APPENDIX VIII

Post-War Restoration -- Forest Products

by

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CHAPTER I

SMALL FOREST INDUSTRY

Introduction

The re-establishment of our soldiers is one of the most important problems of the present moment. Who would object to our helping our boys, by every available means, to recover a normal life for themselves and a suitable subsistence for their families? That is the minimum we owe to those who offered their lives in defence of our rights and liberties and it is only logical that all classes should be interested in this: our governments by adequate legislative measures, the sociologists by specialized studies, the craftsmen in their workshops, the scientists in their laboratories; every one at his appointed task should contribute his mite.

Our immense and rich forests are specially well suited to help to solve part of this problem. Before mobilization a large number of our soldiers earned their living in the forest or indirectly in the wood using industries, and it is only natural that they should think of returning to it. Others perhaps will try to soothe their nerves shattered by the noise of battle, in the silence and peace of the forest and thus regain their self-reliance and ambition and a taste for life in the midst of a fine Canadian family

It is to the socialogists and all men of good will, who are concerned with this problem that this paper is addressed. The author intends to show the nature of our forest, its place in our national economy, the necessity of the small forest industry, the new methods of mechanical and chemical conversion of wood, in short the advantages of the minor forest product industries within the frame of the forest village.

The flood of our veterans should not be drained towards the cities, centres of unemployment and social corruption, but to the countryside and the forest. The following paper is intended to prove that the Canadian forest offers to veterans a centre of activity full of diversity and attraction, in fact the IDEAL RE-ESTABLISHMENT MEDIUM.

WHAT IS THE MEANING OF OUR FOREST?

Nobody now doubts anymore the real character of our forest within the frame work of our national economy. Its importance has never been exaggerated and too often it has been under-estimated. The size of our forest is so considerable and varied that we must consider it as the foundation of all our activities. This is so true that we only need a local or universal crisis to remind us of this fundamental truth which we are so apt to forget. Remove the forest from the face of our province and what will happen? Agriculture, fishing and the mining industry will be threatened with disappearance, for all the industrial activities of our people are based on the forest in all phases of their economical evolution. On the contrary, perpetuate the forest, husband it, manage it and make it produce to capacity, it is then the principal source of wealth of our country. For a good Canadian, fortune

grows on trees.

In the past, we have unfortunately too often disregarded the profound significance of the forest in our national life. The forest is not a cow that can be milked forever without care and feeding, specially if the milk is to be skimmed only, nor is it a mine to be worked only once and left with a frightful pile of waste. No, the forest is a crop that can guarantee to our forest population a constant and periodical revenue, because this national resource is the only one that can constantly renew itself.

A general examination of the state of affairs in relation to our forests is a necessity. Let us examine it together, as objectively as possible. What has been our progress so far in the forest domain? What shall be our plans for the future. Is it worthwhile to go and live in the forest? Can it provide subsistence for the families of the veterans it invites to settle there? These are questions that we must naturally ask ourselves.

First of all have we a forest? The Province of Quebec with its timbered area of 364,370 square miles and a timber ratio of 61.3%, owns one third of all the forests of Canada. It owns one twelfth the forest area of all the countries forming the cold belt of the globe, including Denmark, Estonia, Finland, Lethonia, Lithuania, Norway, Sweden, Poland, European Russia and Siberia, countries whose forests are composed of species similar to ours. Quebec alone owns one thirtieth of all the forests of the universe. This is an incredible wealth!

Even from the qualitative point of view, we are rather well endowed. It is true that we only possess woods of an average density; we totally lack the very

light woods like balsa and very heavy woods like teak wood and lignum-vital, but the same state of affairs exists in all northern states. Spruce is our caracteristic specie, as it constitutes more than 50% of our total forestry volume which reaches about 54 billion cubic feet. Fir is next in importance with 20%, birch with 10%, jack pine with 6%, yellow birch with 4%, poplar and maple with each 2%, cedar with 1%, then red pine, hemlock, basswood and a few other species of secondary importance.

WHAT DOES OUR FOREST PRODUCE?

Canada, the second forest producing country in the world, produces today on account of the war, nearly 40 billion feet board measure in woods of all sorts, that is enough lumber to build each year an enormous airplane runway one inch thick, 280 feet wide, around the world, at the equator. He is not only a gigantic contribution to the war effort, but also an industry providing the daily bread for thousands of Canadian families. Such a crop cannot, however, be carried on indefinitely without seriously compromising the perpetuity of our forest reserve. This conclusion is statiscally proven by the fact that only 25% of the felled timber in this country is really converted to finished products. The rest is lost. In other words, for each volume of converted forest product, we waste three units. A simple calculation reveals that we loose annually, in the Province of Quebec alone, about fifty million tons of ligneous matter in all forms. Far be it from us to claim that nothing is lost in other countries, but it must be admitted nevertheless that this frightful pile of waste could revolutionize our domestic economy if used as raw material in

various conversion industries, particularly in the small industries of the forest villages. Here is assuredly our great problem of practical patriotism.

If the total volume of our forest crop is so impressive what would we think of the products we extract from it? What do we draw from the forest? The analysis of the nature of the forest production actually reveals, not without some surprise, that three types of primary forest products share between them almost the total global value, namely, pulpwood, sawn timber and fire wood. Almost half (47%) of the wood cut in our province is intended for conversion into pulp and paper, almost one third (31%) is used for fire wood, and about one fifth only (22%) enters the saw-mills, that is for the small industry. Much pulpwood, a lot of logs, a little plank and board. That is all our forest now actually produces. Without accepting the word "wood-cutter" in the degraded sense that some like to give it, we have really remained a nation of wood-cutters; we are not yet a nation of foresters in the true sense of the word, because a nation of foresters, conscious of the true value of its natural resources, tries to utilize all parts of all the trees for the integral use of the woods.

LARGE AND SMALL FOREST INDUSTRY.

Since we only produce three types of priary forest products, it is proper to assert that our forest industry lacks diversification. Such a unilateral orientation inevitably leads to profound reperoussions in our way of living and in our general national economy. What should we think of the large industry? Without a doubt large industries are needed in a country like ours. Everyone admits their value

from the point of view of the employment they create, wages they pay, the raw material and the agricultural products they purchase at home. On the other hand, the large industry brings certain disadvantages some of which are serious. On account of its very nature, it is necessarily oriented to the export markets and therefore it is at the mercy of powers, often of an occult nature and always entangled, that control that market; capitalism and international politics. Inevitably it is caught in the meshes of intrigues and competition, it floats hopelessly at the mercy of the tide of international affairs which pass by periods of prosperity, true or fictitous, followed by long critical periods. But all economic crisis are immediately interpreted by a slowing down or even a temporary stoppage of our forest activities and thus reaches in fact the roots of our economic organization. It is known by experience that a decline in the paper production always means a complete disaster, not only for rural life, but also by ricochet for the country at large.

Large industries certainly are needed, but to counter-balance certain dreadful social and economical facts, we need, more than ever, the small rural industry, sound, strong, well oriented, well managed and specially well supported by scientific research. Small industries in general surely deserve very special consideration by the veterans, who are at this moment at the crossroads of their return to civil life.

ADVANTAGES OF THE SMALL INDUSTRY

The beneficial influence of the small industry could establish a happy and necessary equilibrium in our economic organization. Searching for that

state of equilibrium, only one solution is imperative; the development alongside of large industries already in existence, of small establishments in large numbers and industrialized forest villages in strategically well chosen localities. Our forest resources would then be transformed into wealth, thanks to a more judicious, varied and complete utilization. A certain number of these industries could even use the enormous quantities of wastes left by the large operations enterprises either on the forest ground or in the mills, by transforming them into an impressive series of varied objects which our domestic market presently imports in a singularly shameful manner. Not only is the small industry the most efficient means of stopping this sad rural migration towards the large centres of population, but it may easily create for itself a considerable local market, a stable market, almost sheltered against the harmful influences of the international factors mentioned above.

The advantage of this privileged state springs from the fact that the large industries are necessarily few and located in favourable places in function of the raw material, motive power and labour supply, but rarely in function of the local market. It, therefore, follows that between these large units of massive production, vast territories are eliminated either on account of distances, or on account of the transportation system, whereas this market is perfectly accessible to the small industrial organization that may reach the small consumer more directly due to lower administration charges and more advantageous local conditions. Whoever penetrates slightly into the hinterland

of our immense country and far away from the large communication arteries, will easily perceive this state of affairs.

The small industry is, therefore, certain to survive from the point of view of the market, it only needs to be made fit to resist competition in connection with the modern and economical methods of production. Not only has small industry a cause for existence in our country, so wealthy in natural resources, but we believe it should be specially attractive to our veterans.

THE TECHNIQUE OF PRODUCTION.

The recent war has certainly awakened public attention to forest industry and future peace must continue to stimulate this general interest, if really we wish to introduce and render profitable the integrated utilization of the products of our forests and our wooded farm lots. To attain the desired goal, it therefore seems essential to determine, modify and adapt to the small industry certain utilization techniques which normally are suitable only to the large industry. Thus would be established simple and economical methods applied to industries of lesser importance but by way of compensation, more numerous. Evidently, all production techniques could not be thus adapted, but there are some that can be; there are even many that can. It must, nevertheless, be realized that these adaptations will not happen automatically or accidentally, simply by the good will of the large manufacturer. It will necessitate patient specialized researches innumerable trials, long and painful experiments. But there is ground to hope that our small industries, present and future, will gradually learn to benefit from the large utiliz-

ation technology, which will therefore allow it to hold its ground against competition and play an enviable part in the industrial Canada of to-morrow. Without desiring to fight uselessly and with unequal arms against the methods of serial production of the large industry, the small industry will surely find intermediary or complementary opportunities with the large industry. Manufacturers moreover are the first to recognize that certain products may be produced more economically on a smaller scale. But what are these products? That is the big question. A clear and precise answer cannot yet be formulated in all cases, but to find them diligent and well co-ordinated researches are a necessity. Their choice will depend on many factors; local conditions, motive power, species available, rural market, means of transport, skill of labour, etc.

GENERAL ORIENTATION OF PRODUCTION.

It has been previously stated that we almost exclusively produce pulpwood, boards and fire-wood. Pulpwood enters the large industry and is thus, on account of this fact, driven out of these considerations on the small industry. The preparation of fire-wood is not precisely what may be called an industry, it is rather a trade. There remains actually as the sole industrial activity on a small or average scale that of our sawmills. This unique industry naturally depends on one sole market; construction. When this market is firm, all goes well, but when it is affected by a crisis there is distress in our forest villages. It is therefore important above all to diversify our forest production in such a way as to open up many different markets, so that all of them will not suffer from periodical crisis,

anyway, not simultaneously. When one market is weak another one is strong, according to the law of compensation. Moreover, the diversification of our forest industries would have the fortunate result of utilizing economically certain species now actually useless but essential to the forest, like the aspen and the birch, as well as the wastes left on the forest ground or abandoned by other manufacturing industries. Such a combination of mechanical and chemical processes of conversion will then enable us to utilize integrally all parts of all species, a triple advantage from the point of view of sylviculture, forest protection and domestic economy.

