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INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

COLLEGE OF AGRICULTURE    AGRICULTURAL EXPERIMENT STATIONS    AGRICULTURAL EXTENSION SERVICE    SCHOOL OF FORESTRY

Harvesting and Handling Section

PACKINGHOUSE NEWSLETTER

CITRUS EXPERIMENT STATION

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CITRUS INDUSTRY RESEARCH DAY

The University of Florida Citrus Experiment Station at Lake Alfred will hold its annual Citrus Industry Research Day on Thursday, March 30, between the hours of 10 and 4. Tours of the research facilities will be included in the day's agenda. Stress will be placed upon application of current research to immediate and future problems confronting the citrus industry.

Interested individuals or groups from any aspect of the Florida citrus industry are cordially invited to attend.

Export: European Regulations

The following is condensed from February issue of the California Citrograph Vol. 52, No. 4, page 160.

The Common Market

The following items are excerpts taken from reports prepared by D. R. Thompson who is stationed in Brussels, representing the interests of the California-Arizona citrus industry in the important European Economic Community (Common Market) area under a cooperative arrangement between the industry and the Foreign Agricultural Service, U. S. Department of Agriculture.

California-Arizona citrus exports to Europe during the 1965-66 season approximated 11 million cartons.

The European Economic Community has extended the usage of diphenyl, orthophenylphenol and sodium orthophenylphenate for the protection of citrus fruits to June 30, 1967. The previous regulation providing for the use of these protective agents expired the end of last year.

There seems to be no question about the fact that in the long run the three agents will be accepted permanently. The reason given for the extension was that there were more important and compelling matters upon which the EEC had to act and that it would probably take another six months before a directive could be enacted providing for permanent acceptance.

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Furthermore, each member country has its own Phyto-Sanitary Regulations, which can be formidable trade barriers; and Italy prohibits diphenyl.

Duties applicable to imports of oranges from "third countries" (such as the United States) into all member states uniformly will be 20 percent for the period October 16-March 31 each year and 15 percent for the period April 1-October 15. Lemon imports are dutiable at 8 percent and grapefruit at 7.2 percent, both on a year-round basis.

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Free circulation of citrus fruits among the member states of the European Economic Community began January 1, which means that no import duties now are applicable between the member states themselves.

Nevertheless, transaction taxes of the members have not been abolished, and they vary considerably--namely, 14 percent in Belgium and Luxembourg, 5 percent in The Netherlands, 2.5 percent in Germany and 1.5 percent in France.

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The European Parliament in Strasbourg, France, has created a Food Committee which, it is understood, will be concerned with food laws of the European Economic Community, particularly as regards chemical additives.

The European Parliament is strictly an advisory body to the EEC, but it is a convenient "sounding board" of public opinion regarding proposed rules and regulations being considered in Brussels.

The German Parliament (Bundsrat) has adopted for West Germany a Pesticide Residue Regulation or Ordinance applicable to 81 chemicals when used on fruits and vegetables and prohibiting the use of 14 other chemicals or groups of chemicals for the same purposes. The effective date is January 1, 1968.

The maximum residues (tolerances) stipulated in the German regulation parallels, in general, the similar regulation of The Netherlands of April 1965, although in some instances the tolerances are less and there are a few additions.

As in the case of the Netherlands regulation, the tolerances of the various pesticides are in most instances considerably lower than those stipulated in the United States.

On and after January 1, 1968, California-Arizona citrus fruits, and those from all other countries (including Italy), will be illegal in Germany if any of the pesticide chemical residues exceed those stipulated in the regulation. Thus, they could be excluded or destroyed.

Admittedly, the facilities for enforcing adequately such a regulation would be greatly in excess of anything that is presently available in Germany; therefore, it is presumed, like the situation in The Netherlands, that enforcement will be quite sporadic and infrequent, especially if the officials are convinced that citrus fruit imports conform with the requirements of the ordinance.

## MECHANICAL HARVESTING

The mechanical harvesting project is the responsibility of others, however evaluation of the fruit from this program is carried out within this Section. Contrary to the impression given by recent press accounts, this program has now moved into semicommercial tests and two canneries have used fruit from the mechanical harvesting program.

