



Editor: W. F. Wardowski
Harvesting and Handling Section
University of Florida
Agricultural Research and Education Center
P. O. Box 1088
Lake Alfred, Florida 33850

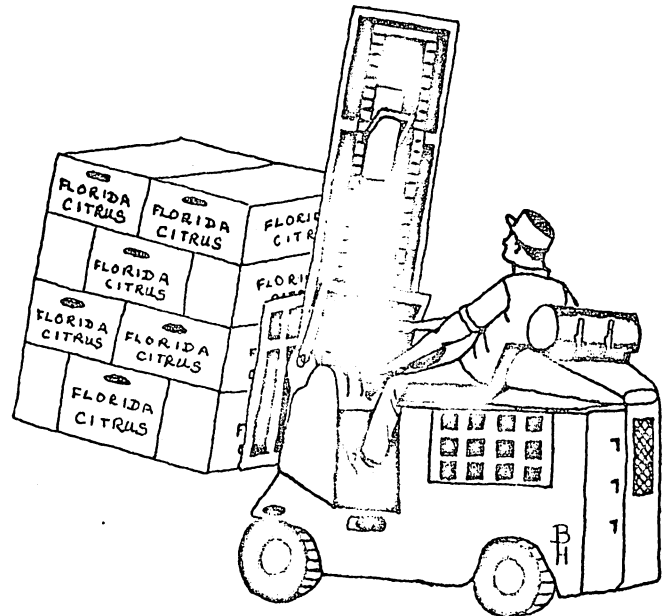
Packinghouse Newsletter

UNIVERSITY OF FLORIDA INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

and

STATE OF FLORIDA, DEPARTMENT OF CITRUS

*Anyone wishing to receive this newsletter
may send a dozen stamped, preaddressed
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Harvesting and Handling Section

P A C K I N G H O U S E

N E W S L E T T E R

CHANGE IN CALIFORNIA'S CITRUS FRUIT FUMIGATION REGULATIONS

The California Department of Agriculture has notified this office that shipments of citrus fruit made on November 1, 1972, and thereafter must be fumigated to prevent movement of Caribbean Fruit Fly infested fruit. Whereas in the past, fumigation was required only during the period March 1 to September 1, it is now to be required on a year round basis. Only green limes are exempted.

This action was taken by California due to their interception of Caribfly in fruit during the period fumigation was not required.

The fumigation chambers at the Doyle Conner Building in Gainesville will begin operation November 1, remaining open 24 hours per day from Monday 8:00 A.M. to 12:00 midnight Saturday. As in the past, any trucks waiting on the lot at midnight Saturday will be fumigated.

Shippers must complete a Request for Fumigation form. Please read the instructions contained on this form carefully. If you need a supply of this form, please request them from the address below.

Ralph E. Brown, Plant Specialist Supervisor
Florida Department of Agriculture & Consumer
Services, Division of Plant Industry
Doyle Conner Building
P. O. Box 1269
Gainesville, Florida 32601
(904) 372-3505

FUMIGATION OF GIFT FRUIT FOR CALIFORNIA

Fumigation of gift fruit poses a special problem due to the small amount of fruit normally shipped at one time. Gift fruit shippers and individuals intending to send citrus fruit to California should check with the Division of Plant Industry, Gainesville (above). We are advised that arrangements are underway for fumigation of small lots of fruit.

H. M. Riley
Division of Fruit & Vegetable Inspection
Winter Haven

REFRIGERATION CAPACITY AND POWER REQUIREMENT

We are seeing an increasing pressure towards more use of refrigeration; and use of refrigeration calls for some costly decisions.

