

Conservation

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

VOL. VII

MARCH, 1918

No.

Proving the Value of Summer Pasture

What Experiment of the Commission
of Conservation Shows

A small field of summer pasture on the farm is very valuable in many ways. If the ordinary pastures are short and dried up during July and August, the piece sown to summer pasture will tide the stock over the dry pasture period. If the ordinary pasture is good, then the summer mixture can be cut for hay or allowed to ripen as a crop. It is an excellent crop with which to seed down, especially when pastured or cut early, and may be sown after the regular spring seeding is completed.

Summer pasture mixtures were sown on a number of farms last year with good results, in connection with the Illustration County work being conducted by the Commission of Conservation in Dundas county, Ontario. On one man's farm five acres were sown as follows: one acre to oats and vetches, one acre to oats and peas, and three acres to a mixture of wheat, oats and barley. This field enabled the farmer to save for hay another five acre field, which gave a yield of 10 tons. The summer pasture grew so well that, when ready for use, it was fenced across and only half of it pastured. The two and one-half acres, however, provided the main pasture for 12 cows during July and most of August, and caused an increase of 35 pounds per day in milk yield, which held up for more than a month, while other pastures were short. The other half of the field yielded six loads of mixed feed cut green and made into hay. The field was seeded to clover and timothy, and the onset of the winter found it in splendid condition with a good catch of grass and clover.

Best results on this farm were obtained from oats and vetches, with wheat, oats and barley next, and oats and peas last. Plan now to try it this year; it means more food.—F.C.N.

In Canadian cities 28 per cent of the buildings in business districts are of frame or brick veneer, whilst in residential districts the proportion is 69 per cent.

Get Ready to Meet the Spring Floods

Winter Conditions Point to Trouble
when the Spring Break up Comes

All this winter snow has fallen in unusually large quantities. There was no 'January thaw' and no marked thaws in February. It has been a steady winter with the prospect of it remaining so until the spring break-up. Then the rains will descend and the winds will blow in the most Biblical manner and floods of unusual proportions will be the result. Already, a small February thaw has caused much damage at points along the Thames and Grand rivers in Ontario. Ice jams forced the water over some of the artificial embankments and much loss and discomfort resulted. Are these instances merely a foretaste of what is coming? In any event, it is better to prepare for such a contingency with every means available. Engineers should be placed in charge and ice jams should be dynamited before they have had a chance to dam back the water. Weak places in embankments should be properly reinforced. Food kept in cellars in the low lands bordering streams should be removed to upper stories of houses, so as to prevent its destruction or damage in flooded cellars. Similarly fodder and grain in barns should be placed as high and dry as possible.

By adopting as many preventive methods as time and circumstances will permit, possible panic and serious loss may be averted to a very considerable extent when the rivers commence their great 'spring drive.'—A.D.

HOW ABOUT THAT WOOD- PILE FOR NEXT WINTER?

Already a number of municipalities are preparing for a possible fuel shortage next winter. Carleton Place, Ont., is arranging for the purchase of at least 1,000 cords of wood. Ottawa, too, is making similar preparations on a larger scale. Efforts are also being made to speed up the output of the coal mines in Canada. All these activities are receiving the endorsement and assistance of the Commission of Conservation. They are steps in the right direction. The

narrow escape from a fuel catastrophe this year has shown, with startling clearness, the serious dependence of Canada on the United States for supplies of coal and the urgent necessity that exists for obtaining substitutes in central Canada, for the duration of the war at least.

The Commission of Conservation's bulletin 'Wood for Fuel' will be sent on request to any municipality interested.

To Reduce Waste in Lobster Fisheries

Suggestions for Reducing Mortality in
the Live Lobster Trade and Making
Hatcheries More Productive

Mr. M. H. Nickerson, of the Boston Lobster Co., has made the following valuable suggestions with respect to the conservation of the Canadian lobster:

1. Two-thirds of the total lobster values of all Nova Scotia are produced in the four counties, Digby, Yarmouth, Shelburne and Queens. The amount is over \$2,000,000. The littoral belt comprises the most productive lobster areas in the world.

2. Of the foregoing sum, about \$1,229,000 is derived from live exports, mostly shipped to Boston by way of Yarmouth. The water-carriage is by a passenger and general freight boat, unsuitable for carrying such perishable goods as live lobsters, and consequently, the loss from dead stock on arrival in Boston is enormous—approximately \$200,000 worth during a single season.