In the next chapter of this series a summary review will be presented of the various forest processes and products, old and new ones, that may eventually play an active part in any rural industrialisation, and, in a third chapter, minor forest products will be dealt with.

CHAPTER II

FOREST PRODUCTS, OLD AND NEW

Recent scientific researches have given to the world a whole series of new and improved forest products, fire proofed, bug and rot proofed, impregnated with resin, compregnated and in plastic form, some of which will probably be manufactured by the small industries, particularly on a co-operative basis in the forestry village. These new products were developed in the course of the last war by the wood technicians of the United States and

other countries. Industries were then obliged to find in wood a suitable substitute for those light metals and their alloys which had become scarce on account of numerous restrictions imposed by war conditions. In order to solve this problem it was necessary to find new physical and chemical treatments which permitted the correction of or the total disappearance of the natural weaknesses of wood, that is, its low density, the inequality of mechanical resistence in different species and even from one tree to another, its weak resistence to fire, pests and fungus as well as the unsatisfactory characteristics of shrinkage and swelling brought about by contacts with water and variable atmospheric humidity. These problems have been so successfully solved that these processes will not only endure after the war, but they will literally revolutionize industries in the construction and engineering fields. The logical consequence of so many interesting developments will be a stable and diversified market, which will greatly reassure the residents of our future villages. Without giving here precise technical details, let us mention briefly the main groups of these new forest products.

DRESSED WOOD.

Pressed wood or "Lignostone" is obtained by applying a strong pressure to wood in a direction perpendicular to its fibres using powerful hydraulic presses under well determined conditions of temperature and humidity. The original density of wood, equal to about 0.5 for our resinous woods, can be raised to that of the hardest woods, indeed, to as much as 1.4. In other words, with the resinous woods, the poplar, the aspen and other light woods, a new kind of wood

can be made whose density will be equal to or will surpass that of the maple, teak wood and even lignum-vitae. This artificially hardened and stabilized wood offers strong resistence against blows and wear and it can be used, for instance, for the manufacture of brake linings and other machinery parts exposed to friction, as well as extremely durable wood for flooring and furniture.

LAMINATED WOOD.

This group includes composite woods, not impregnated but glued together under pressure, by hot or cold process, by means of special resistant glues, whose basis is phenol-formaldehyde, unrea-formaldehyde, casein, albumene or other natural or synthetic adhesives. The pressing time, once very long, is now reduced to a few minutes or a few seconds by accelerating the drying or the resinification of the adhesive by the electronic heating of the layer of glue. The advantages of laminated wood are numerous and significative, namely, elegance and the stylish architectural effects, the future possibility of using our small trees in the composition of large pieces (for instance, beams of 80 feet in length with a cross-section of 24" x 24") up to now imported from the Canadian or American west coast, rapid assemblies and thanks to the combined use of laminated wood and metal gudgeons, greater mechanical resistance of laminated pieces equalling or even exceeding that of metal pieces of equal weight. The use of laminated woods in the engineering and construction field has greatly expanded during the war. The American Army, for instance, has built hangars for its dirigible airships, which measure a thousand feet in length and the arches have spans of 237 feet with a height of

153 feet; each hangar thus erected permitted a saving of 2050 tons of steel. The navy erected immense laminated structures, such as giant dry-docks, wharves, jetties, break-waters, landings and invasion barges, etc. Numerous war industries have also made use of laminated wood for the construction of work shops, warehouses and assembly factories. It has also been used with no less success, in the construction of large stores, commercial stations and public buildings such as churches, schools, theatres, gymnasiums, etc. In engineering, laminated wood assembled with metal gudgeons, is now being used to advantage for the construction of bridges and pylones for antennae and electrical transmission lines, etc. Finally, in the future reconstruction plans of devastated countries, laminated woods will certainly play an important part in the rapid erection of thousands of prefabricated houses.

IMPREGNATED WOODS.

Under this head are placed the improved woods obtained by treatment of the laminated or ordinary woods, generally in the autoclave, by the introduction therein of resins or substances that will make it heavier or proofed against humidity. The choice of the treatment naturally depends on the property or group of properties desired. Amongst the new methods for impregnation, let us mention the process "urea-dimethylolurea" which gives to the "transmuted" wood particularly precious properties, namely, increased hardness, resistance to fire, insects and destructive fungi. Remarkable resistance to humidity and greater facility for working it with the machine tools usually employed in wood working industries. Such an aggregate of qualities will render the transmuted

wood extremely advantageous for the construction of dwellings and the manufacture of furniture. Not only will it be possible to save fabulous sums under the guise of fire insurance premiums and maintenance costs, but the transmutation will permit the use of woods which up to now had not been used, such as aspen and birch and, so doing, the period of rotation of the forest will be considerably shortened. This double advantage from the point of view of sylviculture and forest protection deserves to be underlined.

COMPREGNATED WOODS.

By impregnating wood, particularly rotary-cut veneer, with a synthetic resin, not completely polymerised and then compressing it between the heated plates of an hydraulic press, the polymerisation of the resin takes place inside the wood itself. All the qualities mentioned above for the impregnated woods are found again in the compregnated woods in a much higher degree. Their density can be raised as high as 1.4, that is the density of the cellular membrance freed of all capillary system; moreover, their resistance to fire, mechanical, chemical, atmospheric and biological agents is perfect, so to speak. In one word, wood becomes a substitute for metal, and the uses that are awaiting it after the war, should at least be numerous and varied, not only for the manufacture of scratch proof table tops, various kinds of furniture and floorings, but also for the exterior finish of dwellings.

COMPREGNATED PAPER.

By applying the same principle of compregnation to a variable number of sheets of paper superimposed

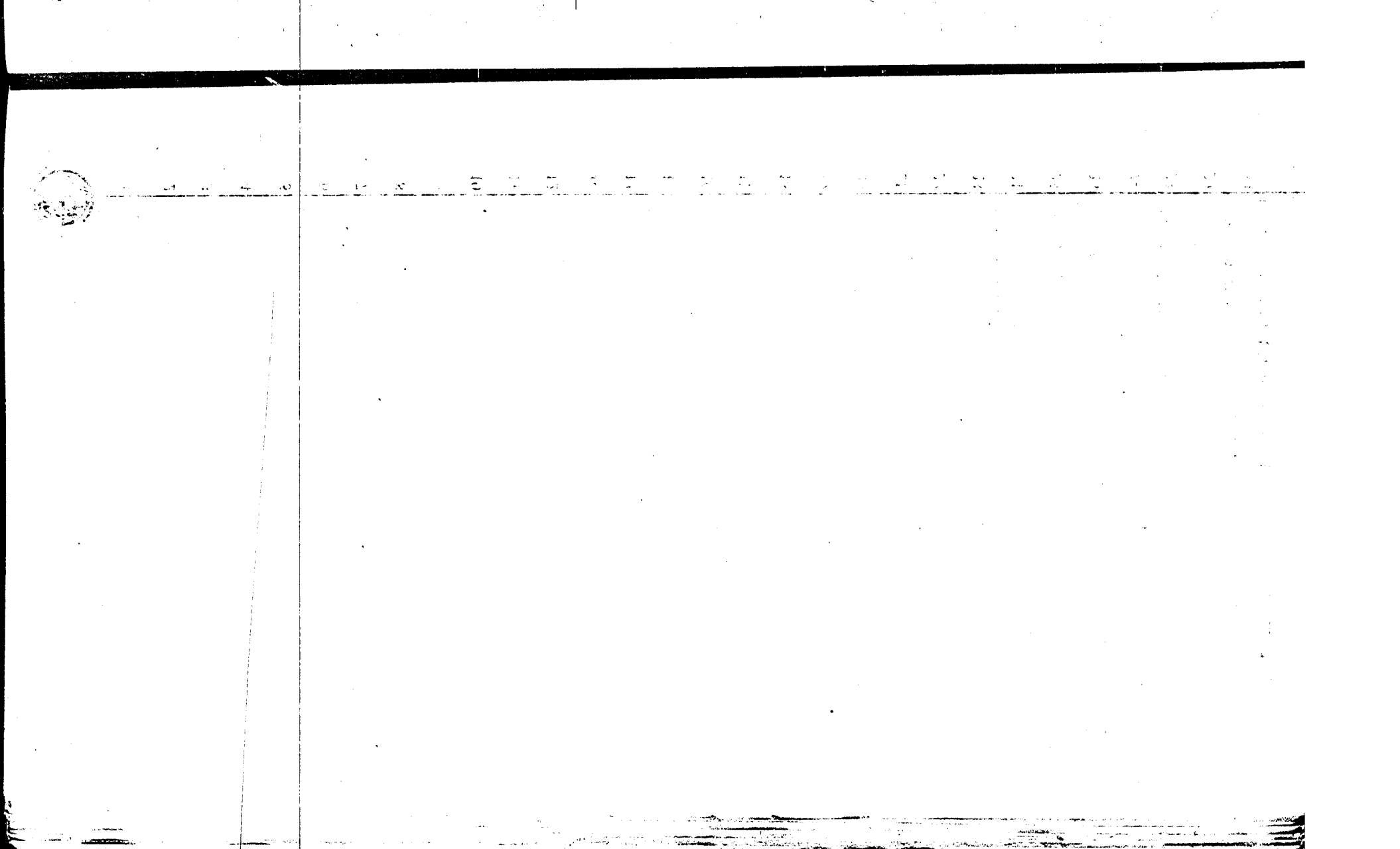
and previously impregnated with a synthetic resin incompletely polymerised a compregnated paper is obtained. It generally has the appearance of a board of any desired thickness, always very hard, and possessing the excellent physical and chemical qualities of the compregnated products in addition to remarkable thermic and electrical resistance.

MOULDED PLYWOODS.

This new product is produced by applying a rotary but wood, coated with a synthetic adhesive on a negative mould having the desired shape. The assembly is then placed in a cellophane or rubber wrapping, in which a vacuum is then created, and finally the whole is submitted to cooking under high pressure in a heated autoclave in order to complete the resinification of the adhesive, forcing the plywood to adopt the shape of the mould. This process was used during the war to produce the shells of the "Fairchild" and "Mosquito" planes, which owe their suppleness, stability and speed to this marvelous forest product. In the post-war period this remarkable product will surely be in great demand for the manufacture of modern furniture, boats, railway cars, racing sail boats, very light and pliable canoes, automobile bodies, etc.

PLASTIFIED FORESTRY BY - PRODUCTS.

In addition to the main types of the raw wood derivatives described above, the possibility exists of applying various plastification processes, modified to suit varing needs, to a full series of forest by-products, such as chips, saw-dust, barks, also the wood lignin contained in the residuary liquors of the chemical pulp mills. The qualities of these plastic compositions vary with the nature of the raw



material and the process used, but they are in most cases sufficiently interesting to justify great hopes from the point of view of the possibilities of these new products on the post-war market. There is also a great opportunity to utilize economically the enormous quantities of waste which now accumulate on the forest ground and in the mechanical conversion mills. The immediate advantages that will follow from the point of view of sylviculture, protection and domestic economy, cannot be over-emphasized.