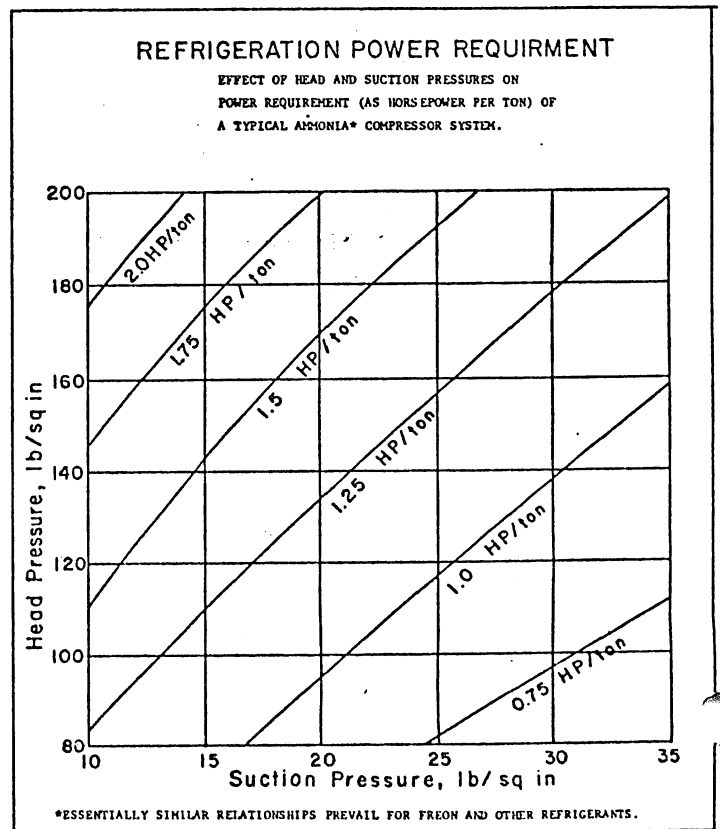
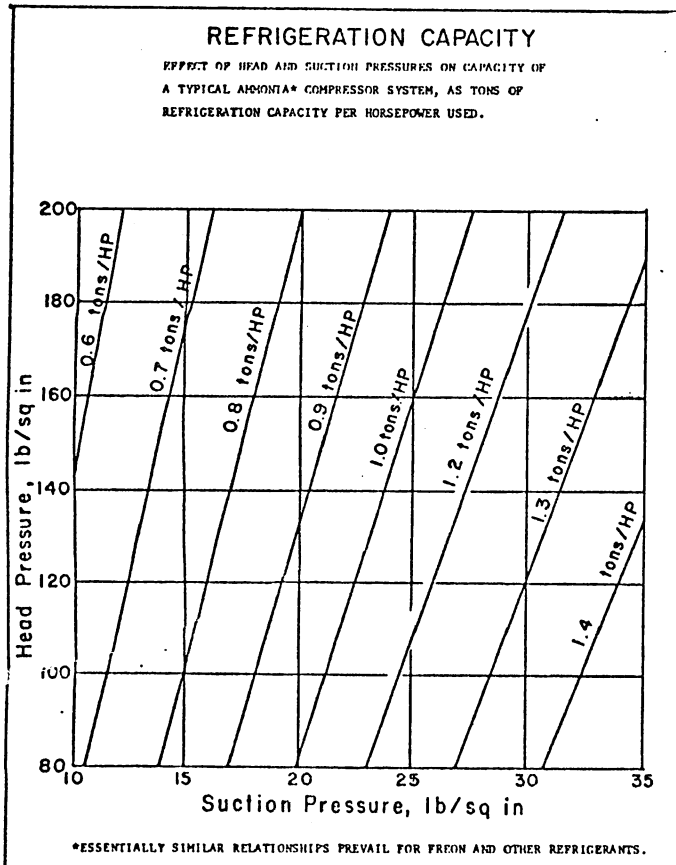
These two graphs need not be thoroughly understood in order to be extremely useful to packinghouse managers. The information contained herein can be valuable when planning and discussing new storage or precooling capacity and refrigeration equipment generally. Figure 1 illustrates that by decreasing head pressure from 180 to 80 psi and increasing suction pressure from 10 to 30 psi, the refrigeration capacity can be more than doubled without changing horsepower. Figure 2 is another way of looking at the same information wherein reversing the pressures mentioned above, it would take more than twice as much horsepower to produce the same amount of refrigeration capacity.

In general, small condensing equipment, run fast at very high pressure differentials, tends to be cheaper to purchase initially; but more expensive to run and maintain. Also the "tonnage" that a given system can deliver is related to the coil temperature. The lower the coil temperature required, the lower must be the suction pressure. As Fig. 1 shows, tonnage per horsepower delivered by a given system drops drastically with decreasing suction pressure. Conversely, as seen in Fig. 2, maintaining a required tonnage capacity from a given system calls for sharp increases in use of horsepower as the required suction pressure (and hence coil temperature) drops. Thus small coils, run very cold, can be cheaper to buy, but (apart from inevitable defrosting and humidity control problems) very expensive to run.

This is the sort of information that refrigeration engineers are accustomed to using, but often find very hard to explain to managers and owners seeking to make the wisest choice between immediate price and future costs. We hope these two charts will help to provide a common ground for future discussions between contractors and management.

Fig. 1.

Fig. 2.



AVAILABLE PUBLICATIONS

Available from Dr. W. Wardowski, Harvesting and Handling Section, Agricultural Research and Education Center, P. O. Box 1088, Lake Alfred, Florida 33850.

"Heating of Citrus Fruits During Degreening and Associated Temperature Gradients Within the Typical Horizontal Airflow Degreening Room", by Douglas L. Deason and W. Grierson. Proc. Fla. State Hort. Soc. 84:259-264. 1971.

"Postharvest Decay Control Recommendations for Fresh Citrus Fruit", by A. A. McCornack and W. F. Wardowski. Extension Circular 359, March, 1972.

"Market Diseases & Blemishes of Florida Citrus Fruits", by A. A. McCornack and G. E. Brown. Florida Department of Citrus. A valuable aid for identification of 12 diseases and blemishes including color photographs.

Available from Publication Distribution Center, Cooperative Extension Service, Building 664-IFAS, Univ. of Fla., Gainesville, Florida 32601 (NOTE: Residents of Florida may obtain these from their County Extension offices.)

"The Tahiti Lime", by C. W. Campbell. Fruit Crops Fact Sheet No. 8, June, 1972.

"The Banana", by C. W. Campbell. Fruit Crops Fact Sheet No. 10, June, 1972.

"The Carambola", by C. W. Campbell. Fruit Crops Fact Sheet No. 12, June, 1972.

"The Macadamia", by C. W. Campbell. Fruit Crops Fact Sheet No. 9, June, 1972.

"The Papaya", by S. E. Malo and C. W. Campbell. Fruit Crops Fact Sheet No. 13, June, 1972.

This public document was promulgated at an annual cost of \$201.60, or two and one-half cents per copy to inform county agricultural directors, ranchers, and growers of research results in harvesting and fresh fruit handling and marketing.