

Conserve all Fertilizer Elements

Valuable Advice on Means for Sustaining the Productivity of the Soil

A recent United States Agricultural Bulletin says:—

"In the unusual conditions existing in the fertilizer trade, it is important that all fertilizing materials on the farm, especially those containing potash, should be conserved. The fertilizer ingredients already existing in the soil should be utilized and developed to the fullest extent. A great deal can be accomplished in this direction by deep ploughing, constant cultivation, and thorough tillage. There should be a proper system of rotation. Especially where one crop has been grown for several years, a different one should be planted this year. Green manures and cover crops should be used as much as possible in their proper rotation.

"Of the organic substances, manure, both solid and liquid, is the most important and should be utilized wherever possible. All material of an organic nature, such as leaves and bedding of various sorts, should be composted and the compost applied to the soil. Special attention should be given also to the conservation of wood ashes. Depending on the character of the wood, they contain potash in quantities varying ordinarily from 3 to 10 per cent. All tree trimmings, brush cuttings, etc., should be burned and the ashes derived therefrom utilized.

"The application of lime to many soils is of undoubted benefit. Though the availability of the fertilizing elements in the soil may not be greatly increased by its use, the resulting improvement in physical and bacterial conditions may increase considerably the productiveness of the soil."

Ruthless Hunting by Stoney Indians

Rocky Mountains Game Threatened with Extinction by Improvident Tribe

To the Stoney Indian, there are two kinds of cattle, that with a brand, which belongs to the white man, and that without a brand—the wild game of the Rocky mountains—which belongs to the Stoney. He usually chooses the easiest way of rounding up his wild cattle. He kills moose when yarked up in the winter; he exterminates whole bands of sheep or elk whenever possible; he kills game regardless of age or sex and harries or slaughters it

regardless of season; he makes use of dogs and organizes drives in which the whole camp, men, women and children, participate. In short, the Stoneys are the most serious menace to the wild game of the Rockies and the restriction of their operations is imperative.

Controlling the tribe, is difficult. It comprises about 500 individuals, living in almost an aboriginal state, and wild meat, with a little flour, sugar and tea, forms their entire ration. Mr. W. N. Millar, of the Faculty of Forestry, University of Toronto, estimates that the annual slaughter by the Stoneys is probably not less than 2,000 head, of which about one-third is Rocky Mountain sheep and the rest deer and moose. In 1913, he visited eight Stoney hunting camps, and in these alone found that nearly 100 head of sheep had been killed, in addition to numerous deer. About the same time, certain forest officers visited six or eight additional camps and found about an equal number of sheep, with many deer, five elk, some moose and bear. In one camp, it was afterwards ascertained that 25 sheep, all ewes and lambs, had been surrounded in a blind valley and completely exterminated.

Fire-Ranging Services

Lack of Field Supervision Not Conducive to Economy

At the fifth annual meeting of the Commission of Conservation, Mr. H. R. MacMillan, Chief Forester, British Columbia Forest Service, emphasized the need for thorough supervision to make a fire-ranging system really effective. He stated that, because of lack of field supervision, more money is being wasted in fire protection than is used economically. While this is a broad statement, it is believed that the facts fully justify it.

Taking both Ontario and Quebec as examples, there is good reason to believe that the amount of co-ordination between the head office and the field is too limited to exercise really adequate supervision over the fire-ranging staffs. The one great secret of the success achieved by the St. Maurice and Lower Ottawa Forest Protective Associations has been organization. The principal feature of these organizations has been the thorough supervision exercised over the men by the relatively great number of inspectors, all of whom are, in turn, closely supervised from the head office. It is believed that the several provincial governments could materially increase the efficiency of their fire-protection work by taking advantage, in this respect, of the experience of the British Columbia Forest Service and of the St. Maurice and Lower Ottawa Forest Protective Associations.—C.L.

Stream Pollution

Serious Conditions: due to the Discharge into them of Untreated Sewage

Sewerage and sewage disposal is dealt with thoroughly in a report on "Water Works and Sewerage Systems in Canada," to be published shortly by the Commission of Conservation. The gravity of the problem of stream pollution in Canada is shown by the great number of our inland waters receiving raw or untreated sewage. Particularly is this the case in the eastern portion of the Dominion. In the west we have the excellent example of the Province of Saskatchewan where 80 per cent of the sewerage systems have treatment plants.



Cut No. 31 Sulphite Mill discharging directly into river

The supply of water to communities is universally recognized as the most important function of inland waters. If these waters are allowed to become polluted, they constitute a grave menace to public health. This may be the case even where filters are employed, as a grossly polluted source of supply may overload the filter, which latter should only be regarded as an additional safeguard in an operation which should begin with the proper treatment of the sewage before it is discharged into any body of water.—L.G.D.

Protecting Game in Dominion Parks

Detection of Offenders now Rendered Certain—Penalties Rigidly Enforced

A stringent and effective system is now in force for protecting game in Dominion Parks. All guns and firearms brought within the boundaries must be sealed by a Government officer and all unsealed firearms are liable to con-

fiscation. In addition, all parties travelling through the parks are compelled to register at the office of the Superintendent and to declare their intended routes of travel. This makes it possible to notify the game wardens, who patrol the trails in question, that such a party will be travelling in that direction at a particular time. The wardens are then on the alert and are enabled to follow them up, visit their camps and search for evidence of infractions of the law, thus rendering it very difficult for an offender to escape detection.

Recently, a number of hunters left Banff, in Rocky Mountains park, to hunt big game on the British Columbia side of the mountains. The warden in charge of the trail along which they traveled inspected their vacated camps two days after they had left the park and found that they had "cached" two goat heads, evidently intending to pick them up on their return. They were brought to Banff, tried before the resident magistrate, convicted and fined. The maximum penalty for killing game in Dominion Parks provides for the confiscation of the entire outfit, pack-horses, ponies, guns and camp equipment and, in a case recently tried in Banff, the property confiscated amounted to over \$1,000. Convictions such as these have convinced old-time hunters and residents of the park that the Department intends to enforce the Parks Regulations without respect of persons.

Records of Bore Holes

Favourable Action Secured with this Object in View

The Commission of Conservation has repeatedly recommended that records of all holes drilled through coal formations in the West be filed with the Government to protect future coal mining operations. If holes are drilled through coal measures to reach the oil or gas zone below, and, after finding natural gas, the casing is withdrawn and the well abandoned, the gas "feeders" will be of great danger to future coal mining unless accurate records are kept.

In this connection it is of special interest to note that in Alberta an order-in-council was passed last June requiring that all mine plans be made only by persons holding mine surveyors' certificates, under the Mines Act. The order-in-council also provided that the mine plans should show the position of gas or oil wells with relation to the workings of any mine which had approached within two thousand feet of such wells.—W.J.D.