We can no longer insist on the practical interest offered by these new types of improved woods that scientific research has added to the already considerable arsenal of classical forest products, even if their "romance" has only been outlined.

MECHANICAL CONVERSION.

But there is also the mechanical conversion sphere that must be seriously considered on the re-adaptation level. In addition to the general and specialized sawing which could, if directed by experts, bring prosperity to a good number of rural communities, hundred of forest workers, using their remarkable ability and their special knowledge of wood working, could make in home shops or in small factories in the forest villages a multitude of objects which we now to our shame import from other countries. It is not possible to detail here the imposing list that comprises all those products from skiis and snowshoes to toothpicks, passing through the collection of toys and trinkets, of hundreds of utensils of daily use, of dozens of hardwood specialities, either for the manufacture of furniture, tools, machinery, scientific and technical instruments, automobiles,

airplanes and other vehicles of transport, etc. But let us not encroach any longer in the field of the mechanical conversion specialist.

CHEMICAL CONVERSION.

It is almost impossible to give adequate attention to the numerous products derived from the chemical conversion of wood, old and new, in the limited scope of this study which rather aims at showing to veterans the varied nature of the market awaiting them in the forest products field. Besides, the economic importance and the fascinating beauty of a large number of derivatives from wood cellulose are too well known and it will only be necessary to mention in passing: newsprint, boards and fancy papers, cellophane, artificial silks, in all their variety and splendour, explosives, lacquers, varnishes and paints, photo and cinematographic films, plastics of all forms and colours, the artificial hulks and fibres, etc. But there are new artificial processes of chemical utilization, less well known, which should be examined for their economic possibilities in the future.

It is known that saw-dust can be hydrolized into sugar then fermented into drinkable or industrial alcohol, or can be used for the production of edible yeast. The first factory of this sort has been in operation in the United States since last summer; it produces four million gallons of alcohol annually from a daily output of 320 tons of saw-mill wastes. The alcohol thus produced will be specially used in the synthesis of rubber.

By means of catalytic and pyrolytic processes it is also possible to transform wood waste into high quality motor gasoline, light oils, Diesel

motor fuel, heavy oils and lubricants, in short, in products similar to those now being extracted from petroleum or coal. That is a triumph of modern chemistry, for the millions of years necessary for natural carbonisation of vegetable matter can thus be reduced to a few hours or minutes. The economic possibility of these processes are still to be proved, but the fact is nevertheless interesting for this country, poor in petroleum and coal, but very wealthy in wood.

Another discovery recently made in Europe also deserves our attention. The problem is to cheaply transform saw-dust into cellulose fit for fodder, whose nutritive value can be compared to that of oats. It is known that in our part of the country farmers are forced to feed their milk stock with hay or other dry fodder for the six months or more of winter period. This generalized use of cellulose fodder would create not only an interesting outlet for the piles of saw-dust accumulating everywhere in our saw-mills but it would also free immense areas of arable land for the cultivation of crops that would pay more than hay.

The scope of this study does not permit me to go into the details of numerous other processes which nevertheless are not without interest. Let us mention as we go along, the products of wood distillation, the derivatives of catalytic hydrogenation, the products to be recuperated from bisulfitic residual waters, the lignive based plastics, the chemical derivatives that can possibly be drawn from saw-dust, barks, etc. It is less a question of making here a complete list of everything that can be made rather than to insist on the fact that our

wood can from now on be used as a basic raw material on the same ground as coal and petroleum. It can and should become our raw material of preference.

(Translated from an original paper in French, in the magazine "Relations".)

APPENDIX IX

Quebec, October 5, 1944

Our Forests in Relation to our Social Existence.

(Notes prepared by Mr. J. O. Wilson for discussion at the First Provincial Congress of the Quebec Forestry Association, held in the Chateau Frontenac, Quebec, October 3rd-5th, 1944.

Since the turn of the century there has been a growing recognition of the importance of our forests in relation to the whole economic and social structure of this Province.

We are now reaching the stage when persistent efforts are being made to place our forests under sound long-term forest management, with a view to making full use of all the forest has to offer for the benefit of our whole population.

Though our attention naturally tends to focus on the commercial uses of our forests, we are constantly reminded by those concerned (forester engineers and government officials) that the forests have other uses which are just as important to our national existence as the obvious benefit we derive from our forests through our forest industries.

The newer conception of forest conservation is the intelligent use of all the resources of the forest for thebenefit of the whole community and the tread of thought is now in the direction of assessing the social values associated with the full and proper use of our forests. These social considerations are of paramount importance with financial considerations decidedly secondary.

This First Provincial Congress of the Quebec Forestry Association is very tangible evidence of

this trend of thought, and of the accelerated pace at which we are now moving towards the full realization of the value of our most important natural resource - our forests.

It is my privilege today, jointly with our inspector general of forests, Mr. Ernest Menard, to introduce the subject "Our Forests in Relation to our Social Existence".

I think we all agree that the discussion of this subject is more important than listening to another thesis. Many able speeches have in the past been delivered on this subject, and there is a vast wealth of material accumulated in technical books and periodicals, and in the Statistical Departments of our Government offices.

I will therefore confine my remarks to a few absolute essentials.

In introducing this subject a brief glance over the history of land settlement along the St. Lawrence towards the Great Lakes and up the main tributaries will help us to realize how present attitudes towards agricultural land settlement and the forests have evolved.

The first phase - known as the Seigneural Phase deals with the arrival of the first Europeans. Their primary concern was to settle and form new communities, similar to those they had left in their old Homeland. These first arrivals found a belt of forest starting at waters edge and reaching back inland as far as the eye could see. Their first problem was to remove the forest from the land so they could build homes, form communities and till the soil to produce their meagre needs in the way of food and clothing. The forest was an obstacle to the seizure of the land and this

primary reactions to the forest has persisted to this day.

This sentiment is expressed in the following slogans with early settlers and colonization societies:

"To get the land we must destroy the forest"

"Dans la guerre contre la Foret, la Victoire depend du Moral des Pionniers".

What was needed for shelter and fuel was used. The rest was burnt off to make way for the plough. This phase lasted so long as there were agricultural lands available, in the immediate vicinity of the St. Lawrence and its main tributaries.

This search for land was led by the cure and the settler and was based on a philosophy of simplicity and spiritual satisfaction within the framework of a society dominated by Cure, Church and State.

The second phase was led by the lumberman in search of lumber for a growing home and foreign markets. As the lumbermen pushed their way up the main tributaries of the St. Lawrence in search of more and more lumber, the settler followed to grow food and provide seasonal labour in the lumber camps. This was the beginning of the present commercial materialistic phase of our advancing civilization.

(a) The first part of this period found the lumberman and settler working in close co-operation. There was apparently plenty of room for both, since the forests appeared to be inexhaustible.

(b) In the second part the lumberman began to supply foreign markets - England during the period of the Napoleonic wars beginning about 1800, and the markets of the United States just across the border to the south, beginning about 1850. The first part of this phase may

referred to as the "Broad Axe" phase, when the square timbers of the pineries of Western Quebec and Eastern Ontario were so important in the economy of Eastern Canada. The second part was associated with the invention and use of steam navigation and the introduction of the sawmill. The demand for lumber increased as the industrial age unfolded. It was during this phase that the settler-lumberen antagonism reached its height and it is from this period that later generations inherited the ideas on which our present colonization policy is based.

We are particularly interested in the following points of view:

(a) First the idea that the settler was all important. The forest was regarded as a passing phase. The soil for agricultural purposes was regarded as the only secure foundation for expansion. This led to settlement on any kind of soil and to needless destruction of large areas of forest.

(b) The lumberman on the other hand, though he at first regarded the forest as inexhaustible, looked upon the lumber industry itself as a passing phase. Later, however, he came to realize that the forest could reproduce itself and that the lumber industry could be made permanent.

(c) These two points of view led to a race between the settler for land and the lumberman for the trees, before the settler could burn and destroy them. Between them they cut, burnt and destroyed large areas of our best forest lands.

This was the old fundamental clash between the two types of motivation for occupation of new countries.

(a) Exploitative to gain and plunder the natural resources.

(b) The desire to possess the land and on it build new societies.

Both elements have been present since Canada was first discovered. It is the conflict between these two elements which has decided our land and forest policies to date. It is only in very recent times that people are coming to realize the forest has a permanent place in our economy, but this fact has not yet produced a definite policy with regard to forest management and permanent forest labour.

When considering the problem of our forests in relation to our social existence, we are seeking to solve this old antagonism and to implement the policy of forest management for sustained yield and work in the forest as a "Way of Life" parallel and just as sound as life on the farm.

In the meantime, there were revolutionary social changes going on throughout the settled areas of this Province. Standards of living changed and pioneering has come to be regarded as of doubtful value when compared with the attractions of urban and even the more primitive rural existence. During the last two decades the process of industrialization has accelerated the march of our population from rural to urban areas.

In so far as logging operations are concerned, the conditions of work - living quarters and rates of pay - are far behind industrial standards. In times of prosperity it is difficult to find plenty of workmen to go into the forest even though rates of pay are