3. The crates for export are collected along the coast by small steamers, connecting with the Yarmouth boat, and as the extent of territory covered is about 100 miles, most of the lobster freight is taken from the water 24 hours before being transferred to the boat for Boston, the passage thither generally taking 16 hours. This boat, not being equipped with cold storage nor having special storage room for live lobsters, it is easy to see how the above loss is incurred.

4. Cape Sable is the central point in the above-mentioned coastline, and the proposition is to establish there a station specially

Criminally Careless Should Be Punished

Heavy Losses in Life and Property
from Fire Continue

Canada is careless, criminally careless, in the matter of fire waste. The *Monetary Times* reports the fire losses for January as \$2,688,556, an increase over January of last year of \$777,896. Twenty-eight lives were also sacrificed.

It might have been expected that, with the rush of war work, the larger portion of this loss would have been in factories. This was not the case. By far the greater portion was in apartment houses and business blocks, hotels, and in residences. It is plain, therefore, that carelessness was the main cause. What this carelessness means may be illustrated by the conditions found by a fire inspector in one Canadian city. He found 68 defective furnaces or pipes too close to woodwork, 157 stoves not protected from woodwork, 140 cases where combustible material should be removed, 122 dangerous and defective chimneys, 46 ash piles too close to partitions, 127 electric wires in contact with nails, 80 defective boiler rooms and 40 cases where gasoline was improperly stored.

In addition to the above, conditions such as endangered life were: 133 obstructed fire escapes, 387 alarm gongs and 188 red exit lights out of order, 90 fire escapes without direction pointers indicating where they were situated and 17 defective operating rooms in theatres.

All of the fire hazards above-mentioned are contrary to law and it is time that the responsibility of maintaining such dangerous conditions should be brought home to those who are guilty of maintaining them. Section 247 of the Criminal Code of Canada makes it a criminal offence to omit taking reasonable precautions and using reasonable care to avoid danger to life. The necessary legislation is provided; it only requires enforcement.

In altogether too many cases fire destroys the evidence pointing to its cause; otherwise, many coroners' inquests would show more effective results than at present. As it is, these inquests are very meagre recompense for the many lives which are sacrificed through lack of care.

(Continued on page 11)

Conflagrations and Building By-Laws

Analysis of Conflagration Conditions in Canada. Construction Outside Municipal Fire District Should Be Regulated

An enquiry into existing conditions in Canada shows that no city or town is free from the danger of conflagration. In some, the hazard is severe; in others, it has been modified by recent construction; in all our cities and towns the hazard is bad. The chief of every city fire department fears the day when he will have to solve for himself the problems that have confronted the organized brigades at Montreal, Toronto, Ottawa and other cities. In a general way, it may be said that the larger cities and towns in Canada consist of compact brick and stone business centres, surrounded by districts constructed almost entirely of wood. Frame buildings, to a greater or lesser degree, constitute the mercantile centres of the smaller towns and villages and whole sections of the residential areas.

In the congested business areas of cities, the more recent buildings are of a good type, but are usually too high for efficient protection by the available water supply under conflagration conditions. The older buildings are of a poor class, ranging from frame to ordinary joint construction. Many have large floor areas that would give an unbroken sweep to fire. Intermingled with the good and bad construction are buildings dilapidated beyond repair, forming a constant menace to adjoining structures. In nearly all buildings the floors are pierced with numerous unprotected openings for stairways, elevators and skylights. The windows of one building are permitted to exactly oppose similar windows in adjacent buildings without any provision to minimize the exposure hazard. To the exterior of many of the buildings, immense metal-covered wooden cornices, useless domes, mansard roofs and other combustible features have been added, entirely destroying the fire protective value of brick and stone walls.

Outside the business centres of cities and towns, there is, invariably, a zone of cheap construction. Municipal boundaries have been extended from time to time, with the result that the poorest classes of buildings have been brought within the limits. These endanger all buildings thereafter erected in proximity to them. This outer zone generally includes the main residential sections, which are, in many instances, closely built-up districts of cheap brick veneer and frame buildings. Construction is extremely defective, owing to the speculative features that enter into the ownership of such property.

