

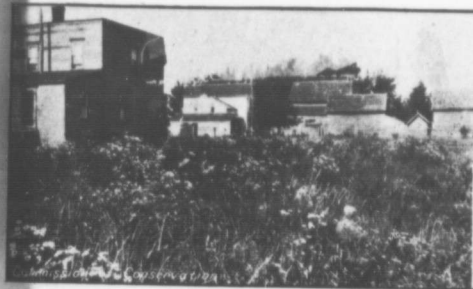
Conservation

A monthly bulletin published by the
Commission of Conservation, Ottawa, Canada.

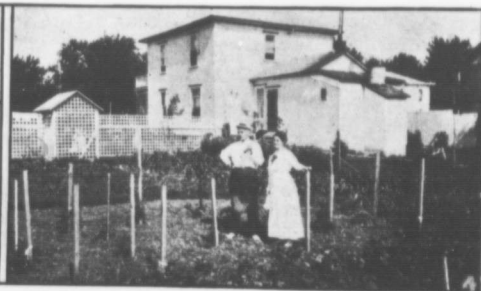
VOL. VI.

APRIL, 1917

No. 4



NEGLECTED AND WEED-INFESTED LOT



IMPROVEMENT, PRODUCTION, DECREASED COST OF LIVING, HEALTH AND HAPPINESS

The above photograph is of two adjoining properties; the owner on the right is growing his own vegetables, while the owner on the left is not only neglecting his opportunity to contribute something to the general good, but is allowing his weed-infested lot to be a menace to his industrious neighbour.—Cut No. 156.

Planting the Farm Home Grounds

Lack of Home Attractions
Makes the Boy Dislike
the Farm

There are two equipments necessary for every farm home—an equipment for work and an equipment for living. Too often the equipment for work receives much more attention than the equipment for living. We are influenced by our surroundings more than we know or are willing to admit. Children especially are sensitive to these things. Many boys have been driven from the country to the city by the unattractiveness of their homes rather than by the hard work of the farm. The unattractiveness of home surroundings and the lack of common comforts have made many a farmer's boy dislike the farm. Every farmer owes to his family and to himself the best that he can do in the way of equipping the farm home and making the home grounds beautiful in order that the simplest and richest life possible may be enjoyed by all.

The cost of improvement and planting will be one of the first considerations. The first item of improvement, neatness, need cost nothing more than the effort necessary to put things in their right

places. Then, if planting is to be done, there should be a plan. This will cost only a little time and study in deciding upon how and where the planting is to be done. Very often the plants and trees required can be mostly, or wholly, secured from the neighbouring woodland. This is especially true of trees. Many home grounds are planted entirely with native trees and shrubs. These will nearly always give better satisfaction than the varieties offered by tree agents. Grape-vines can often be used for decorative purposes and at the same time supply fresh and luscious fruit. Many of the wild flowers, if given care in the flower border of the home grounds, will thrive and bloom so well that they will hardly be recognized as wild flowers.

Home improvement, therefore, need not take much money, but it does take interest. If the farmer is interested in having a well kept and attractive home and grounds, he will find the little time necessary to accomplish this end.—F.C.N.

Make the Boy a Partner

Secure his Interest in the
Business Side of the
Farm Work

Six per cent of the 400 farmers, who were visited in connection with an agricultural survey by the Commission of Conservation in Dundas county in 1916, were paying members of the family who remained at home to work on the farm. No farmer was found who had taken the members of the family into active and actual partnership in the farm enterprise.

It is essential that many of our best boys remain on the farm and help in developing rural life into what it could and should be. Some of our farm boys may be better suited for occupations other than farming, but those who are suited for farming and wish to farm should be given every encouragement to do so.