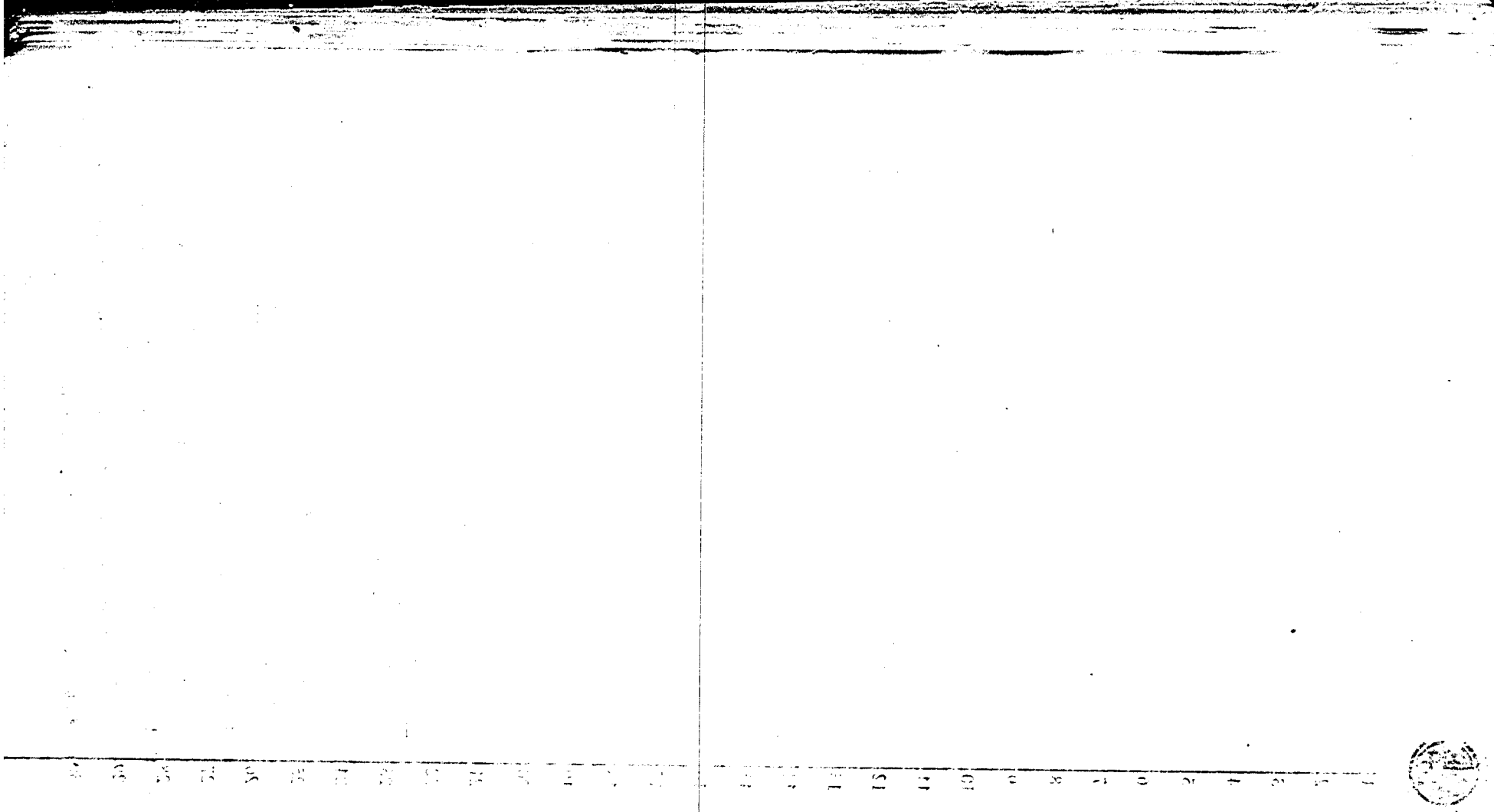
raised and other advantages are freely offered. On the other hand, in times of depression there is a glut of workmen.

There is some truth in the contention often made that there are only two kinds of workmen in our forests at any time - the young men, strong in the back and weak in the head, who doesn't know any better. When he finds out, he doesn't come back. Then there is the older man, who can't help it - the forest is his last resort, where he can supplement his too meagre returns from a marginal farm, or supplement his income from fishing or casual work elsewhere.

We have been obsessed with false ideas with regard to our forests. The present substantial economic returns from our forest industries are only a beginning of still greater potentials in the near future.

We have regarded lumbering as temporary with farming everywhere as the ultimate use of our vast forested areas. Out of this conception has grown an idea which still persists - that the forests exist for the marginal farmer and the eleemosynary fisherman, and laterly for the chomeur.

About the time of confederation the politician began to take an increasing interest in this strife between the lumberman and the settler. Out of this situation he has constantly made political capital chiefly at the expense of our forest heritage. This sentiment was very aptly expressed by Senator Parent in 1905, when he gave expression to the following statement - "The settlement and opening up of our vacant lands and the consequent increase of our population, constitutes our chief aim. All our energies are direct-



ed to that end, for from it comes the political influence we now have and which we are to possess in future."

We have overlooked the real truth - that the forest can support substantial numbers of our population - based on a purely forest economy.

It is our particular concern here to examine the forest situation in order to see what our forests have to offer in the way of social advantages - a "Way of Life".

In order to facilitate discussion, I propose to introduce this subject under four main headings:

1. The extent and economic importance of our forest heritage.
2. Present labour conditions and statistics.
3. An indication of our future potentials and possibilities, associated with the proper development of our forests.
4. A concrete example of possibilities associated with the forest colonies on the north shore of the St. Lawrence.

THE EXTENT OF OUR FOREST HERITAGE.

The statistics set out in the Annual Report of Department of Lands and Forests, for year ending March 31, 1943, gives a clear picture of the vast areas of our forest lands. We usually confine our attention at present to what we have below the 52nd parallel.

The forest land area is given as 86,300 sq. miles and this is at present held as follows:

Privately owned.....26,580 sq.m
Federal Crown Lands..... 277 "
Timber limits.....75,293 "

Forest reserves of various kinds... 5,671 sq.mi.
Vacant Crown Lands..... 154,479

Incidentally the privately-owned lots are made up as follows:

Large properties own 9,982 square miles; - lots of various kinds owned by 200,000 small properties, cover 12,498 square miles; - there are at the present time 4,100 square miles at the present time under location ticket.

We should note here the relatively small area cleared for agriculture: i.e., 22,000 square miles.

What are we doing with this vast area of valuable natural resources?

For our present purposes we may answer this question as follows:

We are using our forests to supply raw material to our forest industries - for our tourist trade - for our power and for recreation.

We have never fully utilized all the resources of our forests. We are only now beginning to realize the enormous potentials associated with the full use of our forests. It is important for us now to learn how to use this heritage ourselves, instead of leaving it to others to exploit.

THE ECONOMIC IMPORTANCE OF OUR FOREST RESOURCES.

(See Annual Report Dept. Lands and Forests - 1942-43).

The Pulp and Paper Industry with a capital investment of $350,000,000 uses 4½ million cords of pulpwood and produces 45 million dollars worth of pulp, and 112 million dollars worth of paper and cardboard. A total production value of 157 million dollars.

This forest industry alone employs 25,500 workmen in its mills and pays salaries and wages amounting

to $33,300,000.

The lumber industry with a capital investment of 18½ million dollars produced over one billion board feet of lumber in 1942 and gave work to over 19,000 workmen, paying salaries and wages amounting to seven million dollars.

Other industries using wood as their principal raw material employ over 14,000 workmen and produce goods with a total value of 53 million dollars.

Finally we must not overlook the Municipal, Provincial and Dominion revenues derived from our forests and forest industries.

In addition to the above salaries and wages paid to our forest workers, the forests and forest industries of this Province pay substantial sums of money to the Municipalities and into the Provincial and Dominion Exchequers.

(a) In 1942-43 the direct revenue from the lands and fore of this Province was close to 8 million dollars (rentals - stumpage - dues water - power sites, etc.).

(b) The Indirect revenue collected by the Province by way of taxes was probably 30 million dollars.

(c) The Dominion Exchequer collected still more, probably 40 million.

Evidently then the forests of this Province are not only the essential foundation of all our forest industries - our tourist trade and our sources of electric power - they are also the keystone of our whole economic structure.

It is of the utmost importance for us to secure the continuity of this asset by proper management.

The supply of raw material to our industries, the conservation and full use of our amenities and

sources of water power, are of paramount importance in assuring the permanent well-being of the whole population of this Province.

THE NATURE OF OUR WOODS OPERATIONS.

Most of you are familiar with the general pattern of our logging operations.

We rely on farmers, fishermen and seasonal labour from other industries to supply the bulk of our present forest labour.

Our activities are confined almost exclusively to harvesting the virgin stands we find already grown on our forest areas. We do not spend any time or money on producing the forest crop.

The logging season usually starts with a small gang of experienced men who do the development work necessary to get into the forest, and provide shelter for men and horses during the operation and for the transportation of the wood out of the forest.

By late August or September the camps begin to fill up and cutting goes on till the snow is too deep for further efficient cutting.

In late December or early January the hauling starts and continues till March.

The drive is confined to the time of the break-up - from late April till early June. Floating may continue on the large rivers all summer.

Though there are some permanent workers - very few - the bulk of the men are seasonal. Usually men go in and out of the limits for each phase of the operation.

We should carefully note in passing that there is no reference to growing wood. The whole emphasis is on logging.

NATURE OF EARNINGS AND WORKING CONDITIONS OF OUR FOREST LABOUR.

From the most recent statistics available for 1941-42 we have the following:

For cutting and hauling the wood in the forests of Quebec, 90,070 workmen were employed.

A total of 4,773,710 man-days (say 16,000 man-years).

An average per workman of 53 days work.

The total salaries paid were $16,039,683.60 gross ($12,411,646.00 net).

Average income per workman	-	$178.08	gross	$137.08 net
Average per day	-	3.36	"	2.60 "
Average per month	-	87.36	"	67.60 "

Average cut per day.....1.7 cords.

Average number of man-days spent at lumber camps.....31.4

DRIVING OPERATIONS.

It took 26,402 men to drive the wood - an average of 25.5 days per workman - a total of 673,251 man-days.

These 116,472 forest workers received gross salaries amounting to $18,696,000 - or a net amount of $14,566,000. after deduction for board.

To this should be added 4,106 contractors and sub-contractors, making a grand total of over 120,000 workers for forest operations only.

We must add to those imposing figures the time spent in cutting, hauling and transporting wood from farmers' woodlots and colon lots, which was sold to forest industries and exported. These workmen received their remuneration from the direct sale of their forest produce, i.e. they did not work for wages.

There is still a further substantial forest employment and payroll amount for all those workmen and forest technicians who work for the Department of Lands and Forests, administering the enormous forest areas owned by the Crown, controlling the logging operations and protecting our forest from fire, insects and fungi.

Our forest protection services alone (Government and private) employ regularly throughout the fire season over 4,500 personnel, with many more on fire fighting duties. These protection services cost over one and a half million dollars in 1948.

FUTURE POSSIBILITIES OF OUR FORESTS AND FOREST INDUSTRIES.

It is very evident from the foregoing statistics that our forests are our prime natural resources and the keystone of our whole economic structure. Further, our forests are a renewable and potentially perpetual asset.

"Timber is a Crop" and the forest like the farm can be neglected and destroyed or cared for, protected and improved.

So far we have done very little in the direction of growing wood. We have found ample supplies of virgin timber ready grown, and our activities in the forest has been almost exclusively confined to cutting and removing this crop.

We have excellent logging organizations and have become highly skilled in the science of logging. But we have now reached the stage where we must start to grow wood - bring our forests under proper forest management so that our forests will continue to produce the wood we require for our forest industries, and so that the workers and communities dependent upon these

forests and forest industries for a living will be assured of a stable and permanent foundation. In the same way we can manage our forests for recreational values and the protection of our sources of water supply. We are only at the dawn of the potential uses of the produce of the forests. With such wealth and such a "Way of Life" offering, we should be able to develop something more worthwhile and secure than we have so far accomplished for our forest workers.

The potential wealth awaiting development and use in our forests should offer more stable employment, better working conditions and a higher standard of living than is evident from the foregoing statistics.

Forest occupations contribute a "Way of Life" in their own right, and should not be made dependent on any other form, such as agriculture and fishing. It is time we realized this and started to reorganize our forest resources, placing our commercial forests on a sustained yield basis, offering a substantial number of our forest workers a permanent living in the forest with permanent family living quarters near their work.

We have to remember we are mainly competing on world markets. We can only stay on these markets by training our workmen to grow wood and harvest the mature timber efficiently. The first step in this direction is to keep the workmen continually employed in forest work - provide educational and vocational training facilities, offer prospects of permanent employment with stability and adequate recompense to support a proper standard of living - then we can hope not only to stay in the markets we already on-

joy - but to extend our participation in the growing markets of the World.

