

THE MAGAZINE GUARDIAN

Teachers, Parents, Pupils, Farmers, Dairymen, Horsemen

WILL EXCHANGE SEED

HOW SHORTAGE WILL BE MET ON THIS CONTINENT.

Canada and the United States have reached an agreement which will enable both countries to get the full supply required and also to give assistance to Allies.

To meet the seed shortage on this continent arrangements have been made for the unrestricted interchange of seeds between Canada and the United States and for seed exports to and from Allied countries. Mr. George F. Clark, Canadian Seed Commissioner, has returned from a conference at Washington. He reported to the conference that the Canadian seed trade and canning stocks on hand together with the 1918 seed production would make possible the export of certain seeds to the United States in return for their supplying our shortage.

Before the war the field root and vegetable seeds used in Canada were obtained largely from Europe. Mangel and beet seed came principally from France and Germany, most of our turnip from Great Britain and Holland, and most from France and Great Britain. Cabbage, cauliflower, celery, parsnip, garden beet and radish seeds were mainly from European stocks. Tomato, onion, cucumber and melon seeds were supplied by the United States while peas, beans and sweet corn comprised the bulk of Canadian production.

The inferior quality of much of the imported seed together with the possible uncertainty of foreign supply had led the Seed Branch to investigate the feasibility of home production. Aside from small quantities grown experimentally by Dominion and Provincial Experimental Farms, individual farmers and gardeners were growing seed in a small way and their experiences were recorded. Indeed, certain localities had achieved some reputation, notably Yarmouth Co., N.S., for sweet seed, and Waterloo County, Ont., for the seed of various vegetables. But the growers were handicapped by inexperience, unsuitable machinery, and the high cost of labor.

With a view to acquiring complete information, experiments extending over a quarter of a century were conducted in Western Ontario under Government contract and supervision. Practically all the different kinds of field root and vegetable seeds were grown in quantity and careful records kept of the various operations. The results were quite satisfactory and served as a basis for drawing up a schedule of subsidies to growers which were authorized by the Minister of Agriculture in 1913. These subsidies were paid in return for the certification of officials who are responsible for the inspection of growing seed crops and cleaned seed. They are paid on the principal kinds produced and are for seedling in Canada and amount to about one-half of normal retail prices, which was estimated as sufficient to overcome the disadvantages of production in Canada.

Some 10,000 pounds of these seeds, mostly sugar beet, mangel, sweet corn, tomato, radish and lettuce, passed inspection in 1913 and were recommended for subsidies. On the outbreak of war in 1914 Seed Branch officers conducted a vigorous campaign in Eastern Canada and British Columbia and in 1915 reported over 85,000 pounds. Last year the Canadian crop was approximately 64,000 pounds, and this year, with the assistance of the Experimental Farms Branch, production will reach almost a million pounds of essential field root and vegetable seeds. Stocks for the 1919 seed crop have been produced this season for planting out next spring on a basis sufficient for well over three-quarters of a million pounds.

Small Farm Disadvantages. Although the "little farm" well filled is a favorite with the poets, farm management surveys of the Nebraska College of Agriculture show that it has several disadvantages. Among those which have the greatest effect upon farm profits may be mentioned the following: (1) Two men are needed to do a large part of farm work economically, and a small farm frequently does not offer enough work to keep an additional man busy. (2) The cost of horse labor per acre, like that of men, is excessive. (3) The cost of machinery per acre on small farms is nearly double that on "family-sized" farms as the smaller machines can be used to better advantage on such farms. (4) Barns and similar equipment cost more per acre than on large farms. (5) Small fields are necessary, and the cost of fencing is increased per acre.

Food Value of Milk. There is undoubtedly no food so essential to the development of mankind as milk. First, it is the only food which man can take from infancy and produce growth to maturity. Second, it is taken in liberal quantities in the greatest disease resisting food found in the entire category of foods; and, third, it is one of the most economical of all foods. Milk is still the cheapest animal product on the market.

Girls at Olds Agricultural School. For the past two years young ladies have been taking the straight agricultural course at the Provincial School of Agriculture, Olds, Alta. In most instances the heavier work, such as blacksmithing, etc., has not been taken by the young ladies, but in one case a young lady, Miss Elma Poedler (now Mrs. Nelson, Cluny) took the complete course.

19 Miles of This on One Farm. Nineteen miles of this have been laid this season by the farm of Mr. Henry Knight, near St. Catharines, the work was done under the supervision of the district representative for the county, Mr. David Elliott.

