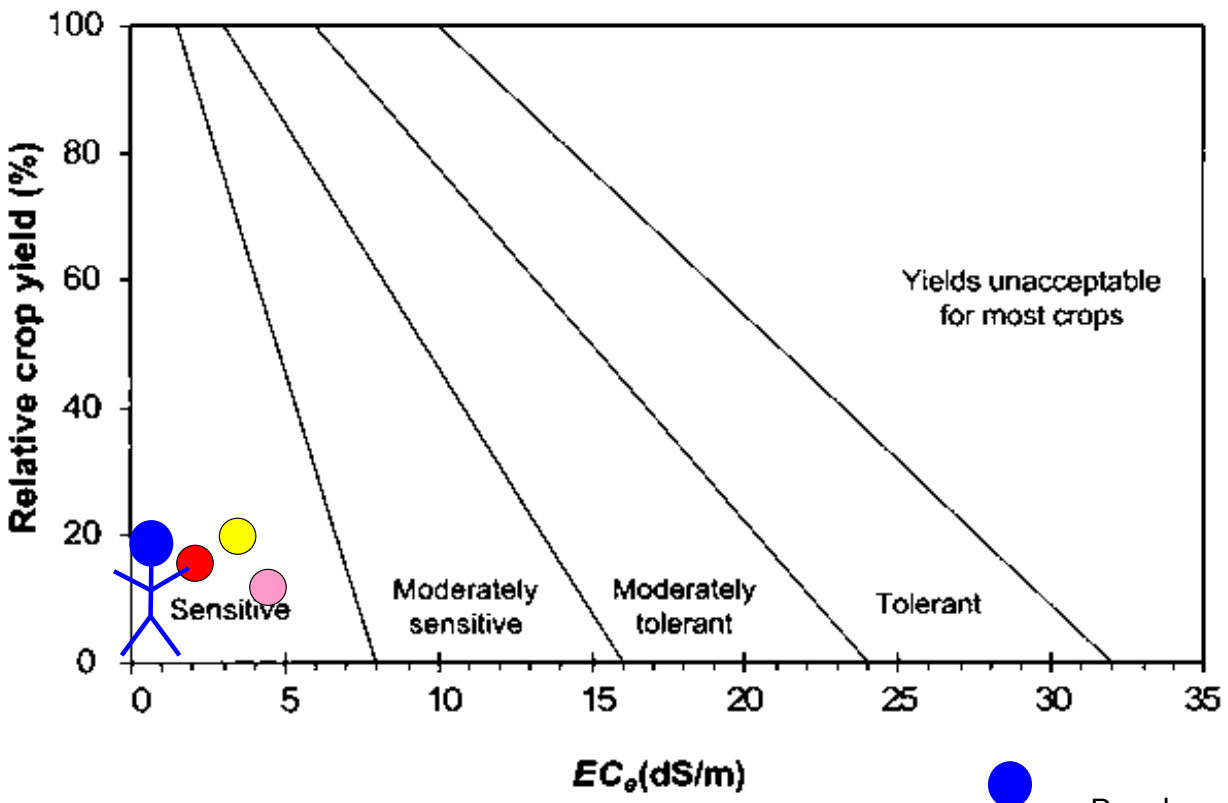
www.fao.org/docrep/005/y4263e/y4263e0e.htm

Figure A1.1. Division for classifying crop tolerance to salinity



Cherries Pears Peaches

People are not a “crop” but are the most sensitive to excess salinity in surface and drinking water

Table A1.2. Salt tolerance of woody crops†

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Crop			Salt Tolerance Parameters			
Common name	Botanical name‡	Tolerance based on	Threshold§ (EC_e) dS/m	Slope % per dS/m	Rating¶	References
Almond	*Prunus duclis* (Mill.) D.A. Webb	Shoot growth	1.5	19	S	Bernstein *et al.*, 1956; Brown *et al.*, 1953
Apple	*Malus sylvestris* Mill.		-	-	S	Ivanov, 1970
Apricot	*Prunus armeniaca* L.	Shoot growth	1.6	24	S	Bernstein *et al.*, 1956
Avocado	*Persea americana* Mill.	Shoot growth	-	-	S	Ayars, 1950a; Haas, 1950
Banana	*Musa acuminata* Colla	Fruit yield	-	-	S	Israeli *et al.*, 1986
Blackberry *	*Rubus macropetalus* Doug. ex Hook	Fruit yield	1.5	22	S	Ehlig, 1964
Boysenberry	*Rubus ursinus* Cham. and Schlechtend	Fruit yield	1.5	22	S	Ehlig, 1964
Castor seed	*Ricinus communis* L.		-	-	MS*	USSL Staff, 1954
Cherimoya	*Annona cherimola* Mill.	Foliar injury	-	-	S	Cooper, Cowley & Shull, 1952
Cherry, sweet *	*Prunus avium* L.	Foliar injury	-	-	S*	Beeftink, 1955
Cherry, sand	*Prunus besseyi* L., H. Baley	Foliar injury, stem growth	-	-	S*	Zhemchuzhnikov, 1946
Coconut	*Cocos nucifera* L.		-	-	MT*	Kulkarni *et al.*, 1973
Currant	*Ribes sp.* L.	Foliar injury, stem growth	-	-	S*	Beeftink, 1955; Zhemchuzhnikov, 1946
Date-palm	*Phoenix dactylifera* L.	Fruit yield	4.0	3.6	T	Furr & Armstrong, 1962; Furr & Ream, 1968; Furr *et al.*, 1966
Fig *	*Ficus carica* L.	Plant DW	-	-	MT*	Patil & Patil, 1983a; USSL Staff, 1954
Gooseberry	*Ribes sp.* L.		-	-	S*	Beeftink, 1955
Grape	*Vitis vinifera* L.	Shoot growth	1.5	9.6	MS	Groot Obbink & Alexander, 1973; Nauriyal & Gupta, 1967; Taha *et al.*, 1972
Grapefruit	*Citrus x paradisi* Macfady.	Fruit yield	1.2	13.5	S	Bielorai *et al.*, 1978
Guava	*Psidium guajava* L.	Shoot & root growth	4.7	9.8	MT	Patil *et al.*, 1984
Guayule	*Parthenium argentatum* A. Gray	Shoot DW Rubber yield	8.7 7.8	11.6 10.8	T T	Maas *et al.*, 1988
Jambolan plum	*Syzygium cumini* L.	Shoot growth	-	-	MT	Patil & Patil, 1983b
Jojoba	*Simmondsia chinensis* (Link) C. K. Schneid	Shoot growth	-	-	T	Tal *et al.*, 1979; Yermanos *et al.*, 1967
Jujube, Indian	*Ziziphus mauritiana* Lam.	Fruit yield	-	-	MT	Hooda *et al.*, 1990
Lemon *	*Citrus limon* (L.) Burm. f.	Fruit yield	1.5	12.8	S	Cerda *et al.*, 1990
Lime	*Citrus aurantiifolia* (Christm.) Swingle		-	-	S*	
Loquat	*Eriobotrya japonica* (Thunb). Lindl.	Foliar injury	-	-	S*	Cooper & Link, 1953; Malcolm & Smith, 1971
Macadamia	*Macadamia integrifolia* Maiden & Betche	Seedling growth	-	-	MS*	Hue & McCall, 1989

