



Vegetables: A comparison

A comparison of tolerances and needs of selected vegetables

Vegetables vary their relative tolerance to environmental factors and their needs for major crop inputs. Specific numbers for each crop cannot be given because tolerances and needs vary with factors such as soil type, cropping history, rainfall, irrigation method, variety, climate, etc.



Crop	Frost tolerance	Water needs ⁺	Water logging tolerance	Drought tolerance	Fertilizer needs (N, P, K)	Salt tolerance [*]
Beans, Fava	Medium	Medium	Medium	Med-High	Lo N,K; Med P	Low
Cabbage	Good	Med-Hi	Medium	Low-Med	Med-Hi N,P; Med K	Medium
Carrot	Medium	Medium	Low	Low-Med	Med N; Med-Hi P; Hi K	Low
Corn, Sweet	Medium	High	Medium	Medium	Hi N; Med P,K	Medium
Eggplant	Very Low	High	Low	Medium	Hi N; Med-Hi P,K	Medium
Garlic	Med-High	Medium	Medium	Low-Med	Med N, P, K	Med-Hi
Lettuce	Medium	Medium	Low	Medium	Hi N, Med P,K	Medium
Melon	Low	Medium	Low	Medium	Med N, P, K	Med-Hi
Okra	Low	Medium	Low	Med-Hi	Med-Hi N; Med P; Low-Med K	Med-Hi
Onion	Med-High	Med-Hi	Medium	Medium	Med-Hi N; Med P,K	Low
Pepper	Low	Medium	Low	Low-Med	Med-Hi N; Hi P; Low-Med K	Medium
Potato	Med-High	Med-Hi	Low	Low-Med	Hi N and K; Med P	Medium
Spinach	High	Low	Low	Low-Med	Lo N; Med P,K	Medium
Tomato	Low	Medium	Low	Low-Med	Med N; Hi P,K	Medium
Watermelon	Low	Medium	Low	Med-Hi	Lo-Med N,K; Hi P	Med-Hi

⁺ Uniform supply of water is generally more important for high yields and quality of vegetables than total quantity of water.

^{*} Seedlings are generally much more sensitive to salinity than established and/or older plants.

Prepared by Ron Voss and Mark Bell. June 20, 2007

References: **1)** V. Rubatzky and M. Yamaguchi. 1999. World Vegetables. Aspen Publications. 843 pp. **2)** D. Maynard and G. Hohmuth. 2007. Knott's Handbook for Vegetable Growers, 5th Ed. Wiley. Publishers. 621 pp. **3)** Vegetable Production Guidelines. www.vric.ucdavis.edu

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