

## COOL AND WARM SEASON CROPS

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**Cool weather crops** are leafy ones like spinach, lettuce, arugula, and greens like mustard, bok choy, collards, and chard, root vegetables like beets and carrots, bulbs such as onions and shallots, and legumes such as peas.

**Warm weather crops** are mostly fruiting ones that require pollination by bees or other insects such as squash, cucumbers, tomatoes, melons and berries.

**Winter Crops** that are suited to overwintering in a cold frame are arugula, corn mache, miner's lettuce, spinach, and kale, among others.

COOL WEATHER	WARM WEATHER	COLD SPRING/FALL	WINTER WEATHER
arugula	beans, bush	arugula	arugula
asparagus	beans, pole	beet	chard
Beet	corn	carrot	corn mache
bok choy	cucumber	endive	endive
broccoli	eggplant	garlic	kale
brussel sprouts	lettuce, heat tolerant	kale	miner's lettuce
cabbage	melon	leek	spinach
cabbage, Chinese	pepper	lettuce	
carrot	spinach, New Zealand	onion, green	
cauliflower	squash, summer	onion, bulb	
celery	squash, winter	radish	
collards	tomato	spinach	
garlic		Swiss chard	
kale			
kohlrabi			
leek			
lettuce			
onion, green			
onion, bulb			
pea			
potato			
radish			
spinach			
Swiss chard			
turnip			

## **TIPS ON PRESPOUTING SEEDS**

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You can pre-spout many seeds. Pre-spouting seeds saves much time off of germination.

### **PEAS**

Disolve 1/2 of a 150 mg Vitamin C tablet in a quart of water and soak peas for 12-48 hours. Great way to germinate old peas too.

After soaking, place seeds between damp paper towels and into an open plastic baggie. They should sprout in a couple of days. Check daily.

As soon as they sprout, coat them in a legume inoculant powder and plant them about 1/2 inch deep in damp soil outside 1" apart. Or plant in pots inside to be transplant outside later after the second true leaves are out.

Peas like to germinate in the warmth but can grow in the cold outside. Don't keep them too long inside. Plant outside very early in spring.

### **SPINACH**

You can direct seed them or germinate them inside-EARLY. Older seeds take longer to germinate.

Soak seeds overnight. Put seeds in damp paper towel in a plastic baggie in the REFRIGERATOR for a couple of days.

Look closely for the little roots everyday because they will grow into the paper towel.

Temps above 70°F may give poor germination. Spinach likes to germinate in the cold-around 60°F. Most people plant too late in spring.

### **CARROTS**

Soak seeds overnight. Put seeds on soil and press in. Cover with burlap. Keep the burlap moist-don't let it dry out.

After it is damp, I put row cover on top of that to hold moisture in. You can also put a aboard on top of them but either way you must check every day for germination.

Thin out to one plant every 2 inches, cutting the unwanted one out rather than pulling and disturbing the other roots.

## SOIL TEMPERATURES FOR VEGETABLE SEEDS

Vegetable	Min (°F)	Optimum Range (°F)	Optimum (°F)	Max (°F)
Asparagus	50	60-85	75	95
Bean	60	60-85	80	95
Bean, Lima	60	65-85	85	85
Beet	40	50-85	85	85
Cabbage	40	45-95	85	100
Carrot	40	45-85	80	95
Cauliflower	40	45-85	80	100
Celery	40	60-70	70	85
Chard, Swiss	40	50-85	85	95
Com	50	60-95	95	105
Cucumber	60	60-95	95	105
Eggplant	60	75-90	85	95
Lettuce	35	40-80	75	85
Muskmelon	60	75-95	90	100
Okra	60	70-95	95	105
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	90	100
Radish	40	45-90	85	95
Spinach	35	45-75	70	85
Squash	60	70-95	95	100
Tomato	50	70-95	85	95
Tunip	40	60-105	85	105
Watermelon	60	70-95	95	105

VARIETY	OPTIMUM SOIL TEMPERATURE FOR GERMINATION	DAYS TO GERMINATE AT OPTIMUM SOIL TEMPERATURE
Bean, lima	85 degrees F	7 to 10 days
Bean, snap	75 to 80 degrees F	7 days
Beet	75 degrees F	7 to 14 days
Broccoli	65 to 75 degrees F	5 to 10 days
Brussels sprout	68 to 75 degrees F	5 to 10 days
Cabbage	68 to 75 degrees F	5 to 10 days
Chard	80 to 85 degrees F	5 to 10 days
Carrot	75 degrees F	12 to 15 days
Cauliflower	65 to 75 degrees F	5 to 10 days
Celery	70 to 75 degrees F	10 to 14 days
Collard	70 to 75 degrees F	5 to 10 days
Corn	75 to 85 degrees F	7-10 days
Cucumber	70 to 85 degrees F	7 to 10 days
Eggplant	75 to 85 degrees F	10 to 12 days
Endive	70 to 75 degrees F	10 to 14 days
Kale	70 to 75 degrees F	5 to 10 days
Kohlrabi	70 to 75 degrees F	5 to 10 days
Lettuce	65 to 70 degrees F	7 to 10 days
Melon	80 to 85 degrees F	5 to 10 days
Mustard Greens	70 degrees F	5 to 10 days
Okra	80 to 85 degrees F	7 to 14 days
Onion, bulb	70 to 75 degrees F	10 to 14 days
Onion, bunching	60 to 70 degrees F	10 to 14 days
Parsnip	70 degrees F	14 to 21 days
Pea	65 to 70 degrees F	7 to 14 days
Pepper	78 to 85 degrees F	10 to 14 days
Pumpkin	70 to 75 degrees F	7 to 10 days
Radish	65 to 70 degrees F	5 to 7 days
Rutabaga	65 to 70 degrees F	7 to 15 days
Spinach	70 degrees F	7 to 14 days
Spinach, New Zealand	75 degrees F	10 to 15 days
Squash, Summer	75 to 85 degrees F	7 to 14 days
Squash, Winter	75 to 80 degrees F	7 to 14 days
Swiss Chard	70 to 75 degrees F	7 to 14 days
Tomato	75 to 80 degrees F	7 to 14 days
Turnip	65 to 70 degrees F	7 to 14 days
Watermelon	75 to 85 degrees F	7 to 14 days