

municipalities. The Department of Highways now carries on the greater part of its road construction work by authorizing an expenditure on certain main roads approved by the department. The department, being satisfied the rural municipality has the organization and equipment to satisfactorily carry on the work, enters into a contract with the municipality whereby the municipality performs the work with its own crew and the department pays the amount authorized to the municipality on the work being completed and on the certificate of the department's inspector that the work has been carried on in accordance with the specifications.

The arrangement referred to above applies only to road construction. In the case of bridge construction, very few of our municipalities have the equipment or the desire to handle the construction of the larger bridges. Practically all bridges of a span of 20 feet or over required throughout the province are built and paid for by the government. The bridges constructed by the government are, broadly, of two kinds—timber bridges on pile abutments and pile bents, and steel bridges on concrete or pile abutments. The timber bridges are built by bridge crews employed by the Department of Highways, and, as stated before, are paid for out of income account. The steel bridges on concrete abutments, also the reinforced concrete arch bridges (several of which have recently been built), are all let by contract and paid for out of capital account. All the timber for the timber bridges, and the steel and cement for the larger bridges, are purchased by the department direct from the manufacturers.

Saskatchewan is an earth-road province and it will no doubt be many years before, outside of the cities and towns, any very considerable mileage of metalled road surfaces will be constructed. For this reason the question of maintenance has become one of the most important problems we have to deal with. To induce rural municipalities to give more attention to this very important matter, the government is now distributing to municipalities in the way of direct grants a large part of the money collected as fees for auto licenses. This is given to the municipalities on condition that it shall be used for the maintenance only of main roads leading to market towns. The amounts given to each municipality in this way are not large, but it is hoped that with the expenditure of this money on maintenance work, the municipal officials will be brought to see the wisdom of devoting more money for this purpose than has been done in the past, and that the amounts contributed by the government for this purpose will be supplemented to a considerable extent by the municipalities.

Rural Municipalities

The rural municipalities in the province up to and including the year 1914 were spending in the aggregate on road improvement work an amount about equal to that spent by the government, and since the outbreak of the war have not reduced their expenditures to the same extent as has the government.

In rural municipalities the money for road and bridge construction is obtained generally from current taxes, though many municipalities have raised money for this purpose by the sale of debentures. This latter method was resorted to to a considerable extent in the years 1912 and 1913 to provide the money contributed by the municipalities as their share under the dollar-for-dollar agreement with the Board of Highway Commissioners.

No special tax is imposed in rural municipalities for road improvement work or other public works. The

council sets aside from the revenues of the municipality as much as it determines can be allocated for this purpose. The money is authorized for the improvement of such roads as the council selects. The Rural Municipality Act, however, provides that one-half the total amount estimated to be expended for general municipal purposes within the year (exclusive of the proceeds of debentures) shall be distributed among the divisions in proportion to the assessed value of the taxable property in each division, unless the council by unanimous vote decide that this amount may be reduced to any amount not less than one-quarter of the total estimate. Moneys raised for road or bridge construction by the sale of debentures must, of course, be spent to carry on the work specified in the by-law.

The Department of Highways exercises no authority or control over the expenditures made by rural councils, or the selection of roads upon which the councils will spend their money. Both the department and the rural councils are, or should be, working towards the same end. It is the policy of the department to plan its improvements, so far as possible, in harmony with the plans of the municipality and many of the authorizations for expenditures by the department in a municipality are made pursuant to an arrangement covering expenditures of municipal funds by the council.

TEST OF QUEBEC BRIDGE

LAST week the final official test of the Quebec Bridge took place when the maximum load which the structure will likely ever be called upon to carry was placed upon the central span. A big locomotive, pulling 55 loaded freight cars, started across the bridge from the north shore, while at the same time a similar train started across the structure from the south end. The two trains, weighing about 14,000,000 pounds, were halted on the central span and rested there for several minutes before continuing across the bridge. Other tests included the running of several trains at high speed past each other on the bridge, the trains passing at the central span.

Although no special trains were run to the site of the bridge, thousands of people from Quebec motored to witness the trial, and when the enormous weight of the two trains had no visible effect on the huge structure, there was cheering from both sides of the river which almost drowned out the piercing whistles of the locomotives on the bridge.

Among the engineers who witnessed the test were C. N. Monsarrat, formerly chief engineer of the Quebec Bridge Commission and now consulting engineer to the Department of Railways and Canals, Ottawa; H. P. Borden, of the Quebec Bridge Commission; Judge E. H. Gary, president of the United States Steel Corporation; Gordon Grant, chief engineer of the Transcontinental Railway; G. F. Porter, engineer of construction for the St. Lawrence Bridge Co., Limited, who were the contractors for the bridge, and other officials of the company; and Messrs. Colclough, Morazain, Atkinson and other officials of the Canadian Government Railways.

The municipality of Swindon, England, has joined in the increased food production campaign, having purchased thirty-six pigs for breeding purposes. A waste paper collection scheme has also been inaugurated.