

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, better germination of the seeds, and 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.