Mango

Carrier Transicold's EverFRESH® active controlled atmosphere (CA) system for refrigerated containers now offers a new carbon dioxide (CO_2) injection option to better preserve the full range of perishable cargo, including low-respiring cargo. The new option allows the container to be pre-charged with CO_2 at the start of a voyage and automatically adds more as needed over the course of the trip.

Optimum Temperature: 10.0-13.0°C
Optimum CA levels: O_2: 3.0-5.0%, CO_2: 5.0-10.0%
Weeks in Air: 2-3
Weeks in CA: 3-5
Relative Humidity: 85-95%

Benefits of CA:
Low O_2 can delay ripening. Elevated CO_2 can maintain firmness. Low O_2 and high CO_2 can delay decay. However, anthracnosis which comes from the field is not effectively prevented by the use of CA as CO_2 levels would have to be higher than 10-15% which would damage fruit and cause undesirable flavors.

Ethylene:
Mangoes produce ethylene and are sensitive to it. Ethylene favors ripening and decay. Avoiding ethylene in transit can help extend transit life potential*.

Special Treatments Before Shipping:
Heat treatments may be used to reduce anthracnose. Heat treatment is used for quarantine insect control for certain importing countries. Heat treatment weakens the fruit and makes it more susceptible to premature ripening and decay. CA can help retard these effects.

Varietal Differences:
Varieties differ in their sensitivity to chilling injury. Less ripe fruit are more sensitive to chilling injury than more ripe fruit. Most varieties, when unripe, will be injured if held < 10°C. Many varieties grown in Southeast Asia are sensitive to lower than 5% O_2.

Mixed Loads:
Should not be shipped with ethylene producing commodities.

Cautions:
O_2 < 2% (< 5% for SE Asia-grown varieties) can cause off-flavors and skin discoloration. CO_2 > 10% can cause softening, off-flavors and grayish flesh color.