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CHAPTER 2–GOVERNMENT REGULATIONS

2.1 Compliance

It is the shipper responsibility to comply with all governmental regulations applicable to the movement of his goods (see 1.2). These regulations include those of the countries to, from and through which the goods will be carried. However, before accepting perishable shipments, the airline should check as far as possible that the regulations have in fact been complied with.

Most country restricts or prohibits the importation of certain perishable commodities, including foodstuffs. Other impose restrictions on the transshipment of such goods. Many countries have strict controls over the exportation of primary produce. The shipper should be advised to check with local consular representatives for details of regulations that may apply to his goods in overseas countries. Details of export regulations will be readily available, but airlines should check that these have not been overlooked. Note that CITES protected flora fall within the scope of this manual and that country specific variations are filed within this section. See Madagascar below.

A list of restrictions and prohibitions can be found in TACT rules under “Information by Countries”. These regulations are wide in extend and broad in coverage, applying to the importation of plants and plant materials, foodstuff, animals products, vaccines and numerous other perishable goods.

Health certificates and other documents issued by authorities in the country of origin must accompany many perishable goods (see 7.5).

2.2 Government Regulatory Agencies and Food Laws

The following is a non–exhaustive list of regulatory agencies, which can provide useful information and technical support to understand laws and imports requirements in different countries. Please note that the following information should only be used as guideline.

2.2.1 European Union

The European Union (EU) consists of 28 member countries Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom. Briefly, the EU regulations can be summarized as follows:

> All shipments of animal products entering the EU by air are subject to veterinary inspection at the port of entry. The inspection that involves documentary, identity and physical checks will be carried out at designated border inspection posts by the state veterinary authority, or an authority that has been delegated to carry out the checks. Physical checks may take place at the port of destination provided it is one of the designated inspection posts.

The EU has issued a regulation of the European Parliament and of the Council, which lays down the general principles and requirements of food law, establishing the European Food Safety Authority as well as laying down procedures in matters of food safety.

The European Food Safety Authority (EFSA) was legally established by a European Parliament and Council Regulation No. 178/2002. Adopted on 28 January 2002, the Regulation laid down the basic principles and requirements of food law. It also stipulated that EFSA should be an independent scientific source of advice, information and risk communication in the areas of food and feed safety. A further requirement is to set up a network enabling close collaboration with similar bodies in the European Union Member States.

In the Regulation, the responsibility for risk assessment is clearly separated from that of risk management. While EFSA advises on possible risk related to food safety, the responsibility for risk management lies with the EU institutions (European Commission, European Parliament and the Council, i.e. EU Member States). It is the role of the EU institutions, taking into account EFSA's advice as well as other considerations, to propose and adopt legislation as well as regulatory and control measures when and where required.

EFSA is made up of four distinct bodies. They are the Management Board, the Executive Director and staff, the Advisory Forum and the Scientific Committee and Panels.

EFSA's risk assessments are carried out by its Scientific Committee and eight Scientific Panels specialized in the following areas:

- Panel on food additives, flavourings, processing aids and materials in contact with food (AFC)
- Panel on additives and products or substances used in animal feed (FEEDAP)
- Panel on plant health, plant protection products and their residues (PPR)
- Panel on genetically modified organisms (GMO)
- Panel on dietetic products, nutrition and allergies (NDA)

CHAPTER 3—CARRIER REGULATIONS

3.1 General Airline Information

Aer Lingus

EI—AER LINGUS

Contact information

Contact: www.iagcargo.com

AIR CANADA

AC—AIR CANADA

Contact information

- Customer Website
  http://www.aircanada.com/cargo/en/
- **Worldwide offices**
  http://www.aircanada.com/cargo/en/contact/index.html
- **Perishable Cargo Products**
  http://www.aircanada.com/cargo/en/services/ac_cool.html
  http://www.aircanada.com/cargo/en/services/ac_fresh.html

AIR CHINA 中国国际航空公司

CA—AIR CHINA

Contact information

- Sales & Marketing
  Tel: 86 - 10 - 64623822, 86 - 10 - 64623824
  Fax: 86 - 10 - 64623823
  Email: cgomkt@mail.airchina.com.cn
- Warehouse & Delivery
  Tel: 86 - 10 - 64597493, 86 - 10 - 64599303
  Fax: 86 - 10 - 64599303
  Email: specgo@mail.airchina.com.cn
  Website
  http://www.fly-airchina.com

AIRFRANCE

AF—AIR FRANCE

Contact information

- **Contacts**
  http://www.af-klm.com/cargo/portalb2b/contact
  Select: Contact
- **Perishable Cargo Products**
  http://www.af-klm.com/cargo/portalb2b/contact
  Select: Product and Rates, then scroll down to Variation Fresh or Variation Pharma

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  Email: specgo@mail.airchina.com.cn
  Website
  http://www.fly-airchina.com

AIRFRANCE

AF—AIR FRANCE

Contact information

- **Contacts**
  http://www.af-klm.com/cargo/portalb2b/contact
  Select: Contact
- **Perishable Cargo Products**
  http://www.af-klm.com/cargo/portalb2b/contact
  Select: Product and Rates, then scroll down to Variation Fresh or Variation Pharma

as too low temperature will affect the quality of the product at its final destination (refer to chapter 6.4.1.1).

