

Successful Seed Starting

Katelyn Valdinger, District Technician



Carroll
Soil and Water
Conservation
District

Advantages

- ▶ Low cost
- ▶ More selection in varieties
- ▶ Flexibility of planting times



Disadvantages

- ▶ More daily management
- ▶ Longer season (1-2 months)




































“I’ve tried starting my own seeds and it never works...”



Getting Started



Late April (When ground temperature is reliably 50 degrees)		Early May		Late May - Early June		
Seed	Transplant*	Seed	Transplant	Seed	Transplant	
 Beets	 Radishes	 Leeks	 Beans	 Broccoli	 Basil	 Basil
 Carrots	 Spinach		 Early corn	 Early cabbage	 Brussels sprouts	 Brussels sprouts
 Chard	 Onions (sets)**		 Pumpkin	 Cauliflower	 Late cabbage	 Eggplant
 Lettuce				 Parsley	 Late corn	 Peppers
 Peas					 Cucumbers	 Pumpkin
 Seed potatoes					 Dill & Cilantro	 Summer squash
					 Melons	 Tomatoes
					 Winter squash	 Tomatillos



When to Sow Your Seeds

Below is a chart that gives you the estimated amount of time that it takes to produce a transplant. Take the date that you want to transplant the seedlings to your garden, subtract the number of weeks it takes to grow the transplant and then subtract the number of days it takes to germinate the seed to figure the date you should sow your seed.

SPECIES	DAYS to GERMINATE	WEEKS to TRANSPLANT
Broccoli	6-10	4-5
Brussels Sprouts	6-10	4-5
Cabbage	6-10	5-6
Cauliflower	6-10	5-6
Collards	6-10	4-6
Cucumber	6-10	3-4
Eggplant	7-14	6-7
Endive/Escarole	5-10	5-7
Kale	6-10	4-6
Kohlrabi	5-10	4-6
Leek	7-12	6-8
Lettuce	6-10	4-5
Melons	5-10	2-3
Mustard	6-10	4-6
Okra	7-14	6-8
Onion	7-12	5-6
Pepper	10-20	6-8
Pumpkin	6-10	2-3
Squash (summer & winter)	6-10	2-3
Tomato	6-14	5-6
Watermelon	4-14	3-5



Vegetable Crop Planning Numbers
sorted by crop

Vegetable	soil temperature for germination				days to emergence at 1/2" deep (soil temp)						Days to maturity	average monthly air temp for best growth				spacing row" X plant"				Seed depth	transplants	
	Minimum	Optimum Range		Optimum	Maximum	50°	59°	68°	77°	86°		95°	Optimum	Minimum	Maximum	Hardness	conventional	johnny's	Jeavons		Peregrine Farm	weeks to grow
Beet	40	50-85	85	95	17	10	6	5	5	5	55	60-65	40	75	HH	12-30X2-4	12-18X3	3	6-10X2,3-4 rows	1/2		
Broccoli		45-85	75								65	60-65	40	75	H	18-36X12-24	18X8	15		T	5-7w	72
Cabbage	40	45-95	85	100	15	9	6	5	4		65	60-65	40	75	H	24-36X12-24	18-34X12-18	15		T	5-7w	72
Carrot	40	45-85	80	95	17	10	7	6	6	9	60	60-65	45	75	HH	16-30X1-3	16-24X1-2	2	6-10X1-2,3-4 rows	1/2		
Cauliflower	40	45-85	80	100	20	10	6	5	5		70	60-65	45	75	HH	24-36X14-24	24-36X18	15		T	5-7w	72
Celery	40	60-70	70	85	16	12	7	NG	NG	NG	80	60-65	45	75	HH	18-40X6-12	24-36X6-8	6	18X6, 2 rows	T	9-12w	50
Collards											70	60-65	40	75	H	24-36X12-24	18-34X12-18	12	18X12, 2 rows	T	4-8w	72
Corn	50	60-95	95	105	22	12	7	4	4	3	75	60-75	50	95	T	30-42X8-12	30-36X6-7	15-18	30X8, 2 rows	1		
Cucumber	60	60-95	95	105	NG	13	6	4	3	3	60	65-75	60	90	VT	36-72X8-12	60-72X8	12	48X6, 1 row	1/2, T	2-4w	50
Eggplant	60	75-90	85	95			13	8	5		65	70-85	65	95	VT	24-48X18-30	18-24X18	18	12X18, 2 rows	T	6-10w	50
Lettuce, leaf	35	40-80	75	85	7	4	3	2	3	NG	40	60-65	45	75	HH	12-24X8-14	12-18X8-12	8	12X10, 3 rows	0, T	5-7w	128
Lima bean bush	60	65-85	85	85	NG	31	18	7	7	NG	75	60-70	50	80	VT	18-36X3-6	18-36X3	6		1		
Muskmelon	60	75-95	90	100			8	4	3		75	65-75	60	90	VT	60-84X12	72X18	15	48X18, 1 row	1/2, T	2-4w	50
Okra	60	70-95	95	105	NG	27	17	13	7	6	55	70-85	65	95	VT	42-60X8-24	24-36X6-12	12		1/2, T	4-6w	50
Onion	35	50-95	75	95	13	7	5	4	4	13		55-75	45	85	H	16-24X1-4	12-18X3-4	3	6X4, 4 rows	1/2, T	9-12w	162
Pea english/snap	40	40-75	75	85	14	9	8	6	6		60	60-65	45	75	H	24-48X1-3	48-72X1-2	3	2X1, 4 rows	1		
Pepper	60	65-95	85	95	NG	25	13	8	8	9	70	70-75	65	80	VT	18-36X12-24	24-36X12-18	12	12X18, 2 rows	T	6-8w	50
Potato	40											60-65	45	75	HH	30-42X6-12	30-36X12	9		2-6"		
Pumpkin	60	70-90	95	100							100	65-75	50	90	VT	72-96X36-60	72-144X18-36	30	48X36, 1 row	3/4		
Radish	40	45-90	85	95	11	6	4	4	3		25	60-65	40	75	H	8-18X1	3-12X1	2	3-4X1, 6-7 rows	1/2		
Snap bean bush	60	60-85	80	95	NG	16	11	8	6	6	55	60-70	50	80	T	18-36X2-4	20-36X2	4		1		
Southern Pea		65-85									75	60-75	50	95	T	18-42X3-6				1		
Spinach	35	45-75	70	85	12	7	6	5	6	NG	45	60-65	40	75	H	12-36X2-6	12-18X2	4	6-10X2-4,3-4 rows	1/2		
Squash, summer	60	70-95	95	100							50	65-75	50	90	VT	36-60X24-48	60-72X12	15		3/4		
Sweet Potato											100	70-85	65	95	VT	36-48X10-18	36X12-18	9		slips		
Swiss chard		50-85									55	60-65	40	75	HH	24-36X12-15	18-24X4-6	8		1/2		
Tomato, early	50	60-85	85	95	43	14	8	6	6	9	62	70-75	65	80	T	36-48X12-24	48-72X12-36	18-24	60X18, 1 row	T	6-8w	18
Tomato, late	50	60-85	85	95	43	14	8	6	6	9	72	70-75	65	80	T					T	4-5w	50
Turnip	40	45-105	85	105	5	3	2	1	1	1	40	60-65	40	75	H	12-36X2-6	12-18X1-2	3	6-10X1,3-4 rows	1/2		
Watermelon	60	70-95	95	105			12	5	4	3	80	70-85	65	95	VT	72-96X24-36	72X18	18		1/2, T	2-4w	50