Beyond the outer area again are hundreds of suburban real estate

developments, composed entirely of wooden buildings. Without restrictions, every builder has been a law unto himself. In many cases there is congestion through the efforts of real estate men to sell the maximum number of lots per acre. These subdivisions are absolutely devoid of fire-retarding features and have little or no protection from public fire departments. They form a problem in themselves and, at the same time, constitute a menace to the cities which they adjoin. A fire, well started in such a locality, with a strong wind blowing, is exceedingly difficult to control. As a matter of fact, such fires seldom are extinguished until they have burned out, or are blocked by some natural barrier, such as a river, park or other open place. In their sweep they annihilate everything combustible and destroy homes which represent the investment of years of toil and saving by those who can least of all afford the loss. The sad experience of scores of small communities justifies and demands legislation that will operate to control all forms of construction outside of municipal fire districts. This is not only of importance to the particular community itself, but vitally affects the future extension of the city or town to which it stands adjacent.—J.G.S.

Note.—Of the fire loss in Canada (excluding forest fires) during the last 50 years, 36 per cent has been due to conflagrations, but only one fire in 20,000 reaches the proportion of a conflagration.

REVOLUTIONIZE THE FIRE DEPARTMENT

Are we serious in our attempts to combat the fire waste? The records of 1917 hardly prove it. To the most superficial observer it is obvious that we are directing our energies along wrong lines. Despite first-class fire fighting equipment and firemen amongst the most expert in the world, our losses continue unabated. Our most efficient fire brigades are utterly discomfited by the raging conflagrations that, with increasing frequency, destroy buildings, devastate whole communities and wipe out human life. Canadian municipalities spend millions of dollars annually for the maintenance of fire departments and a few paltry dollars in fire prevention. Without deprecating the provision of adequate fire extinguishing facilities the short-sighted policy that neglects preventive measures must be condemned. The fire departments of the country should be revolutionized. For every dollar appropriated by municipalities for fire protection, fifty cents should be used for fire prevention.—J.G.S.

Soldiers crippled in the war are being trained in England to tend electric machines and as assistants in power stations.

Factors in Production

4. Treatment of Grain for Smut

Save Millions for the Country by Removing the Smut Evil

The annual losses from grain smuts in Canada are much greater than is commonly supposed. Various estimates have been made, the smallest of which is serious indeed. We cannot afford it. On one farm in Dundas county, Ontario, 37 per cent of the oat crop was found on careful examination, to be ruined by smut. The loose smut of oats is one of the commonest and most troublesome of grain smuts in this country and in fields which appear to be but slightly affected the losses, if known, would be truly startling. *Oat smut can be prevented by treating the seed with formalin.* The following method is recommended by the Ontario Agricultural College: *Mix one pint of formalin with 40 gallons of water. Place the grain to be treated in a heap on a clean canvas or floor. Sprinkle the formalin solution over the grain, then shovel the grain over into another pile so as to mix it thoroughly, then sprinkle and shovel again. Repeat this until every grain is moistened by the solution; then cover the pile with sack and leave for three or four hours. At the end of this time, shovel the grain out thinly to dry; shovelling it over three or four times will hasten the drying. Forty gallons of the formalin solution is sufficient to sprinkle between thirty and forty bushels of grain.*

Never expose wet grain to a temperature below freezing. If the grain is sown while moist, it will not run as freely as dry grain; for this reason open up the drill somewhat or the stand will be too thin.

—F.C.N.

FARM FIRE PREVENTION

The protection from fire of farm properties is a problem which has seldom been attempted in any practical way, aside from the exceptional use of fireproofing materials. In a small town in Ohio, Hollandsburg, the villagers and the farmers within a radius of five miles have combined forces. They have purchased a motor-truck equipped with chemical extinguishers, ladders, etc., and arrangements have been made for answering fire calls anywhere in the district. If this experiment proves successful, a widespread adoption of the plan should follow.—Industrial Canada.

It was estimated in 1907, after a full enquiry, that the annual average loss caused in Great Britain by each rat was \$1.80, in France \$1.00, and in Denmark \$1.20.

