

Utilization of Fish Waste

Practical Methods of Converting Offal to Economic Use Required

The profitable utilization of the immense quantities of waste material which characterize practically every branch of the fisheries presents one of the chief problems in securing efficient conduct of the Canadian fishing industry. As a result of investigations on the Pacific coast, it has been estimated that the sheer waste of the fisheries of Alaska amounts to 70,000 tons per annum and of those of British Columbia at from 15,000 to 20,000 tons. The proportion of waste material in the lobster canning industry is extremely high. Mr. R. H. Williams of Halifax makes the startling assertion that of 32,000,000 pounds of lobsters required for an average Canadian season's pack of 160,000 cases only 6,500,000 pounds are utilized, 25,500,000 pounds being absolutely wasted. In other words, the lobster industry as now conducted uses only 20 per cent of the raw material. Even under such conditions, the annual value of this industry to the Dominion is normally around \$4,000,000.

From the foregoing figures it will readily be appreciated that few industrial improvements could render more substantial aid to the fishing interests than the perfection of practical methods of converting the offal to economic use. Experiments now being conducted by Mr. J. B. Fielding for the Commission of Conservation will prove of material service in solving this problem.

Plant for Using Grain Screenings

The Fort William Grain Co., Fort William, Ont., recently purchased a local factory building which is to be converted into a plant for the production of grain-screenings products. Heretofore there has been practically no market in Canada for the residue from the cleaning machinery of the grain elevators. The entire output of the elevators of this district has been purchased by American firms and shipped to Duluth and Minneapolis, with some shipments to Buffalo and New York city. This material is used as the principal element in certain kinds of cattle food. These screenings are usually sold at a stated price per ton without regard to grade, prices being 1 c. a bushel at the elevator shipping point. They consist largely of wheat screenings, although mixtures of oats, rye, and other grains are noticed. Grades run from mere elevator grain dust, valued at \$6 per ton, to high-grade "scalpings" (practically no-grade grain), val-

ued as high as \$40 per ton. Prices for all grades thus far this season have averaged about \$8.50 per ton, with a tendency toward much lower prices during the coming autumn months.—U. S. Consular Report.

IS THE PLANT READY?

"A stitch in time saves nine" is never more true than when spring is at hand and finds the farmer unprepared. Much time is often lost because his machinery is not in condition for immediate use. Parts are missing; bolts and screws have been removed from one machine to repair another, and, from lack of paint to protect it, the woodwork has decayed and probably become broken.

During winter, all implements should be thoroughly overhauled.

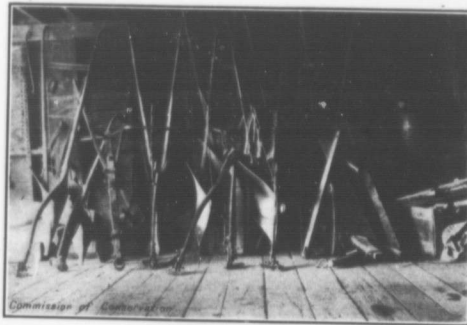


FIG. 23

IS THE PLANT READY?

Implements and tools should be put in best condition and kept where they are immediately available when the work season opens.

Missing parts should be secured, a supply of bolts and screws obtained, working parts should be cleaned and polished, and woodwork well painted. Bolts and screws can be purchased in boxes of assorted grades and sizes. The loss of a nut or breakage of a small part while engaged in the use of not only the implement, but the team, the hired help, and probably of the opportunity during favourable weather to perform the work which had been planned.

Thousands of trees throughout Canada are being injured by the nailing of advertising matter to them. Not only is the bark injured and the cambium layer broken, which gives fungi an opportunity to attack the trees, but the spaces behind such signs serve as harbours for moths and other insects.

Heavy seeding smothers weeds and adds humus to the soil. Light seeding encourages weed growth in the vacant spaces and adds little fertility to the soil.

WEED ERADICATION

QUACK GRASS

All methods of eradicating this troublesome weed are based on thorough tillage. The implements found on any well equipped farm are sufficient to eradicate quack grass.

As the quack roots are found closer to the surface in sod and pasture fields than in cultivated fields, it is often advisable to utilize a field for pasture or meadow, keeping the grass cut closely or grazed before attempting to kill it. The work should start immediately after haying by

Lookout Towers

Their Value Proven as a Protection Measure

The great value of lookout towers for the quick discovery of fires has been demonstrated many times, in Canada as well as in the United States. In the west, the devices are used extensively by Dominion Forestry Branch, Dominion Parks Branch, and British Columbia Forest Branch. The system is being extended each year and as the stations being connected by telephone with headquarters with neighbouring settlements can be despatched quickly in case fire is discovered.

The United States Forest Service and many of the states are using lookout towers extensively with excellent results in the direction of both efficiency and economy.

In eastern Canada, while developments along this line have been slower than in the west, an excellent beginning has been made. Lookout towers have also proved their great value, in the case of the St. Maurice and Lac Ottawa Forest Protective Associations, in Quebec. In Ontario similar results have been secured on Nipigon forest reserve, and on the limits of M. J. O'Brien and Mattagami Pulp and Paper Company. In each case cited an usually progressive system of fire protection is in effect, due largely to the assignment of competent men, with power to act.

On the whole, action along these lines, by the provincial governments in eastern Canada has kept pace with the progress made by private initiative, but the situation is improving steadily, and efficiency of fire protection Crown lands is increasing in proportion.—C.L.

Technical training will also be the present system of apprenticeship in many establishments, just letting a boy grow into business because he happens to be on the premises.

Farmers should make the necessary preparations to harvest the ice supply, so that there may be no delay when the ice is at its maximum usually in February.

The practice of standing in roadway to wait for an approaching street car is unnecessary, a menace to public safety, and frequently blocks traffic to an objectionable degree.

In the Yunnan province of China one pheasant farm produces about 200,000 birds a year, and many other farms have lesser output. The birds are mostly of the Golden Silver breeds.

ploughing the infested land only deep enough to turn over a furrow containing most of the grass roots. From three to four inches will be deep enough on sod or pasture land. Disk the land thoroughly every ten or twelve days until autumn, when the quack grass will be killed. Plough the land to a good depth the following spring to bury the dead roots which will supply food to the succeeding crop. Plant corn or potatoes and cultivate thoroughly, or sow a smother crop as millet or buckwheat.

The process of killing quack grass is not complicated, but one thing must always be borne in mind, the work must be done conscientiously and thoroughly. A half-hearted effort is useless.—F.C.N.

Popular lectures on the importance of forestry to China have recently been given in Peking under the auspices of the Chinese Forest Service. The lectures have been given by a Chinese official of the service. They were accompanied by an exhibition of Chinese woods.