

# COOLING SECTORS PROFILES

## EU Fresh Fruit and Vegetable Sector



The EU fresh fruit and vegetable sector ensures the continued availability of high quality, safe to eat, and highly diversified fresh fruits and vegetables to consumers. This is particularly important as fresh fruits and vegetables form a significant and vital part of a balanced healthy diet; high quality and a stable supply of European fresh produce is essential to the well-being of all people across Europe and globally.

The sector is worth close to 200 billion euros and creates millions of direct and indirect employment opportunities across Europe each year from production activities down to trade, logistics and retailing, creating a significant economic value to the sector and the EU economy.

### WHAT IS THE ROLE OF COOLING IN THIS SECTOR?

In the fresh produce sector, cooling is used across the entire supply chain with a preference for a closed cooling chain from producer to the end consumption. This means that cooling should be continuous throughout the chain.



#### STORAGE.

Types of cooling used:

- Ammonia refrigeration in cool cells (commonly used)
- Hydro cooling
- Ice showers
- Cooling air



#### TRANSPORT.

Types of cooling used on trucks:

- Diesel cooling units (common)
- Electric or cryo/CO2 cooling units



Types of cooling used on ships:

- Electric containers
- Cooling ships (for particular products)

Temperature controls and cold treatments prior to shipment, during transit or upon arrival are also important tools in some cases.

# 200

## BILLION EUROS

is the contribution of the EU fresh fruit and vegetable sector to the EU economy

# 125

## MILLION TONNES

125 million tonnes of fruits and vegetables produced every year of which 75 million tonnes are for the fresh fruit and vegetables market.

# 140

## DESTINATIONS

140 export destinations worldwide making the EU a global player in international trade of fresh fruits and vegetables with more than 36 different fruit categories and 28 vegetable categories

## WHAT IS THE TEMPERATURE RANGE FOR COOLING?

In the fresh produce sector, the cooling temperature range differs both between links in the chain and between products. For example, bananas require 12-13°C during cooling, citrus fruits require 7°C during cooling, and the remainder of fresh produce products require roughly 0°C during cooling. For long term storage, particularly for hard fruit such as apples and pears, the cooling temperature is important, but additionally low levels of oxygen might be required to prevent the fruit from ripening. Conversely, exotic fruit, including bananas and mangoes must be ripened before being transported to retailers, a process which happens in ripening chambers.

## WHAT ARE THE SOCIAL BENEFITS ?

Appropriate cooling of fresh produce has many advantages to society. Importantly, cooling maintains the high quality of European produce and improves its shelf life for consumers. Cooling additionally facilitates access to markets far away and also contributes to market access and trade of fresh produce globally, allowing supply chains to be admitted on markets that would not otherwise be accessible. Indeed certain countries require cooling to facilitate plant safety by preventing certain pests and diseases from developing.

Furthermore, cooling is essential to the sustainability of the sector, for example in food waste reduction, ensuring the viability of the fresh produce sector into the future.

Information kindly provided by Freshfel Europe ([www.freshfel.org](http://www.freshfel.org))

Freshfel Europe is the forum for the European fresh fruits and vegetables supply chain and represents the interests of the sector and its members at European and international levels. Its members and associated members are national associations, organisations and companies with an interest in the European fresh fruit and vegetable sector, including production, trade, logistics, wholesalers, retailing and other services. As such, Freshfel represents stakeholders across the entire vertical fresh produce chain and coordinates tasks for the benefit of the fresh produce sector.