

The restriction of the maximum loads that may be carried on roads is in accord with developments in vehicle-design which are enabling greater loads to be carried on vehicles with less wear on the roads. Foremost among these developments are: (a) The multi-axle type, which reduces axle-loads, and impacts on the roads; (b) improved tires and springing.

The encouragement given to the development of the multi-axled vehicle in road-classification has a far-reaching effect in road transportation. It means, broadly, that road-classification will result in heavy loads being transported in multi-axled vehicles over roads that will require much less expenditure than would roads to carry the same loads on two-axled vehicles. It means also that where conditions warrant the haulage of heavy loads the restriction of the gross loads by road-classification is not prohibitive, since recourse can be had to the multi-axled vehicles.

Seasonal Nature of Heavy Loads.

The bulk of our manufacturing industries that operate more or less evenly throughout the year, and the transportation requirements of which do not fluctuate with the seasons, are in the bigger centres of population, where the question of limiting the gross loads on roads or streets does not generally arise owing to the structure of these roads and the greater density of population which results in a wider spreading of the roading-costs. On the rural roads—and it is on these roads that the restrictions mainly arise—there are marked seasonal characteristics in the nature and weight of the loads. The products of the dairying and pastoral industries are moving towards the exporting ports in the summer and autumn, road-metal and timber are being carted throughout the whole year, while manures are being hauled mainly during the winter and spring months.

Owing to the importance of meeting the heavy seasonal traffic in farming products, many counties have been apprehensive of placing restrictions on the gross loads to be carried over their roads, but in the majority of cases an investigation disclosed the fact that substantial savings in aggregate transport costs would result from a well-devised scheme of classification.

Investigations have shown that a study of the heavy-traffic requirements of a locality, the operating-costs of the different classes of trucks, and the cost of the roads generally, draws attention to the maximum load that will yield the most economic results.

Road-classification and Future Road Standards.

Road-classification is the result of economic pressure in the direction of coping with the road expenditure, which has displayed a marked tendency to increase with the growth of motor traffic. Unclassified roads permit of any traffic up to the statutory limit of 10 tons for two-axled vehicles. In several districts where classification has not been systematically enforced a relatively few heavy loads have caused undue damage to the roads. In several other districts, mainly those where road materials are relatively cheap, classification has not been adopted in any form on many roads, with the result that traffic up to the 10-ton limit has developed on all the unclassified roads, a small length only of which are capable of carrying such loads. The result has been additional expenditure for maintenance and the finding of additional moneys for construction purposes much sooner than would otherwise have been the case.

Taking into account the railway reticulation and the existence of coastal shipping, it would appear that unless road facilities are to duplicate these facilities, and thus foster unnecessary competition, maximum gross loads of $6\frac{1}{2}$ tons on two-axled vehicles and 8 tons on multi-axled vehicles should meet the requirements for heavy loads on our rural roads. This would direct road-development as a complement in the whole national transport system. Road vehicles would, broadly speaking, carry the short-haul traffic, while the longer hauls would be left to the railways and coastal shipping, which under existing conditions can handle them more economically. Unclassified roads or roads where the classification is too high tend to foster long haulage by motor transport. Even on third-class roads goods-hauliers are operating over routes of more than 100 miles in length in competition with the railways.

Summary of Road Classification Activities during Year.

As indicated in last year's annual report, the Department has pursued a vigorous policy in regard to the general classification of the rural roads in the Dominion, and the efforts made in this direction have received general support from practically all the road-controlling authorities.

During the year conferences were held with local-body representatives in four of the highway districts, and the whole question of road-classification discussed in the light of a comprehensive economic survey of each district.

(1) *Conference at Masterton: No. 10 Highway District.*—Present, representatives from the following counties: Featherston, Wairarapa South, Masterton, Mauriceville, Castlepoint, Akitio, Eketahuna, Pahiatua.

After considerable discussion it was unanimously decided that the maximum classification of any road or highway in this district be second class. Since the conference a number of the counties have submitted proposals in line with the above recommendation.

(2) *Conference at Timaru: No. 15 Highway District.*—Present, representatives from the following counties: Ashburton, Geraldine, Levels, Mackenzie, Waimate. The District Engineer, Public Works Department, Christchurch, was also present.

The transport requirements and facilities of the district were reviewed, and after full discussion the delegates unanimously agreed on the following recommendation: "That the maximum classification of any road or highway in the No. 15 Highway District be second class." Since the conference all the counties represented have submitted classification proposals in line with this recommendation.