This is mentioned here because it points up two aspects that are of real concern to the packinghouse industry. Successful mechanical harvesting is going to involve a far greater degree of coordination from tree to extractors than has been attempted to date. Once such problems have been mastered, the spread between costs of cannery and fresh fruit harvesting are going to become increasingly wider. This, in turn, will increase the "cost-price squeeze" on the packinghouse operation, particularly with regard to low pack-out crops. This in turn relates to the problems discussed below.

## PACK-OUT, AUTOMATION AND MANAGEMENT

The increasing price-cost squeeze has caused a belated interest in a series of now out-of-print papers from this department relating to the economics of pack-out (e.g. see "Citrus Close-ups," Florida Grower and Rancher, February, 1967, pages 40-41). Not only are these papers now largely out-of-print, but fruit prices and labor and equipment costs have all changed in the intervening years.

As time permits, many of these figures are being brought up-to-date for publication in a future article. Meanwhile, the experiment is being tried of including graphs, tables, etc. in this Newsletter as they are developed. It is hoped that these will be of use to management in long-range planning and resultant comments and discussion might be very helpful in attempting to serve the needs of the industry.

For the immediate future, equipment is available that can reduce labor costs on particular operations, such as tree-to-packinghouse hauling, or packing of shipping containers. For the long haul, a complete reevaluation is obviously going to be involved in order to be able to utilize expensive equipment fully and to live within the increasing stringencies of the Wage and Hour Law.

### Cost of Pick and Haul as Related to Pack-out

Figure 1 illustrates the relationship between pack-out and the amount of fruit that has to be picked by fresh fruit methods in order to have a given volume of packed fruit to sell. In the example shown, for a 600,000 box house, using crops averaging 80% pack-out involves picking and hauling a quarter of a million boxes less than when using crops averaging 60% pack-out.

### Optimum Utilization of Automatic Equipment

Any automatic equipment is expensive and the only way to make it pay is to turn out the greatest possible number of saleable packages with the

minimum amount of equipment and as little overtime as possible. Figure 2 shows the theoretical possibilities for a packinghouse averaging a dump-rate of 750 boxes per hour for 8 hours per day. Working 180 days per season, on crops averaging 60% pack-out, annual output is 648,000 packed boxes. If, in theory, working days per season can be extended to 210 (35 six-day weeks) and average pack-out raised to 80% , then this very modest dump-rate results in a theoretical 1,000,000 packed boxes per season!

#### Hours per Day and Days per Season

Figure 3 illustrates the theoretical output for various lengths of working season for dump rates of 500, 750, and 1,000 boxes per hour and working days averaging 8 and 10 hours and presuming an average pack-out of 80%. (This average pack-out will be considered high by many, but Figures 1 and 2 illustrate that, with increasing pick and haul costs, expensive packing equipment and increasing minimum wage, low pack-out crops are going to be just too expensive to handle in fresh fruit channels.)

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It is emphasised that these three figures illustrate theoretical possibilities. However, management of our better packinghouses are already starting to push actual accomplished results closer to theoretical possibility than had even been considered when the first "costs and pack-out" paper was published from this Section, 10 years ago. It is hoped that we, who are not involved in the day-to-day complexities of the market, can help by supplying a long-range viewpoint: that is, frankly, strongly partial towards the continuance of a strong fresh fruit trade.