NO SEED SHORTAGE.

Supply in North America Sufficient for Allies.

As an outcome of a joint meeting of the Seed Branch Committee, representatives of the War Trade Board, Food Administration, vegetable growers and wholesale seed merchants of the United States, held in Washington recently, at which a representative of the Canadian Seed Department was present, it was decided that there is no cause for fear of a shortage of seed of farm and garden crops in Canada or the United States, such as existed in the spring of 1918. In the case of items of seed supply of which there is a shortage in the United States there is a surplus in Canada, and with the exception of onion, radish and parsnip seed, the supply in the United States will be sufficient to take care of all requirements including prospective demands from all Allied countries.

As regards the seed supply for the principal grain crops in Canada, the supplies of barley and oats are well above normal, while spring wheat is expected to be sufficient for the country's requirements. In Ontario, barley and oats show a good surplus, giving farmers in that province the opportunity to make careful and exacting selection for next season's planting, a similar condition with regard to the supply of coarse grains exists throughout the rest of Eastern Canada.

Corn grown for seed in Southwestern Ontario is proving most satisfactory crop, and will ensure great proportion of the yield being well preserved for next spring's use. Most of the counties in the recognized seed producing section will have a supply sufficient for their own needs and the surplus in the more favored counties is expected to be sufficient to meet the demands of the outside growers of the province. Several of the varieties imported from the Southern States in last spring's shortage of seed, proved successful in a seed-producing sense as much as 10 per cent of the yield in many cases being considered fit for seed purposes if properly wintered. Where seed of home-grown corn was planted last spring, the yield in most cases was heavy and the quality first-rate, so ensilage growers will have a chance to return next year to the use of varieties that they were in the habit of growing previous to the season of 1918.

To Reduce Distribution Costs.

Municipal authorities in Vancouver are trying to bring about an amalgamation of the milk distributors, as a counter to conditions which are causing a rise in the price of milk. An investigation made a year ago by the city authorities found that an estimated \$75,000 to \$100,000 a year was lost in milk distribution owing to duplication in equipment and labor. The producers were the first to point out the great economic loss in the milk distributing system of Vancouver, and would welcome formation of one distributing concern. In fact, they have even considered attempting to handle the milk themselves. This does not, however, appear to be especially good prospects of success in the present agitation. The three largest concerns, which developed at the conference, would join a merger, but many of the smaller dealers, who are frequent cases, work on their own outfits, are chary of the deal. They do not care to put their capital in a concern in which they would have little control, but some would be glad to sell out.

To Expropriate Idle Land.

In British Columbia a Provincial Land Settlement Board has been appointed, which has authority to take drastic measures for the making available for settlement land held in idleness by speculators. Such lands can be expropriated if the owners do not see fit to sell at such prices and upon such terms as the board deems just and fair. After expropriation the board can survey and sell the land to actual settlers in small lots, or upon long time at a small rate of interest, thus making it possible for men of small means to go on the land and make homes for themselves and families. As a start, the board is expected to take about 100,000 acres of the best bottom and bench lands lying along the right bank of the Elk river, in the Fernie district, will be surveyed and made ready for sale and settlement by next spring, and further exploration of the land is being undertaken by the board, whose avowed policy is to open up to actual settlement and cultivation all available lands.

Story of One Sugar Bush.

Several years ago a cyclone swept over the Gilbert farm in Elgin county and a clean swath was cut through the woodlot. Indians were employed to cut the fallen timber into cordwood. In less than two years afterwards, Mr. Abraham Gilbert told A. S. Paragous of the St. Thomas Times-Journal, "the place was grown up so thick and tight with underbrush you'd get lost if you went into it."

Then the Indians were again called in service and all the young growth cut out except young maple trees, that were left ten or fifteen feet apart. The young trees then saved form a valuable sugar bush to-day. Nine hundred have been tapped already, and in ten years more two thousand will be ready for the buckets if nothing comes along to prevent.

Record Harvests.

Both barley and rye harvests in the United States this year are next to the largest ever known. The 2,777,775,000 corn crop is considerably below that of last year, but is said to be of much better quality. The total wheat yield is estimated at 915,920,000 bushels, which is 41 per cent above the crop of last year.

Percherons Go to England.