Times have changed rapidly in the last two decades. We are becoming a predominently industrial province. To keep pace with these changes we must offer our forest workers something more than we have been able to offer them in the past.

In the old days forest work for lumber and work at the sawmill could be easily integrated with farming and fishing. The pulp and paper mills however offer no work at their mills for the forest workers. On the other hand, the enormously increased demands for wood call for many more workers in the forests and at the same time increase the need for more effective forest management.

We need a new deal for our forests. Have we the vision to make the necessary long term plans calling for the immediate intensive forest management of our commercial forests to assure adequate stocking, continuous growth and improved yield. Have we the courage to undertake this work ourselves, or must a we continue to lease our forests to others, only reserving to our forest workers the 'mud', 'sweat' and tears, at present associated with the exploitation of our forest heritage for others.

We have still to learn how to manage our forests for sustained yield. We have still to educate and train our forest workers not only to cut and utilize the produce of the forest, but also to grow wood. And still more important, we must provide liberally for the education and training of the necessary forest engineers and logging engineers, forest research workers and subsidiary technicians so that we may build up our own organizations to grow wood and convert the

numerous products of the forest at naturity to the fullest and best possible uses.

By extending our utilization to use all of the products of the forest and by constantly seeking new markets for the favpurable disposal of these products, we can provide a "Way of Life", and remunerative employment for our ever growing rural population.

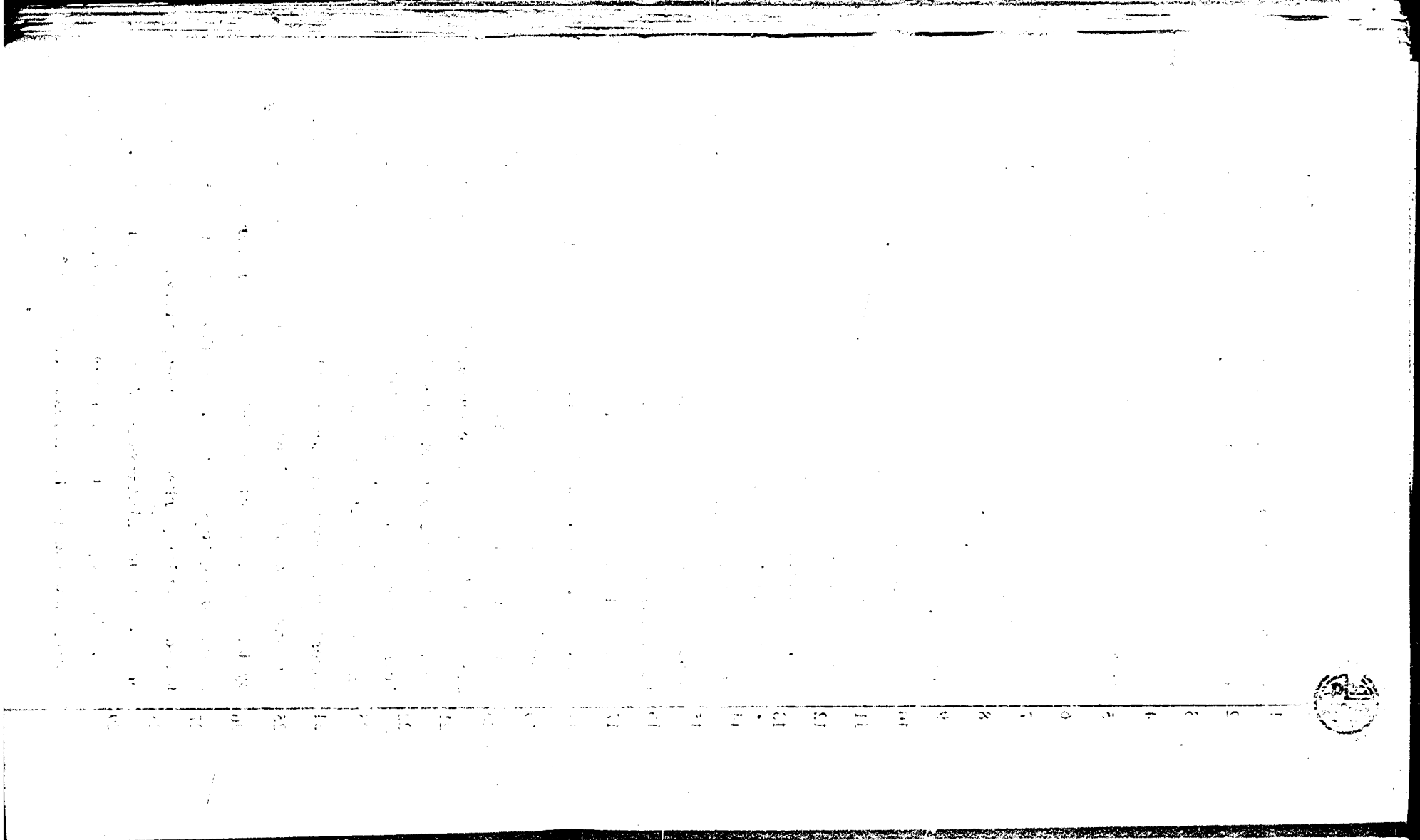
It has been said that "A People without Vision shall Perish". We have the resources, we have the workers. Don't let us perish for want of vision and courage to work out our own salvation.

What is the vision we should have of our future forest operations?

1. We should foresee in the near future a time when the farmers' woodlots will be properly managed and will yield a steady and continuous supply of fuel, material for use on the farm, wood of various kinds for local industries and pulpwood for our pulp and paper mills and saw mills.

2. We should visualize the Rehabilitation of those colonies which have been founded on marginal forest lands and which are at present being subsidized to make certain that the forest crop on the lots will be utterly destroyed and even the roots of the trees torn out so that the soil will be destroyed also. We should visualize the saving and placing under proper forest management the trees which remain on the lots, and these colonies placed on a sound wood economy, by the provision of sufficient forest reserves from neighbouring forest areas. We should plan to have these colonies worked on a co-operative basis and on a sound sustained yield forest management plan.

3. Finally, we should foresee the future forest worker settled in the forest with his family near



permanent work, with the opportunity to work out his own salvation in his own way. By co-operative participation in the proper management and utilization of an adequate forest reserve, and with additional opportunities of supplementing his income for a growing family by forest work of various kinds in the neighbouring Crown forests.

We say the forests belong to the people. We have a duty to make this boast actual, by teaching the people how to manage their forests and how to turn the mature produce into cash, to provide a standard of living in keeping with the potential wealth of our greatest natural asset. So far we have neglected this potential. We should make use of postwar reconstruction planning, to change the present system of cashing in on our forests and plan to manage them properly for sustained and improved production, and teach our people how to harvest and dispose of the produce of these forests to the best advantage.

If we have the vision and courage, we can through proper forest management enter into full possession of our main natural resources and develop full use of it. The forest colony is the foundation of this solution.

Suggested Method of Organizing a Forest Colony on the North Shore of the St. Lawrence River.

We should emphasize at the outset that there is no one master pattern for the solution of the problem of forest colonies. It will take us a number of years to work out the most efficient organization for the various conditions in different districts throughout the Province. We can perhaps employ our time here most profitably by considering a concrete instance.

From the statistics already quoted it is obvious the forest can offer remunerations and permanent work to many individuals, and at the same time forest products

yield sufficient returns to pay for the cost of management and sustain the workmen on a basis at least as favourable as our best small farms.

In order to facilitate discussion, I have worked out what I think can be done on any watershed on the north shore of the St. Lawrence River.

Let us consider one of the many rivers on the north shore draining say 1,000 square miles of forest land.

Assuming such a forest area has an annual growth of .2 cords per acre per annum. It will easily support an annual cut of 100,000 cords per annum in perpetuity.

It is proposed to bring this area under sustained yield forest management and to operate it primarily to supply pulpwood for a pulp and paper mill. There will be subsidiary produce which will be used to foster small forest industries.

From experience already gained in this province it is easy to calculate the number of man-days required per year to cut, haul and drive 100,000 cords per annum and to carry out logging development work.

For forest management work we have drawn an experience elsewhere (Sweden and Finland).

Finally, by spreading this work over the whole year we can see what we have to offer in the way of permanent and seasonal employment.

The results are shown on this summary sheet and on this chart. All this work calls for a total of 107,500 man-days, divided by occupation as follows:

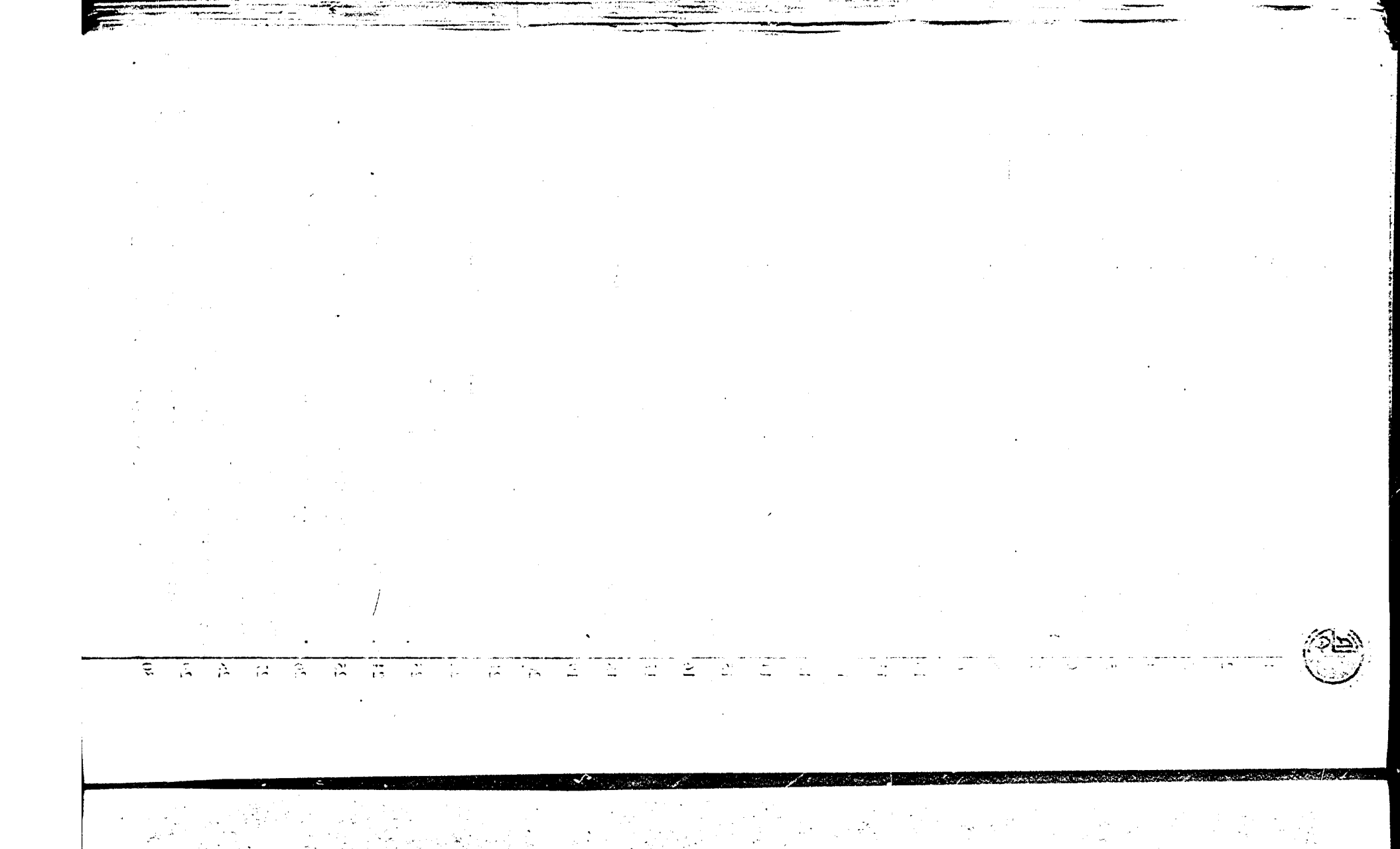
Occupation	Permanent Man-days	Seasonal Man-days	TOTAL Man-days
Drive	9,500	500	10,000
Cut	29,500	20,500	50,000
Haul	12,000	8,000	20,000
Syviculture	4,500	7,500	12,000
Improvements	2,250	1,500	3,750
Maintenance	3,500	-	3,500
Firewood, logs, etc.	8,250	-	8,250
	69,300	38,000	107,300

