

obtain a product of the highest standard suitable for military use
 under combat conditions. To attain this standard rubber in Canada a
 co-operative enterprise involving the extensive services of the Federal
 Department of Agriculture, which is responsible for the production
 phase of the program, the applied biology division of the National
 Research Council, which is engaged in perfecting methods for the ex-
 traction 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 milweed had the most
 potentially adaptable qualities. In January, 1943, a method for the
 mechanical extraction of rubber gum from this plant was evolved. Ex-
 tensive investigations indicate that this gum will blend well with the
 Buna-S synthetic product so produced in Canada, increasing the heat
 resistant properties, increasing tear resistance and improving tack
 and processability.

It is estimated that an acre of milweed will yield from one to
 two tons of six-day 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 ex-
 pected to produce about five tons of milweed gum during 1944. This
 is to be obtained from wild areas 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 red-sage or, Russian
 mulberry. Although the rubber produced from the latter plant was
 poorer than that with Malayan rubber, production costs at present in