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## EDITORIAL.

If the state of the roads show the degree of civilization in a community, some of us must be not very remote from savagery.

Given health and a sound understanding, very few acres are necessary to give anyone a decent living on the land, but he must not waste things.

One hundred dollars and upwards for grade dairy cows, is something worth pondering. Considering the price of labor, is it not rather more profitable producing cows at \$100 each than milk at 100 cents per hundredweight?

The Ontario Agricultural and Experimental Union is proposing to extend the scope of its experimentation by trying out various systems of weed eradication, with the object of obtaining definite information as to best means of controlling the worst weeds in the Province upon different kinds of soils and with various systems of cropping and rotation. This first year the attack is concentrated upon perennial sow thistle, twitch grass, bladder campion and mustard. Particulars may be obtained on application to J. E. Howitt, Botanical Department, O. A. C., Guelph.

The idea of warming a farm by artificial means would strike most people as a joke, yet that is precisely what may be done by drainage. Land is chilled by the evaporation of surplus water from its surface. When one pound of water disappears from a cubic foot of soil by evaporation, it carries with it, says King, heat enough to leave the temperature of that soil from 28.8 to 32.8 degrees F., depending upon whether the soil is sand or clay loam. The writer spent a day with one of his men early in April, letting surplus water off the land by shovelling ditches through the slushy soil, with a hard frost-pan below as a convenient bottom to walk on while working. We estimate that in this way we drained off from five hundred to a thousand barrels of surplus water. It was probably one of the most effective day's work that will have been accomplished on the farm this year.

A Toronto newspaper editor suggests that the only effective preventive of freshest destructiveness is to hold the water up in numerous small dams on the tributary streams. By a grim coincidence, the issue that conveyed this important contribution to the theory of conservation contained a news-story telling that the Credit had destroyed fourteen dams and several bridges. Bearing in mind that the breaking of one dam doubly endangers the one below it, we fear the cost of constructing these upper tributary dams, so as to make them really a factor of safety would be quite a penny, to say nothing about compensation for inundated land. No doubt such dams would be all right in some cases, but their principal advantage would consist in holding backwater for power purposes. It is really doubtful whether dams are of much use in preventing destruction, for when the water is reaching the rivers it must get away somewhere, and, if pent up, its potentialities for destruction are rather enhanced than reduced. As a means of regulating river-flow, Provincial or municipal reforestation of head-water regions and river banks has much to be said in its favor.

### The Highway Problem.

That the public realize the inconvenience and loss to communities and the country generally, because of bad roads, is clear from the contributions in the recent "Farmer's Advocate" competition on this subject. All agree that good roads are desirable and necessary, but there are unsolved problems in "How to Build Them," and still more in how to maintain them. The public are willing that money be spent liberally to secure these objects, but it is not so clear as to how these funds should be provided and handled. Discussions during the late session of Parliament at Ottawa and outside of it show that there is as yet no well-settled Canadian good roads policy. The blocking of the Government Highway Bill by Senate amendments unacceptable to the Commons, caused a hitch, but will not stop the movement for better roads. The proposal was well intentioned, but probably not sufficiently matured. Road-building by the Federal Government direct was questioned, and though it may supplement Provincial resources for that purpose it will likely be found best to leave road-fund administration and road-making with the Provinces and municipalities. The Senate amendment prescribed that the proposed aid for highway improvement be divided among the Provinces, according to population.

The United States Government has at Washington an Office and Director of Public Roads, under whose supervision 52 object-lessons in road-making were executed last year, but at local expense. Road-making proper and road administration is left with the individual States. The Federal Office has also undertaken elaborate work in testing materials for road-making, surfacing, repair and maintenance. In the view of L. W. Page (Director), the problem is to locate roads so as to serve the needs of the most people, and solve it according to local conditions involved. The considerations to be kept in mind are, first, how to use local materials more fully, thus keeping down cost; second, securing more specific information regarding the nature and behavior of materials for construction and maintenance; third, systematic road maintenance; and, fourth, more businesslike road management. All this is very clearly apparent in the information which the Scientific American publishes in regard to what forty-six different States are doing (or not doing) by legislation and otherwise for good roads. Information lately made public by Secretary Wilson, of the United States Department of Agriculture, shows that, of the total 2,200,000 road mileage in the States, only a trifle over 8 per cent. can in any proper sense be described as "improved" for the traffic they are required to bear, thus proving the need of a nation-wide movement. But apathy is at last giving place to effort on the part of many State Legislatures, municipal and voluntary organizations.

The sudden appearance of the automobile on the roads of the country is one of the factors in precipitating road-making activity. Bad roads are destructive of motor cars, tires and comfort, and good roads are destroyed by automobile traffic. So, while their owners agitate for better highways, various States have, in different forms, levied automobile taxes.

### What States Are Doing for the Roads.

In the State of Maine, the automobile tax amounts to \$120,000, and a movement is started to create a road fund of \$2,000,000 by capitalizing the revenue so provided. Massachusetts is deriving \$400,000 a year from automobile owners. The State has a Highway Commission, and there are fifteen bills relating to highways before the Legislature. One of the proposals for 1912 is a \$5,000,000 appropriation, to be expended in road construction in five years. There are State highways and local improved roads connecting them. By a yearly \$5-per-capita tax on automobile owners, Texas derives about \$100,000 revenue. In recent years, millions of dollars have been voted in bond issues by the people of the State, and large sums wasted through unscientific methods of road work. This year's legislation contemplates a State Highway Department, a Highway Commission, and a State Highway Engineer to co-operate with county authorities. A State road, to be conducted by convict labor, is planned. The Texas constitution prohibits levying direct road taxes.

In Vermont, the law creating a maintenance fund from automobile license and legislation fees, is said to be responsible for the general improvement in State roads. These funds supplement appropriations under the State Aid Laws, relieving the towns of a portion of the cost of maintenance.

A new law in Minnesota provides for the appointment of State Highway Commissions and the creation of a State Road and Bridge fund, made up in part by a levy of  $\frac{1}{4}$  of a mill for each dollar valuation on all taxable property. In accordance with the eternal fitness of things, commercial and auto clubs are actually constructing roads in Nebraska, east and west across the State. The State is creating a Highway Commission, and will put the general supervision of the State's roads under the State Engineer. The New Hampshire legislation makes a percentage of automobile fees available for road repairs. A \$1,000,000 bond issue has helped the road situation. The State has provided money for the construction of three automobile trunk lines, but it is admitted that what the State needs most is a system or cluster of roads leading between the cities and the farms. New Jersey has not built any State roads, but extends help to local bodies, and supervises their work, enforcing certain general plans and specifications, and influencing the location of roads. This is said to have given the State the best system of roads, at low cost. New York has appropriated \$5,000,000 a year for ten years, expended under Commission. The trunk lines are built and maintained by the State; other roads jointly, the State paying 50 per cent., the counties 35 per cent., and the towns (townships) 15 per cent. North Dakota people will vote on a State Aid Law for roads, including automobile and motor-cycle taxes.

Ohio employs a State Highway Department, lays down standards, and shares with local authorities the cost of constructing and maintaining roads. Pennsylvania maintains a Highway Department, and shares with municipalities the cost of road-building and repair under prescribed conditions. The State Board of Public Roads in Rhode Island has been crippled for want of funds, but a bond issue and a \$250,000 appropriation this year is expected to improve the situation. In South Dakota the people have awakened to