The credit for starting the export of Percherons from this continent to Europe belongs to George Lane, of Alberta, who some weeks ago concluded arrangements with an English buyer for the sale of 26 mares and a three-year-old stallion to go to the Old Quay.

FACTS ABOUT BARLEY.

Information for Those Who Wish to Grow This Grain.

The time of harvesting barley depends on the use of the crop, the variety, the climate and the method used.

For seed, brewing, or feed, the crop should be mature. The maturity should not be judged by the earliest spikes. If possible, the latest spikes should be mature, as this will insure that no part of the crop will be shrunken from having been harvested too soon. If the stand is thin or uneven, this may not be possible as the earlier spikes of many varieties would begin to shatter. By maturity is meant the point where material ceases to be added to the kernel and not that the grain has become dry. There are several popular tests which indicate this period. The kernel at this time can be dented with the thumb-nail and retains the dent for some time. The milky juice largely disappears from the furrow. The hull begins to wrinkle on the finest grain, showing the shrinkage of the kernel beneath. After this point is reached, ripening is merely the loss of moisture and can take place in the shock as well as if left uncut.

Sturge crops of barley are often cut somewhat earlier than grain crops, but this is for the purpose of favoring the development of the grass



Barley Ready for Harvest.

seeded with the barley and does not enter largely into the general problem of barley harvest.

As a hay crop barley is harvested still earlier. It is not, however, cut while in bloom, as is customary with many of the grasses. The grain is allowed to develop almost to its maximum. The grain content of barley hay constitutes a considerable part of its feed value. Barley is highly prized as a hay crop in some parts of the west, despite the coarse awns which frequently cause sore mouths in horses and cattle. Sometimes the hooded varieties are grown for hay, in order to eliminate this objectionable factor. Much of the hay, however, is incidental; that is, the barley is grown for grain. If the season is favorable, it is harvested for grain; if unfavorable, it is harvested for hay.

The time to harvest sometimes depends on the variety. Some varieties shatter badly when ripe, while others do not. Hooded and awnless sorts shatter most easily.

The climatic conditions at the time of harvesting have some influence on the stage at which barley is cut. In a section subject to storms the harvest must be accomplished within a very few days. If the straw is too green it will not dry out properly in a humid climate and there may be mold damage. If harvest is delayed too long much grain might be lost through the influence of a storm, as all barleys in humid climates shatter rather easily.

There are but three common methods of harvesting barley, by the use of the binder, the header and the combined harvester. The grain binder is the implement of the intensive farmer and is by all means the best where it can be used. The grain can be cut with less loss. It can be cut at the optimum time and in the humid regions of the west with less damage than by the other methods. When cut with the header or the combined harvester, the grain is allowed to ripen more completely than when cut with the grain binder.

A Home-made Roof.

A good serviceable roof can be made for chicken houses, hog pens and barns, from burlap, coal tar and sand. Experience has shown that such a roof, if retreated with coal tar and sand every two or three years, will last a lifetime.

The boards on which the roofing is to be laid should be smooth and close. Nail two thicknesses of burlap to the boards. When the burlap is in place, apply a coating of thin slush made of the paste has dried, spread on a coat of coal tar and sprinkle with sand. Grind the sand into the fibre of the burlap with a heavy pair of shoes. When thoroughly dry, apply a second coating of tar and sand.

Hogs Prospects After the War.

The Breeders' Gazette says that, although one of the largest crops of hogs ever gathered in the United States has been marketed this year, the cellar of American packers are practically empty. It is believed, too, that hog prices will hold for at least some time after the war. A provision trade circles opinion exists that peace will materially broaden export demand for all kinds of hog products. Such neutral countries as Norway, Sweden, Denmark and Holland will then greatly increase their purchases; England and France must be fed, and the empty larders of the central empires at least partly replenished.

KEEPING SWEET POTATOES.

Value of Crop Increased by Proper Storage.

Sweet potatoes stored in up-to-date storage houses bring a higher price on the market than those stored in banks and pits. By the adoption of the better methods of storing and marketing sweet potatoes, their value could be greatly increased without increasing the acreage of production. This is especially true in the south, where they are either rushed on the market at digging time, when the price is low, or stored in outdoor pits or banks, where a large portion of them decay. Very few of the potatoes stored in pits or banks ever reach the market, for from 25 to 50 per cent spoil, while those that remain sound are not of good quality.