Boys on the farm are too often

allowed to drift along with very little attention being paid to them. The boy will be more likely to become a willing worker if his interest is aroused in the business side of his work and he will gain ability to save if he is taught to spend thoughtfully and wisely. These two factors, willingness to work and ability to save, are fundamental for future success. Permit the boy to participate in the practical business transactions of the farm as the conditions allow. Let him do some of the buying and selling. When he has decided that he will be a farmer, the father may be gradually relieved from some of his responsibilities through a partnership management.—F.C.N.

USE THE SOIL

It is just as important under present conditions to have reserves of food as reserves of cartridges. When so much is dependent upon a good crop, the entire community should concern itself about the situation from the beginning of the season. There are certain common vegetables, comprising a large part of the food supply, such as potatoes, beans, onions, etc., which do well in all parts of the country. They can be grown in a small way without machinery, and their production this year in ample quantities should be assured beyond chance or doubt.

Use more time and lower heat in cooking to develop flavours and to secure all the value in the food.

"Of all forms of productive capacity there is none more vital, indispensable and steady than the application of human industry to the cultivation of the soil. And if there is one point at which order seems beginning to emerge from the present confusion of our political and social aims it is precisely with regard to this fundamental necessity of making a better use of the greatest of all natural resources."—Viscount Milner.

Co-operation Gains Ground

Southern St. Lawrence Forests to be Protected by New Association

The rapid spread of the co-operative idea in forest fire protection is evidenced by the recent organization of the Southern St. Lawrence Forest Protective Association. The territory which will be protected by this new organization comprises a very large area of Crown timber lands and freehold land, in the province of Quebec, south of the St. Lawrence river, extending from the end of the Gaspé peninsula on the east to the boundary between Dorchester and Bellechasse counties on the west, or to a line drawn in an easterly direction from Levis.

This territory is about 240 miles long and varies from 30 to 70 miles in width. Including timber limits, freehold lands and unlicensed Crown lands, the district has an area of about 15,000 square miles, of which presumably a large percentage will be protected by the new association. Limit-holders and owners of freehold lands will be assessed on an acreage basis, and it is anticipated that the provincial government will contribute, in consideration of the protection to be afforded unlicensed Crown lands.

A president and a secretary-treasurer have been elected for the Association as a whole. The area has been separated into two divisions, an eastern and a western. The managers for the two divisions have been taken from the staff of the Quebec Government Forest Service and are graduates of the Laval Forest School.

In the eastern division there is a large acreage of private holdings varying in area from 100 acres to 500 acres each. These small tracts of private timberlands will greatly increase the difficulty of securing protection against fire. The situation calls for the full co-operation of the owners of all such lands.

Including the St. Maurice Forest Protective Association, with some 11,000 square miles, the recently-extended Ottawa Valley Forest Protective Association, with 29,000 square miles, and the newly-organized Southern St. Lawrence Association, with probably about 15,000 square miles, the province of Quebec now has under the co-operative system of fire protection, a forest area aggregating more than 50,000 square miles. This covers the most valuable forest areas of the province, including a very large percentage of the territory in private ownership and under timber license.

It now seems likely that the area under co-operative fire protection in Quebec will be still further increased, through the organization of an additional association in the Lake St. John district. The severe fires of last

Pulverized Fuel on Locomotives

A Means for Utilizing Western Coal by Railways

The Prairie Provinces have large reserves of coal, but much of it is unsuitable for railway fuel on account of its liability to cause fires by sparks from locomotives. During recent years experiments have been made respecting the use of pulverized fuel for locomotives. It has been used for several years in connection with certain metallurgical works and found to be of great economic importance. The tests made on locomotives show that the use of pulverized coal is more efficient than the ordinary method of burning coal and, in addition, does not cause smoke, cinders or sparks. Its use would not only be an economy, but would add largely to the comfort of the passengers.

The following shows the increased use of this kind of fuel on locomotive service during 1916:

The Chicago and Northwestern Railway has adapted, to the use of pulverized coal, an Atlantic-type passenger locomotive and is now operating it in its regular passenger-train service between Chicago and Milwaukee. The Delaware and Hudson Company has just put into freight service a new Consolidation locomotive (probably the largest of this type in the world), equipped to burn powdered coal. The Delaware and Hudson Company is also installing a complete fuel-drying, pulverizing, storage and distributing plant, and equipping its stationary boilers at Olyphant, Pa., for burning the waste tailings from anthracite culm banks.

