

# Conservation

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## Bird Protection in Canada

Splendid Educational Work of  
The Canadian Society for  
the Protection of Birds

In past years, one of the greatest obstacles encountered in the effort to secure proper protection for the wild life of Canada has been the lack of strong, organized endeavour, independent of official connection. The work of the Canadian Society for the Protection of Birds, incorporated in 1915, promises, in large measure, to remedy this difficulty. The objects of this society, stated generally, are as follows:—

(a) To instruct the public regarding the importance of protecting bird life in the interests of the country by holding meetings, lectures and exhibitions.

(b) To publish and distribute literature relating to birds, and cooperate with the Federal and Provincial Governments and regularly organized natural history societies throughout Canada in this respect; also to acquire and maintain a library.

(c) To secure legislation in behalf of bird protection in addition to existing legislation and to assist in enforcing the same.

(d) To forward the study of migration and all other matters relating to the nature of birds.

From the foregoing it will be seen that the work of this society is mainly educational. It has already organized and undertaken a thorough-going campaign for the promotion of nature study in Canadian schools. The concentration of effort in this direction will, it is hoped, inculcate in the minds of the rising generation a deeper and fuller appreciation of the values, both material and sentimental, which attach to bird life than has characterized the Canadian people heretofore.

Forest planting has been carried on by the Japanese for probably a much greater period than 400 years, and it is this work that gives Japan credit for having practised forestry before any other nation. As a matter of fact, however, the forests of Japan have been under real forest management less than thirty years.—Ex.

## Drinking Fountains

A Necessity for Horses and Dogs  
During Warm Months

A small and yet an important matter, which has been overlooked in many of our cities and towns, is the provision of drinking fountains. Fountains are especially necessary for horses, dogs and birds. The general public can usually find a place to quench thirst, but not so the dumb animals. The supplying and placing of fountains is not an expensive matter, and should be undertaken by the community. In municipalities which place a tax upon horses and dogs, the supplying of drinking fountains would in a small way justify this tax.

Drinking fountains would also encourage birds to remain in the cities. Much money has been expended by municipalities in fighting insect destroyers of shade trees, when not the slightest effort has been made to protect the birds—the natural enemy of insects.

## PRACTICAL RESULTS OF TOWN PLANNING

In giving his experience as a resident of a town-planned garden suburb, Mr. George Phelps, now of Toronto, at the preliminary conference to form a Civic Improvement League, said:—I had the privilege of living in a garden suburb a few years ago, and from having lived in it and taking part in the life there, that very fact has fired me with an enthusiasm for town-planning and housing I cannot get rid of. I know the project from the inside, and I also know that the place where I lived was one of the most beautiful places anywhere—the Hampstead garden suburb in England. Anything I can do to forward a movement to improve conditions in the way that the town-planning movement has been carried on there I will do to my very utmost ability, simply because I know, from living in it and being connected with the movement, what a tremendous benefit it is, not only in beautifying the town but in uplifting the people who live there.

## Slaughter of Shade Trees

Glaring Cases of Neglect in  
Some of Our Cities—Trained  
Arborists Required

To sustain life at all under urban conditions, trees do as much as can reasonably be expected. In some cities so little value is placed upon shade trees that they are not only given no care whatever, but are exposed to all the ill-treatment which the malicious and thoughtless can bestow.

A particularly glaring instance of neglect may be seen in Canada's metropolis. Montreal has long been noted for its handsome old trees. They have been an attraction for visitors, and one of the beautiful features of that city. Without the trees, Montreal's residential streets would be bare, indeed, and yet along these thoroughfares may be noted many aggravated cases of abuse of the trees. A correspondent calls attention to this condition as follows:

"Referring to an article which appeared in your March issue respecting the treatment of shade trees in cities, may I—with the hope that the matter may thus be conveyed to proper authority—draw your attention to the beautiful trees of Upper Mountain street, Montreal, and others in the vicinity of the Ritz-Carlton Hotel on Sherbrooke street.

"Some of these trees are certainly over 100 years old and tower high above the surrounding houses. Very few streets indeed in any city can boast of such a fine avenue. Yet, nobody seems to care about them, and visitors passing opposite the Hampton Court Apartments, between St. Catherine and Sherbrooke streets, are shocked to see the milkman's horses, as well as those of the baker, the scavenger, etc., biting and eating away the bark of these giants until several square feet of the trunks are now entirely denuded, and therefore exposed to rot and decay.