Even if the pit or bank method of storage were satisfactory in other respects, it is not economical. Too much labor and expense are required to make these banks every year and to get the potatoes out of them when wanted for market purposes. It can be marketed more economically and to much better advantage from storage houses. It is not advisable to open a bank when the soil is wet or the weather cold, as these conditions injure the potatoes and cause material loss. Outdoor pits and banks cannot be depended on. In some years a very small number spoil in banks, while in other years practically the whole crop is lost. The only safe and practicable method of storing sweet potatoes is in a storage house, for then they can be taken out at any time without subjecting them to unfavorable conditions.

Prepare for 1919.

Now is the time for the farmer to plan his croppings for 1919 and in doing so to decide upon what fertilizers, if any, he proposes to use. Last spring there was considerable disappointment among farmers, especially among those who had delayed placing their orders till a few weeks before the season opened, as there was not only a shortage of material but transportation facilities were such that quick deliveries could not be made. There is no prospect that conditions will be better next spring and it therefore behooves the farmer to place his orders for fertilizer, manure and having made his selection to place his orders stipulating an early delivery. Co-operation in ordering may effect the saving of a considerable amount in purchasing and freight rates.

During the last ten years there has been considerable increase in the number of farmers in British Columbia, Quebec, Ontario and the Maritime Provinces, using fertilizers, but unfortunately the vast majority of them have no definite knowledge of the profit that may have resulted from their application. There will always be a degree of uncertainty as regards results from fertilizers, chiefly because of the fact that seasonal conditions cannot be predicted, but with close observation from carefully planned work, a very great knowledge may be gained as to the kind and amount of fertilizer, which will prove profitable. A series of adjacent plots on fairly uniform soil, each with a different amount or combination of fertilizer and sown to the same crop, furnishes the most reliable means of learning if time and labor are not permitted of the adoption of this plan, a strip of the field well staked; should be left unfertilized, and its yield weighed against that of a similar sized strip receiving the fertilizer.

A considerable saving may be usually effected by buying fertilizer ingredients—nitrate of soda, sulphate of ammonia, superphosphates, basic slag, etc., than by purchasing ready mixed fertilizers, and this course also furnishes valuable information for future guidance obtainable in no other way.

Information and advice regarding the use of fertilizers will be gladly given as far as may be practicable, by the Division of Chemistry, Central Experimental Farm, Ottawa.

Protecting Fruit Trees.

Orchard owners are warned by the department of horticulture at the Ontario Experiment Station to provide protection for young fruit trees from rodents before the first snowfall, as field mice and rabbits may begin to do their damage near the opening of winter. Even in orchards where there is an abundance of vegetation there has been found, that rabbits will leave the green forage to gnaw the bark of the fruit trees.

Horticulturists have found that field mice do not attack trees when the grass is cut to a height of 18 inches. Mice avoid tunnelling in ground that is not covered with grass, and make no passages through exposed patches.

Fall Planting of Shrubs.

Ornamental plantings on the lawn or in the garden may be done more successfully in the fall than in the spring. Most deciduous trees and shrubs may be transplanted in the fall with an advantage of gaining almost a year's time in favor of fall planting. The lilac begins to grow very early in the spring, but if moved in the fall the bush stands a much better chance of living and making a healthy amount of new growth as compared with spring transplanting. The bush honeysuckles, as well as spruces, are much less likely to sustain a severe shock if shifted in the fall.

Cattle for E. C.

W. T. McDonald, Live Stock Commissioner for the Province of British Columbia, visited Edmonton recently and purchased some 800 head of cattle. These are to be run in the Bulkley Valley, the money for their purchase being advanced by the Provincial Government on a long term basis. The cattle purchased were nearly all stocker steers and heifers.

FARM PRODUCTS NEEDED.

Day of Intensive Farming Has Arrived.

The day for more intensive agriculture in Canada is here. The events of recent years have exceeded those of the past two centuries in injecting Canada into world politics and world events. The fact that our armies are fighting on the battlefield of Europe for liberty and human rights has made us part and parcel of the commerce of the world. For three reasons, then, we must prepare by intensive agriculture to take advantage of these enlarged opportunities.

First, the commerce of this country has increased enormously within the period of the war. There is a constantly enlarging call for Canadian products both on this continent and in Europe. Second, labor to produce our crops has become alarmingly scarce. Such conditions force us to devise ways and means to maintain the greatest production with a minimum of labor. The third reason is found in the economic problem which the demobilizing of a great army is bound to precipitate. In order to take our part on the field of honor it has been necessary to drain the man-power of Canada. At the close of the war there will be the problem of assimilating a considerable number of Canadians who have laid aside the cruel business of war and are again to take up the art of peace. Productive farming, therefore, becomes the natural outlet for such a fund of energy.

