Green Asparagus

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: 0.0-2.0°C
Optimum CA levels: O_2: 10.0-15.0%, CO_2: 10.0-15.0%
Weeks in Air: 1-2
Weeks in CA: 2-4
Relative Humidity: 90-98%

Benefits of CA:
Low O_2 is not beneficial for asparagus. Elevated CO_2 can help maintain tenderness and green color, and slows down development of soft rot. 10% O_2 +10% CO_2 is beneficial for long distance shipments.

Special Treatments Before Shipping:
Hydrocooling is the best pre-cooling method for asparagus. Asparagus should be kept vertical so that the spears do not bend as they continue to elongate after harvest. Brief exposures to 20% CO_2 can reduce soft rot at the butt end. Spears tolerate insecticidal treatments with 60% CO_2 for 4 days at 0°C.

Ethylene:
Asparagus produces very little ethylene but is sensitive to it. Avoiding ethylene in transit will help prevent toughening of spears and help extend transit life potential.

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

Cautions:
O_2 < 10% can cause discoloration of the spear. CO_2 >10% at 3-6°C and >15% at 0-3°C can increase elongation of the spears, weight gain, and sensitivity to chilling and pitting. Asparagus is sensitive to chilling at <2-3°C for longer than 4 weeks.