

obtain a product of the highest standard suitable for military use under combat conditions. To obtain this natural rubber in Canada a co-operative enterprise involving the science service of the federal Department of Agriculture, which is responsible for the production phases of the program, the applied biology division of the National Research Council, which is engaged in perfecting methods for the extraction of rubber from these plants, and the chemistry division of the National Research Council, which is engaged in processing it, is being carried out. The department of botany of the University of Toronto is also working on fundamental problems of selection, breeding and analysis in connection with the program.

Research in this field was undertaken in June, 1942. Of the numerous plants tested, it was found that milkweed had the most potentially adaptable qualities. In January, 1943, a method for the mechanical extraction of rubber gum from this plant was evolved. Preliminary investigations indicate that this gum will blend well with the Buna-S synthetic product to be produced in Canada, decreasing the heat embrittlement properties, increasing tear resistance and improving tack and processability.

It is estimated that an acre of milkweed will yield from one to two tons of air-dry leaves, which in turn, will yield from 150 to 300 pounds of gum. The leaves must be gathered, dried, cooked in an alkaline solution, washed, and the resulting compound crushed and ground in a pebble mill. An experimental processing mill in Ottawa is expected to produce about five tons of milkweed gum during 1943. This is to be obtained from wild stands harvested by school children and farmers under the general direction of the federal Department of Agriculture.

Other experiments have been conducted in Canada with other plants, including goldenrod, dogbane, and kok-saghz or "Russian dandelion". Although the rubber produced from the latter plant compares favorably with Malayan rubber, production costs at present in