



Growing Vegetables Organically

Tables

Table 1. Amount of organic matter to add from various sources.¹

Material	Rate/1000 Sq. Ft.
Cattle manure	150-500 Lbs.
Compost	4 bushels
Horse manure	100-200 Lbs.
Poultry manure	50-200 Lbs.
Sheep manure	75-100 Lbs.
Swine manure	75-100 Lbs.

¹Rates are minimum initial applications; you may wish to experiment with more or have the material analyzed for actual nutrient content and adjust application accordingly. In addition, you may wish to have your soil tested to determine the amount of organic matter present.

Table 2. Green manure crops, season of growth, amount of seed and type.

Crop	Season	Seed (Lbs./acre)	Type	Nitrogen (Lbs./ton dry material)
Buckwheat	Summer	75	Non-legume	14
Crimson clover	Winter	15	Legume	45
Rye	Winter	75	Non-legume	21
Southernpea	Summer	90	Legume	60
Soybean	Summer	75	Legume	46
Sudan grass	Summer	25	Non-legume	28
Vetch	Winter	30-50	Legume	62
Wheat	Winter	75	Non-legume	20

Table 3. Vegetables in related groups or families.

Nightshade Family	Legumes	Cucurbits	Cole
Eggplant	English pea	Cantaloupe	Broccoli
Irish potato	Lima beans	Cucumber	Cabbage
Pepper	Peanuts	Pumpkins	Collards
Tomato	Snap beans	Squash	Mustard
	Southern pea	Watermelon	Turnips

Table 4. Comparison of fertilizer needs for heavy, medium and light feeders with a medium soil test for phosphorus and potassium in pounds per 1,000 square feet of actual nutrient (nitrogen, phosphorus or potassium).

Feeders	N	P	K
Heavy	3.0	2.8	2.8
Medium	2.2	1.8	1.9
Light	0.8	0.9	0.9

Light feeders	Southern peas		
Medium feeders	Asparagus Beans, all Beets Broccoli Cantaloupes Carrot Cauliflower	Corn Cucumbers Eggplant Greens Herbs Okra English peas	Peppers Pumpkin Radish Squash Sweet potato Swiss chard Watermelon
Heavy feeders	Cabbage Lettuce	Onions Potatoes	Tomatoes

Crop	Hardiness	Days to Maturity
Asparagus	Perennial, winter tolerant	Second Season
Bean, bush	Tender	50-60
Bean, pole	Tender	65-75
Bean, lima	Tender	65-75
Beet	Half-hardy	55-65
Broccoli	Hardy	60-80
Cabbage	Hardy	65-80
Cantaloupe	Very tender	80-90
Carrot	Half-hardy	70-80
Cauliflower	Half-hardy	55-60
Collard	Hardy	55-70
Com	Tender	80-100
Cucumber	Very tender	60-65
Eggplant	Very tender	75-90
Kale	Hardy	50-70
Lettuce	Half-hardy	60-85
Mustard	Hardy	40-50
Okra	Very tender	55-60
Onion	Hardy	100-120
Peas, garden	Hardy	60-80
Pepper	Very tender	65-80
Potato, Irish	Half-hardy	70-90
Radish	Hardy	25-30
Southern pea	Tender	60-70
Spinach	Hardy	40-45
Squash, summer	Very tender	50-55
Squash, winter	Tender	85-120
Sweet potato	Very tender	90-150
Tomato	Tender	70-85
Turnip	Hardy	45-65
Watermelon	Very tender	80-90