Vegetables

Equally to fruit, vegetables continue being a living matter after having been removed from the plant, hence continue their respiration and therefore deterioration. Vegetables are also climacteric (e.g. tomato) or non-climacteric (e.g. eggplant) and can be affected by ethylene emitted by other products. Exposure to ethylene can affect the taste or appearance (color) of the vegetables. The taste of the product can become bitter or the product will lose its green color and become yellow (e.g. broccoli and cucumbers).

At the same time, exposure to too high or too low temperatures will affect the product and cause changes in taste or color. As in the case of fruit, the temperature is a key aspect in the supply chain of vegetables and should be maintained as much in accordance with the requirements as possible in the entire supply chain.

More detailed information about the effect of handling operations on fruit and vegetables can be found in section 6.4.1.

TABLE 4.2.A
Classification of Some Fruits According to their Respiratory Behavior During Ripening

Climacteric Fruits	Non-Climacteric Fruits
Apple	Blackberry
Apricot	Carambola
Atemoya	Cashew
Avocado	Cherry
Banana	Cranberry
Biriba	Cucumber
Bitter melon	Date
Blueberry	Eggplant
Breadfruit	Strawberry
Cantaloupe	Grape
Cherimoya	Grapefruit
Date palm	Lemon
Durian	Lime
Fig	Longan
Feijoa	Loquat
Guava	Lychee
Honeydew	Mandarin
Kiwifruit	Okra
Kiwifruit	Olive

TABLE 4.2.A
Classification of Some Fruits According to their Respiratory Behavior During Ripening *(Cont'd)*

Climacteric Fruits	Non-Climacteric Fruits
Mango	Orange
Nectarine	Peas
Papaya	Pepper
Passion fruit	Pineapple
Peach	Pomegranate
Pear, European	Prickly pear
Pear, Chinese	Rambuntan
Persimmon	Raspberry
Plum	Summer squash
Quince	Tangerine
Tomato	Tomatillo
	Watermelon

TABLE 4.2.B
Examples of Products that are Ethylene Producers or Ethylene Sensitive

Ethylene Producers	Ethylene Sensitive
Apples	Bananas, unripe
Apricots	Belgian endive
Avocados	Broccoli
Bananas, ripening	Brussels sprouts
Cantaloupes	Cabbage
Cherries	Carrots
Figs	Cauliflower
Honeydew melons	Cucumbers
Kiwifruit, ripe	Eggplant
Mangoes	Green beans
Nectarines	Kiwifruit, unripe
Papayas	Leafy greens
Passion fruit	Lettuce
Peaches	Okra
Pears	Parsley
Persimmons	Peas
Plantains	Peppers
Plums	Spinach
Prunes	Squash
Quinces	Sweet potatoes
Tomatoes	Watercress
	Watermelon

CHAPTER 5—PACKAGING

5.1 General Knowledge

☐ OPERATOR VARIATION: EK-02

There are many types of perishable goods and they all have different characteristics. Some deteriorate quickly and easily, others are less susceptible to the effects of time and temperature. For all products, however, the standard of packaging and handling will determine the success of transportation and the airline's ability to deliver the product in good condition. This section deals with the overall design and construction of packaging, the general methods used for packing and the handling procedures that should apply to all perishable commodities.

Packaging must be of a standard that will help maintain the condition of the contents and minimize the effects of transportation time and environmental change (temperature, humidity, etc.). In addition, packaging methods must prevent contamination, contain any spillage or leakage and withstand the stresses of handling throughout the entire transportation.

Any materials that come into direct contact with food must comply with food safety regulations and must be of food grade standards.

Packaging design must allow for changes in altitude, temperature, angle and orientation which may occur during flight and for changes in weather conditions on the ground, at origin, destination, transit and transfer points.

Containers must be sufficiently strong to withstand stacking to levels specified by the airline(s).

Regardless of the packaging and the protection it offers for the products, temperature and handling are leading aspects in the transport chain of perishable products and should always be kept in mind by all staff involved in the cold chain.

The IATA Perishable Cargo label and “THIS WAY UP” label should be either affixed or imprinted on the side of the box (see 7.7).

Perishable shipments consisting of live animals must be shipped in containers meeting the requirements specified in this manual and the IATA Live Animals Regulations.

