Table III-1.—Recommended Protective Services for Perishable Foods During Transit — Continued

Product	Recommended Transit Temperature		Desired Relative Humidity	Highest Freezing Point		Top-ice and/or ¹ Package-ice OK	
	°F	°C	Percent	o _F	°C		
Fresh fruits and vegetables: — Continu	ued						
Peas:							
(green, in pods)	32	0.0	95 - 98	30.9	-0.6	5 Yes	
				(pods)			
				29.9	2		
				(she			
Peppers (sweet) Pineapples:	45 - 55	7.2 - 12.8	90 - 95	30.7	-0.7	7 No	
Mature-green	50 - 55	10.0 - 13.0	85 - 90	30.0	-1.	l No	
Ripe Fruit	45	7.2	85 - 90	30.0	-1.		
Plums and Fresh							
Prunes	32	0.0	90 - 95	30.5	-0.8	8 No	
Potatoes:							
Early crop for							
table	50 - 60	10.0 - 15.6	90	30.9	-0.6	5 No	
Early crop for							
chipping	65 - 70	18.3 - 21.1	90	30.9	-0.6	5 No	
Late crop for							
table	40 - 50	4.4 - 10.0	90	30.9	-0.6	5 No	
Late crop for							
chipping	50 - 60	10.0 - 15.6	90	30.9	-0.6	5 No	
Radishes	32	0.0	95 - 100	30.7	-0.7	7 Yes	
Raspberries	32	0.0	90 - 95	30.0	-1.	l No	
				(bla			
				30.9	5		
				(red)			
Rhubarb	32	0.0	95 - 100	30.3	-0.9	9 No	
Romaine	32	0.0	95	31.7	-0.2	2 Yes	
Salad mixes	33	0.6	90 - 95	(vai	ries)	No	
Spinach	32	0.0	95 - 100	31.5	-0.3	3 Yes	
Squash and Pumpkins:							
Winter	50 - 55	10.0 - 12.8	50 - 70	30.5	-0.8	8 No	
Summer	41 - 50	5.0 - 10.0	95	31.1	-0.5		
Strawberries	32	0.0	90 - 95	30.6	-0.8	8 No	
Sweet potatoes	55 - 60	12.8 - 15.6	85 - 90	29.7	-1.3		
Tangerines							

Table III-1.—Recommended Protective Services for Perishable Foods During Transit — Continued

Product	Recommended Transit Temperature		Desired Relative Humidity	Highest Freezing Point		Top-ice and/or ¹ Package-ice OK
	°F	°C	Percent	oF	°С	
Fresh fruits and vegetables: — Contin	nued					
Tomatoes:						
Mature-green	55 - 70	12.8 - 21.1	90 - 95	31.0	-0.6	No
Pink	46 - 50	7.2 - 10.0	90 - 95	31.1	-0.5	No
Watermelons	50 - 60	10.0 - 15.6	90	31.3	-0.4	No
Canned Foods ⁴	_	_	_	_	_	
Dairy Products:						
Butter:						
Fresh	39	3.9	75 - 85			No
Frozen	-10	-23.3				No
Margarine	35	1.7	60 - 70			No
Milk (whole)	32 - 34	0.0 - 1.1		31.0	-0.6	No
Cheese ⁵	34 - 40	1.0 - 4.0	65 - 70			No
Ice Cream	-2015	-2926		21.0	-6.0	No
Fresh and Cured Meat	and					
Seafood ⁶	_	_	_	_	_	_
Frozen Foods ⁷	_	_	_	_	_	_
Poultry and Eggs:						
Fresh	26 - 34	-3.0 - 1.1	90 - 95	27.0	-2.8	Yes
Hard, chilled	0 - 26	-183	90 - 95	27.0	-2.8	No
Eggs	40 - 45	4.4 - 7.2	80 - 85	28.0	-2.2	No

¹ Make sure products are packed in moisture resistant containers before applying top- or package-ice.

² Florida and Texas oranges shipped from cold storage or those that will be in transit for more than 5 days should be held at 32–34°F (0.0° to 1.1°C). Arizona and California oranges should be shipped at 38° to 48°F.

³ Early Bartlett pears that are ripened in transit should be shipped at 55–60°F.

⁴ See text page 57 and table 4.

⁵ See text page 60 and table 5.

⁶ See text page 62 and table 6.

⁷ All frozen foods should be shipped at 0°F (-18°C) or below.

Selected Bibliography

American Society of Heating, Refrigerating, and Air-Conditioning Engineers, ASHRAE Handbook—Refrigeration Systems and Applications, Atlanta, GA, various editions.

Ashby, et al., *User's Guide to the RTF Truck Trailer Classification*, Transportation Tips No. 8, AMS-TMD, U.S. Department of Agriculture, Washington, DC, March 1989.

Frozen Food Roundtable, Frozen Food Handling and Merchandising—A Code of Recommended Practices, Washington, DC, 1992.

Hardenburg, R.E., et al. *The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks*, Agricultural Handbook No. 66, ARS, U.S. Department of Agriculture, Washington, DC, 1986.

Kasmire, R.F. and R. Tom Hinsch, *Maintaining Optimum Transit Temperatures in Refrigerated Truck Shipments*, University of California Perishables Handling Supplement No. 2, University of California, Davis, CA 95616, and ARS, U.S. Department of Agriculture, Fresno, CA, April 1987.

Lipton, W.J. and John M. Harvey, *Compatibility of Fruits and Vegetables During Transport in Mixed Loads*, MRR-1070, ARS, U.S. Department of Agriculture, Washington DC, May 1977.

McGregor, Brian M., *Tropical Products Transport Handbook*, Agricultural Handbook No. 668, U.S. Department of Agriculture, Washington, DC, 1987.

Nicholas, C.J., *Export Handbook for U.S. Agriculture Products*, Agricultural Handbook No. 593, U.S. Department of Agriculture, Washington, DC, March 1985.

The Packer, *Produce Availability & Merchandising Guide*, Vance Publishing Corp., Overland Park, KS, 1993.

The Refrigeration Research Foundation, *Commodity Storage Manual*, International Association of Refrigerated Warehouses, Bethesda, MD.

Transfresh, Fresh Produce Mixer & Loading Guide, Transfresh Corp., Salinas, CA, 1988.

Other Resources

Contact the Refrigerated Transportation Library, Department of Pomology, Wickson Hall, University of California, Davis, CA 95616, for a catalog of videos, slide sets, and printed material that may be either purchased or obtained free. The items in the catalog are of interest to those involved in the transportation of perishable foods. It comprises the library of the Refrigerated Transportation Foundation and other resources available from the University of California, Davis, Cooperative Extension and the U.S. Department of Agriculture.