"Further up beyond Sherbrooke, a great many fine trees have been entirely neglected. Broken limbs are to be seen at every step, caused by glazed-frost at different

times; no tree-surgeon ever passed there. Again on Sherbrooke street, fine big trees have seen their roots cut and trimmed to be tightly enclosed in concrete sidewalks and asphalted streets.

"It is high time that tree-surgeons should be appointed by the city of Montreal to attend to such trees which are one of the finest ornaments of that great city."

Canadian cities have been slow to appreciate the value of shade trees, but it is a hopeful sign that some are now realizing what shade trees mean to their streets and are taking measures for their protection. With this growing interest has come the appointment of specialists in the care of trees under civic conditions. These trained arborists look to the saving of the trees, their proper planting and their protection from the ravages of insects. Tree butchers in the employ of public service corporations are guarded against, and conditions are made such as to preserve and strengthen tree life.

The great service of trees in shading and beautifying our streets and in providing a refuge for the wild birds entitles them to every care and protection, and it is hoped that our Canadian cities which have not done so, our metropolis especially, will appoint thoroughly efficient arborists to supervise their valuable shade trees.

## POTASH AND FELDSPAR

Dr. Frank D. Adams, speaking at the recent annual meeting of the Commission of Conservation, said: "A question of great importance is whether we cannot find deposits of potash in Canada. It is practically impossible for us to find deposits of potash similar to the German ones, but, locked up in the rocks of the northern Laurentian country, where we have these great granites, we possess enormous deposits of silicate of potash and feldspar. These are now awaiting the arrival of some one who will invent a method to get supplies from the old granite rocks. Whenever that can be done we will have in the northern country an enormous and inexhaustible supply of potash."

## Canada's Insect Destroyers

The Woodpecker and Chickadee are Especially Active in Trees and Foliage

Canada's bird visitors are rapidly returning for the warmer season, and we may again look forward to their assistance in the destruction of caterpillars and insects, so destructive to our trees.

One of the most important of these birds is the woodpecker. It feeds on larvae and small insects, which are found in crevices

both in the city and country, and it is surely not too much to ask that people give them the necessary protection to allow them to continue their invaluable work.

The illustrations herewith are used through the courtesy of the American Forestry Association, of Washington, D. C.

### Electric Light on the Farm

Convenience and Attractiveness Assists in Keeping Young People on the Farm

The Hydro-Electric Power Commission of Ontario, in its Seventh Annual Report, gives some interesting data on the advantages and cost of installation of electric lighting in farm homes and out-buildings. The report says: "The farmers in the districts that are being served greatly appreciate the improved condition on their places by reason of having electric light in the house, barn, drive shed, and yard. With previous forms of lighting, the dull appearance of the place from the road and from the yard had a depressing effect. The attractive contrast that is the result of installing electric light will probably be beneficial in keeping the young people on the farm. The decrease of fire risk on the premises due to the absence of coal oil lanterns and lamps is another feature that is usually considered by the farmer in arriving at a conclusion regarding the installation of electric service on his premises.

"Installations in barns are now being made in conduit, as this method is found necessary for the protection of the wires and fittings. The cost of installation varies according to conditions in the different districts. The open wiring varies from \$1.25 to \$1.75 per outlet and the concealed wiring from \$1.50 to \$2.25 per outlet. Conduit installations in the open, that is, in barns and farm buildings, vary from \$3.25 to \$4.50 per outlet. The outlet in each case is the opening for either fixture or switch; it does not include (except where drop cord is used) the fixture, but does include the switches."

### Influence of War on Water Powers

Many New Developments to Supply Abnormal Demand for Power

One of the results of the European conflict upon hydro-electric undertakings is the proposed development by the United States Government of an important power site on the Tennessee river for the manufacture of power. It is proposed to install 125,000 mini-

num horse-power to meet all probable ordnance demands for fixation of nitrogen from the air, and it is stated that all such demands may be safeguarded by providing for an amount of power up to 300,000 h.p. If constructed, the project will be directed by army engineers, and will cost about \$20,000,000.