In general the carrier can advise on the expected height and of the ULD contour. For more information on stacking see Chapter 6.4.3.1.1.

Methods of packaging depend largely on the nature of the product and its “perishability”. Some frozen and chilled products, such as frozen meat and carcasses, may be shipped in a virtually unpackaged state in specialized ULDs.

Single and Combination Packaging

The nature and durability of a perishable product dictate different requirements when it comes to packaging. Products that are, for example, more resistant against physical damage may be packed directly into a transport package (e.g. fiberboard box) holding the product. In this regulation this type of packaging is referred to as single packaging.

However, increasing amounts of perishables are today shipped using outer packaging that encloses an inner packaging. This may be because the product requires additional protection best provided by different materials, e.g. a product that is placed into a plastic bag (inner packaging) to contain humidity and prevent drying out, which is in turn placed inside a fiberboard box (outer packaging) to provide physical protection. If inner and outer packaging are used for transportation in this regulation this type of packaging is referred to as combination packaging.

High-end packaging technologies are available which can maintain appropriate conditions throughout the entire journey.

Additional Protective Systems

Depending on the sensitivity of the product, local circumstances, the available facilities on the trade lane and the phytosanitary regulations which may apply, it may be necessary to use an additional protective system. Such additional protective systems take many forms, the most common being:

- Pest netting, in the form of a fine plastic net fitting tightly over the outside of the pallet to prevent the passage of insects and other pests and required by regulatory authorities in some countries. Pest netting is used primarily for fruit, vegetables and flowers and does not provide any protection from rain or temperature excursions. Its very open structure allows free passage of air so it does not significantly reduce ventilation of respiration heat generated by the cargo. When pest netting is required, it is important that the bottom of the pallet also be closed with netting or with a sheet of craft paper or film, so that pests cannot pass through the spaces between the wooden slats.
- Single layer fiberboard wrapped around the pallet load to reduce ingress of warm or cold air from the surroundings. This low-cost material is widely available, but provides relatively little thermal protection and is easily damaged, especially in wet conditions.
- Polymer films wrapped around the pallet to protect from rain and to help to contain any leakage from the load. A common form is ‘stretch-wrap’ which is polyethylene film with a smooth surface that adheres to itself. It also has a controlled elasticity so that if it

TABLE E.1.A
List of Perishables *(Cont'd)*

Commodity (presentation) A	Cat. B	Group C	min T D	max T E	Tab. E.2.A Col. F
Apple	FR		-1	2	C E F
Apricot	FR		-0.5	2	F
Ardisia crispa	OR	POFP	10	13	
Artichoke	VG		0	4	F
Arugula	VG		0	2	
Asparagus	VG		1	4	F
Asparagus rhizomes	OR	NUST	-1	0	
Asparagus, plumosa	OR	FLGR	2	4	
Asparagus, sprenger	OR	FLGR	2	4	
Aspidistra elatior	OR	POFP	10	13	
Aster, China	OR	CUTF	0	4	
Atemoya	FR		13	18	
Avocado	FR		5	13	D E
Azalea (un-rooted)	OR	PFLP	2	5	
Azalea, un-rooted	OR	CUSC	-0.5	4	
Banana	FR		13	18	C D
Banana	FR		13	18	C D
Banana	FR		13	18	C D
Barbados cherry	FR		0	2	
Basil	VG		7	10	
Bean	VG				
Bean sprout	VG		0	0	
Bedding plants	OR	NUST	4	13	
Beef	MP		0	1	C
Beef (carcass)	MP		0	1	C
Beet	VG		0	4	F
Beetroot	VG				
Begonia, tuberous	OR	BCRT	2	7	
Begonia-elatior	OR	PFLP	10	15	
Belgian endive	VG		0	4	
Bell pepper	VG		7	10	
Bird of paradise	OR	CUTF	7	8	
Biriba	FR				
Bitter melon	VG		13	18	
Blackberry	FR		-0.5	2	F
Blueberry	FR		-0.5	2	F
Blueberry wood (un-rooted)	OR	CUSC	-1	0	
Bok choy	VG		0	2	
Boniato	VG		13	18	
Bougainvillea	OR	PFLP	10	15	
Bouvardia	OR	CUTF	0	2	
Boysenberry	FR		0	2	
Brassaia actinophylla	OR	POFP	10	13	
Breadfruit	FR		13	18	
Broccoflower	VG		0	2	
Broccoli	VG		0	4	F
Browallia	OR	PFLP	10	15	
Brussels sprout	VG		0	4	F
Cabbage	VG		0	4	C F
Cactus pads/nopales	VG		7	10	
Caimito	FR		0	2	
Calabaza	VG		7	10	
Calceolaria	OR	PFLP	2	5	
Calendula	OR	CUTF	4	4	