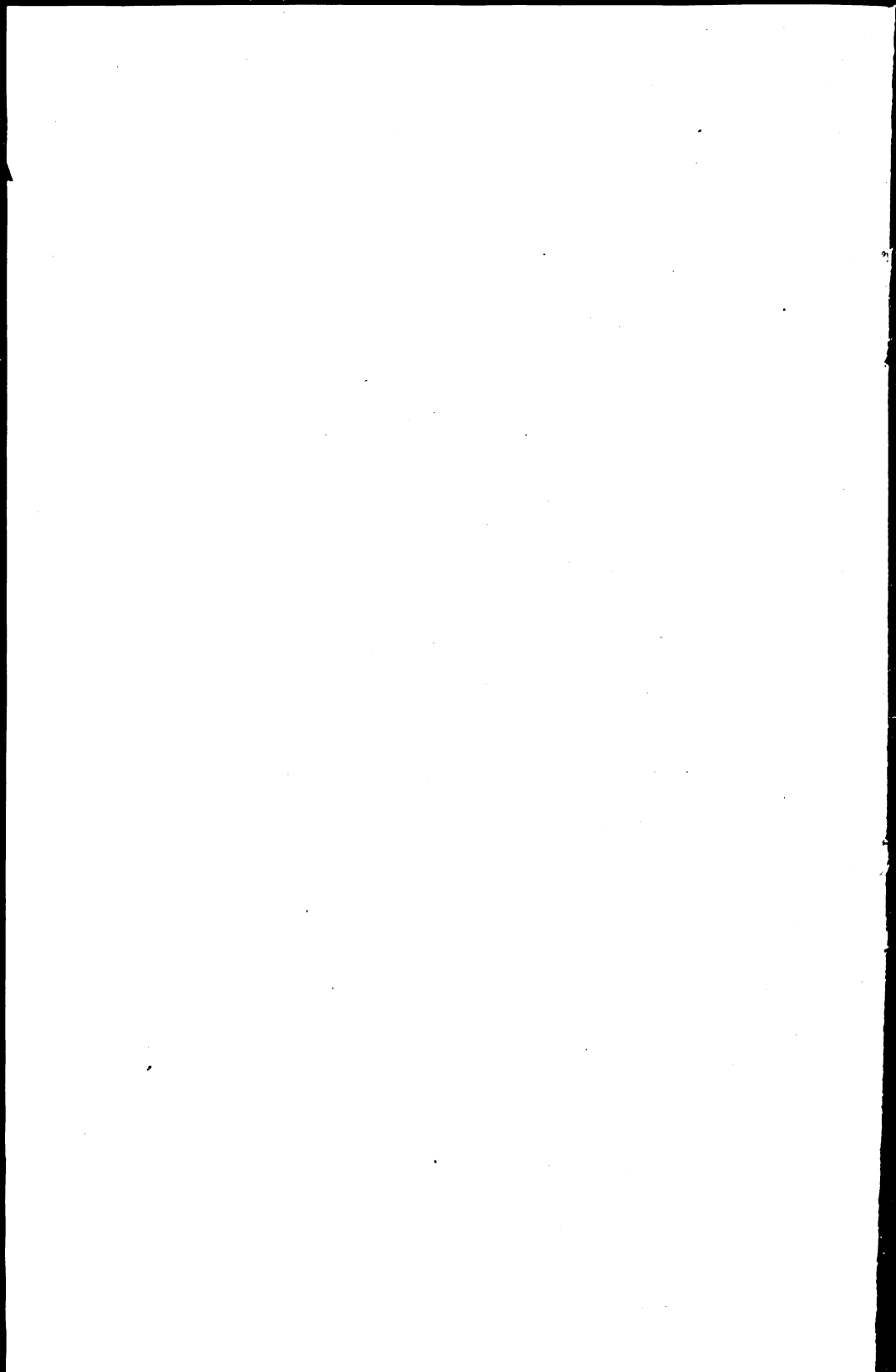
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