

## Soil Temperature Conditions for Vegetable Seed Germination (in degrees F)

<b>Crop</b>	<b>Minimum</b>	<b>Optimum Range</b>	<b>Optimum</b>	<b>Maximum</b>
Asparagus	50	60-85	75	95
Bean	60	60-85	80	95
Beet	40	50-85	85	95
Cabbage	40	45-95	85	100
Carrot	40	45-85	80	95
Cauliflower	40	45-85	80	100
Chard, Swiss	40	50-85	85	95
Corn	50	60-95	95	105
Cucumber	60	60-95	95	105
Eggplant	60	75-90	85	95
Lettuce	35	40-80	75	95
Muskmelon	60	75-95	90	100
Onion	35	50-95	75	95
Parsley	40	50-85	75	90
Parsnip	35	50-70	65	85
Pea	40	40-75	75	85
Pepper	60	65-95	85	95
Pumpkin	60	70-90	95	100
Radish	40	45-90	85	95
Spinach	35	45-75	70	85
Squash	60	70-95	95	100
Tomato	50	60-85	85	95
Turnip	40	60-105	85	105
Watermelon	60	70-95	95	105

\*Daily fluctuation to 60° F or lower at night is essential

Data Compiled by J. F. Harrington, Dept of Vegetable Crops, University of CA at Davis

**Days to Appearance of Seedlings at Various Soil Temperatures from  
Seed Planted at 1/2" Depth**

<b>Crop</b>	<b>Soil temperature in degrees F</b>								
	<b>32</b>	<b>41</b>	<b>50</b>	<b>59</b>	<b>68</b>	<b>77</b>	<b>86</b>	<b>95</b>	<b>104</b>
Asparagus	x	x	53	24	15	10	11	19	28
Bean	x	x	x	16	11	8	6	6	x
Beet	...	42	17	10	6	5	4	4	...
Cabbage	...	...	15	9	6	4	3	...	...
Carrot	x	51	17	10	7	6	6	8	x
Cauliflower	...	...	19	10	6	5	4	...	...
Corn	x	x	22	12	7	4	4	3	x
Cucumber	x	x	x	13	6	4	3	3	...
Eggplant	...	...	...	13	8	5	...	...	...
Lettuce	49	15	7	4	3	2	2	x	x
Muskmelon	...	...	...	...	8	4	3	...	...
Onion	135	31	13	7	5	4	4	12	x
Parsley	...	...	29	17	14	13	12	...	...
Parsnip	171	57	27	19	14	15	32	x	x
Pea	...	36	13	9	7	6	6	...	...
Pepper	x	x	x	25	12	8	8	9	x
Radish	...	29	11	6	4	3	3	....	...
Spinach	62	22	12	7	6	5	6	x	x
Tomato	x	x	43	14	8	6	6	9	x
Turnip	x	x	5	3	2	1	1	1	2
Watermelon	...	x	...	...	12	5	4	3	...

X little or no germination

... not tested

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