Where is the Fuel for Next Winter

Reliable Information Obtained by the Commission of Conservation Points to a Decline in Production

Fore sight is always more efficient than hindsight, but in handling the coal situation a combination of both is better than either alone. The growing scarcity of fuel during the past few years culminated in a near catastrophe during the present winter. It has surely been demonstrated beyond peradventure that it is very dangerous to try to "muddle through" any longer. The experience of the past has not been lost if that lesson has been thoroughly learned. Indications are not lacking, by any means, that the shortage of coal next winter will be more acute than ever. The output of the Nova Scotia coal mines has declined from 7,263,485 tons in 1917 to 1913 to 5,657,000 tons in 1917 to 22.75 per cent. Owing to the steadily growing scarcity of mine labour and to recent serious mine accidents it is evident that there must be a further marked reduction in 1918. At the same time there has been a large increase in the consumption of coal in the Maritime provinces during those years. In fact, it appears as if the Nova Scotia mines will not be able to do better than to supply their own requirements and those of the Maritime provinces. If this is done little or no coal will be available for Montreal and it is assumed that Nova Scotia coal will be available for Ontario. Fore sight indicates that in the woodpile lies one of the means of preventing panic and disaster next winter.

FIGHTING BASEMENT FIRES

Fires originating in the basements of business buildings constitute one of the most potent causes of fire loss in Canadian cities. It is difficult to believe that the owners of such buildings are entirely ignorant of or fail to appreciate the value of dry sprinkler systems for basements. The fact that the expense for the installation of special water supplies is involved makes the cost reasonable. A dry sprinkler equipment for basements consists of distributing pipes with sprinkler heads as in the ordinary system but with the supply main carried to the outside wall of the building where it ends in an ordinary hose connection. When an outbreak of fire occurs in the basement the nearest sprinkler head is opened by the heat, the firemen attach their hose to the external supply connection and the water is immediately directed upon the seat of the fire. The complete saturation of the contents of the basement is thus avoided, the firemen can effectively operate despite the dense smoke which is common to all basement fires and the loss by both fire and water is largely minimized.—J.G.S.

**Commission of Conservation
CANADA**

SIR CLIFFORD SUTTON, K.C.M.G.

Chairman

JAMES WHITE

Assistant to Chairman and Deputy
Head

This Commission is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and proper conservation, and the publication of timely articles on town-planning and public health.

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

OTTAWA, MARCH, 1918

**ARE FARMERS LACKING
IN BUSINESS VISION ?**

"If I were manager of the 'Cape Cod Cranberry Growers' Association, I would move heaven and earth to get an appropriation of money for the purpose of showing people that cranberry sauce tastes about as good at other times as on Thanksgiving Day, and fits roast chicken about as well as roast turkey.

"Now, while I believe advertising would be a good thing for the cranberry or strawberry growers of Cape Cod, I would not relish the job of trying to extract from them the money it would require to do it. Farmers are pretty 'set' in their ways, and the profits of farming do not look large enough for them to see much of it go for co-operative efforts along lines that do not yield pretty easily seen returns.

"Some years ago, through the efforts of a young lawyer in a certain Kentucky town, the growers of Burley tobacco organized an association, and, by means of it, forced the tobacco trust to pay better prices for tobacco. I think the returns for one year, at least, were something over \$1,000,000 better than the year before. The young lawyer charged the association \$10,000 for his year's work. These days a man who could increase the selling price of a firm's product \$1,000,000 a year for that salary would be classed as a Simon-pure philanthropist, but not so with those Kentucky farmers. To them this young lawyer's salary looked too big and they fired him. He probably shortened his life several years just getting them organized.

—H. H. HANCOCK, in Report of Mass. State Board of Agriculture.

DANGER IN THE GRASS

A patch of ground grown up to grass or weeds may look harmless, but an unextinguished match, cigar or cigarette stub carelessly thrown aside, or children playing with matches in the vacant area may lead to disastrous results. Fire will run very rapidly in this dry material, and surrounding wooden fences or buildings may easily become ignited.

FORESTS AS A FACTOR IN WAR

Victory is with the army whose country has the greatest iron mines and smelters, the largest areas of waving grain and an abundance of wood. Of all the products of the soil upon which the very life of a nation depends in times of war, wood is the only one that cannot be rapidly increased under necessity and by the employment of adequate labour. Therefore, provision for adequate national defence necessitates the maintenance of vast reserves of timber throughout the nation, reserves from which billions of feet can be drawn in a single year if necessary to meet the needs of the army and navy.

