Optimal Fresh

The fruit, vegetable and fresh produce expert system

Crop pea, snow

Maturity stage General
Category Vegetable
Plant Part Pod
Usage Fresh/ Raw, Ornamental
Botanical name *Pisum sativum macrocarpon* Ser.
Botanical family Fabaceae (Leguminosae)

Picture source: Dept. Agriculture, NSW, 1980

Alternate names include

(C) holondow
(C) xue dou
(E) pea, snow
(E) pea, sugar
(F) pois mange tout
(F) pois sucre
(G) Zuckererbse
(J-K 7G;T
(J-R kinusaya
(S) guisante azucarado
(S) tirabeque

Refrigerated Container/Coolroom Recommendations

Optimum product storage temperature 0.0 to 1.0°C

Temperature set point **0.0°C**

Add a margin for uncertainty in equipment performance if necessary.
For return air control set point add 1°C to delivery set point.

Ventilation (air exchange) settings for containers:
6 m (20') = **15 m³/h = 10 cfm**
12 m (40') = **30 m³/h = 20 cfm**

Acceptable product temperature at loading into container **0.0 to 5.0°C**

Key Properties

Storage time (days)†	**Humidity (% RH)**	Freezing point (°C)	Storage time at ambient (~20°C)	Ventilation rate
7 - 14	**90 - 95**	-0.6	1 - 2	Low

† at optimum storage temperature

Other Properties

Ref	Maturity stage	Air exchange *	Freezing Point (°C)	Ethylene production **	Ethylene sensitivity	Ice compat-ibility	Water loss ***	% Water content	Bruising suscept-ibility
1	General	Low	-0.6	Very Low	Medium				

* Air exchange rates: Nil = 0%; Very low = 25%; Low = 50%; Medium = 100%; High = 200%; Very high = 400% fresh air/hour.

** Ethylene production rates at 20°C: Nil = 0 nM; Very low = <4 nM; Low = 4 - 40 nM; Medium = 40 - 400 nM; High = 400 - 4000 nM; Very high =>4000 nM ethylene/kg/hour.

*** Where % weight loss/week is given this is converted as: Low <= 1%; Medium = 1.1 - 3.4%; High = >3.5%

Controlled Atmosphere

Ref	Maturity stage	% O2		% CO2		Temp°C		Benefit of controlled atmosphere
		min	max	min	max	min	max	
1	General			5	7	0	0	Fair, (+ 7d)

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Respiration* and Heat Transfer

Ref	Maturity stage	0°C		5°C		10°C		15°C		20°C		25°C		Specific heat kJ/kg/EC **
		min	max	min	max	min	max	min	max	min	max	min	max	
1	General			163	265	275	433	490	714	745	1000			

* Respiration values given are in Watts per tonne. 1 W/t = 20.4 kCal/t/d = 82.1 Btu/tn./d = 73.3 Btu/2000 lbs/d =0.167 mL CO2/kg/h = 7.0 umol CO2/kg/h = 0.308 mg CO2/kg/h

** Specific heat (kJ/kg/°C) = 0.0335 x % water content + 0.8374; Specific heat in Btu/lb/°F = 0.08 x % water content + 0.2

Compatibility in Mixed Storage

Temperature compatibility group

0	7	13	20

Humidity compatibility group

Dry 60-80%	Moderate 80-90%	High 90-95%	Very high 95-100%

Not compatible with crops that:

Odours will be absorbed by:

Absorbs odours from:

Seasonal Availability

Ref	Country	Region (where given)	Start Season	End Season	Start Peak	End Peak
1	Australia		January	December	September	November
1	USA		January	December	-	-
1	Canada		June	September	-	-

References for pea, snow

Values quoted in Detailed Report are taken from a compilation of the best set of figures from all references. This best set of figures is always referred to as Reference 1.

See Reference Report for full listing of all values, original references and alternate names.