docks and in storage at the distribution centres will all influence how well the product will hold up until it reaches consumers.

What needs to occur?

- During warm months, refrigerated sealed or locked containers are required.
- Distribution systems must know how to handle confectionery products.
- Light in display cases can influence the quality of a confection – white chocolate is especially susceptible to light-induced degradation of flavour due to its lack of natural antioxidants; and exposed nut pieces would also be susceptible to light-induced rancidity.
- Infestation can also occur during transportation and distribution. Examining transporting vehicles and keeping the temperature controlled greatly helps eliminate this concern. Sealed packages can deter insects from trying to penetrate through folds or bore through packaging.

23.12.6 Shelf life determination

Shelf life is governed principally by temperature, humidity, light and exposure to oxygen (packaging). Shelf life is determined by the mode of failure for the particular confection (e.g. taste, bloom or microbial growth).

Table 23.4 lists the shelf life recommendations for products stored properly, sealed and away from light for the purpose of the "Best Before" date. This knowledge can be used as a tool to assist with shelf life determination.

The final shape and form of the confection will also impact its shelf life. Small discs with greater surface are will tend to degrade more quickly than a ten-pound bar. Using conditioned cabinets at specific temperatures and relative humidity for a specific time can also be used to predict accelerated shelf life. An example would be:

Bloom stability potential of a product – a tool to aid in shelf life determination:

- General reference: 1 week of cycling is equivalent to 1 month of shelf life.
- Hold samples at 30 °C (84 °F) for approximately 12 h.
- Hold samples at 20 °C (68 °F) for approximately 12 h.

Table 23.4 Shelf life recommendations for products stored properly, sealed and away from light for the purpose of the "Best Before" date.

Category of product	Shelf life (months)	
	Temperate conditions	Tropical conditions
Milk chocolate	16	12
Dark chocolate	24	24
White chocolate	16	12
Fondant cream filled chocolates	18	12
Chocolate with nuts etc.	12	9
Wafer/cereal centred product	12	9

- Continue until bloom is observed.
- If a sample holds its integrity for 12 weeks, the product can be predicted to maintain its integrity for 12 months.

Many factors contribute to loss of shelf life and failure of a customer to return to purchase a product. Not everyone has resources to perform stability or shelf life testing but we all have the ability to perform sensory analysis on our products to look for degradation and loss of product integrity.