The whole matter resolves itself into a business proposition. Canada is essentially an agricultural country. That what more natural line can we follow at the close of the war than in producing the greatest quantity of crops and live stock of highest quality? This will necessitate the development of the foreign market, for it is a case of seeking the foreign market, we are already in it. With broad-minded statesmanship at home and keen, alert business men on the outside, Canada should find little difficulty in marketing material of the quality she is capable of raising.

Had Many Potatoes.

In view of the importance attached to the Green Mountain type of potato as a result of that particular variety having been recommended to growers in Ontario as the best suited for the main crop in most districts, the following information provided by Justice Miller, B.S.A. Assistant Commissioner of Agriculture, in the Agricultural Gazette for October, will no doubt prove a source of satisfaction to many growers of varieties otherwise named that known to be similar to the Green Mountain. Mr. Miller reports as follows: At a conference of the Potato Council of Ontario, held in Toronto on Sept. 6, the following varieties of potatoes were decided to be similar to the Green Mountain: Carman No. 1, Clyde, Gold Coin (Vermont), Delaware; Dreer Standard (not Dreer Early Standard), Green Mountain; Green Mountain, Jr.; Norcross; Snow, State of Maine; Ure Sam; Woe MacGregor. The reports present agreed that no one can distinguish between them as to plant, blossom or tuber.

Why No More Cheap Food.

Cheap food has been obtained in the past by the exploitation of new lands, by robbing the soil, and by paying low wages. A continuance of such methods would result eventually in the depopulation of the country districts and the abandonment of farming. Our city cousins do not seem to realize that the food which is so plentiful is one-sided to a dangerous degree; it has concentrated itself in the towns and cities and left the country derelict, and if the downward tendency cannot be checked it will ultimately bring about the decay of the towns themselves and of our whole civilization. It is with Bailey, that "the cities have grown at the expense of the country, and the cities' gains have cost the country dear in abandoned farms, weakened churches, and discouraged communities drained of their vitality."—Farm and Dairy.

Two Sales of Breeding Stock.

At a dispersal sale of the dairy herd on the farm of Mr. J. S. Smith, Clarke township, two of the Holstein cows sold for \$225 and a couple of other animals for \$245. A non-registered Holstein with twin calves, fetched \$245, and grades at \$65 and \$105.

At a sale of Shorthorns belonging to Mr. James Falls, of Peel county, two cows and a bull sold for \$1,485, and a couple of other animals for \$800. The total proceeds of the sale were \$20,000.

Assisting Cow in Giving Birth.

Mr. C. C. Nixon, writing in the Farmers' Advocate, tells of a case in which a cow, which had been striving in vain to deliver a calf, was finally relieved on being turned on her back. Mr. G. A. Brethen, of Norway, tells Farmer and Dairy that he had a similar experience. He was having trouble with a Holstein cow, the calf of which was being held by the hips. As soon as the cow was on her back the calf was delivered.

Associate Course in Agriculture.

An associate course in agriculture for Saskatchewan farm boys was opened at the Provincial University at Saskatoon on Oct. 23rd. The course will last five months, closing on the last Thursday in March in order to give the boys a chance to get home and help with the seeding.

FATTENING THE PIGS

PLAN OUTLINED FOR HANDLING OF YOUNG ANIMALS.

When Pork is Being Prepared for Market, the Most Rapid as Well as the Most Expensive Gains are Made During the Finishing Period—Pastures are Found Very Valuable.

After weaning, the stock selected for fattening is fed in two periods—first, the growing period, from weaning until approximately six weeks to two months of the marketing date, and, second, the finishing period, from that time up to marketing. During the first or growing period the ration is much the same as that given to the breeding stock—that is, all of the nutritious pasture they need but with a heavier grain ration of slightly wider nutritive ratio. The object is to grow a pig with plenty of size



Hog Feeding.

and scale and one that will fatten quickly and economically. Some feeders use the self-feeder at this period and obtain excellent results, giving the pigs free access to such feeds as corn, mill feeds, and tankage while on pasture. The practice tends to shorten the feeding period and produces pork with slightly less grain per unit of gain. Under these conditions pigs do not neglect their forage but really make more economical use of it than when the grain is limited. In feeding a limited grain ration on pasture more success has been attained by giving an amount equal to three per cent of the body weight than when fed in lesser amounts.