* Indicates the produce grown on the Snug Harbor peninsula

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Mandarin orange; tangerine	*Citrus reticulata* Blanco	Shoot growth	-	-	S*	Minessy *et al.*, 1974
Mango	*Mangifera indica* L.	Foliar injury	-	-	S	Cooper *et al.*, 1952
Natal plum	*Carissa grandiflora* (E.H. Mey.) A. DC.	Shoot growth	-	-	T	Bernstein *et al.*, 1972
Olive	*Olea europaea* L.	Seedling growth, Fruit yield	-	-	MT	Bidner-Barhava & Ramati, 1967; Taha *et al.*, 1972
Orange	*Citrus sinensis* (L.) Osbeck	Fruit yield	1.3	13.1	S	Bielorai *et al.*, 1988; Bingham *et al.*, 1974; Dasberg *et al.*, 1991; Harding *et al.*, 1958
Papaya	*Carica papaya* L.	Seedling growth, foliar injury	-	-	MS	Kottenmeier *et al.*, 1983; Makhija & Jindal, 1983
Passion fruit	*Passiflora edulis* Sims.		-	-	S*	Malcolm & Smith, 1971
Peach *	*Prunus persica* (L.) Batsch	Shoot growth, Fruit yield	1.7	21	S	Bernstein *et al.*, 1956; Brown, Wadleigh, Hayward, 1953; Hayward *et al.*, 1946
Pear *	*Pyrus communis* L.		-	-	S*	USSL Staff, 1954
Pecan	*Carya illinoinensis* (Wangenh.) C. Koch	Nut yield, trunk growth	-	-	MS	Miyamoto *et al.*, 1986
Persimmon	*Diospyros virginiana* L.		-	-	S*	Malcolm & Smith, 1971
Pineapple	*Ananas comosus* (L.) Merrill	Shoot DW	-	-	MT	Wambiji & El-Swaify, 1974
Pistachio	*Pistacia vera* L.	Shoot growth	-	-	MS	Sepaskhah & Maftoun, 1988; Picchioni *et al.*, 1990
Plum; Prune *	*Prunus domestica* L.	Fruit yield	2.6	31	MS	Hoffman *et al.*, 1989
Pomegranate *	*Punica granatum* L.	Shoot growth	-	-	MS	Patil & Patil, 1982
Popinac, white	*Leucaena leucocephala* (Lam.) de Wit [syn. *Leucaena glauca* Benth.]	Shoot DW	-	-	MS	Gorham *et al.*, 1988; Hansen & Munns, 1988
Pummelo	*Citrus maxima* (Burm.)	Foliar injury	-	-	S*	Furr & Ream, 1969
Raspberry	*Rubus idaeus* L.	Fruit yield	-	-	S	Ehlig, 1964
Rose apple	*Syzygium jambos* (L.) Alston	Foliar injury	-	-	S*	Cooper & Gorton, 1951
Sapote, white	*Casimiroa edulis* Llave	Foliar injury	-	-	S*	Cooper *et al.*, 1952
Scarlet wisteria	*Sesbania grandiflora*	Shoot DW	-	-	MT	Chavan & Karadge, 1986
Tamarugo	*Prosopis tamarugo* Phil.	Observation	-	-	T	National Academy Sciences, 1975
Walnut	*Juglans* spp.	Foliar injury	-	-	S*	Beeftink, 1955

† These data serve only as a guideline to relative tolerances among crops. Absolute tolerances vary, depending upon climate, soil conditions, and cultural practices. The data are applicable when rootstocks are used that do not accumulate Na^+ or Cl^- rapidly or when these ions do not predominate in the soil.

‡ Botanical and common names follow the convention of Hortus Third (Liberty Hyde Bailey Hortorium Staff, 1976) where possible.

§ In gypsiferous soils, plants will tolerate an EC_e about 2 dS/m higher than indicated.

¶ Ratings are defined by the boundaries in Figure A1.1. Ratings with an * are estimates.

* Indicates the produce grown on the Snug Harbor peninsula