Table 7. Recommended vegetable varieties for Georgia

Vegetable	Days to Maturity*	Cultivars**	Planting Dates		Seeds or Plants/ 100 ft.	Spacing Rows/ Plants	Depth to Plant***
			Spring	Fall			
asparagus	2nd year	Jersey Giant, Jersey Knight, Mary Washington, Purple Passion	Jan 15 - Mar 15	Nov 1 - Dec 1	50 roots	36" x 18-24"	6"
beans, bush	50 - 60	Bronco, Blue Lake 274, Half-Runners (State, White, Volunteer) Kentucky Runner, Roma	Mar 15 - May 1	July 5 - Aug 10	½ pound	36" x 2-4"	1" - 1 ½"
beans, pole	65 - 75	Blue Lake, Dade, Kentucky Blue, Moccasin	Mar 15 - May 10	July 1 - Aug 1	½ pound	36" x 4-12"	1" - 1 ½"
beans, lima	65 - 75	Henderson's Bush Fordhook 242, Jackson Wonder (Speckled)	Mar 15 - June 1	July 1 - Aug 1	½ pound	36" x 3-4"	1" - 1 ½"
beans, pole lima	80 - 85	Sieva, Florida Speckled	Mar 15 - June 1	July 1 - Aug 1	½ pound	36" x 6-8"	1" - 1 ½"
beets	55 - 65	Detroit Dark Red, Red Ace, Ruby Queen	Feb 15 - Apr 1	Aug 1 - Sept 20	1 ounce	18-36" x 2"	½"
broccoli	60 - 80	Marathon, Packman, Patriot, Premium Crop, Bravo, Decathion	Feb 15 - Mar 15	Aug 1 - Sept 1	100 plants	36" x 12"	—
butterpea	70	Dixie	Apr 1 - May 1	July 1 - Aug 1	½ pound	36" x 3-4"	1" - 1 ½"
cabbage	70 - 120	A&C No. 5+, Blue Dynasty, Bravo, Early Round Dutch, Rio Verde, Green Jewel	Jan 15 - Mar 15	Aug 1 - Oct 1	100 plants	36" x 12"	—
cantaloupe	80 - 90	Ambrosia, Athena, Satcoy Early, Sweet	Mar 20 - June 20	—	1 ounce	60" x 36"	1"
carrot	70 - 95	Chantenay, Scarlet Nantes, Sweetbites, Sweet Delight, Thumbelina (small)	Jan 15 - Mar 20	Aug 20 - Sept 15	½ ounce	18-36" x 2-3"	¼"
cauliflower	60 - 75	Absolute, Early Snowball, Graffiti (purple color), White Magic, Symphony	Mar 1 - Apr 1	July 15 - Aug 15	100 plants	36" x 12"	—
collards	55 - 85	Blue Max, Georgia Southern, Hevi-Crop	Feb 1 - Mar 15	Aug 1 - Sept 1	½ ounce	36" x 8-16"	½"
corn, yellow	65-90	Bodacious, Golden Queen, Honey Select, Mirai 131, Seneca	Mar 15 - June 1	—	¼ pound	36" x 12-18"	1" - 1 ½"
corn, white	65-90	Avalon, How Sweet It Is, Seneca Sensation, Silver King, Silver Princess, Silver Queen	Mar 15 - June 1	—	¼ pound	36" x 12-18"	1" - 1 ½"
corn, bi-color	65-90	Ambrosia, Butter & Sugar, Honey 'n Pearl, Mirai 301, Peaches & Cream, Serendipity, Sweet Breed Chorus	Mar 15 - June 1	—	¼ pound	36" x 12-18"	1" - 1 ½"