The Missouri, Kansas and Texas railway is installing a complete pulverized-fuel preparing plant at Parsons, Kan., and applying equipment for burning pulverized coal and lignite in its stationary boilers and locomotives.

Various other steam railways, including the Atchison, Topeka and Santa Fé, Grand Trunk, Southern Pacific, Kansas City Southern, Chicago Junction, and Central Railway of Brazil, are now considering the use of pulverized fuel for locomotive service. The last named railway has already decided to adopt it, after an exhaustive three months' investigation made in the United States.

The railway fuel problem in central and western Canada is an important one and, considering the rapid introduction of pulverized fuel on railways in the United States and the economy to be effected by its use, it will be only a short time before such locomotives will be used in Canada.—W.J.D.

summer demonstrated beyond question the urgent necessity for action in that region.—C.L.

Electric Fire Hazards

Small Electric Devices Become Dangerously Careless

Numerous electric fires are not due to faulty wiring or defective appliances, but owe their origin strictly to gross carelessness in the use or misuse of the various convenient electrical appliances now placed on the market for domestic use.

Because of their convenience, small electric devices, such as many pressing irons, curling irons, toasters, electric pads or blankets, electric plate warmers, and electric sterilizers or heaters are now to be found in almost every community.

If these were used with proper care the danger would be negligible, but, unfortunately, many users do not realize the peril of leaving them in circuit when not in use. In such cases these devices tend to become overheated, and to set fire to anything combustible with which they are in contact.

According to the fire underwriters, most of these fires are small, but the aggregate loss is large, and occasional instances show extensive damage. Fires of this class furnish a special peril to life, being most frequent in dwellings and often breaking out at night. A characteristic example is that in which an electric pressing iron is left upon the ironing board, with the circuit closed, and then forgotten. In such a case the fire may not occur until some hours later.

This form of hazard is already assuming large proportions. The Actuarial Bureau of the National Board of Fire Underwriters in one day noted approximately 100 reports of fires from this cause, out of a total of 2,000 losses in the day's reports, and it estimates that small electrical devices are causing fires at the rate of 30,000 or more in the course of a year.

Most of these fires, it is claimed, are entirely preventable, and are due to carelessness on the part of the user. Various "safety" devices have been added by certain manufacturers. Some of these devices are fairly effective, but there is one absolute precaution which should be borne in mind at all times by every user, namely, that of shutting off the current when the appliance is not in use.—L.G.D.

In Belgium old newspapers are being worked up into a papier mâché composition from which artificial limbs are moulded.

The Chilean Government has recently adopted measures whereby a special room is to be provided in factories where mothers may spend one hour of the working-day in caring for their children, without any loss in wages.

The Garden on the Farm

More Attention Should be Paid to the Vegetable Supply for the Table

In an agricultural survey of 10 farms in Dundas county during 1916, 54 per cent of the gardens were reported as being neglected and only 45 per cent as being well kept. Very few people, whether living in the country, or in towns or in cities, fully realize the possibilities of the small piece of ground represented by the back-yard of the ordinary city lot or the garden plot on the farm. The farm garden does not receive the attention of the farmer himself to a sufficient extent, and is often left entirely to the care of the farm women. More vegetables in the diet mean better health and cheaper living. This applies to the farmer as well as to the other members of the family.

Planting. If the farm garden is properly arranged, it can be worked with a horse and horse-cultivator thus eliminating much of the drudgery. A plan should be made of the garden, preferably on paper, but at least in mind. This plan will be very useful when purchasing, planting and recording the dates of planting.

