



CAPE COD COOPERATIVE EXTENSION

H O R T I C U L T U R E F A C T S H E E T

Soil Temperature Conditions for Vegetable Seed Germination

Crops	Minimum ° F	Optimum Range ° F	Optimum ° F	Maximum ° F
Asparagus	50	60 – 85	75	95
Beans, Snap	60	65 – 85	85	85
Beets	40	50 – 85	85	95
Cole Crops	40	45 – 95	85	100
Carrots	40	45 – 85	80	95
Celery	40	60 – 70	70	85
Corn	50	60 – 95	95	105
Cucumbers	60	65 – 95	95	105
Eggplant	65	75 – 90	85	95
Lettuce	35	40 – 80	75	85
Melon	60	75 – 95	90	100
Onions	35	50 – 95	75	95
Parsley	40	50 – 85	75	90
Parsnips	35	50 – 70	65	85
Peas	40	40 – 75	75	85
Peppers	60	65 – 95	85	95
Pumpkins	60	70 – 95	95	100
Radishes	40	45 – 90	85	95
Spinach	35	45 – 75	70	85
Squash	60	70 – 95	95	100
Swiss Chard	40	50 – 85	85	95
Tomatoes	50	60 – 85	85	95
Turnips	40	60 -105	85	105
Watermelon	60	70 – 95	95	105



Number of Days for Vegetable Seeds to Emerge at Different Temperatures

Crops	32° F	41° F	50° F	59° F	68° F	77° F	86° F	95° F	104° F
Asparagus	0	0	52.8	24	14.6	10.3	11.5	19.3	28.4
Beans, Snap	0	0	0	16.1	11.4	8.1	6.4	6.2	0
Beets	-	42.0	16.7	9.7	6.2	5.0	4.5	4.6	-
Cole Crops	-	-	14.6	8.7	5.8	4.5	3.5	-	-
Carrots	0	50.6	17.3	10.1	6.9	6.2	6.0	8.6	0
Celery	0	41.0	16.0	12.0	7.0	0	0	0	-
Cucumbers	0	0	0	13.0	6.2	4.0	3.1	3.0	-
Eggplant	0	-	-	-	13.1	8.1	5.3	-	-
Lettuce	49.0	14.9	7.0	3.9	2.6	2.2	2.6	0	0
Melons	-	-	-	-	8.4	4.0	3.1	-	-
Onions	135.8	31.6	13.4	7.1	4.6	3.6	3.9	12.5	0
Parsley	-	-	29.0	17.0	14.0	13.0	12.3	-	-
Parsnips	171.7	56.7	26.6	19.3	13.6	14.9	31.6	0	0
Peas	-	36.0	13.5	9.4	7.5	6.2	5.9	-	-
Peppers	0	0	0	25.0	12.5	8.4	7.6	8.8	0
Radishes	0	29.0	11.2	6.3	4.2	3.5	3.0	-	-
Spinach	62.6	22.5	11.7	6.9	5.7	5.1	6.4	0	0
Sweet Corn	0	0	21.6	12.4	6.9	4.0	3.7	3.4	0
Tomatoes	0	0	42.9	13.6	8.2	5.9	5.9	9.2	0
Turnip	-	-	5.0	3.0	2.0	1.0	1.0	1.0	3.0
Watermelon	-	-	-	-	12.0	5.0	4.0	3.0	-

