

percentage of grapefruit tended to result in lower average cost than if the firm had packed the same percentage of each type of fruit and type of pack as assumed in computing the synthesized costs.

The relationship between the synthesized long-run cost curves and the average cost-volume relationships based on accounting data is not well defined. This is because the two sets of cost estimates are not comparable in a true sense. The long-run synthesized cost function shows the cost level that may be expected from packinghouse operations of various sizes, when they are organized as efficiently as possible under specified conditions. The average cost-volume relationships based on accounting data combine and confuse economies of scale with internal efficiencies, so that the results describe neither the short-run cost changes that an individual packinghouse may achieve by expanding volume and "spreading overhead costs" nor the long-run cost changes that result from adjustments in scale of operation. Finally, as pointed out, the accounting costs have not been standardized with reference to factor prices.

### SUMMARY AND CONCLUSIONS

From the analyses presented it is apparent that there are three pronounced types of long-run economies possible in the operation of Florida citrus packinghouses: (1) those which would result if packinghouses shifted from the conventional field box automatic dump method to the lower cost methods available, without changing the scale of the packinghouse; (2) savings that might result if firms packing more than 380,000 boxes per season shifted to a two-unit type operation; and (3) economies which might result from consolidation and expansion. The difference in costs between the single-unit conventional packinghouse (Fig. 5) and the single-unit model packinghouse (Fig. 2) is roughly \$0.13 per box, for packinghouses with capacity rates of approximately 300 boxes per hour. This difference decreased gradually as the size of the packinghouse increased, with a difference of approximately \$0.10 per box for packinghouses with the range of 450 to 750 boxes per hour. The difference between the long-run cost curve of the two-unit model packinghouse and the conventional packinghouse increased from approximately \$0.10 per box for packinghouses with capacity rates of 400 to 450 boxes per hour to roughly \$0.13 per box for packinghouses with capacity rates of 600 to 750 boxes per hour.