As a result of the foreign demand for electric-furnace products, the Pennsylvania Water & Power Co. is utilizing its off-peak power for these manufactures, an example that may be profitably followed by some of our Canadian hydro-electric plants. This company had long been considering ways and means of bettering its load factor and finally determined that the development of electric-furnace usage was the natural means of producing the desired results. It was apparent that, to reap the fullest benefit, these electric furnaces should be operated by the power company, to ensure the power being used in the furnaces as, and when, the power company saw fit. Various ferro-alloys and other materials are made most successfully in the electric furnace. After carefully considering which would be the most profitable to meet its requirements, the Pennsylvania Water and Power Co. decided upon the manufacture of ferro-silicon and have recently erected and put in operation a 10,000 h.p. electric furnace having a capacity of 30 tons per day or 10,000 tons per year.—L.G.D.

### Talc Industry

Many Uses for this Widely Distributed Mineral

Talc or soapstone is now being shipped to Great Britain from South Africa, a development in the industry which has taken place since the beginning of the war. Talcose minerals have been found at many places in the Dominion, but with the exception of the mines near Madoc, Ont., have not been mined to any great extent. In Frontenac, Hastings, Leeds, and other counties in eastern Ontario, a number of such deposits have been discovered; in Bromes county, in the Eastern Township in Quebec and in the Maritime Provinces deposits of potential value are known.

The United States is the largest producer and the largest consumer of talc in the world; the production in 1913 was valued at over \$1,900,000. The United States imports some of the finer grades from France and Italy, at prices varying from \$15 to \$25 per ton.

Much of the talc is ground exceedingly fine and is used chiefly as a, so-called, "filler" in the manufacture of paper. Next to the manufacture of paper, the rubber industry utilizes most talc. It is also used as an adulterant in

cheap grades of soap; for "sizing" cotton cloth; for insulators; manufacture of paints, toilet powder, etc.

As the demand for talc is increasing, it is hoped that at least a portion of this demand will be met by the greater production of Canadian talc.—W.J.D.

### Maple for Cross-Ties

Its Use, after Treatment, Found Satisfactory

Ten years ago maple was practically unknown as a railway cross-tie, being included in the list of woods that decayed too quickly for this purpose. Treating with creosote renders it immune to decay and, it, now, figures quite largely under the head of "miscellaneous hardwoods," while in some regions it constitutes a considerable percentage of the ties treated. As clear hard maple is too valuable for flooring and other purposes to be used for ties, the tops and smaller trees are utilized for treatment. Maple takes creosote treatment fairly well, being, in this respect, very similar to beech and red oak. It does not treat as uniformly as some of the other woods, but absorbs creosote sufficiently well to become fully protected against decay. As with most other woods which do not take full penetration, it is best to bore and adze maple ties before treatment.—American Forestry.



Cut No. 123

**AFTER THE BORES**—Woodpecker with a billful of wood, boring larvae. They are great destroyers of Codling Moth and other insect pests.

of the bark; securing them with its protrusible tongue. This tongue is sharp, hard at the end, has barbs directed backward, and can be extended several inches. The red-headed woodpecker, besides digging insects out of bark, seizes them on the wing. In the examination of over 700 stomachs of woodpeckers, animal food, mostly insects, was found to constitute 76 per cent of the diet, and vegetable matter 24 per cent. The animal food consists largely of beetles and caterpillars, and includes many harmful species.

The chickadee is another of our most active insect destroyers. It is especially active in the vicinity of any timber or wood chopping. The birds will become very familiar, and will readily make friends. Not being equipped, as the woodpecker is, with a long bill, they take advantage of the cutting of cordwood, etc., to secure the grubs found under the bark or exposed in the cutting. As a rule, however, they feed upon the insects of the orchard, the bush or shrubbery.

The woodpecker and the chickadee are only two of the many birds which are of great service



Cut No. 124

**AN INSECT DESTROYER**—A Chickadee visiting an old Tent-Caterpillar's nest for eggs deposited by the Moths before dying.

When raking up the garden and lawn in the spring many bones will be found, carried there by the dogs and buried in the snow. These should be gathered up and buried around the roots of trees and bushes. They are rich in potash and make an excellent fertilizer.

## Commission of Conservation

CANADA

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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.