Containers



Bigger Containers



Read the Seed Packet



- ▶ Variety
- ▶ Price and Weight
- ▶ Dates
- ▶ Description
- ▶ Sunlight
- ▶ Maturity Rate
- ▶ Planting Instructions
- ▶ Spacing
- ▶ Plant Care



Planting Medium

- ▶ What will fill the containers before adding seeds
- ▶ Do not use soil from garden- drainage and air issues
- ▶ Can be soil mix or other material



Coco Coir



Pete Moss



Perlite



Heat

- ▶ Needed for germination
- ▶ Some require 75+ degrees (warmer than home)
- ▶ Placement of seed tray- on top of fridge?
- ▶ Heated mat or heater in small room



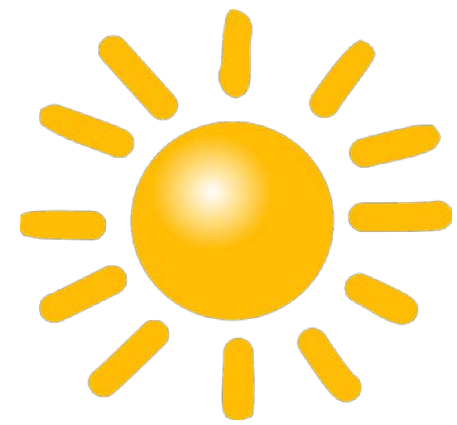
Labeling

- ▶ Plant type
- ▶ Variety
- ▶ Date planted
- ▶ Date to be transplanted?



Lighting

- ▶ Needed after germination
- ▶ Lack of light can cause “leggy” plants
- ▶ Artificial plant light- Grow Lights
- ▶ Homemade light- Florescent Shop Lights



Watering

- ▶ Before seeding, mix soil with water and let sit
- ▶ After seeding, keep soil moist but not wet
- ▶ Consider covering with plastic until well established
- ▶ Check soil everyday
- ▶ Place drainage holes
- ▶ Use tray under seeds
- ▶ Be gentle with watering



Hardening Off

- ▶ Transition to outdoors
- ▶ Plants should gradually spend time outside
- ▶ Will still be in containers or heavily covered
- ▶ Increase time outside for 7-10 days
- ▶ Consider size and fragility of plant
- ▶ Consider wind and temperature outside



Questions?

Information provided by:

Kevin & Sarah Swope, Heritage Lane Farms

Sandy Smith & Michelle Moon, OSU Extension

Katelyn Valdinger, Carroll Soil & Water