A sane and conservative development of forest resources to meet the needs of the nation in times of peace necessitates a constantly increasing intensity of management of all absolute forest land and the building up and maintenance of an enormous forest capital. Please remember this forest capital can

be drawn upon in times of war and may determine the fate of the nation.

For generations, England has obtained most of the wood used in her buildings and industry from beyond the sea. The stress of war found her with a meagre forest capital, and the sons of England and Canada are to-day felling the remnant of the forests of that proud country that the empire may live. When the sombre clouds of war are lifted from Europe's battlefields and peace again rules over the earth, England's lesson, learned in this bitter strife, will be taken to heart by her people and forests will clothe her idle lands. A forest capital, far beyond that of former days, will not only add to her economic development in times of peace, but be developed and maintained to better insure her against vital needs in times of possible future strife.—Prof. J. W. Toumey.

Reduce Waste in Lobsters

(Continued from page 9)

designed for handling all the lobster catch within the limits described. The station should serve the following important purposes: (a) receive all consignments for Boston; (b) impound all egg-bearing female lobsters as well as the immature specimens, thus protecting them till they reach the legal size for export. The Government policy in the past has been to preserve in this manner the "breeders." The method could be extended to the shorts, to be kept in a separate compartment of the pound.

5. Adjoining the pound, there should be a lobster-hatchery, so that the collecting of eggs might all be done at one place, thus saving time and expense, besides enabling the management to deposit the eggs in the jars immediately on their removal from the mother-lobster. This is an advantage which no other lobster hatchery in the Maritime Provinces can show, and it should not be underestimated.

6. The takes of lobsters on the designated section of coast (or a more limited one, if more convenient) to be collected by gasoline well-snacks, boats of about 20 tons each, the well having a carrying capacity for 14,000 lobsters. These craft would receive the lobsters uncracked and just from the floating cars where they were deposited on being caught; and by this means of conveyance, the lobsters, big and small, whether intended for export, breeding or impounding for growth, could be brought to the central receiving station from the section boundaries, even, without being out of the water half an hour. This would completely eliminate the usual

high loss from lobsters dying in transit.

7. There should be direct steam connection between the said receiving station and Boston, the customary port of consignment for all shipments through Yarmouth (and formerly by the Plant Line from Halifax, all forwarding now focussed at Yarmouth), by a boat of sufficient size, specially planned for carrying fish stuffs, and equipped with refrigeration to keep a suitable even temperature in the cold-storage space both for live lobsters (crated), and all other mercantile fish put up fresh. The lots arriving in Boston, say fifteen hours in transit, could be put on the market in as good condition as when gathered from the floating cars, and thus effect a saving of \$200,000 annually on goods that go to waste.

FUTURE FOR WATER-POWER

Many authorities believe that the use of cheap hydro-electric power in making iron will eventually bring about a commercial revolution in the leading nations, and that all industries which consume large amounts of mechanical energy will be forced to emigrate to countries where water-power is abundant. What a future there is for Canada when this comes about!

The establishment at Shawinigan Falls of an electrolytic process for recovering metallic magnesium from magnesite has stimulated the production of this metal. Magnesium is used in connection with the war for the manufacture of star shells and flares and as an alloy with aluminum for the manufacture of aeroplane parts.

**Saving Ammonia By
Storing Natural Ice**

Scarcity of Ammonia May Cause Shortage in Artificial Ice Supply

Ammonia, which is used in the manufacture of ice, will likely be scarce during this coming summer. The United States Food Administration reported recently that 'the Government cannot give assurance that there will be a sufficient supply of ammonia, and the manufacture of the customary amount of artificial ice will be possible. There is danger of serious shortage of ammonia and steps are being taken to have as large as possible a harvest of natural ice to meet any possible shortage of artificial ice.'

Dealers in artificial ice, as well as operators of packing houses, dairies and others who use it in Canada, should take all possible precautions against such a shortage, by storing natural ice. It would be a great misfortune if the food supply should be decreased during the hot months of summer, owing to a lack of proper refrigeration.

**Saskatchewan to be
Fire-proof Province**

"An ounce of prevention is worth a pound of cure." The old proverb is as applicable to the problem of fire waste as it is to scarlet fever, or small pox, or any other disease. Carelessness with fire long ago assumed the proportions of an epidemic in Canada and there are no signs that it is being controlled. In spite of the world shortage of food and the fact that the Empire is fighting for its very life, Canada permits to be burned, millions of dollars worth of food and other vital requirements each year. The problem of greater production is of first importance, but not less important is that of conserving products already in existence. By far, the larger percentage of fires occurring in Canada are the direct result of carelessness, which, in time of war at least, should be punished as a criminal offence.

