

ferences in the sales rates were comparatively small. Consequently, the apparent consistent relationship between grade and size and the purchase rates of customers is somewhat less sharp than an initial examination of Fig. 4 would suggest. In many cases the differences in purchase rates between grade-size categories were not large enough to warrant the conclusion that consumers did distinguish one from the other.

The analytical procedure employed allowed a statistical comparison of the sales rates for any specific grade-size category with all others.⁴ These comparisons reveal the instances where consumers regarded tomatoes of a particular grade and size as superior or inferior to other types, and the instances in which they failed to differentiate between grade-size categories. The results of these tests are shown graphically in Figs. 5 through 9.

Under most circumstances, customers did not distinguish between tomatoes that were not greatly different with respect to grade or size, or some combination of grade and size. The results indicate that consumers are somewhat more conscious of quality and size differences when they are making comparisons between large tomatoes than is the case when they choose between tomatoes that are at the lower end of the size range. Since this tendency is of considerable import to the Florida tomato industry, the behavior pattern of customers in these respects will be examined in some detail.

Out of the 11 categories of tomatoes tested, the only one which consumers regarded as distinctly different and superior to all others was the 5 x 6 No. 1 (Fig. 5). The discriminatory powers of the consumers became somewhat less sharp when they compared the No. 2 grade of this size with all other categories. While the No. 2 tomatoes of the 5 x 6 size were regarded as less desirable than those of the same size but one grade higher, they were not regarded as superior to the 5 x 6 size in the No. 3 grade. Further, consumers did not think the 5 x 6 No. 2 tomatoes were any better than the next smaller size of the same grade. All combinations below the 6 x 6 size were regarded as inferior to the 5 x 6 No. 2, and it was also considered superior to the 6 x 6 No. 3.

Moving to the No. 3 grade of the 5 x 6 size, it becomes apparent that consumers regard a number of other types of toma-

⁴The "t" test developed by Student was used as a criterion for testing whether one grade-size category differed from another.