Vegetable	Days to Maturity*	Cultivars**	Planting Dates		Seeds or Plants/ 100 ft.	Spacing Rows/ Plants	Depth to Plant***
			Spring	Fall			
cucumber, slicing	50-65	Bush – Salad Bush Hybrid, Bush Crop, Fanfare Vine – Burpless Hybrid, Diva, Marketmore, Straight Eight, Sweet Slice, Sweet Success	Apr 1 – May 15	July 15 – Aug 15	1 ounce	60" x 12"	½" – ¾"
cucumber, pickling	50-65	Bush Pickle, Calypso, County Fair	Apr 1 – May 15	July 15 – Aug 15	1 ounce	60" x 12"	½" – ¾"
cucumber, gynoeceious	50-65	Calypso, General Lee	Apr 1 – May 15	July 15 – Aug 15	1 ounce	60" x 12"	½" – ¾"
eggplant	75 – 90	Black Beauty, Classic, Dusky, Ghost Buster's (white), Calliope	Apr 1 – May 15	July 10 – July 30	50 plants	36" x 24"	—
kale	50 – 70	Vates, Dwarf Siberian, Blue Armor, Blue Knight	Feb 1 – Mar 10	Aug 1 – Sept 1	½ ounce	36" x 8-16"	½"
lettuce	60 - 85	Butterhead, Romaine, Buttercrunch	Jan 15 - Mar 1	Sept 1 - Oct 1	¼ ounce	18-36" x 8-12"	⅛"
mustard	40 – 50	Florida Broadleaf, Southern Giant Curled, Red Giant, Savannah	Jan 15 – Apr 1	Aug 15 – Sept 15	½ ounce	18-36" x 2"	½"
okra	55 - 65	Annie Oakley II, Burgundy, Cajun Delight, Clemson Spineless	Apr 1 - June 1	June 15 - July 10	1 ounce	36" x 12"	1"
onion, green	60 - 90	White Portugal	Jan 1 - Mar 15	Sept 1 – Dec 31	300 plants	18-36" x 3"	—
onion, dry bulb	100 - 120	Burgundy, Excel, Grano, Red Creole, Savannah Sweet	Jan 1 - Mar 15	Oct 10 - Nov 10	300 plants	18-36" x 3-4"	—
peas, garden (English)	60 - 70	Lincoln, Jackson Wonder, Wando, Little Marvel, Green Arrow, Maestro	Jan 15 - Feb 15	—	1 pound	36" x 2"	1" - 2"
peas, edible pod	60 - 70			—	1 pound	36" x 2"	1" - 2"
peas, Southern	60 - 70	Sugar Daddy, Snow Pea, Sugar Snap Blackeyed - California #5, Pinkeyed - Purple Hull FVR, Cream Pea - Texas Crème, Crowder Pea - Mississippi Silver, Zipper Cream	Apr 1 - Aug 10	—	½ pound	36" x 3-4"	1" - 2"
pepper, bell	65 - 80	Big Bertha, Camelot x3a, Colossal, Karma	Apr 1 - June 1	July 25 - Aug 10	50 plants	36" x 24"	—
pepper, hot	65 - 95	Habeñero, Jalepeno, Tula, Marbles			50 plants	36" x 24"	—
pepper, hot-sweet		Banana Supreme, Kuberille, Sweet Banana	Apr 1 - June 1	—	50 plants	36" x 24"	—
potatoes, Irish	70 - 90	Red (Pontiac), White (Kennebec, Atlantic, Yukon Gold)	Jan 15 - Mar 1	—	12 pounds	36" x 12"	4" - 5"
potatoes, sweet	90 - 120	Centennial, Georgia Red, Giant Jet, Hermandes, Red Jewel	Apr 15 - June 15	—	100 plants	36" x 12"	—