William Grierson, Head  
Harvesting & Handling Section

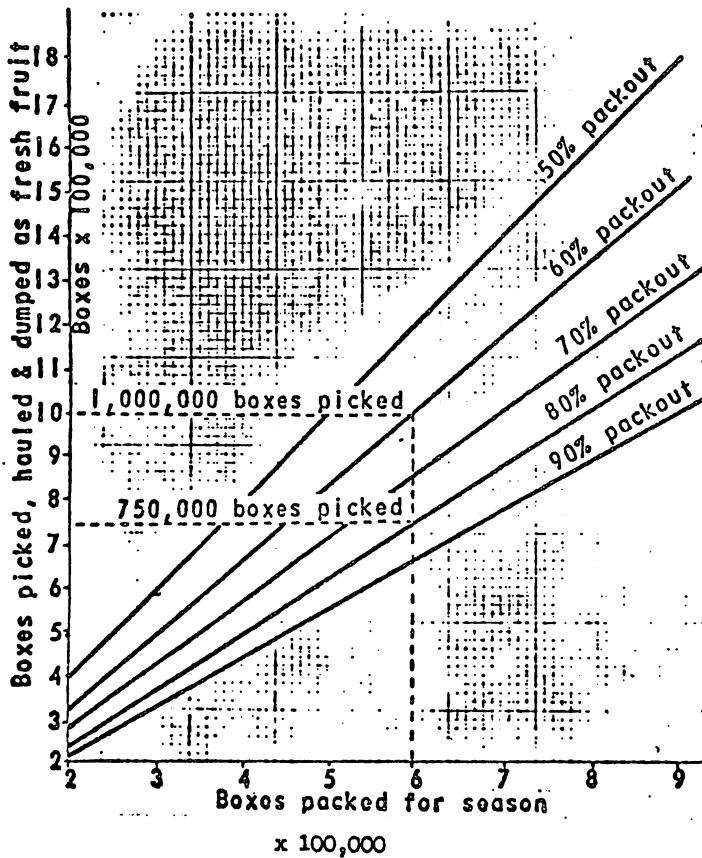


Figure 1

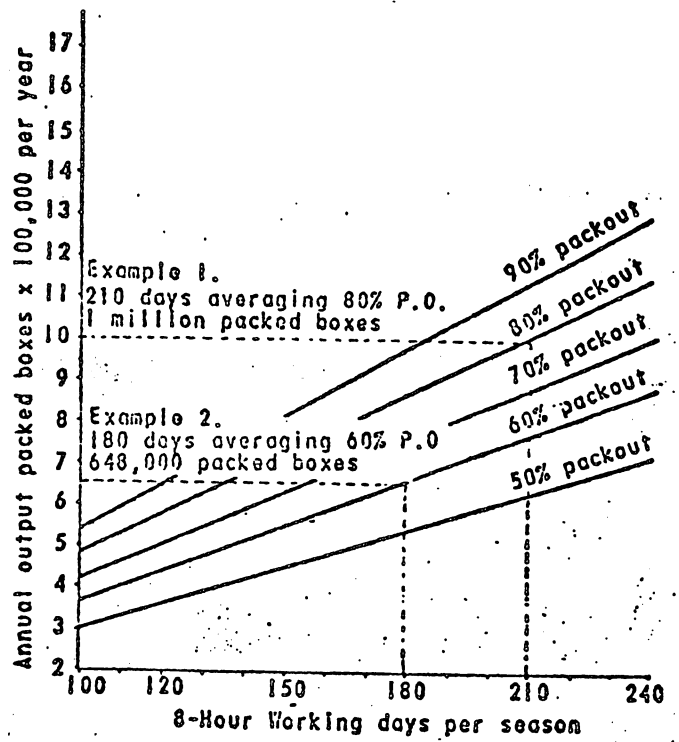


Figure 2

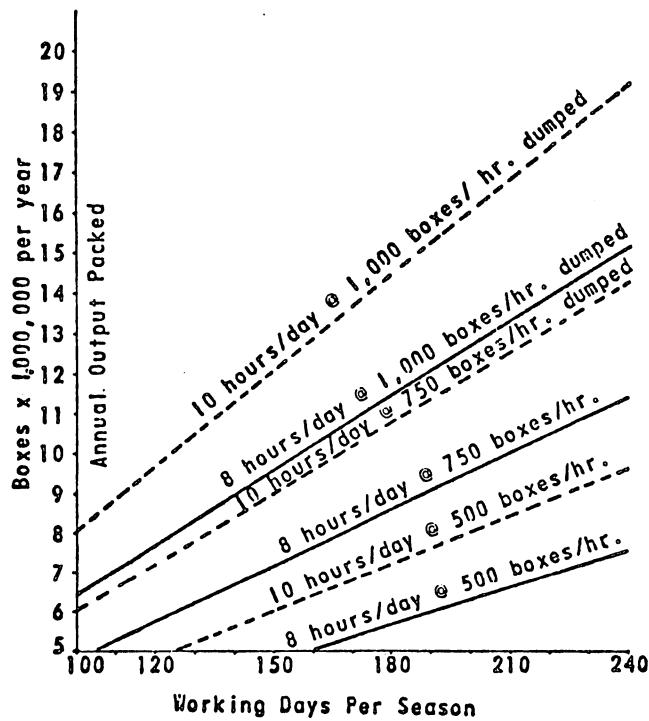


Figure 3