No. Men Employed By Months.	Permanent Men	Seasonal Men	TOTAL
January	250	150	400
February	250	20	270
March	140	-	140
April	140	-	140
May	250	-	250
June	250	100	350
July	250	100	350
August	250	100	350
September	250	180	430
October	250	310	560
November	250	310	560
December	250	250	500
	250	310	560

Now you will notice -

A. 250 of the men work all the year round and these will be the supporters or heads of 250 families. They will work a twenty-five day month, ten hours per day.

B. Provision is made for seasonal workers in areas where they are plentiful - by cutting down on permanent workers we can provide for more seasonal workers and so adapt ourselves to the present social structure (later no doubt families of seasonal workers will want to leave marginal farms and derelict cabin lots for forest colonies.



It is proposed to locate ten (10 communities or colonies at strategic points on the main roads - 25 families will be located in each colony.

For each community there will be a forest reserve sufficient to yield a volume of pulpwood, which can when sold 'driven' in the river provide each family with an annual income of say $1200.00 per annum. Thus, assuming pulpwood is selling at $6.00 per cord 'driven' - each family cutting 200 cords per annum would have a basic income of $1200.00. To produce 200 cords, each family will need 1,000 acres of forest land.

Assuming each family would have two square miles of forest, each reserve would be 50 square miles and this block would be planned and controlled by a resident forest engineer, responsible for the working plan, who would indicate what could be cut each year. The block would be worked on a co-operative basis, with each worker getting credit for the wood he cuts, hauls and drives.

Ten (10) colonies with a reserve of 50 square miles each takes a maximum of 500 square miles. The balance of the limit consisting of outlying areas difficult to organize would be operated by the limit holder and the forest colonist would have the opportunity of working for the limit holder if he wished to do so. This is a potential reserve which will serve to satisfy family expansion of the first settlers.

Season labour would be brought in, but some would eventually be the sons and relatives of the forest colonists.

All would have the opportunity of working on forest management, development and maintenance projects, so that as families increase, income potential is always sufficient.

This is a very brief and sketchy idea of the basic

principle, but this basis certainly offers plenty of possibilities.

There are many difficulties, such as:-

(a) We will have to overcome the fire hazard

(b) Can we reconcile this with the moral and social community standards demanded by the Church and State

(c) How can we adjust earnings in times of depression

(d) What of the limit holder?

(e) How will we provide Church, school and community buildings for each colony - or can we centralize by transportation facilities.

We have to bear in mind that -

(a) Times have changed. We must attract the forest workers by offering them a real interest in the forest.

(b) Social values are now of paramount importance

(c) Business and gain have to be reconciled to this fundamental

(d) The radio and transportation have revolutionized living conditions in the remotest places - There are no longer pioneering conditions

(e) Woods management calls for full time resident workers.

But with vision and courage we can solve these problem-

Statistics for Use in Discussion of Forest Colonies.

The following statistics with regard to the potential sustaining capacity of land of various types is perhaps of interest at this stage in our discussion.

The average citizen of the world lives on what can be produced on two (2) acres of land. Many citizens have to live on less than one (1) acre.

In Great Britain experience has shown that -

10 acres of wheat will support ten (10) persons.

10 acres of potatoes will support 42 persons.

1 acre of green land will support 1 person.

There is a similar factor for forests - which obviously varies with the rate of growth -

In certain areas of the United States of America it takes 250 acres of forest land per family - south of Sweden - 440 acres - north of Sweden - 1400 acres. The factor we have used for Quebec is 2 sq. miles, or 1280 acres.

In our northern forests we should start with a reserve of between two square miles of forests for each family. As these acres are brought under management, the production per acre will no doubt be increased, but we must bear in mind that the original colony will also increase - we hope so anyway.

We cannot emphasize too strongly that there must be no confusion between the idea of a forest colony and colonization as developed up to the present day. The forest colony is based upon the conception that the forest will provide a complete living for the forest colonist. He will not need to keep pigs, hens, or to grow any food, but if he likes to do so that will no doubt add to his standard of living and increase the stability, but will not be taken into account when setting up the financial standards for these colonies.

As forest colonies are developed, there is no doubt much can be done to solve the problem of marginal farms and marginal colonies. In other words we should be able to exchange these social liabilities for assets in the shape of new forest colonies. Formation of these forest colonies will take time so that the present social structure will not be unduly disrupted. As seasonal workers from present marginal farms and derelict colonies are absorbed, the demand for seasonal workers will decrease.

EDUCATION, TRAINING AND RESEARCH

We are not prepared for this development.

There are not sufficient trained technicians available.

We have had no experience in building up the necessary organization and there are no trained workmen.

This, however, does not need to discourage us. It will be slow unfolding this development, but it will take us all our time to be in readiness by the time we can make the necessary changes in the public outlook.

Our knowledge of local forest areas is limited. We need research in these areas, but as yet we have not got the research workers.

All this brings us back to a consideration of what we should advocate in the way of providing immediate facilities on an adequate scale for forest education, training and research.

1. We need many Elementary Forest Schools, where wood craft and logging techniques can be taught in the local areas.
2. We need Intermediate Woods Technical Schools, similar to the one at Duchesnay. I would suggest one for each forest district, eventually eight or nine.

Finally, we need more accommodation at our school for foresters at Laval. We should be turning out fifty qualified forest engineers every year. Based on a four year course, this will call for a total accommodation for something like 250 students.

3. The teaching staff should be suitably increased and professors and students alike should be given a chance by providing [illegible] full time professors and liberal scholarships for the students.
4. We also need an experimental forest area of suitable size where we can do research work, carry out experience on a commercial scale and provide demonstration areas for the general public, lot owners and forest colonies.

5. Propaganda:

Public Education

Rural Education, etc.

Economy of the Forest

The forest colony on its materialistic side must be based upon the economy of the forest.

Our various products at the present time find their chief outlet on World Markets and although we must look to a future when local demands will increase, world markets will always predominate. We can only keep our place on these world markets by efficiency.

We maintain that the forest colon can be taught how to operate efficiently and can be organized on a forest co-operative basis to largely replace our present system of forest exploitation.

We should not neglect the need for forest propaganda. Little is known about our forests and their tremendous importance to our whole economic structure. The general public do not realize they own the forests and that it is their responsibility to see that they are properly managed and made us of to the fullest extent for the benefit of the whole community.

Religious Basis

Though we tend to stress the materialistic side of this problem, we do not for one moment forget that there are other values which to us at least are even more important than purely materialistic consideration. We constantly hear idealistic declarations stressing the fact that social considerations are of paramount importance. These social considerations of course being based upon Christian principles.

We have however reached that stage of civilization when a real effort is being made to reconcile the

materialistic as expressed [redacted] standards of living, with the old conception of simplicity and spiritual satisfaction. In no other phase of our provincial development have we such an opportunity of reconciling these two conceptions.

JOW:B

Oct. 5/44
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APPENDIX XI

Memorandum for the Royal Commission on Veterans' Qualifications presented at a meeting of the Commission under the chairmanship of Lieutenant-Colonel Wilfrid Bovey, O.B.E., at St-Hyacinthe, on February 11 and 12, 1946, by Mr. Stephane Boily, District Superintendent of the Veterans' Land Act for the Province of Quebec.

The Veterans' Land Act, 1942 provides for the rehabilitation in civil life of veterans who wish to be established in rural centres to operate a farm on a full time basis, or to simply live there while earning a living through industrial employment or drawing an income coming from other than agricultural sources.

For that purpose the Act provides for four distinct ways of settlement and allows the government to absorb an important portion of each establishment through a conditional grant. The four forms of establishments are the following:

a) Full-time farming

b) Establishment on small-holdings

c) Commercial fishing

d) Establishment on Crown lands.

The government must make sure that each applicant is fully qualified to be established in the manner he has chosen, and asks him to make a down payment covering one-tenth of the cost of land, buildings and permanent improvements when he applies for assistance.

We believe that 15,000 veterans will avail themselves of the benefits offered by the Veterans' Land Act and that applications will come within the following breakdown of percentage for each form of establishment.

Full Time Farming	5,000	- 20%
Small Holdings	10,000	- 66%
Commercial Fishing	1,000	- 7%
Crown land settlement	1,000	- 7%

For administrative purposes, the province of Quebec has been divided into three regional offices, Montreal, Quebec and Sherbrooke, and since the Act has been in force in this province, that is, since the fall of 1944 our Regional Advisory Committees have studied 1,666 of the 2,218 applications received to date, or 75 per cent of all applications received.

Among the 1,666 cases studied by our committees, 483 candidates wished to be established as full time farmers, or 25 per cent of the total, and we have qualified 240 of them, or 57 per cent of that number.

About establishment on small-holdings, 1234 candidates have been interviewed by the Committees, that is: 75 per cent of the total, and we qualified 75 per cent of them, or 62 per cent.

Eight out of nine candidates for a commercial fishing establishment will benefit by the advantages offered by the Act.

To summarize, of 1,666 veterans interviewed by the Committees 1,005 - 60% have been qualified under the Act, and 661 candidates - 40% have been refused qualification. However, a certain number of those cases will be reconsidered. For instance, we directed forty-eight applicants to farms where they will complete their agricultural experience and will, in the time, be granted benefits No. 2 during their apprenticeship.

