late ripening and suggested as a supplement to 'Fuyu.'

**Summary**

Four of the non-astringent varieties tested are suggested for trial in Florida. These are 'Hanafuyu,' 'Jiro,' 'Hanagosho,' and 'Fuyu (J).' 'Gianbo' as well as 'Hachiya' and 'Tanenashi' are astringent varieties suggested for planting.

There were no conclusive differences between *D. kaki* and *D. virginiana* stocks except that the latter caused objectionable suckering. Further tests of possible *D. kaki* effects on improved fruiting of 'Hachiya' and some other varieties should be made.

Even though persimmons break dormancy relatively late, they are not a satisfactory crop for cold sites in Florida. Over a ten year period, late March freezes caused blossom and terminal injury twice. Wood and trunk injury in January, 1960 caused loss and reduction of crops for two succeeding years. Yields would be too low for commercial interest on such sites.

**Literature Cited**


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**FORWARDING INSTRUCTIONS FOR TROPICAL FRUIT PLANTS ENTERING THE U.S.A.**

Wm. F. Whitman

In arranging for fruit plant imports entering the U.S.A. the uninitiated usually assumes the foreign shipper will handle everything in a satisfactory manner. Unfortunately just the opposite commonly prevails and material that has taken a year or more to propagate is frequently lost because of a lack of "forwarding know-how."

**Delays, Inspection, Documentation and Treatment.** Delays between the time the plant material is brought in for packing and when it is turned over to the forwarding airline should be held to an absolute minimum. Most frequent cause for such detaining is the inspection, documentation and treatment rendered by the agricultural department of the country where the shipment originated. According to U.S. Dept. of Agriculture regulations the treatment of plant propagating material is not required prior to shipment from foreign countries. The delay and treatment, especially when fumigation is used, commonly cause the death of the forwarded plants prior to their arrival in the United States. While foreign inspection and photosanitary certification are desirable, plant shipments will not be refused entry into the U.S. because of a lack of such inspection or certification. As the U.S.D.A. Plant Quarantine treatment of incoming plant shipments is based on plant pests and diseases found, every effort should be made to forward only healthy, vigorous, disease and pest free material. Such "clean" plants are less likely to be fumigated upon arrival by our Plant Quarantine.

**Packing.** Plants should be shipped bare root (free of soil) and be labeled with their botanical name, the variety and whether graft, marcot or seedling. Plastic bags have been found to give good results when used for shipping plant material. One or more plants can be enclosed in each large plastic bag of suitable size to contain them. These bags should be sealed by tying the end after the plants have been placed inside. This prevents any loss of moisture and keeps the plants from drying out and wilting. No sphagnum moss or other material should be enclosed, as this only adds unnecessary weight to the shipment. Small plastic bags can be used for tying up the roots of the plants in order to prevent damage in transit, the roots first being
enclosed in the small bags and then the entire plant or plants put inside the large bag.

A light weight cardboard box should be used for shipping and the suggested overall weight of minimum shipments held down to six pounds or less if possible. As the airline's freight rates are based on either weight or cubic displacement, whichever figures out more, the smallest shipping container that will hold the plant material without damage should be used and plants selected for shipping should be preferably not over 30 inches in overall length. Those that exceed this length can have their tops pruned back to avoid having to use larger shipping containers. The Green and Yellow U.S. Dept. of Agriculture Shipping Permit (which you have previously obtained from the Plant Importations Branch, U.S.D.A., 209 River Street, Hoboken, New Jersey and forwarded to your shipper) should be placed on the outside of the package. This "Green and Yellow" shipping permit should be addressed to the consignee's anticipated first-port-of-entry, which in the case of the writer would usually be Miami. Labels printed with "TROPICAL PLANTS — PROTECT FROM HEAT AND COLD" and pasted to the outside of the forwarding container have been useful in preventing the shipment from being exposed to injurious temperature extremes en route. It has been found advantageous to furnish the shipper with these tags as well as plastic bags for forwarding the plants in.