Soil Preparation. The soil should be thoroughly prepared. All rubbish and clods should be thoroughly cleaned out, and the coarse lumps of soil finely pulverized. There is any doubt as to whether the soil is sufficiently prepared, give the garden the benefit of the doubt, and put a little more work on it. Well prepared soil means a proper seed-bed, and better germination of the seeds, when it is planted.

Varieties. It is better to grow a few of the standard varieties of the more common vegetables than to attempt too many novelties.

Seeds. When buying seed, it is well to remember that the best is the cheapest. Deal with reliable seed firms and place orders for the seeds early.

Sowing. The seeds of such hardy plants as peas, spinach, radishes, lettuce, carrots and onion may be sown as soon as the ground is in proper condition. The seed of tender crops, such as cucumbers, corn and beans, should not be planted until danger from frost is past.

There is no reason why there should not be a good and productive garden on every farm. It is a profitable undertaking and will give good returns. The time will be well spent and much may be accomplished in the time that the busiest farmer and his family can easily find if they have an appreciation of the importance of the garden and a disposition to undertake the work.—F.C.N.

Commission of Conservation

CANADA

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Assistant to Chairman and
Deputy Head

CONSERVATION is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and the proper conservation of the same, together with timely articles covering town-planning and public health.

The newspaper edition of CONSERVATION is printed on one side of the paper only, for convenience in slipping for reproduction.

OTTAWA, APRIL, 1917

THE HOME GARDEN

Yes, in the poor man's garden grow far more than herbs or flowers. Kind thoughts, contentment, peace of mind,
And joy for weary hours.

—The Poor Man's Garden.

From the cares of business and the nervous strain of the office, the back-yard garden offers a relief which is not sufficiently enjoyed. Open air exercise is essential to good health. To what better end could this effort be devoted than the cultivation of the back-yard garden.

It requires but a small area of land to supply a table with green vegetables. These may be had crisp and fresh and, on this account, much more of such food will be used, to the great advantage of health.

The product of the home garden relieves to that extent the demand upon the general supply. "Self-preservation is the first law of nature." Do not abuse that law by expecting others to provide your food supply when you are capable and have the facilities for growing at least part of your needs.

Settlers' Fires

Easily Controlled Under the Permit System for Burning System

The report of the St. Maurice Forest Protective Association for the season of 1916 shows that the controlled area belonging to members of the Association was 282,776 acres, or 11,223 square miles, in addition to more than 900,000 acres of government land under license and to the lots taken up by settlers. This territory is very largely on the watershed of the St. Maurice river in the province of Quebec.

During the year 200 fires were reported and extinguished, of

which 173 were extinguished without extra labour. The efficiency of the work has been very greatly increased by the use of lookout stations, telephones, automobile patrols, motor speeders and portable gasoline pumping apparatus.

The report shows that in the past one of the most frequent causes of fires was the carelessness of river driving crews. However, since the co-operation of the logging departments of the constituent companies of the Association was secured, this source of danger has been entirely eliminated.

More than 1,200 permits were issued by Association officers for the regulated burning of settlers' slashings. As a result of the care exercised in this direction, not a single fire was reported during 1916 as being due to settlers' clearing land, within St. Maurice Association territory. In 1915, there were 41 such fires; in 1914, there were 80; and in 1913, the number so reported was 151. This indicates clearly how practicable it is to control the menace due to settlers' clearing operations, with the right kind of law and an efficient organization to administer it.

Applying Farm-Yard Manure

The rate of applying farm-yard manure to give the best results gives rise to difference of opinion wherever the question is discussed. The rates will naturally depend upon a variety of circumstances, such as the nature of the soil and the crop to be grown. There is little doubt that, on the majority of Canadian farms, the rate at which manure has been and is being applied is excessive. Opinion is gaining ground among a number of practical farmers, that lighter and more frequent dressings would give better results than the heavy applications given at longer intervals. Science supports this view. Manures and fertilizers are subject to various risks in the soil and the importance of minimizing these risks should not be overlooked. Regardless of how manure is applied, a part of it is lost by leaching. The sooner the fertilizing elements of manure applied to land can be recovered and the greater the number of plants working for this purpose per ton of manure applied, the less will be the waste. In other words, there will be less loss from twenty tons of manure, if applied at ten tons per acre on two acres, than if the whole twenty tons were applied on one acre, because there will be the plants on two acres rather than on one acre working to recover the plant food from the manure. A short rotation with plenty of hoe crop, and the manure well cared for and applied frequently as a light dressing, mean better crops and greater farm profits.—F.C.N.