In an effort to stamp out the fire evil in Saskatchewan, the fire commissioner, Mr. Arthur E. Fisher, is carrying out a vigorous campaign to 'make Saskatchewan fireproof.' By means of bulletins, pictures in movie theatres and with the assistance of the press, Mr. Fisher is pointing out the way to ban the fire fiend from that province. Such work, especially in the rural sections of Canada's greatest grain-growing province, will doubtless be the means of saving large quantities of food products from the all too common fate of destruction by fire. The effort is a commendable one and should receive hearty support from every organization and from every person who is able to lend a hand.—A.D.

Conservation—use without abuse.

RURAL COMMUNITIES CAN CONSERVE FUEL

All the anthracite coal used in eastern Canada, and much of the bituminous coal, is from mines situated in the United States. Munitions plants alone have increased the demand upon United States coal supplies by 100 million tons a year. Due to labour and transportation shortage, the output could be increased by only 42,000,000 tons. Conservation and the use of substitutes must make up the balance.

Present indications are that the coal shortage will be more serious next winter than this.

The extensive use of wood fuel, particularly in rural communities, is being urged, both in the United States and Canada, to help relieve the present situation and to avert possible disaster next winter.

Wood for next winter's use should be cut now, to allow time for seasoning.

Farmers and rural communities generally can render a distinct patriotic service by reverting to the use of wood fuel, thus, at the same time, helping to relieve the shortage of coal and of freight cars. Substitute team haul or water transportation for rail haul, so far as practicable.

It may become necessary to restrict even more closely than has yet been done, the allotment and distribution of coal in sections where wood fuel is available. Prudence demands provision against this contingency.

A large production of wood fuel is the best safeguard against extortionate prices.

Municipal wood yards will, in many cases, help solve the problem. The large operations thus involved will justify the use of power saws, and power splitters, and perhaps also of motor trucks for hauling. The labour shortage will in some cases make it desirable to transport the wood to the municipal yards in log lengths, there to be cut up and split by the use of machinery.

The farmers wood-lots should become a large factor in the wood fuel situation. It is, however, of the utmost importance that the wood-lot be not destroyed by cutting clean. Remove dead, diseased, defective and over-mature trees, leaving a sufficient stand of the thrifty stock. Protect the young growth. Retain the forest cover on all lands not suitable, or not needed for cultivation.—C.L.

NEED OF BETTER URBAN AND RURAL DEVELOPMENT

The importance of promoting more scientific methods of rural as well as of urban development is engaging the attention of prominent groups of citizens in all legitimate countries. It is generally agreed that recovery after the war in each nation will be the more rapid in proportion as more effi-

cient methods are applied to secure the increase of production. Canada has never failed to apply the doctrine of Adam Smith to incite the natural efforts of the producers by means of promoting a condition of freedom amongst its citizens and encouraging the settlement of land by the real users of the land. Unfortunately, however, land speculation has been so little controlled and the planning and laying out the land for economic use has been so much neglected, that production has been hampered and bad social conditions have grown up. Incitement to natural effort by means of mere ownership of the land has proved inadequate because of these deficiencies—and the quality of the natural effort has been impaired as a result of overcrowding and bad sanitation in the cities and isolation and poverty in the country.

—T.A.

BOOKS ON GARDENING

Accurate Knowledge Means
Greater Production

*Home Vegetable Garden and a Patriotic Gardening Competition,** by W. T. Macoun. Pamphlet No. 13, Central Experimental Farm. Deals with situation of the garden, preparation of the soil, planning the garden, and gives list of suitable varieties of vegetables.

Farm Garden Bulletin No. 5, Manitoba Agricultural College. Discusses site, location, arrangement, soil cultivation, seeds, thinning, transplanting, storing, and gives notes on the various garden crops and recommended varieties. Apply Manitoba Agricultural College, Winnipeg.

Production in the School Garden. Rural Education Monthly, published by Dept. of Education, Regina.

*Vacant Lot Gardening,** Pamphlet No. 6, Dept. of Agriculture, Ottawa.