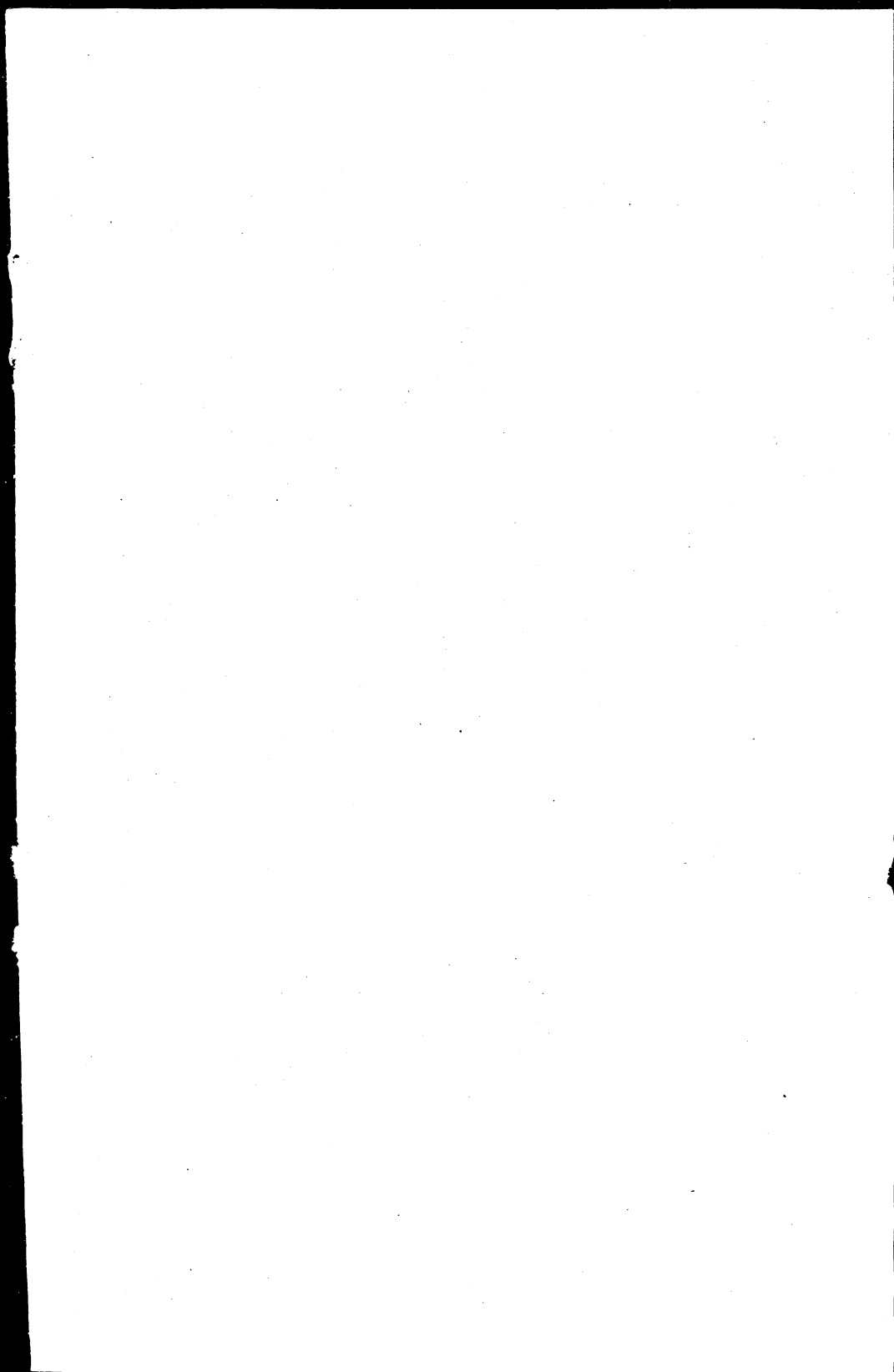
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