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OTTAWA, APRIL, 1916

## Save Your Waste Paper

Heavy Drain Upon Canada's  
Forests to Replace Paper  
Material Lost through  
Waste

Waste in any form is extravagance, but when the material represented by waste constitutes a severe drain upon the natural resources of our country, it is all the more to be deprecated.

To-day the United States is suffering from a serious shortage of paper-making material, including old paper. In an endeavour to overcome this shortage, they are drawing heavily upon Canadian supplies, and one large Canadian manufacturer advises that this increased demand will result in an early shortage in Canada. This is especially true of waste paper, such as old newspapers, magazines, wrapping paper, etc. This stock is used in the manufacture of the cheaper grades of paper, building paper, tarred felt, patent roofings, millboard, and filling for cardboard, etc. There are at present three mills in Canada using reclaimed paper exclusively in their manufacturing.

Canada is wasting fully 500,000 pounds of paper weekly without any reasonable excuse. It is estimated that a ton of wood-pulp requires eight trees, averaging nine inches at the butt. To replace this waste of paper stock, therefore, necessitates the cutting of approximately 2,000 trees weekly, or over 100,000 annually in Canada's forests.

As an illustration of what may be accomplished when waste paper is saved and systematically collected, the results secured by the

Daughters of the Empire at Ottawa may be cited. In September last this organization undertook to collect waste paper, the proceeds from its sale to be used for patriotic purposes. Since this collection was instituted, approximately 15 tons have been secured monthly, composed almost entirely of old newspapers, which had been previously burned or otherwise destroyed. This material is deposited by the public in boxes distributed throughout the city, and later collected and baled.

The satisfactory results indicate that there is room for a considerable enlargement of this project. It is work that might be undertaken by municipal charities for the purpose of securing funds, or by other interests with a popular object in view. True, there are certain dealers carrying on this industry at present, but they have failed to secure the support of the public, which is necessary to the plan of saving the paper from the homes and delivering it to designated places.

When every effort is being made to conserve our forests, to protect them from the ravages of fire and wasteful lumbering methods, the public should give more attention to saving their old papers and to similar economies which may reduce the drain upon our forests and other resources.

### MOSQUITOES ARE DISEASE CARRIERS

To exterminate them, clean up, and thus destroy their breeding places.

Drain off stagnant water, or where drainage is not possible, spray with coal oil. Let the sunlight into damp places.

Cover rain-water barrels with a fine netting.

### LUMBERING INDUSTRY OF THE PRAIRIE PROVINCES

Although the prairie provinces are usually associated with but one pursuit, namely, farming, the forested portions give rise to a lumbering industry of importance, and, while inferior in development to those of British Columbia or the eastern provinces, are of great value to the immigrant settlement in the west. In 1913 some 188 mills in Manitoba, Saskatchewan and Alberta sawed approximately 250 million feet of lumber, valued at the point of manufacture at over \$4,200,000. Of this quantity, Saskatchewan forests produced approximately two-thirds, Alberta one-fifth, and Manitoba the balance.

The prairie market consumes about 1,434 million feet of lumber annually. Over one-half of this comes from British Columbia (in part from the Railway Belt portion), and the remainder is supplied from north-western Ontario, the United States, and the home forests.—*Forest Protection in Canada, 1913-1914.*

## Lightning Rod Protection

Insurance Companies Appreciate Its Advantages to  
Rural Risks

An insurance authority, in speaking of the fire losses of April last, said: "Lightning has caused considerable loss during the month, especially throughout central and eastern Ontario and western Quebec. On the 25th and 26th of the month, 34 barns and nine dwellings were damaged in Ontario, and on the 27th, 18 buildings were struck in the province of Quebec. If enquiry were made it would doubtless be found that none of these buildings was rodded. When it is remembered that lightning loss upon farm property in Ontario and Quebec costs the insurance companies well over \$400,000 a year and that losses not covered by insurance probably amount to an equal or even greater sum, it seems strange that farmers do not more generally adopt so simple a means of protection as the lightning rod."

