

may be indicated by taking at random a definite number of tubers from each sack till 100 are obtained (see Figs. 1, 2, and 3). If these are laid out on the ground they represent to the eye the average grading of the sacks sampled. To convey this grading in terms of figures the method adopted is to separate by eye measurement the sixteen largest and the sixteen smallest tubers. If these lots are weighed separately the weight will convey, after some little practice, a reasonably accurate idea of the standard of grading in that particular line. Sixteen tubers afford a convenient number, because if the weights are recorded in pounds they indicate also the average weight per tuber in ounces. Thus a line grading "6/3" means that the sixteen largest tubers weigh 6 lb. as against 3 lb. for the sixteen smallest. It also indicates that the

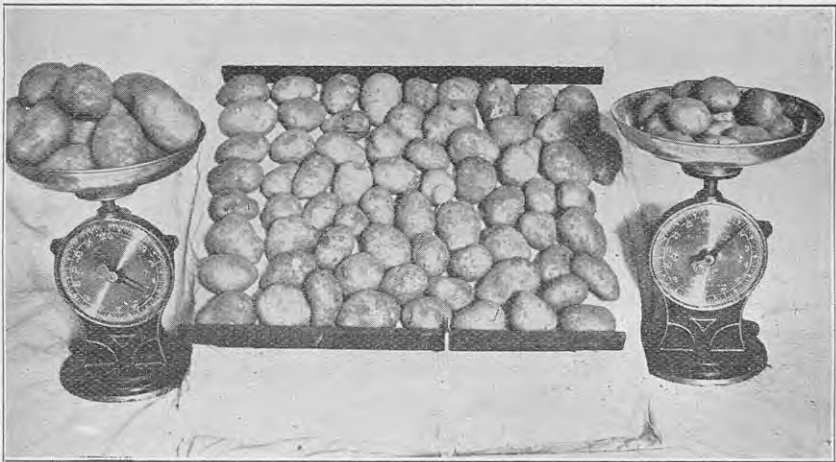


FIG. 6. SAME LINE AS IN FIGS. 4 AND 5, SHOWING WEIGHINGS.

The weight of the sixteen largest is $4\frac{3}{4}$ lb., and that of the sixteen smallest $1\frac{1}{4}$ lb. The grading is therefore " $4\frac{3}{4}/1\frac{1}{4}$." There being more than $2\frac{1}{2}$ lb. between the two weights, the line would be rejected for inefficient grading.

average weight of the sixteen largest tubers is 6 oz., and the average of the sixteen smallest 3 oz. The range is from round about 6 oz. to round about 3 oz. A few tubers will be over 6 oz. and a few below 3 oz. These grading figures are always to be found on the tags attached to the sacks by the grower. If the merchant regrades, the figures, of course, fail to be of any value.

The final tuber-inspection for certification is undertaken when the seed is graded, in sacks, ready for sale. At least one sack in every six is opened up (with a minimum of eight sacks in any one line) and twenty-five tubers are taken at random from every sack opened. Each lot of 100 tubers is weighed for the grading standard. Each tuber is inspected, and a certain proportion cut to determine the percentage of disease present.