

Eleven measurements are taken on each foot. Four of these are taken on a device, built especially for the survey, by the Dominion Physical Laboratory, in order to equip the operators with apparatus that would enable them to take these measurements with the most facility and the least degree of error. The four measurements taken on this device are the length of the foot, the length from heel to ball, from heel to little toe, and the width of the ball joint. Five circumference measurements are being taken by tape, these being the toes, the joint, the instep, the waist, and the heel. The depth of the ball is being taken with another instrument built by the Dominion Physical Laboratory, and a caliper is used to measure the width of the heel. An outline of each foot is being drawn, in order to provide a visual basis for determining the shape of the foot.

Progressively, as the information is obtained, it is correlated by the Government Statistician, in order to provide a basis for analysis and graphs, with the object of showing the proportionate relationship of the different measurements. With the completion of the survey a statistical analysis will be made of the data obtained, with a view to ascertaining the groups of measurements which can properly be brought within each size-range. In this way it should be possible to establish a range and gradation of sizes, and the basic measurements for each, which are necessary to ensure correct fitting, this being the object of the survey.

Gum Boots.—Further progress was made with standard specifications for gum boots, women's, girls', and children's city gum boots, lace-up rubber boots, goloshes. Draft standard specifications are at present being circulated to some three hundred affected interests in New Zealand and overseas for comment. They provide for a general service quality and a super quality of rubber footwear.

PRIMARY INDUSTRIES STANDARDS

Butchers' Knives Committee	..	..	..	..	Two meetings.
Bull Chains Committee	..	..	..	..	One meeting.
Produce Sacks Committee	..	..	..	..	One meeting.
Produce Sacks Sub-committee	..	..	..	..	One meeting.
Woolpacks Committee	..	..	..	..	One meeting.

Butchers' and Slaughtermen's Knives.—Manufacturers of butchers' and slaughtermen's knives in New Zealand have requested the preparation of a standard specification for skinning, boning, and steak knives, and have supplied much of the necessary technical information. Generally, the specification will cover the quality of steel, grinding, and polishing of the blade, security of the handle, and the finish of the knife.

Bull Chains.—Following complaints from farmers about the quality of many bull chains on the market, steps have been taken to prepare a standard specification. Some samples of chain have been tested, and the test results have been used to assist the formulation of draft provisions covering the tensile strength and durability of welded rod chains of two strengths. Difficulty experienced in obtaining essential information has delayed further progress.

Garden Tools.—Shovels, spades, rakes, and hoes are covered by standard specifications issued during the year. These specifications set out a range of standard sizes and types, and lay down requirements for materials and manufacture, in addition to the other factors which determine the efficiency and durability of the tools. This project was sponsored, and its development actively assisted, by a manufacturing interest to safeguard the reputation of the industry, by establishing a reliable basis for the certification of its products that would maintain the confidence and goodwill of the buying public.

Vitamin A and D Oils for Animal Feeding.—The standard specification for vitamin A and D oils for animal feeding was completed and issued during the year. Its preparation was undertaken at the request of the New Zealand Farmers' Union, which was concerned at the low quality of much of the oil being marketed, and desired a reliable basis for the purchase of oils according to grade. The standard specification