Much has been said and written of recent years as to the value of lightning rods as a means of fire protection. This question has especially interested insurance companies, who have to provide for the primary loss. When, however, insurance officials make such statements as that quoted above, it is apparent that only a small part of the ultimate loss is borne by them. Farmers, especially in eastern Canada, are paying this loss. True, the insurance companies collect the money from a large number and pay it over to those who suffer from lightning, but the farmers pay the price, as well as the cost of making the collection. The heavy loss by lightning must be provided for through an increased premium paid by farmers for their insurance. It is therefore advisable for those who must pay this heavy charge to take precautions to protect property.

The data collected by United States Farmers' mutual fire insurance companies demonstrated that lightning is one of the principal causes of fire in rural districts.

Canadian farmers' mutual insurance companies are also taking a great interest in lightning losses, and almost unanimously make a reduction in premium on protected risks.

In European countries, particularly in France and Germany, all public buildings are protected; school authorities insist upon lightning rods upon all school buildings.

With a very heavy fire loss in Canada, at a time when such wastes should be reduced to the minimum, some action should be taken to protect rural property against this destructive element.

## Vacant Lot Gardens

An Excellent Means of Reducing the Cost of Living and  
Securing Vegetables

Organization work for the promotion of vacant lot gardening should be taken up at once. Good work was done in many places last season and this year should show a large increase. Many months may be fed by this means; fresh vegetables, the most healthful food available, may be obtained with very little effort. In every city and town many vacant lots can be made available for gardens, requiring only the initiative of public-spirited citizens to start the movement.

Among the successes of last season, the results from vacant lot gardens in Ottawa may be cited. The enterprise consisted of 128 plots, fifty by one hundred feet, for which no fewer than 180 applications were received. No charge was made for the plots. The gardeners supplied their own tools and seeds, and, to minimize failures, were given until May 25th to begin work. If no work was done on a plot by that date, it was given to some one else. In this way several plots changed hands. June 15th was set as a second time limit when at least two-thirds of the plot must have been planted. Again a number of plots changed hands, as several gardeners failed to do sufficient work or showed a lack of interest. Of the one hundred and twenty-eight, only twenty were weeded out for failure to do justice to their plots.

The crops secured from some of these plots were as follows:—

Plot No. 13—12 bags of potatoes; a liberal supply of corn, pumpkins and squash. One squash measured 80 inches around and weighed 125 lbs.

Plot No. 31—10 bags of potatoes; 300 ears of corn; 1,200 cucumbers and 300 tomatoes.

Plot No. 20—9 bags of potatoes; a large crop of tomatoes, cucumbers and beets.

Plot No. 110—Potatoes, 6 bushels; carrots, 1 bushel; turnips, 1 bushel; beets, 2 bushels; cabbage, 36 heads; green beans, 16 gallons; peas, shelled, 10 quarts; onions, 2 gallons, corn, 13 dozen cobs; tomatoes, 314 lb.; ripe; 2 bushels, green.

Plot No. 121—For a family of seven, a constant supply of green beans, July 15th to October 1st, potatoes, 6 bags and sufficient carrots, turnips, parsnips, onions and cabbage for the summer, fall and winter supply.

The cost of living continues to soar in Canada, entailing an added hardship on the head of a family in supplying food. The cultivation of the vacant lot garden offers healthful and pleasant recreation and an effective means of augmenting the family income.

## Prepare for Clean Up Day

### Early Organization Required to Obtain Results—Get the Public Interested

In many Canadian cities "Clean-up Day" has become an established custom, and, without any special effort on the part of those interested, the work is efficiently carried out. In many others, however, practically nothing has been, or is being, done. Due to the inefficiency of those responsible, or to those insidious causes, patronage and indifference, numerous municipalities are in a sadly neglected state, as evidenced on every hand.

Canadian conditions make a clean-up in spring a necessity. Owing to the cold weather, and the abundance of snow, sanitary conditions are not at their best. Lanes and alleyways become littered with garbage, ashes and waste-paper; backyards, cellars and attics harbour refuse which is both useless and dangerous. With the melting of the snow this accumulation is exposed to view, the thawing of garbage permits of speedy decay, and a very dangerous condition is at once established.

No. and Street .....