Advance Notice Of Shipment. Prior to sending live plant materials the shipper should notify the consignee. An air mail letter posted ten days before shipment will normally handle this requirement. Not only will this alert the person who is to receive the shipment, but it will enable him to make plans for some one else to obtain it for him in the event he is un-

Packing: 1) Wash soil from roots. 2) Tie small plastic bag around roots. 3) Place plants in large plastic bag. 4) Use light weight cardboard box.

—Photo by Wm. F. Whitman
Plants received in a weakened condition after prolonged shipment often make a more rapid recovery when they are enveloped in clear plastic bags and placed in semi-shade.

—Photo by Wm. F. Whitman
available on the date of its arrival. Also with an approximate departure date overdue shipments can be checked by contacting the air freight department of the forwarding airline to ascertain the cause of the delay and the shipment's whereabouts. If the shipper air mails a copy of the air waybill this search for the shipment is made much easier.

Routing. The shipment should be routed so as to enter the United States at the nearest first-port-of-entry to the consignee's address. Instances in which this is not followed can result in the plant shipment taking longer to travel domestically than it required in the first place to reach the U.S. The routing should be typed across the face of the air waybill along with the words "No Deviation." Past experience tends to indicate that shipments arriving in Miami as the First-Port-of-Entry are possibly more likely to survive than if inspected and treated in other Plant Quarantine Stations, some of which are less familiar with tropical plants and therefore more likely to resort to the fumigation of incoming shipments. Plant importers using Miami as the Port-of-Entry should request the shipper to route the consignment so that it will not enter the U.S. at other ports. Examples of such routings would be K.L.M.'s Amsterdam, Holland, Curacao, Netherlands Antilles, Miami and B.O.A.C.'s London, Bermuda, Nassau, Miami, where the shipment which originated in tropical areas would otherwise have passed through New York, Los Angeles or some other port. Any decision regarding the best season of the year to receive forwarded plants will be influenced by the climates of the shipper's locale, the routing and the final destination within the U.S. The writer's experience in Miami has been that summer shipments usually have the highest plant mortality rate because of the unfavorably high temperatures encountered en route.

Shipping Charges. Shipping charges are usually made air freight collect. Arrangements should be made in advance, so that if there is any question the domestic office of the airline selected can wire its consent for shipments originating outside the U.S. to be accepted. Where a mutual plant exchange prevails, both the foreign and domestic shippers usually prepay for their respective outgoing shipments.

Air Mail. Small packages of three pounds or less can usually be forwarded more cheaply by air mail than by air freight. The least expensive air mail rate is the "Other Articles" classification for the smallest packages and air parcel post for those too large or heavy to go by the "Other Articles" rate. While air mail is cheaper for shipping small packages, air freight usually is considerably faster and may frequently be preferred in spite of the added costs.

Forwarding Seeds. Most tropical fruit seeds cannot tolerate being dried out. Such seeds should be treated with a fungicide as soon as they are removed from the fruit and then be immediately packed in moist pulverized charcoal perlite or other suitable material. Good results have also been obtained by shipping seeds which have just started to germinate, in which case they are less likely to rot and die in transit. Seed shipments should be made in small plastic bags, the ends of which are tied shut.

Plastic Bagging Potted Plants. Plants received in a weakened condition after prolonged shipment often make a more rapid recovery when they are enveloped in clear plastic bags after being potted. Three or four equally spaced sticks thrust into the potting soil help to support the bag and keep it from collapsing over the plants. The bags are tied around the outside of the tops of the plant containers, after which the plastic covered plants are placed in semi-shade to avoid excessive heating as would take place in direct sunlight. After new growth commences and the plants make a suitable recovery the plastic bags can be removed. This should be carried out in gradual stages over a period of a week or more. Unless this is done the difference between the high humidity inside the bag and the normally lower humidity of the outside air can cause sufficient shock to result in the death of the plants.