Gardening for Schools. Ontario Dept. of Agriculture. Bulletin No. 152. Apply Dept. of Agriculture, Toronto.

Improvement of School Grounds, by the Ontario Dept. of Education, Toronto, Ont. Profusely illustrated. Discusses flower borders, perennials, vines, nursery stock shrubs, making of lawns, and gives plans for laying out school grounds.

The Gardenette or City Backyard Gardening, by Benjamin F. Albaugh. Discusses vegetable gardening and flower gardening, dealing particularly with city small yard conditions. Price \$1.25. Published by Stewart and Kidd Co., Cincinnati, Ohio.

*May be obtained from Publications Branch, Dept. of Agriculture, Ottawa.

POULTRY LITERATURE

The "Keep Chickens" Convert
Should Be Well Informed

Farm Poultry, by M. C. Herner. Discusses housing, breeds, feeding and feeding, egg production, judging of poultry, egg circles, egg preservatives, diseases, and general care and management of both fancy and utility breeds. Apply Dept. of Agriculture, Winnipeg.

Bulletin No. 189, Ontario Dept. of Agriculture, Toronto, deals with poultry, houses, egg production, flocks, incubation, rearing chickens, fattening, care and management of fancy and utility breeds. Apply Dept. of Agriculture, Toronto.

*Bulletins 7, 8, and 9,** Dept. of Agriculture, Ottawa, deal with poultry farming, farmers' poultry houses and diseases and parasites of poultry, respectively.

Preparing Poultry Produce for Market, by F. C. Elford. Bulletin No. 88*, Dept. of Agriculture, Ottawa.

Poultry Houses by F. C. Elford. Bulletin* No. 87, Dept. of Agriculture, Ottawa.

Poultrycraft, by John H. Robinson 260 pp. What to do and how to do it. Fully illustrated. Published by Farm Poultry Publishing Co., Boston, Mass. May be obtained from most dealers in agricultural text books, or poultry supplies.

Successful Poultry Raising, by A. W. Foley, Poultry Superintendent, Dept. of Agriculture, Alberta. Apply Dept. of Agriculture, Edmonton, Alberta.

How to Keep Hens for Profit, by C. S. Valentine. Illustrated, 290 pp. clo. cover. Published by the Macmillan Co., Toronto. Handled by book stores and by dealers in poultry supplies.

*May be obtained from Publications Branch, Dept. of Agriculture, Ottawa.

Preventing Loss of Food by Lightning

In eastern Canada, April and May are the worst months for fires resulting from lightning. In Ontario, lightning fires during April and May, 1917, numbered 172, entailing a loss of \$158,921, little over half of which was covered by insurance.

Many lightning-rod systems have been installed during the past few years, and these are gradually showing results. When properly installed, they give almost absolute protection, so much so that many of the farmers' mutual insurance companies report no losses by lightning on rodded buildings, while others will not insure a risk that is not rodded. Nearly all insurance companies charge a lower premium on insurance on buildings equipped with lightning-rods.

The rapid increase in the use of wire fences constitutes a serious lightning menace to live stock. Many hundreds are killed by getting close to wire fences during a thunder storm. When lightning strikes the wire fences, if there are no ground wires, or if iron fence posts are not used, the animal furnishes the path of least resistance between the fence and the ground. Wire fences, should have a ground wire sunk to moist earth, every few rods, to carry off the current.

Lightning-rod installations should be inspected before April, in case any break in the continuity of the cables has been caused by the severe winter weather; the grounding of the cable should also be assured.

With the tremendous world shortage of food, and the great demands being made upon Canada to increase the supply, it is of the utmost importance that the great destruction of foodstuffs caused by lightning striking wire fences and destroying barns and their contents should be overcome.

HAVE YOU \$8.60?

¶ By investing it with the Government now, you will get a war savings certificate entitling you to ten dollars at the end of three years.

¶ Certificates are also obtainable in denominations of \$25, \$50 and \$100, for \$21.50, \$43 and \$86, respectively. Individual purchases limited to \$1,500.

¶ All certificates purchased will be registered at Ottawa in your own name, and if lost or stolen are valueless to anyone else. Further, if you should need your money, you can get it back at any time.

CANADA IS YOUR SECURITY.

ON SALE AT ANY BANK OR MONEY-ORDER POST OFFICE