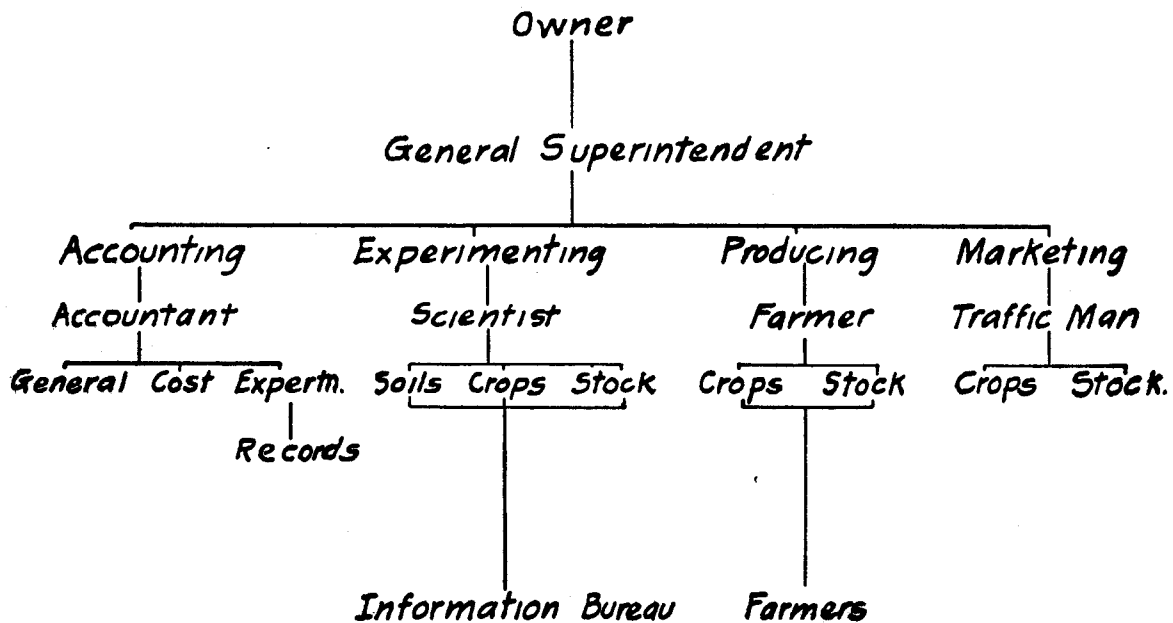


source, and a responsible source, such a farming corporation will unquestionably obtain best quotations.

ORGANIZATION

The successful conduct of any large business requires an organization. In such an undertaking there must be a division of both authority and responsibility. Leaving the customary idea on the farm for the owner to assume all responsibility from feeding the cattle to buying the tractor, it will be necessary to make this undertaking departmental. On such a large scale of operation this may be very advantageously done. The diagram appended herewith will illustrate the interdependence of the various departments and their chiefs.

For General Superintendent, a successful business man rather than a farmer, is suggested. Such a man would be primarily an organizer and an influence for enthusiasm.



For the chiefs of the three departments, trained men are necessary. For operating chief, a man of practical experience in farming should be obtained. This man will not need to know the technicalities of farming but must be able to convert into realities, theories and suggestions from the Experimental Department.

These words are not intended to class scientists in agriculture as impractical, but just as it is possible for an architect to draw up a set of plans for a building which he, himself, could not possibly erect and which would not trouble a building contractor, so the experimental department on this farm might often make good suggestions which they could never carry out in the fields.

The Experimental Department can be best divided into three parts: Soils, Crops and Live-stock. Depending upon whether the State Experiment Station would cooperate, it might not be necessary to have a man for each division. Probably two men: one a Soils and Crops man and the other a Live-stock man would be sufficient.

If systematizing the work-route of a product to an efficient course and organization of the human factor in a big enterprise with its attendant supervision, division of responsibility, and cooperation, make for efficiency, so also do Records.

It may be said that Supervision may supervise conditions that ought not be and Records may record inefficiencies of system. This is true but where, except in Records, will such leaks be brought to light?

From a study and close comparison of authentic records, a rein is kept upon business by which it may be swerved to the right or left to dodge the pitfalls of extravagance or inefficiency.

No human brain is large enough to act justly and wisely in all instances. No individual is big enough to judge the true condition of a very large business at all times and since pursuit of the wrong policy for even a short time in big business is tremendous in its consequences, it is essential to control that accurate accounts be kept. Accounts as kept by the out-of-doors man whose bent is in the direction of things practical and who slices off fractions and approximates results are worse than no accounts. The man in this department must be born to work in detail and with

increasing diligence to obtain a record of everything.

THE NORFOLK SOUTHERN FARMS TRACT POSSIBILITIES

The first half of this report in its discussion of the importance of interesting Capital in large farming enterprises and its explanation of the policy of the owners of this tract of land, can amount to nothing but a beautiful theory unless the land has possibilities of such adaptation. Success in farming is largely due to the business ability of those directing it, but not solely. Although the good farmer on poor land may make a better success, sometimes, than the poor farmer on good land, one cannot hope to interest Capital in an enterprise which does not possess the basal elements of success.

It is the purpose of the remainder of this report to analyze the conditions as found upon examination, pointing out the possibilities of this particular tract of land and what from a study of pertinent experiments, may be expected.

The six most important factors in crop



Road Along Canal on Partially
Cleared Land

Main Canal and Felled Timber

production are -

1. Seed
2. Soil
3. Moisture
4. Light
5. Heat
6. Food

1. Too much importance cannot be placed upon the factor of seed. Under scientific direction, at least as much if not more, development may be obtained in plant-breeding than in animal-breeding. Under identical conditions of climate, rainfall, soil and cultivation, some seeds will produce a much larger crop than others. This factor will be given careful consideration by the experimental department.

2. The home of the seed, the soil in which it is to germinate and mature as a plant, is a factor of large import. Whether the soil be a heavy, plastic and resistant medium for growth, or whether it be a light, workable soil giving a wide-feeding-range for the plant roots, will materially affect crop production. While some changes in soil tex-

ture may be accomplished through proper handling, these changes are limited and usually costly.

3. Moisture, a very important factor in crop production, is almost beyond the control of man. Fortunate, indeed, is the region where rainfall is abundant and well distributed.

4. Light, of course, is essential to plant growth. Sunlight, by a process of photosynthesis, changes the carbon dioxide in the leaves of plants to starch. Furnishing light usually means planting with sufficient room for each plant and a struggle against weeds.

5. Heat implies not alone a consideration of a warm soil which due to its color, texture and drainage warms up early in the spring, but also to the growing season. A short growing season limits the number and kind of plants grown, as well as the number of crops per season. Although quickly maturing crops may be selected as adapted to short seasons, there is a much smaller handicap in choosing a climate permitting longer growing plants and more than one crop per season.

6. Plant food consists of ten essential ele-

ments, three of which - Carbon, Hydrogen and Oxygen, are contained in the air and water, and the remaining seven - Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Iron and Sulphur - in the soil. No plant can attain its proper growth, no crop can attain its maximum production, without a sufficiency of all of these ten elements.

Plant food is one of the most easily controlled factors of crop production since the elements may within certain limits be purchased and restored to the soil.

CLIMATE

The element of the section of North Carolina in which this tract of land lies is very desirable. Tempered by its proximity to the ocean, it is mild and free from the extremes found in sections not close to a large body of water. North Carolina, moreover, lies far enough south to insure a long growing season in which two crops of temperate-zone plants may be harvested and a cover crop sown for the winter. This fact not alone lessens the amount of winter feeding for hogs and