pumpkin, tiny	85 - 120	Little Ironsides	May 15 - July 1 (depending on maturity date)	—	1 ounce	72" x 48"	1"
pumpkin, pie type	85 - 120	Small Sugar, Sugar Baby, Touch of Autumn	—	—	1 ounce	72" x 48"	1"
pumpkin, small	85 - 120	AutumnGold, JackO'Lantern, JackofAllTrades	—	—	1 ounce	72" x 48"	1"
pumpkin, large	85 - 120	Aladdin, Gold Rush, Major Lantern, Merlin	—	—	1 ounce	72" x 48"	1"
pumpkin, giant	85 - 120	Dill's Atlantic, Giant, Prize Winner	—	—	1 ounce	72" x 48"	1"
radish	25 - 30	Cherry Bell, Scarlet Globe, Champion	Jan 15 - Apr 1	Sept 1 - Oct 15	1 ounce	24" x 1"	½"
spinach	40 - 45	Melody, Winter Bloomsdale, Hybrid #7	Jan 15 - Mar 15	Sept 1 - Oct 15	1 ounce	18-36" x 2"	½" - ¾"
squash, summer (zucchini)	40 - 55	Any yellow or green—all are good and easy to grow. Use compact varieties for limited space gardens	Apr 1 - May 15	Aug 1 - Aug 25	½ ounce	36" x 24"	1" - 2"
squash, winter	85 - 120	Acorn, Buttercup Bonbon, Butternut	Apr 1 - July 1	—	½ ounce	60" x 36"	1" - 2"
tomato, determinate	70-90	Bush - Celebrity, Early Girl, BHN 444, BHN 640, Celebrity, Mountain Fresh, Mountain Spring, Rutgers, Amelia, Mountain Pride	Mar 25 - May 1	June 15 - July 15	50 plants	48" x 24"	—
tomato, indeterminate	70-90	Early Girl, Better Boy, Big Beef, Big Boy, Beef-master	Mar 25 - May 1	June 15 - July 15	50 plants	48" x 24"	—
tomato, cherry	70-90	Jolly, Sweet Baby Girl, Super Sweet 100	Mar 25 - May 1	June 15 - July 15	50 plants	48" x 24"	—
tomato, grape	70-90	Grape, Juliet	Mar 25 - May 1	June 15 - July 15	50 plants	48" x 24"	—
turnip	40 - 60	Purple Top, Royal Crown	Jan 15 - Apr 1	Aug 10 - Sept 15	½ ounce	18-36" x 2"	½"
watermelon, large	80 - 90	Mardi Gras, Royal Majesty, Sangria	Mar 20 - May 1	—	1 ounce	72" x 36-48"	1" - 2"
watermelon, round	80 - 90	Baby Doll, Crimson Sweet, Ice Box,	Mar 20 - May 1	—	1 ounce	72" x 36-48"	—
watermelon, small	80 - 90	Imagination, Jade Star, Palm Melon, Solitaire	Mar 20 - May 1	—	1 ounce	72" x 36-48"	—

*Days to maturity are from planting seed or setting transplants in the garden. The number of days will vary depending on cultivar (some mature earlier than others), temperature and general growing conditions. Check catalogues for individual maturity time.

**Cultivars listed in the chart represent a few of those recommended. There are many other good cultivars worthy of trial.

***Plant shallowly in heavy (clay) soil when adequate moisture is present.

Table 8. Guide to the mineral nutrient value of organic materials.				
Materials	Percent¹			Availability
	N	P₂O₅	K₂O	
Bone meal	0.7 – 4	18 – 24	0	Slow/medium
Compost	1.5 – 3.5	0.5 – 1	1 – 2	Slow
Cottonseed meal (dry)	6	2.5	1.7	Slow/medium
Blood meal	12	1.5	0.6	Medium rapid
Fertrell Blue Label	1	1	1	Slow
Fertrell Gold Label	2	2	2	Slow
Fertrell Super	3	2	3	Slow
Fish meal	10	4	0	Slow/medium
Guano	6 – 12	9 – 11	2 – 3	Medium
Chilean nitrate	15	0	0	Rapid
Green sand	0	0	3	Slow
Kelp				
<i>Fresh manures</i>				
Cattle	<1	<1	<1	Medium
Horse	<1	<1	<1	Medium
Poultry	3 – 4	1 – 3	1 – 2	Medium/rapid
Mushroom compost	0.5 – 1	<1	0.5 – 1.5	Slow
Peat	1 – 2	<1	1	Very slow
Soybean meal	6 – 7	2	2	Slow/medium
Wood ashes	0	1 – 2	3 – 7	Rapid
¹ The percentage of plant nutrients is highly variable; with some materials, average percentages are listed. ² Contains common salt, sodium carbonate, sodium and potassium sulfates. ³ Plant nutrients available during year of application. Varies with amount of straw and method of storage. ⁴ Potash content depends on the tree species burned. Wood ashes are alkaline, containing approximately 32 percent CaO.				



Bulletin 1011 Tables / Revised January 2011

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