

## Dehytray™ Drying Capacity Table

Crop Type	Initial Moisture (% Wet Basis)	Wet Weight in Dehytray		Final Moisture (% Wet Basis)	Dry Weight in Dehytray	
		kg	lb		kg	lb
<b>Apples</b>	85.6	2.20	4.84	6.0	0.34	0.74
<b>Blueberries</b>	92.1	2.20	4.84	8.0	0.25	0.55
<b>Chili Pepper</b>	82.0	2.64	5.81	10.0	0.53	1.16
<b>Garlic</b>	66.3	1.41	3.10	8.0	0.52	1.13
<b>Ginger</b>	90.0	3.08	6.78	11.0	0.35	0.76
<b>Mint</b>	87.9	0.88	1.94	9.0	0.12	0.26
<b>Mushrooms</b>	85.8	2.20	4.84	8.0	0.34	0.75
<b>Tomatoes</b>	96.0	2.42	5.33	11.0	0.11	0.24
<b>Papaya</b>	88.7	3.48	7.65	5.5	0.53	1.17
<b>Shelled corn</b>	30.0	4.50	9.90	13.0	3.62	7.97
<b>Okra</b>	95.0	1.50	3.30	15.0	0.09	0.19

**Note:** 1 kg = 1000 g = 2.2 lb

### How to use the Dehytray drying capacity table

- The drying capacity for the Dehytray used in drying these crops are estimates based on thin-layer drying studies and were extrapolated to the Dehytray capacity. Note that crop variety could influence the final capacity and so treat these estimates as ballpark estimates.
- Crops such as fresh fruit and vegetables should be dried in thin slices or chopped in chunks and spread to dry in thin-layer. The smaller or thinner the slice the faster the rate of drying of that crop.
- The table should be used as follows: about 2.2 kg (4.84 lb) of fresh apples will obtain 0.34 kg (340 g or 0.74 lb) of dried apples.
- To determine the number of Dehytrays that are needed to dry a batch of 100 kg (220 lb) of apples, this will be 100 kg/2.2 kg (or 220 lb/4.84 lb) equal to 45.5 ~ 46 Dehytrays (from the Table). The 100 kg batch of fresh apples would yield 15.5 kg (33.6 lb) dried apple slices.
- While the final moisture content of the crop is indicated in the table, we advise that drying crops/foods to a water activity below 0.60 ( $a_w < 0.60$ ) or Equilibrium Relative Humidity, ERH < 60% should be used as the indicator to determine when crop or food has been dried to a safe moisture that would prevent deterioration by molds. A simple mini hygrometer device comes with every Dehytray for use in determining when crop or foods has been sufficiently dried.
- Drying duration is not indicated because time varies depending on the weather and geographic location where the Dehytray is used. Hot dry weather better favors rapid solar drying than cold humid weather.

- In general, the ambient temperature is doubled within the Dehytray by the absorbed heat radiating from the tray walls. For example, if the ambient temperature is 25oC (77oF), the temperature inside the Dehytray would be 50oC (154oF).
- Because the temperature is double inside the Dehytray, the humidity inside the tray decreases, thus creating a better drying environment than in open-air ambient sun drying.
- The vents in the Dehytray should be opened to release humid air and prevent condensation. Opening the vent will also cause the temperature to decrease slightly by about 5oC (41oF).