POST-HARVEST and TRANSPORT TECHNOLOGY ISSUES in EAST & SOUTHERN AFRICA - VIDEO CONFERENCE
Tuesday 22 June, 2010, 9:30 to 17:00

Kenya position paper

Abstract

Europe remains the main international Market for Kenyan horticultural produce. Despite the market becoming increasingly competitive with regard to produce quality and price, expansion to other international markets for Kenyan produce has been slow partly due to lack of direct air freight to most potential markets; and high air freight charges. Efforts to mitigate high air freight charges have focused on sea freight as a cheaper alternative means of transport. Preliminary results indicate that fruits and vegetables such as sugar snap, snow peas, garden peas, sweet corn, baby corn, broccoli, and baby carrots can successfully be freighted to international markets through the sea. However, for the leafy vegetables and other products such french beans there is need for special packaging material to facilitate transportation through the sea. There are about 1200 active and well coordinated logistic service providers with adequate warehousing and transport facilities for handling fresh horticultural produce in Kenya. It is however believed that "interest groups" among service providers have hindered fare business competition resulting in exaggerated freight charges. Efforts to facilitate direct air links for regional trade have had little achievements partly due lack of enactment of regulations on competition into local law of African States. Information on capacity of private owned Horticultural Produce Handling Facilities (HPHF) i.e. cold storage and refrigerated trucks is scanty. However, there are ten (10) cold storage facilities with a capacity of 715 tonnes per day owned by the public sector.

1.0. Present status of storage, transport, and logistics for horticultural produce

1-1. Storage of horticultural produce

A large number of cold storage facilities are owned by the private sector with the public sector owning limited pre-cooling and cold storage facilities. Most cold storage facilities are concentrated in Nairobi. Private cold storage is mainly owned by exporters and logistic service

providers (Specialized Phyto Operators). Information on the capacity of privately owned horticulture cold storage facilities is scanty. It is estimated that the ten (10) leading export companies have a total cold storage capacity of over 1790 tonnes per day. The four (4) leading companies (Air Connection, Kuehnet+nagel, Air-link, and Total touch) in providing logistic services are believed to have adequate cold storage facilities at the Jomo Kenyatta International Air-port (JKIA) that caters for export companies that do not own cold storage facilities. There are two hundred and fifty nine (259) companies actively involved in exporting of horticultural produce in Kenya. There is also a private owned cold storage facility with a capacity of 250 tonnes per day at the Eldoret International Airport.

The public cold storage facilities are owned by the Horticultural Crops Development Authority (HCDA) and the Kenya Airport Authority (KAA). The Horticultural Crops Development Authority owns eight (8) cold storage facilities with a total capacity of 205 tonnes per day. The KAA owns two (2) storage facilities with a total capacity of 510 tonnes per day; the facilities are located at the Jomo Kenyatta and the Moi international Airports.

1-2. Transport of horticultural produce

As indicated in the preceding paragraph, information on the capacity of privately owned Horticultural Produce Handling Facilities is scanty. It is estimated that the ten (10) leading export companies have 125 trucks with the capacity to transport 719 tonnes of horticultural produce per day.

There are one thousand two hundred (1200) registered companies actively involved in providing logistic services including air, sea, and land freight in Kenya. The companies operate under an umbrella organization known as the Kenya International Freight and Warehousing Association (KIFWA). The companies' transport capacity for fresh horticultural produce outstrips the demand.

The public transport for horticultural produce is owned by the Horticultural Crops Development Authority (HCDA). The Authority has 44 trucks with the capacity to transport 217 tonnes of horticultural produce per day.

1-3. logistics of horticultural produce

The companies affiliated to the Kenya International Freight and Warehousing Association (KIFWA) and the Kenya Ships Agents Association (KSAA) are registered to provide logistic services to exporters in Kenya. Whereas KSAA deal with sea freight, KIFWA provides air, sea and land freight services. There are forty seven (47) shipping lines registered with

the Kenya Maritime Authority (KMA); twenty one (21) shipping lines are active carriers from the port of Mombasa.

The companies provide logistic services such as: payments for freight and customs charges; customs clearance; and tracking of the shipment from the port of exit to the port of entry. The companies also undertake consolidation of horticultural produce.

In Kenya, production of fruits and vegetables is predominantly smallholder with most production areas having on-farm produce collection shades constructed by individual farmers or groups of smallholder farmers.

Depending on the availability of the public storage facilities, the produce from smallholder farmers is either pre-cooled or directly transported to cold storage facilities that are highly concentrated around the Jomo Kenyatta International Airport (JKIA). In the case of sea freight, most produce is transported over 500 km in reefers to the port of Mombasa. There are 120 power charging points for perishable reefer containers at the port of Mombasa. The power points enable the charging of containers while awaiting loading onto ship liners thus ensuring continued cold chain management of the produce. On average, logistics for air freight are concluded within 24 hours whereas sea freight logistics are completed within 96 to 120 hours.