ANALYSIS OF APPLICATIONS FOR QUALIFICATION RECEIVED in the PROVINCE OF QUEBEC

	Montreal	Quebec	Sherbrooke	Total
Applications received	1289	561	368	2218
Applications dealt with (a) Original	1075	503	333	1611
(b) Subsequent	25	2	30	55
Qualified without training	658	214	152	1005
Qualified after training				
(a) farms	-	-	-	-
(b) commercial fishing	-	-	-	-
Total qualified				
(a) full time farming	101	71	68	240
(b) small-holdings	537	136	84	757
(c) commercial fishing	-	8	-	8
Disqualified without training	128	52	59	239
Disqualified after training				
(a) farms	-	1	-	1
(b) commercial fishing	-	-	-	-
In abeyance	332	37	52	421
Competency certificates cancelled	31	1	8	50
Recommended for training				
(a) farms	22	7	2	34
(b) commercial fishing	-	-	-	-
Being trained				
(a) farms	7	4	3	14
(b) commercial fishing	-	-	-	-

The purpose of the Committees' meetings is to study the individual qualifications of each veteran, to determine the value of any technical training acquired and to reconsider the certificates of competency issued by the Armed Forces.

Though some of the technical training acquired by veterans might be of great use to establish them as full time farmers, we must not forget that a good farmer must possess special qualifications.

We use a system of points to determine the natural disposition of the candidates. Here is a detail of that system:

Age	10 points
Health	10 "
Experience or employment	15 "
Education	10 "
Financial resources	10 "
Personality and character	10 "
Service	5 "
Wife's personality	10 "
Suitability of wife to live in a rural centre	15 "
Number of children	5 "

To be qualified, the applicant must get 60% of the total.

1) AGE - 10 points

Age is of primary importance. Indeed, an old person could not perform the hard task of operating a farm. Furthermore, an applicant of advanced age would have to repay his loan within a limited period of time say ten to fifteen years, instead of twenty-five years. The annual repayment amounts would therefore be heavier. Generally speaking, we do not favour the issue of qualification certificates for full time farming to applicants over forty-six years of age. The mean age of applicants wishing to be full time farmers is thirty-four, while it is thirty-two for those who wish to be established on small holdings. The ideal age would be from 25 to 30 years old.

2) HEALTH - 10 points

A farmer will succeed if he is in good health and robust. A great number of ex-servicemen are being refused a qualification certificate because they are not sturdy enough to perform this hard task. Some of the candidates, though experienced in agriculture, cannot be qualified on account of disabilities incurred during the war.

3) EXPERIENCE - 15 points

In most cases, to qualify unexperienced applicants would mean failure in our plans and in their establishment, and would most certainly deprive them of obtaining benefits for other purposes.

However, the Act allows us to complete the agricultural experience of those who have been connected with farming before, but who lack the full qualification necessary for us to issue a certificate to them.

We possess three ways of supplying veterans with additional experience in agriculture:

a) We may place them under training with practical and successful farmers;

b) We may rent them one of our farms under the supervision of one of our agronomists;

c) We may send them to some agricultural schools where they will be trained theoretically and practically.

During their training, they will be entitled to receive benefits No.2 (Apprenticeship benefits), as provided for them by the Rehabilitation Act.

4) EDUCATION - 10 points

Education, though of lesser importance to the full time farmer, nevertheless contributes to the success of his enterprise.

According to a survey of applications received, the average year in which candidates for full time farming have completed their school education is the sixth grade, while the average year for small-holding applicants is the tenth grade (primary school).

5) FINANCIAL RESOURCES - 10 points

The Veterans' Land Act stipulates that any veteran applying for assistance must pay cash 10 per cent of the amount he wishes to borrow from us.

According to a survey of files, the average of

savings for the full-time farming applicants if $551 per applicant, while it is $970 for small-holding candidates. These savings are hardly sufficient to enable them to make the 10 per cent down payment. Though under the Act a sum of $1,200 is given free for the purchase of livestock and equipment, it is almost impossible for a settler to buy all the farm equipment necessary with that amount, and he should therefore have a little more savings. According to our point of view, a sum of $1,000 would not be too great. However, we can prevent this difficulty by renting one of our farms to a veteran, and by making him pay only for taxes and interest on the invested capital. This procedure will, in the long run, help establishing many veterans who otherwise would not have enough savings. While being placed on that farm, they will also be entitled to draw living allowance benefits.

6) PERSONALITY AND CHARACTER - 10 points

A successful farmer is one who possesses many moral and physical qualities. Let us mention, among other, courage in face of temporary failure, patience, co-operation with neighbours providing mutual help, and sobriety that will prevent him from scattering away the profits of his enterprise.

7) RECORD OF SERVICE - 5 points

Generally speaking, bad soldiers do not become good citizens, and a bad citizen seldom turns out to be a good farmer. Members of Advisory Committees have to get some information respecting an applicant's record of service and use their own judgment in deciding whether he will fit in our rehabilitation scheme.

8) WIFE'S PERSONALITY - 10 points

An applicant's wife must accompany her husband

when he appears before the Committee, for her part in the organization of the farm is of first importance. A farmer's wife, like her husband, must be strong and be able to help him constantly whether in the home or in the field. Furthermore, in a few cases, she must be educated well enough to make up for her husband's lack of education.

9) SUITABILITY OF THE WIFE TO LIVE IN A RURAL CENTRE - 15 points

Many wives cannot stand country life, and their unsuitability to adjust themselves to it can make a farmer finally leave his land and lose the profit of years of hard work.

10) NUMBER OF CHILDREN - 5 points

A farmer's children are always a big help on a farm. His sons can do part of the field workwhile his daughters lend a hand to their mother in the keeping of the home.

The following tables will give you an idea of the average age, savings, and last year in school of 100 veterans who have applied for establishment under the Act.

Full Time Farming applicants:

OFFICE	Age	Education	Savings
Montreal	34	7th grade	$ 650.00
Quebec	34	5th grade	541.00
Sherbrooke	34	7th grade	483.00
Average	34	6th grade	551.00

Small-holding Applicants:

Office	Age	Education	Savings	Annual Income
Montreal	33	10th grade	$ 952.00	$ 2060.00
Quebec	35	10th grade	1037.00	2100.00
Sherbrooke	30	9th grade	922.00	1600.00
Average	32	10th grade	970.00	1920.00

As a conclusion of this survey, may I say that we had to refuse a qualification certificate to 240 applicants, and to put in abeyance the issue of 421 certificates for other applicants, which makes a total of 661 final or temporary refusals, or 40 per cent of all applications.

The question is: what are we going to do with those ex-servicemen who cannot profit by the Veterans' Land Act.

Those persons have spent a good part of their life in the country, and they want to live there; if we cannot help them, they will come to the cities to live there, will not be able to find any employment, and will probably become dependents of the government.

We believe that the movement of regeneration started by the leaders of our province in connection with rural industry could solve this problem and help to the rehabilitation of veterans.

Years ago the Quebec village was a social cell which could live by itself. There you could find a blacksmith, a wheelwright, a carpenter, a bricklayer, a tanner, a butter-man, a cheese-maker, a shoemaker, a saddler, a winnower, a weaver, etc., etc. Today, those handicraftsmen have almost all disappeared from the village, to the prejudice of the social balance of the parish, which sees each day another one of its sons or daughters leave the native place to go to the city, attracted by the false allurement of high wages in the manufactures. That is what is going to happen to each of those veterans, to those whom we cannot establish as full time farmers, if we do not find a plan to help them.

We therefore take the liberty of recommending to the leaders of our society the creation of a body whose exclusive task would be to form, by some appropriate

courses and by practical apprenticeship, some qualified artisans capable of reestablishing those lost trades in our Quebec county.

We believe that this formation should bear upon the following arts and trades:

1 - Butter-men
2 - Cheese-makers
3 - Canners
4 - Butchers
5 - Bakers
6 - Wheelwrights
7 - Blacksmiths
8 - Tinmen
9 - Ornamental iron work artisans
10 - Electricians
11 - Carpenters
12 - Cabinet-makers
13 - Wood carvers
14 - Bricklayers
15 - Brick-makers
16 - Potters
17 - Shoemakers
18 - Saddlers
19 - Tanners
20 - Basket-makers
21 - Weavers
22 - Agricultural mechanics
23 - Farm machinery salesmen
24 - People's Bank managers
25 - Cooperative's managers

We feel sure that thanks to this influxion of fresh blood, we will see domestic arts get popular again in our province. Furthermore, while reestablishing the economical and social stability of the parish, we will contribute to the rehabilitation of this 40 per cent of veterans who, finally given a means of regular income through their trade or art, will now be able to benefit by the advantages offered by the Act and be established on small-holdings, the second form of establishment under the Act.

Thanks to this plan, we shall realize that aim of every one of us, that is to rehabilitate every veteran who wants to participate in the benefits of the Veterans' Land Act.

APPENDIX XII

Brief on the Creation of Parks as Post-War Projects

L. A. Richard,
Deputy Minister of
Lands and Forests.

Queensland is one of the provinces of Australia whose surface is less than that of the Province of Quebec, whose population is only a third of ours, whose resources are inferior to ours and who have not the advantage that we possess of having in our immed s neighbourhood a population of 130,000,000 people.

But, the province of Queensland possesses ninety-five parks the majority of which have been made in times of depression or unemployment. All these parks are not of great extent. That is not necessary. But they have all been chosen with care and they contain most beautiful scenery or interesting natural phenomena.

There is an example that surely ought to inspire us in the province of Quebec for the period following the end of the war.

Parks have become one of the necessities of modern life. With the transportation facilities which we now enjoy, people will become less and less sedentary and pleasure trips for all classes of society will from now on be part of our daily living. For the well-to-do, beautiful beaches and luxurious hotels. But for the masses, parks, whether they be federal, provincial or simply local.

For the family of the workman, the park will be the equivalent of a splendid vacation, spent at little expense in fresh sea or mountain air, in the midst of particularly well chosen natural surroundings. It also is a question to a large extent of the health of our people. Our national pride is also involved - giving our people the opportunity to admire our beautiful scenery, our fine

views, the lakes and mountains of our country which so far they can only see in pictures.

Of course if we lived in Europe, in the midst of an old civilization we could offer distractions of a different kind to our people - revelling in monuments of the past, recalling happy pages of history. But failing historical monuments of profound national interest, it rests with us to make the most of nature's charms.

Of secondary importance but importance nevertheless are parks for our tourist industry. It would draw customers to the parks but only if these parks were laid out where nature is so to speak without rivals. For sixty years the U.S.A. has been spending millions and millions each year to provide parks for the public; the Americans today know.

These observations are perhaps tedious but they appeared necessary to me to stress the importance of parks in the organization of the new society which will emerge from the ashes of war.

Before mentioning what we ought to have in the province of Quebec, it is perhaps wise to show what we already possess in the way of parks, whether it is parks controlled by the federal government or parks administered by the different departments of the provincial government. Intentionally, I am omitting municipal parks which are of undoubted importance but which are a special study in themselves.

