

Treatment of Dusty Roads

Proper Construction and Use of Dust Laying Materials Only Solution.

The problem of dust prevention on our roads has gradually become more important during the last decade. That the dusty country roads have become an intolerable nuisance is now commonly acknowledged. In the larger centres the dust nuisance is not so evident as it is in the country simply because preventive means are more accessible and more generally utilized.

It is obviously futile to anticipate any relief from the dust nuisance through a decrease in traffic. On the contrary, the number of vehicles is steadily increasing. The remedy, therefore, must be in the form of some method of curing the defects in the roadway.

Real dust prevention begins with the construction of the road crust. In this work it is necessary to minimize the subsequent production of both superficial and internal dust—the latter rising eventually to the surface—by selecting road metal of a hardness appropriate for the traffic, by providing drainage for the removal of excessive water from the road crust, and by securing in the macadam the firmest angular bond that the metal permits.

Regardless of its construction, any roadway, even in city streets, may become superficially dusty and require some means of suppressing the dust on its surface.

The simplest method is sprinkling with water "to lay the dust." This method is not entirely free from objection. As the sprinkling must be done periodically it is seldom done efficiently and between the times of sprinkling—when there is a temporary excess of water—the surface condition varies from muddy to dusty again.

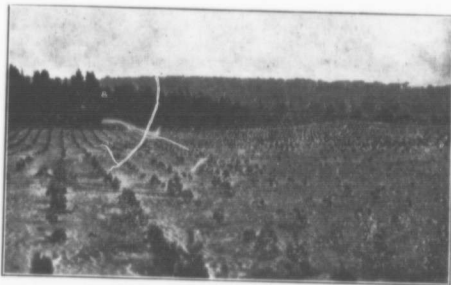
The second process, chemical in character, consists in the use of concentrated sulfolite liquor, usually produced as a waste or by-product at wood-pulp mills, and commercially known as "glutrin." The glutrin is used either with or without water and its effects are composite. It has cementing powers and acts chemically on the road materials, strengthening their binding qualities. The glutrin is, however, more or less soluble in water and eventually will be washed out of the road crust.

The most successful, for either the prevention or suppression of dust on roadways, are the bituminous materials. No general definition can be given regarding what constitutes the proper bituminous material. In each case that will depend largely upon the local conditions. Broadly speaking, it may be said that the as-



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Beach grass planted by the Provincial Forest Service upon the sand dunes near Lachute, P.Q. Note, at the right of the picture, how the grass in the rows has begun to grow together by means of root suckers. In a few years the surface will be well covered and the shifting of the sand by the wind will have been stopped, at the work pay for itself, through the careful harvesting of mature trees, leaving enough standing to hold the sand in place. At the same time the gaps will be filled that if trees had been planted at once, they would either have been buried or the roots uncovered through the rapid movement of the sand. Forest plantings on sand dunes in France, under similar conditions, has proved a great financial success.



Cut 109

Plantation of white pine and Scotch pine made in 1911, by the Provincial Forest Service, on the sand dunes near Lachute, P.Q. This work will stop the consequent destruction of valuable farming lands through being covered with sand. This work will in time pay for itself, with a profit, from the sale of timber.

phalic oils are better for this work than the paraffin base oils.

The non-volatile oil will quickly penetrate the wearing surface of the road, incorporating itself with fine particles, so that it forms a dense, smooth, water-proof coating, or else renders the surface dressing so heavy that the winds will not hold it in suspension in the air. Moreover, its non-volatile character should give it lasting qualities in order to impregnate whatever dust may blow or be carried upon the road already treated.

Forest Planting

Laurentide Co. Carrying out Aggressive Reforestation Policy

The Laurentide Company, Limited, has inaugurated an aggressive policy of forest planting upon lands which it has purchased, in the vicinity of its pulp and paper mill at Grand Mere, P. Q. To a considerable extent, these are lands previously cleared for cultivation but found, upon trial by the set-

ters, to be unsuitable for agricultural purposes. About four hundred acres have already been planted to trees, mostly Norway spruce, with some Scotch, white and red pine. The oldest of these plantations was made in 1913 and all have been successful. The only failure has been in fall planted red pine. The Scotch pine has made good growth and the white pine has started well. With the Norway spruce there has been less than 5 per cent loss and they have begun to grow nicely. These plantations are guarded by fire lines and roads and a special ranger is kept on duty continuously from snow to snow. The nursery has been enlarged to produce one million trees per annum and this output will mean the planting of practically a square mile a year. It is expected that by the time the trees reach suitable size to be thinned for pulp wood, the company will have a reserve of cheap wood within six miles of the mill. If this project is carried out, it will be the first of its kind on the continent.

Waste Due to Smoke Nuisance

Action Must be Taken to Prevent Pollution of Atmosphere

A source of fuel waste is represented by the smoke nuisance which is becoming very pronounced in our large cities. While it is difficult to prevent the smoke arising from the chimneys of private dwellings, this, in the cities of Canada, is relatively unimportant, for, as a rule, hard coal is burned for domestic purposes. On the other hand, the immense volume of smoke emitted from the stacks of many of the great power plants and factories of our large cities, as well as by locomotives and steamboats, can be greatly reduced or stopped by the installation of reliable smoke consumers, operated by firemen instructed in the proper use. Investigations show that in many cases such plants not only stop the smoke but pay the owners.

The waste of fuel, however, but a small part of the loss entailed by the smoke in our cities. It disfigures buildings, impairs the health of the population, renders the whole city filthy, destroys its beauty with which it may be naturally endowed, and tends, therefore, to make it a squalid and undesirable place of residence; that at a time when economic influences are forcing into our cities an ever increasing proportion of our population. These conditions pre- especially on the poor, who must reside in the cities and cannot escape from these evils by taking houses in the suburbs. After all the conservation of humanity is even more important than the conservation of coal.

Investigations into the best means of abating the smoke nuisance have been, and are now being carried on by government and municipal commissions in several private individuals, as well as in the leading countries of the world. Many cities have officials whose time is devoted exclusively to the education of public opinion and the enforcement of a existing laws with reference to this matter. The question as to what steps can best be taken to lessen the amount of smoke which is being discharged into the atmosphere in our Canadian cities is by no means a simple one, but the time has come when the Commission of Conservation may very properly make a thorough investigation of the question and ascertain for the benefit of the dwellers in our great cities what can be done to prevent the wholesale pollution of the atmosphere.—Dr. Frank D. Adams at 1915 Annual Meeting of Commission of Conservation.

Whitewash is cheap and it is one of the best fire retardants that can be used on buildings or rough woodwork.