The most rapid but also the most expensive gains in the pig's life come during the finishing period. During these last few weeks before slaughter the animal is given all the feed he will consume with relish. Much more corn and less protein concentrates are fed during this period, a representative ration being composed of ten pounds of corn to one pound of tankage. The change in rations must be gradual and the increase in feed not too rapid; otherwise the animal is apt to "go off feed," or lose his appetite. Pastures are very valuable at this time, especially those composed of feeds high in protein, for they furnish a cheap source of nitrogen and keep the pig toned up and his appetite keen. A hog will consume a 3% to 4% per cent grain ration at this time and serve its purpose on the character of the feeds and the weight of the hog, a larger hog eating less in proportion to his weight than a smaller one. The self-feeder was primarily devised to finish the hog at this time and serve its purpose in excellent fashion. Slightly more rapid and economical gains are made by its use than can be obtained by the best hand feeding.

Tight Stable Floors.

By increasing the value of the manure produced, cement floors in the pig sty will pay for themselves in about a year. Tight stable floors save soluble plant food from seeping away as it does with earth floors. Manure was increased in value by \$4.48 annually for every thousand pounds live weight of steers fed on cement floors over that recovered from animals standing on earth floors. In the experiments 58 steers were fed. The cost of concrete floors about \$4.50 a street. Two six-month periods would therefore pay for the expense of the concrete floors.

Much of the fertility value of manure is in the liquid part, which is easily carried away through earth floors. Concrete prevents this seepage, making each ton of manure worth more and at the same time increasing its quantity.

Tractor on Rough Ground.

Mr. Ernest Gilbert, of Paynes Mills, tells the St. Thomas Times-Journal that on his farm of two hundred and sixty-five acres (one hundred and seventy-five under cultivation), the tractor will save between five and six horses.

Move Farmers From Stricken Area.

A relief train to take financially stricken farmers from southern portions of Saskatchewan to the northern woods, is a proposition now being placed before the provincial authorities. Work for those willing to leave for other parts, it is thought, can be obtained for them during the winter. But I never had a new piece of ground broken so well. From four to five acres would be a fair day's work, counting a ten-hour day and good heavy land.

NEAT NAVY BLUE SATIN GOWN



The stylishly dressed woman delight in having this navy blue satin gown with a loose panel weighed with fringe.

GOAT THAT ASSURES SERVICE



Every woman with a sense of clothes that instantly recognizes a beautiful achievement in any garment, will admire the coat pictured here. It is of broadcloth with large, convertible collar of Hudson seal, and there are two fur balls on the back. The sleeves are novel and graceful with wide cuffs and there is a girde across the front fastened with large ornamental buttons. Other fur than seal might be used for the collar and balls.

TAKE PROVINCE FROM SEA.

Holland's New Scheme to Secure More Territory.

The announcement that the necessary authority has been given by the Dutch Parliament for the draining of the Zuider Zee probably brings ambitions which engineers have entertained for a very long period a stage nearer realization. It was in the closing years of the first half of the nineteenth century that Van Diggele put forward proposals for drainage and reclamation, which, in their main aspects, are not very different from those which are receiving attention to-day. The area with which it is proposed to deal is one of nearly 1,500 square miles, of which more than 800 would be reclaimed and the remainder converted into a fresh water lake, thus providing a remedy in the present dearth of Holland of water supplies in summer. From the point of view of the engineer, the reclamation on which it is proposed to expend \$15,750,000, is a large scale project of somewhat simple form.

The construction of a main embankment more than eighteen miles long, which it is estimated would occupy nine years in construction, would shut out the sea, and enable four areas, extending more than 500,000 acres, to be set aside for reclamation. These would probably be available for occupation within twenty years, by which time the ordinary reclamation schemes in Holland, which have provided about 25,000 acres annually for a considerable period, will from natural causes have been discontinued. When the whole work has been completed 30 years hence, not only will a new province have been added to Holland and the risk of food damage from the Zuider Zee eliminated, but it will be possible to supply the brackish canals with fresh water from the new lake.

An important railway connection across the new embankment between Friesland and North Holland is also included in the provisional plans. On the debit side of the account, regard must be had of the destruction of the Zuider Zee fisheries, but in comparison with the advantages derived from the reclamation these are of subsidiary importance.