



## Effect on avocado cultivars (*Persea americana* Mill. Cv. Simmonds, Pancho, Waldin (used as rootstock))

### 1. The net impact of individual and combined stress on plant growth

Crop: Avocado (*Persea americana* Mill. Cv. Simmonds, Pancho, Waldin (used as rootstock))  
 Stress 1: Low temperature (-5.5 °C)  
 Stress 2: Ozone (10.5, 39.5, 74.6, 107.8 nl/l)  
 Stage of plant: 6 month old Sapling

The table shows the impact of low temperature and ozone on percent survival of leaf stem and plant in avocado cultivars.

	Treatment	Type A parameters		
		% Survival		
		Leaf	Stem	Plant
Pancho/Waldin	<i>Ozone 10.5 nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	13	42	100
	<i>Ozone 39.5 nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	35	72	100
	<i>Ozone 74.6nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	9	35	89
	<i>Ozone 107.8 nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	5	9	40
Simmonds/Waldin	<i>Ozone 10.5 nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	N/A	59	N/A
	<i>Ozone 39.5 nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	N/A	69	N/A

	<i>Ozone 74.6nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	N/A	69	N/A
	<i>Ozone 107.8 nl/l + Low temperature (-5.5 °C ) 10 days later (Sequential stress)</i>	N/A	77	N/A

**Note:**

‘\*\*’ - Values are presented as it is from the source article without subjecting to the calculation.

‘\*’ - For more information on parameters classification, please refer to ‘methodology’ tab.

For raw data – Click here (.xlsx file)

Reference - Eissenstat DM, Syvertsen JP, Dean TJ, Yelenosky G, Johnson JD (1991) Sensitivity of frost resistance and growth in citrus and avocado to chronic ozone exposure. *New Phytologist* 118: 139-146.

**Inference from the study:** Eissenstat et.al. (1991) studied the interaction of ozone and low temperature in avocado cultivars Pancho/ Waldin and Simmonds/Waldin. Stress treatment was given sequentially with four ozone concentrations. Survival percent reduced with higher ozone concentrations in cultivar Pancho/ Waldin but not in cultivar Simmonds/Waldin. **Thus, this stress combination negatively affect physiology of avocado cultivar Pancho/ Waldin.**