



**VEGETABLE ROOT DEPTH – TO GAUGE WATERING DEPTH**  
Sources: UC Small Farm Program; NCCE Agriculture;  
AZ Master Gardener; Stephen Albert, garden writer and teacher, Sonoma, CA  
Compiled by Master Gardener Florence Nishida, September 2011

Depth: S = 18"- 24" (36"); M = 36"- 48"; D = >48"

Artichoke	D	48"+, perennial
Arugula	S	12-18"
Asparagus	D	6-8", perennial
Beans	M	24-36" wide spreading
Beets	M	18-36"
Bok choy	S	12-36"
Broccoli	S	18-36"
Brussels sprouts	S	18-36"
Cabbage	S	12"
Carrots	M	18-24"
Cauliflower	S	18-36"
Celery	S	18-36", biennial/annual
Chard	M	36-48", biennial/annual
Chiles	M	18-48", annual/perennial in tropics
Collards	S	18-24", biennial
Corn	S	18-36",
Cucumber	M	36-48"
Eggplant	M	36-48", annual/perennial in hot regions
Fava bean	M	36-48"
Fennel	S	12-18", perennial/summer annual
Garlic	S	12-18"
Jerusalem artichoke (sunchoke)	S	12-18", perennial
Kale	S	12-18", biennial/annual
Kohlrabi	S	12-18", biennial/annual
Leek	S	18-36", biennial/annual
Lettuce	S	18"
Mache	S	3-6"
Mustard greens	S	18" perennial/annual
Napa cabbage	S	18-36" annual
New Zealand spinach	S	10-24" biennial/annual
Onion	S	8-12"
Parsnip	D	48" biennial/annual
Peas	M	36-48"
Peppers	M	36-48"
Potato	S	18-24" perennial/annual
Radish	S	5-8"
Rhubarb	D	36-48+", perennial
Rutabaga	M	24-36" biennial/annual
Spinach	S	12-18"
Squash, summer	M	12-18+"
Squash, winter	D	12-24+"
Strawberry	S	12-18" perennial
Tomato	D	18-48" perennial
Turnip	M	18-24" biennial/annual

HERBS		
Basil	S	8-12"
Chive	S	3-6" perennial, divide every 3 years
Cilantro	S	8-18"
Mint	S	12-18" perennial, plant in a pot
Oregano	S	6-18" perennial
Parsley	S	8-12" biennial/annual
Rosemary	S/M	12-24"+ perennial
Sage	M	24-36" perennial
Summer Savory	S	8-12"
Tarragon	S	6-10" perennial, divide every 3 yrs
Thyme	S	6-10" perennial

**WATER NEEDS:**

Give plants up to 1.5" water/week as needed during hot periods for plants with a spread of 12" or more. During cooler seasons, ¾" water/week may suffice.

For small seeds (planted ¾" depth or less), immediately after planting the seed, apply from ½" to ¾" of water (in the planting bed) to settle the soil and to start seed germination.

For larger seed crops, water a few days prior to seeding, as well as water to a depth of 2 or more inches after planting the seeds.

Transplants need good soil moisture. Water a few days prior to transplanting. A light watering of ½ to ¾" will help young roots after transplanting.

It is important that the soil has sufficient moisture for seed germination and good root growth. Frequent, light irrigations result in shallow root systems which are easily stressed in dry periods. Deep, infrequent watering is better once plants are established.