Forest and Prairie Fires

Saskatchewan Takes Action to Overcome These Scourges

The possibility of preventing damage by forest and prairie fires in Saskatchewan will be greatly facilitated by a new law which has recently been enacted by the Saskatchewan legislature. This law prohibits the setting out of fires except when certain specified precautions are taken, and provides for the appointment of the reeve as chief fire guardian in each rural municipality. All members of the provincial police shall be fire guardians, ex officio, under the new act.

Provision is made also for the appointment of fire guardians in unorganized areas. It is to be anticipated that the latter provision will pave the way for co-operation with the Dominion Forestry Branch, for the better protection of areas immediately adjacent to forest reserves. The new law includes a provision for the permit system of regulating settlers slash-burning operations in forest settings. The enforcement of this provision, through co-operation with the Dominion Forestry Branch, in the neighbourhood of forest reserves, will greatly reduce the danger of damage to the forest reserves through fires coming in from the outside. Such fires have been a fruitful source of damage in the past.

Reports on all fires are to be made to the Provincial Fire Commissioner, who will be in general charge of the administration of the law.

The act prohibits the throwing away of matches, cigar and cigarette stubs, etc., without extinguishing same. It provides also that citizens may be required to fight fires which occur within 15 miles in wooded districts, and 6 miles in prairie country.

Fire guardians are given authority to make arrests for violation of the act.

Provision is made also for the safe disposal of debris resulting from the construction of roads, trails, telegraph or telephone lines, and railways, or from the clearing of land for other purposes.

The new act is thoroughly progressive and its enforcement will unquestionably go far toward reducing the forest and prairie fire losses in Saskatchewan.—C.L.

Small Fruits on the Farm

Among the 400 farmers visited in 1916 in Dundas county in connection with an agricultural survey conducted by the Commission of Conservation, it was found that 80 per cent of the farmers were growing no small fruits. Bush fruits, such as the currants, raspberries,

gooseberries, etc., could be easily grown and would yield an abundant supply of wholesome, fresh fruit for the table and for canning purposes, on the farms of Dundas county, and in many other counties, where they are now not being grown. There are farmers who are successfully growing small fruits in their gardens in parts of Canada where the difficulties are great, while thousands of farmers who are more favourably situated and who could grow small fruits with the greatest ease, are neglecting to do so. This is a matter which should receive the earnest attention of all. It is poor business for the farmer to be paying out his money for canned fruits, or for fresh fruit to be canned at home, when a sufficient supply of most of the varieties desired can easily be grown in the home garden.—F.C.N.

Spring Clean-up

Getting Rid of Ashes and Refuse Leaves Much Space for Garden

Throughout Canada the disappearance of the snow reveals accumulations of ashes, garbage and other refuse, which, owing to the covering mantle, are not visible during the winter. For this reason it is necessary that an outdoor clean-up be undertaken, as well as an indoor. To accomplish this work systematically, the "clean-up week" has been inaugurated, and has proved successful in inducing many municipalities to adopt efficient means to the end.

Preparations should be undertaken at once for this annual event. The people must be educated to a thorough overhauling of their premises, both inside and out. Much useless material, probably the accumulation of years, will be found serving only to harbor dust. This should be either disposed of to those who can use it or destroyed. Fires of apparently unknown origin can frequently be traced to these accumulations in attics or other out-of-the-way storage spaces. Clean them out, and instead of wondering what to do with them, there will be a feeling of relief that they are gone.