Due to the risk associated with long produce handling chain, the number of exporters seeking "known shipper status" with air carriers is on increase. On average consignments for export companies without the "known shipper status" leave the chilling blower two (2) hours before the flight scheduled departure time. However, for export companies with "Known Shipper Status", on average the consignment leave the blast chilling blower 15 minutes before departure. In addition, export companies with "Known Shipper Status" are waived of handling charges; don't incur costs of jelly packs for maintaining the produce at low temperature before loading into the air craft, and their shipments weigh less.

2.0. Present status of the crisis management

2-1. Air freight

One of the oldest vices in air freight business is immense "group interests". The "group interests" operate in form of cartels and determine air freight operations such as: duration for clearing a shipment; availability of space in the air craft; refund period for money deposited by an exporter; and air freight charges.

This vice has negatively impacted on most companies dealing in air freight business in Kenya. To mitigate the negative impression, the Kenya International Freight and Warehousing Association (KIFWA) in collaboration with other air freight associations for member states of East African Community have developed a code of practice for all its members with a view of disbanding cartels. A certificate of compliance is mandatory for affiliation to KIFWA.

The cost of air freight in Kenya is up to 41% higher compared to sea freight. High cost of air freight charges makes Kenyan produce less competitive compared to that of countries like Egypt, Morocco, Guatemala, and Peru that use largely sea freight. Efforts to mitigate the high air freight charges have also focused on adoption of packaging technologies that can enable shipment through the sea. There are on-going sample checks of assorted produce through the sea to Europe; the results are very promising. It is envisaged that Kenyan produce will be more competitive in the international market with the break through of shipment of most horticultural produce through the sea.

2-2. Sea freight

The port of Mombasa is the hub for sea freight of horticultural produce destined for export markets. With rather prohibitive air freight charges, most bulk produce especially fruits are increasingly been transported through the sea.

Other than the fruits, results of shipment through the sea for produce such as snow peas, sugar snap, garden peas, broccoli, baby carrots, and generally non-leafy vegetables have been very promising.

Shipment through the sea is threatened by piracy in the Gulf of Aden and on the East Coast of Somalia. Subsequently, ship liners avoiding the gulf take 22 – 32 days to Europe depending on the destination compared to 14 – 16 days through the gulf. Piracy has thus increased the cost of sea freight and the need for investing in special temperature controlling bags for packaging of produce that is shipped through the longer route.

Although not to the same extend, “group interests” similar to those in the air freight have been reported to operate in sea freight business. It is predicted that unless strong measures are put in place, the operations of “group interests” will significantly increase the cost of sea freight as most people seek for cheaper sea transport for perishable produce.

Despite the comparatively lower cost of Shipping through the sea, most exporters have to contend with congestion at the port of Mombasa. In

addition, there is need to invest in developing crop varieties that are appropriate for sea transport.

3.0. Collaboration on air transport

Kenya has entered into Bilateral Air Service Agreement (BASA) with a number of countries in Africa with a view of facilitating direct air links. However, like BASA agreements between other countries, the agreements have not been implemented mainly due to lack of clear guidelines on competition rules and arbitration procedures. In addition, opponents of BASA have accused the initiative of creating a platform for airlines to collude.

The Yamoussoukro Decision (YD) adopted in July 2000 by the Assembly of Heads of State and Governments of the Organization of African Union has addressed what was perceived to be the challenges in implementing the BASA agreement. Despite these efforts, there has been little progress in regional liberalization of air transport in Africa. This has been attributed to lack of enactment of regulations on competition into local law of African States.

RECOMMENDATION

Need for local Horticultural Industry to Embrace Latest Postharvest Technology

The use of ethylene response inhibitor 1-methycyclopropene (1-MCP) is one of the latest Post harvest technology in the horticultural industry. It has had a huge impact with its potential to maintain the quality of fruits, vegetables and flower quality for a considerable period after harvest (Up to 3 weeks).1-MCP was patented in 1996 and is commercially available in powder form which is released as a gas when the powder comes in contact with water/moisture. 1-MCP is colourless, odorless, non-toxic and is applied at very low dose levels, with low measurable residues in food commodities.

It was approved by the United States Environmental Protection Agency (EPA) in 2002 and currently marketed under the trade name SmartFresh^{TM} by Rohm and Haas Company (Springhouse, PA, USA). By 2007, registration for 1-MCP use in horticultural products (Both food and non-food) had been obtained in Australia, Canada, France, Israel, New Zealand, the Netherlands, UK, Turkey, Switzerland, Brazil, Mexico and South Africa. Registration for its commercial use is still ongoing in several other countries.

Registered crops, which are specific to countries include, apple, avocado, melon, papaya, pear, pepper, tomatoes, mango, squash, bananas, plantains, rose flowers, carnations, Chrysanthemum, Alstroemeria, Orchids, and tulips. Registration for use for various horticultural products is expected soon for

other countries. Research using 1-MCP to increase potential for shipping longer distances or increasing market share of various horticultural products is being undertaken around the world.

1-MCP is not yet registered in Kenya and information about commercial trials carried out locally remains speculative. 1-MCP research experiments on locally produced mango and tomato fruits are on going at JKUAT. If the local horticultural industry can embrace this technology in combination with cold storage then transportation of horticultural produce by sea will be possible.