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Advantages of Air Freight

Airfreight allows products to be quickly transported over long distances. The short transit times allow producers to quickly respond to market needs, allowing highly perishable products to reach distant markets that cannot be serviced by highway or marine transport. Airfreight is commonly used for high value horticultural products including flowers, other ornamental products and fresh cut fruits and vegetables.

Recent IATA (International Air Transport Ass) statistics report a 9.3% growth rate per annum in airfreight. The Association of European Airlines predict a rise of 8.7% per annum in airfreight volumes for future years.



Plate 1: Open pallet awaiting loading, the produce is warming up in the sunshine

Plate 2 (Top Right): Roped open pallet load covered with insulation material to reduce temperature changes

Plate 3 (Right): Aircraft ULD (Unit Load Device) enclosed containers, as used for perishable products



Industry Involvement

Writtle College has been involved with airfreight of perishables in design, refurbishment and management of facilities (at 5 airports in Africa), and the monitoring of consignments and training. EU, USAID and commercial companies have funded this work (including student dissertations). Writtle staff have written various training manuals, conference and research papers as well as co-authoring a University of California Davis (UCD) publication. (This is believed to be the first time a non American has been involved in a UCD postharvest booklet).

Limitations of Air Freight

Only a small amount of perishable products are shipped by air because it is considerably more expensive than highway or marine transport. The freight cost per unit weight can be ten times that of sea freight, although the actual costs vary according to destination, season and market cycles

Lack of temperature control is the most serious disadvantage for perishable commodities shipped by air. Cold storage is not dependably available at airports and, even if it is present, it may not be available for use with horticultural products. Before loading the cargo will be positioned outside near the plane. The freight areas can also be quite variable in temperature, which can lead to product deterioration through temperature abuse.



Figure 1: Produce temperature before and after installation of an improved handling system designed by Writtle College. From ADC / IDEA project in Uganda (Funded by USAID)

Recent Publications:

- Thompson JF, Bishop CFH, Brecht PE (2004): Air Transport of Perishable Products, UC Davis, University of California, 22 pgs
- Bishop CFH & Morpeth DR (2000): Perishable airfreight out of Africa, some observations. *Outlook in Agriculture* 29 (3) p221-224
- Bishop CFH (2000): Transport aeren de fleurs coupees d'Afrique. *Revue General du Froid*, 1004 p53-56