Clean-up the area around the home. Dispose of the ashes, and you will be surprised at the extent of garden you will be able to cultivate from the apparently useless surroundings of the home.

As an encouragement to the people the municipal authorities should do their part. There should be an early start, made on street cleaning and the opening up of outlying spaces, and provision should be made for the removal of the refuse gathered by householders.

Canada's season for outdoor life is not long, and it should not be shortened by delay in cleaning up and making presentable our gardens, streets and open spaces.

Ontario's Forest Protection

A Strong Organization Being
Formed to Administer
the System

Material progress is being made in the re-organization of Ontario's forest fire protection system. The organization will be supervised by E. J. Zavitz, Provincial Forester. Mr. Zavitz is a technically trained forester and has had wide experience under Ontario conditions, having been connected with various lines of government forestry work in the province during the past 12 or 13 years. He will be assisted in the head office by J. H. White, of the Faculty of Forestry of the University of Toronto. Mr. White has collaborated in the preparation of reports on *Forests of Nova Scotia, Trent Watershed Survey and Forest Protection in Canada, 1913-1914*, published by the Commission of Conservation. Three district chiefs have been appointed, for the supervision of the work in the field. L. E. Bliss will be stationed at Port Arthur, Ernest G. Poole at Cochrane, and A. J. McDonald at North Bay. Under these district chiefs will be a large staff of inspectors and fire-rangers. A strong effort will be made to co-ordinate the work of the whole organization, and to provide adequate overhead supervision and inspection.

Co-operation with the Board of Railway Commissioners will be continued, under which the Province will provide a number of inspectors to supervise the fire protection work of the several railways, in forest sections. The regulations of the Board make the railways responsible for the prevention and control of fires due to railway agencies. For the enforcement of these regulations in Ontario, the Province last year provided eleven inspectors. The work of these inspectors related chiefly to right-of-way clearing, the reporting and extinguishing of fires by railway employees, and the inspection of locomotive fire-protection appliances.

Proposed amendments to the Ontario Forest Fires Act will give the Provincial Forester very wide authority in the handling of the whole situation. One of the most important amendments provides for the adoption of the permit system of regulating settlers' clearing fires. This action should go far toward preventing a repetition of previous disastrous fires in the clay belt. Similar provisions are now in effect in other provinces.—C.L.

Keep up the Food Supply and Help Make Victory Sure

"I AM assured that my people will respond to every call necessary to the success of our cause—with the same indomitable ardour and devotion that have filled me with pride and gratitude since the war began."

HIS MAJESTY KING GEORGE

OUR soldiers must be fed; the people at home must be fed. And—in spite of Germany's murderous campaign to cut off the Allies' Food supply, by sinking every ship on the High Seas—an ample and unflinching flow of food to England and France must be maintained.

*This is National Service—
Not to the Farmer only—
But to YOU—to everybody—
This appeal is directed*

WE must unite as a Nation to **SERVE**—to **SAVE** and to **PRODUCE**. Men, women and children; the young, the middle aged and the old—all can help in the Nation's Army of Production.

EVERY pound of **FOOD** raised, helps reduce the cost of living and adds to the Food Supply for Overseas.

PLANT a garden—small or large. Utilize your own back yard. Cultivate the vacant lots. Make them all yield food.

WOMEN of towns can find no better or more important outlet for their energies than in cultivating a vegetable garden.

*Be patriotic in act as
well as in thought.*

*Use every means available—
Overlook nothing.*

For information on any subject relating
to the Farm and Garden, write:

INFORMATION BUREAU
Department of Agriculture
OTTAWA

Dominion Department of Agriculture

OTTAWA, CANADA.

HON. MARTIN BURRELL, Minister.

Will you encourage turning waste garden space into food this summer?

Waste ground and spare time may be jointly used for the increased production of food.

The planting of the backyard garden is a "home defence" against the high cost of living.

Be careful of your own eyes, own limbs and your own life as well as for those of others.