#### ITEMS FOR CLEAN-UP AT- TENTION

Front Yard x Ashes x Paper x  
Side Yard x Ashes x Paper x  
Back Yard x Ashes x Paper x  
Sawdust x Wood x Rubbish x  
Old Barrels, Boxes, Etc.,  
Vacant Lot to be rid of  
Other Conditions

#### ITEMS FOR PUBLIC HEALTH ATTENTION

Garbage  
Outside Vaults  
Stable Nuisance  
Drainage  
Other Conditions

The success of a "Clean-up Day" depends entirely upon the citizens. Leaders are necessary to initiate the movement, to get the proper officials interested, and to awaken a public interest. In many places the Boy Scouts have been called upon to assist in this work, inspecting premises in outlying and residential sections. For this purpose a small card is supplied as shown here. These re-

## Arbour Day

The educational authorities in nearly every province of Canada proclaim an Arbour Day, for which special exercises are prescribed. Interesting programmes, including tree-planting, are carried out.

The planting of trees and shrubs and their protection and care is a feature of nature study well worth the attention of all school principals and teachers. Too many of our schools have a neglected and deserted appearance, an index of the character of those respon-



Cut No. 125

A good school, but bare and uninviting. Shows lack of interest in surroundings.



Cut No. 126

A home-like school, one with an air of welcome and which the pupil will always remember with pleasure. The flowers and foliage make the difference.

sible for them. Nothing will overcome this drawback more easily or with less expense than the improvement of the school grounds. Trees, flower beds, borders and climbing vines add to the school a home-like and attractive appearance, causing it and its teachers to be remembered with pleasure by the pupils in after years.

It is not too early to prepare for this year's observance of Arbour Day in our schools. Educational authorities, school principals and teachers should commence at once on a programme, secure the necessary supplies of trees and shrubs, and interest their scholars in the work, so that when the day arrives they will enter with enthusiasm upon the task of beautifying their surroundings.

ports are returned to headquarters and facilitate action to secure improvement.

Municipalities should provide sufficient cartage facilities for removal of the refuse collected, furnish places for its disposal or destruction, and give every encouragement for the voluntary efforts of citizens to make their home towns more cleanly, more healthful and more home-like.

#### STATISTICS OF FIRE LOSSES

At the recent annual meeting of the Commission of Conservation a resolution was passed requesting the various provincial governments to take steps to secure complete reports of all losses from fires occurring within their boundaries, and the extent, if any, to which the property was insured.

## Rate of Seeding for Best Results

### Experience of Illustration Farmers on this Important Question

The question of the amount of seed grain to sow per acre to secure the best results is an important one for the farmer.

In a review of this question and the results secured by the farmers on the twenty-four illustration farms conducted for the Commission of Conservation, Dr. J. W. Robertson, at the last annual meeting of the Commission, said:—

The question of the amount of grain to sow per acre to get best results had not received much attention by the farmers, and many did not consider the condition of the soil when determining the amount. Thirteen state they now know that the amount sown previously was not suitable, and have changed their rate of seeding. Every farmer says that he has found that cleaned and selected seed does not require to be sown as thickly as uncleaned seed, and that soil conditions should determine to a considerable extent the amount per acre to be sown. A number had previously given this point indifferent consideration, but ten stated that they had not thought of it at all previous to the visits of the Commission's instructor.

George R. Barrie, (Galt, Ont.) says: "We have found that the richer the land the smaller the quantity of seed needed, and where the land is poorer a heavier seeding is needed. We formerly seeded it all the same."

Only two of the farmers claimed to have been sowing their clover seed thickly enough to ensure a good catch. Twenty-one had been sowing an average amount of six pounds per acre whereas they now sow ten pounds per acre. Some had sown as little as three or four pounds, but are now convinced that ten pounds is better and are sowing it. Three farmers had previously grown their own seed while now twelve are regularly doing so.

George R. Barrie, (Galt, Ont.) again says: "The high price of clover seed has something to do with our sowing a small amount. Since growing our own seed we do not mind sowing it more heavily and find that the extra seed worth more than pays for itself."

Another farmer, who had not previously grown his own seed, states that in 1914 he produced 500 lbs. of alsike seed and 100 lbs. of red clover, while in 1915, he grew over 1,000 pounds of red clover seed. The farmer doing illustration work for the Commission in Lanark county, Ont., in 1914, grew 1,200 pounds of red clover seed; he had never grown a pound of his own seed previous to commencing work with the Commission.