controls the number of tubers produced per unit length of row and intensity of competition between hills.

Returns.—Calculations in Table 9 show returns, above cost of seed, harvesting and marketing, on the average total yields of potatoes produced by planting 3 sizes of whole and cut seed at 3 spacing distances in the row. Returns per acre, above these expenses, on potatoes grown from whole and cut seed weighing 1, 1½ and 2 ounces each at all 3 spacing distances in the row averaged $395, $539 and $533 an acre, respectively. On the basis of the cost-price figures used in these calculations the 1½-ounce seed proved slightly more profitable than 2-ounce seed. This was due to the fact that the former seed tended to out-yield the latter in 1952, Table 5.

Increased yields secured by planting 3 sizes of whole and cut seed closer in the row generally proved profitable, as indicated in Table 9. Per-acre returns above specified expenses from average yields of 2 sizes of whole and cut seed at spacings of 12, 10, and 8 inches in the row averaged $526, $540 and $576, respectively.

Returns per acre were not affected materially by planting whole or cut seed of the same size at the same spacing. Returns over specified expenses on total yields of all three sizes of seed at three spacing distances in the row averaged $509 an acre for use of the whole seed and $497 an acre for use of the cut seed. Thus, it appears that whole seed tubers could be used as profitably as cut seed in the production of Sebago potatoes at Hastings, when both types of seed are of equal size and planted at the same spacing.

SIZE AND SPACING OF CUT SEED IN RELATION TO YIELDS AND RETURNS FROM 1943 TO 1953

Returns on average total yields over the seed, harvesting and marketing costs, obtained by planting cut seed weighing, 1, 1½ and 2 ounces each at spacings of 12, 10 and 8 inches in the row during 4 to 8 years are shown in Table 10. The increased yield secured by planting larger cut seed more than paid the increased seed, harvesting and marketing costs. Returns above these expenses on total yields produced by cut seed weighing 1, 1½ and 2 ounces each at all 3 spacing distances in the row averaged $293, $404 and $432 an acre, respectively.

Increased yields resulting from planting 3 sizes of cut seed closer in the row from 12 to 8 inches also proved profitable,