(a) Federal Parks

Actually we have three federal parks in the province of Quebec. I shall name them because their existence has never run counter to the desires of provincial autonomy but on the contrary leads us to believe that federal collaboration can be very desirable in the interest of the province. The first of these parks,

the most beautiful and the best known, is the Park des Champs de Bataille on the plains of Abraham. Its historic character places it in the forefront of the national parks in the dominion. The second, is the Ile aux Noix, in the Richelieu, with the old fort and the museum which constitute its chief attractions. It is likewise a park of historic character. Finally there is Gatineau Park, a short distance from Ottawa, in what I may call the federal district. It is a panoramic park that the federal government began to lay out some years ago, after having bought for something more than $150,000 about 15,000 acres situated in the midst of natural beauty typical of the Gatineau. This park is already a credit to the province since it sets forth a few steps from the capital the charm of our Laurentians and capitalizes the attractions for both winter and summer sports.

Provincial Parks:

Since 1895 to this day, the province has laid out several parks, at least on paper. They are the Parc des Laurentides (1895), the Park of Mount Tremblay (1895), Gaspé Park (1937,) Mount Orford Park (1938), the Reserve de peche de la Route Mont-Laurier-Senneterre (1939), of which I shall speak at greater length to describe its possibilities. To be precise, it is necessary to add le Jardin Zoologique de Quebec (1931) and which the petit peuple have patronized with an enthusiasm that never fails. I must also add the Parc du Pont in Quebec under the jurisdiction of the Department of Public Works which is very popular. Also a few months ago, the province inherited for public use the Moulin de Vincennes, the furnishings which it contains and the gardens which surround it. From the point of view of the historian, we have nothing more authentic; charm-

ing or picturesque to show our people. As the centre of a local museum, it is quite unique. In conclusion, I might mention the terraces which the Department of Highways has constructed and which it maintains in several places along the national highway, where the view is quite remarkable. There are two or three in the Gaspe area and there is another on the heights of Baie Saint-Paul. These little parks which might be measured in feet rather than acres, fill several needs; they allow the traveller to enjoy a view of exceptional beauty, to picnic in the shade, to relax pleasantly and provide comfort stations. If, in our province, these have been established as an experiment, there is no doubt that they will now be multiplied in a serious effort to recapture the tourist trade.

III

I would like to mention now what, in my humble opinion, would be a suitable reconstruction programme for the post-war period.

Federal Parks: The federal government spent, up to the outbreak of war a sum of about thirty million dollars for the construction and management of national parks in nearly every province of Canada, aside from the historical or special parks, three of which exist in the province of Quebec. These great parks today number eighteen. They cover, in the most remarkable parts of the country an area of about 18,000 square miles and they include the highest peaks, mountains covered with eternal snows, glaciers, canyons, hot springs, magnificent waterfalls, luxuriant forests, an interesting flora, millions of lakes, numerous rivers, wild animals which are found perhaps nowhere else and all these places are run with a view to satisfying the curiosity and interest of the public and are

definitely removed from industrialism and commercialism. We now have federal parks in all the provinces except Quebec and New Brunswick. Has the time not arrived when we should attempt to interest the federal government in the construction and management of two parks for this province, one in the Gaspe area and the other north of Montreal, the two most important districts of our province from the tourist point of view? The Gaspe peninsula was becoming before the war and will become again after the war, one of the most sought-after places in America by tourists because of its incomparable scenery. The Nord de Montreal is not less popular as a result of a perfect organization which enables tourists to enjoy both winter and summer sports. Besides, the immense population of Montreal needs an outlet and if they are not provided with the means of taking the natural route to the north that population will head for the south and holiday on the comfortable beaches of Maine. If I am insistent regarding the construction of two federal parks, it is because I am convinced that the province will probably never have the means to build great parks, conforming to the standard of national parks and that for the pride of our population as well as for the satisfaction of American tourists two of our parks at least ought to be the equals of the most beautiful parks of North America and show the world what the Laurentians and the Shickshocks have to offer for the pleasure of the eyes and for the enjoyment of sports of all kinds.

Provincial Parks - Laurentian Park - Its assets are as follows: one of the wildest and most elevated corners of the whole Laurentian chain. A territory of 4,000 square miles. Two cross country highways in excellent condition. About 1,500 lakes. Several

hundred rivers. An excellent habitat for trout. A famous deer and fur-bearing animal reserve. An organization already important though insufficient for the reception of tourists under the direction of the Department of Hunting and Fishing. Its liabilities are as follows: too great an industrialization of the forest, too many damned lakes. Nature's beauties too readily sacrificed to industry. But the province can draw a large revenue from this park. In order to attain that goal, there would have to be a more scientific management of the woods, construction of well controlled barrages, a permanent biological station, new roads and portages to open up the new territory to tourists, the multiplication of cheap camps for visitors.

(b) Mount Tremblay Park

Established in 1895. Area about 1,500 square miles. Exists only on paper. One of the most picturesque places in the Laurentians. Leased entirely for wood-cutting. Numerous dams. Several territories licensed or rented for hunting and fishing. Situated at least 100 miles from Montreal. A short distance from one of our most beautiful national highways as well as from the C.P.R. station. Lends itself admirably to winter and summer sports. Already there exists in the western limits of the park, one of the finest ski centres in America and certainly, one of the best managed. One part of this park ought to be offered to the federal government for the purpose of a national park and the other part organized by the province in accordance with the more modest plan of the Parc des Laurentides.

(c) Parc de la Gaspesie

Situated some thirty miles south of Sainte-Anne des Monts and about sixty miles north of New Richmond,

on the Bay des Chaleurs. Territory about 350 square miles. A few lakes. Source of several rivers. The highest elevation in eastern Canada: Le Mont Albert. La Table, le Mont Jacques-Cartier. Gorges that make one dizzy. Perpetual snow on some peaks. A renowned flora. The last great herd of cariboo in eastern Canada. To know Gaspe, it is not enough to encircle it; one must penetrate it. There is already quite a good road into the interior, portages, some camps, as well as a hotel whose construction was interrupted at the outbreak of war. This park ought to be offered to the federal government. Failing that, the management of it should be taken over as soon as circumstances permit.

(d) Mont Orford Park

Area about 16,000 acres, a short distance from Magog and Sherbrooke, along the national highway. The highest elevation in the Eastern Townships. Several very beautiful lakes in the immediate vicinity. A very picturesque golf course. Numerous ski-trails as well as a ski-tow. The construction of a road leading to the summit was abandoned at the outbreak of war. A summer camp for children. This park offers great possibilities for the population of the Eastern Townships and the work ought to be undertaken as soon as possible. The children's camp should be run at state expense. Another place ought to be run for the Boy Scouts organization.

(e) The Fishing Reserve of the Mont-Laurier-Senneterre Route.

Area about 2,000 square miles. We are almost at the height of land. The mountains are in the distance and one can no longer see anything. But the lakes are so numerous that one passes from one to the other by portage in a matter of seconds or minutes. For long

and beautiful canoe trips without the least fatigue it is hard to find anywhere in the province a better lay-out. The pickerel and the pike reach a remarkable size and are very numerous. This Reserve should be made a provincial park and the locality made more comfortable to receive the public. More portages and more camping places would also be necessary. The introduction of bass there would assuredly be a success.

(f) Local Parks

The five provincial parks of which I have just spoken, would be quite enough to satisfy the needs of our population if our province were not so vast. But between them, there are often hundreds and hundreds of miles and it would be wise to establish little local parks not far from the smaller centres of population where a natural beauty makes it possible and desirable. It would be sufficient to follow the example of Queensland and lay out parks of a limited area. Even if the province was unable to begin them at once, we could anticipate the future by choosing the land and settling the boundaries on Crown lands while there is still time before these sites are definitely taken over by industry or for colonization, during the course of the years. There would surely be room in the province for at least a dozen small local parks. When, twenty-five years from now, our population has doubled and the number of our tourists has tripled with increased communication facilities, these parks would be a considerable asset. But the choice of sites might become a bone of contention or even an apple of discord unless a commission, with wide powers, were named for that purpose. Cases could easily occur where remarkable sites have already been taken over and a law might have to be passed to permit expropriation.

It was Theodore Roosevelt who in the United States classed the most beautiful sites as one of the country's natural resources. So in accordance with the idea which he has bequeathed to us, there are resources which in certain spheres and in certain circumstances, become inalienable since they constitute a national heritage and cannot become part of an individual patrimony. These local parks ought not to be chosen without great care and thought, I repeat, and it would take a commission at least two years to make an effective survey.

(g) Scenic Routes and Boulevards

I have already spoken of the conclusive experiences of the Department of Highways along the great national routes. I do not hesitate to repeat that it would be well to multiply these scenic routes for the reasons given above. Only the Department of Highways with its knowledge of localities could draw up an adequate programme for our present and future needs.

(h) Natural Monuments

It is not only man who creates monuments. Nature has played a large part. In France and in the United States laws exist relating to natural monuments. Often these natural monuments are things of great beauty. Often also, they are things of curious and unusual interest. In one case as in the other, these ought to be kept for the pleasure and instruction of the public. In the United States, the number of natural monuments is as great as the number of national parks and it sometimes happens that these natural monuments after some years of arrangement and administration are raised to the rank of national parks, and with good reason. In the province of Quebec, we have natural monuments of truly exceptional beauty and interest. Those monuments have been taken over and have become a part of

private property. It is a shameful thing to contemplate. These must be returned to the public domain without delay for the pleasure and profit of the native population and visiting tourists. Their expropriation would cost comparatively little and their management for the use of the public would be easy and inexpensive. I would like to illustrate my thought with typical examples but I am afraid of prolonging my subject in a manner incompatible with the purpose of this work.

(i) Vacation Centres

In the majority of parks of which I have spoken, vacation centres ought to be established for children whether it be the under-privileged of the city, or simply your; naturalists, scouts, guides or hikers. Nothing should prevent these centres being under the direction of competent authority in religious matters even outside of these parks. I know of public properties which could easily be organized for the reception of groups of children; the majority of fisheulture centres of the province, for example, are so well situated in this regard that it would be possible with little expense to establish vacation centres. Think how the curiosity of these children would be stimulated in following the daily activities of these establishments. But a complete study of this question of vacation centres could easily be made the subject of a separate work.

In conclusion, it only remains for me to excuse myself for not having been as definite as could have been desired. Since the beginning of the century, the majority of the countries of America, Europe, Africa and even of Asia have created parks of a greater or less extent, as circumstances permitted. I do not know that any country has regretted engaging in such

projects even if they have had to incur expenses which might momentarily appear unjustifiable. In laying out and beautifying a park, one often builds more for the future than for the present and that is an act of prudence and wisdom.

Finally, should we hesitate to create for peace when we have learned never to hesitate in constructing the tools of war? As a comparison, I recall that to build an airport for fifty bombers, we had to use 64,000 square yards of cement; to employ a fleet of 1,000 airplanes, we required fifty airports. We required moreover 60,000 specialists and behind them, 65,000 men. That was the price we paid for keeping 10,000 men in the air. (Voir Target: Germany).