



FERTILIZING ESTABLISHED VEGETABLE GARDENS

Standard pre-plant fertilizer applications usually provide plants with nutrition needed for the complete growing season. Some crops do benefit from side dressing or the addition of fertilizer during the growing season. Irrigation and rainfall leach nitrogen from the soil, so additional nitrogen can be applied to encourage good growth, development, and higher yield.

Phosphorus and potassium are not subject to leaching, and, therefore, a complete fertilizer is not necessary. It is more convenient to purchase a complete fertilizer, but nitrogen sources do exist in convenient consumer packages.

Table 1 lists sources of nitrogen fertilizer and the rate of application per 100 square feet. When fertilizing established gardens, take care not to have dry fertilizer come in contact with the foliage. Deep incorporation of fertilizer is difficult and can injure established root systems. Apply the fertilizer at the recommended rate, rake it into the upper two inches of soil, and water the garden to move the fertilizer down into the root zone. When possible, dissolve the recommended amount of fertilizer in water and then apply to the soil. It may be convenient to apply the fertilizer in two gallons of water, covering 100 square feet.

Table 1 Nitrogen sources

fertilizer	analysis	Ounces suppling 3.5 oz. of N/100 ft ²	release rate	comments
Urea (synthetic)	46-0-0	7.5	rapid	Inexpensive, concentrated, may be difficult to apply
Calcium nitrate inorganic	15.5-0-0	23	rapid	Can help raise pH
Ammonium sulfate (inorganic)	21-0-0	16.5	medium	Can help lower pH. Used for acid loving plants
Blood Meal (natural organic)		29	Medium- rapid	Readily available
Corn gluten (natural organic)		35	slow	Expensive
Cotton Seed Meal (natural organic)		58	Slow- medium	Can help lower pH. Contains P & K
Sodium Nitrate (natural organic)		22	rapid	Avoid high rates

Table 2 - Time of side dressing of vegetable crops

Asparagus and rhubarb	End of harvest season
Beets	4" tall
Bean	In bloom
Crucifers (cabbage, cauliflower)	Leaves 4-6"
Carrots, parsnips	4" tall
Celery	4" tall
Cukes and melons	When vines spread
Eggplant	Fruit set
Lettuce and endive	4" tall
Peppers	Fruit set
Potatoes	When 8" tall
Pumpkins, squash, gourds	When vines spread
Spinach	When 3" tall
Sweet Corn	When 8" tall
Tomatoes	Fruit set
Turnips	4" tall

MID-SEASON FERTILIZER RECOMMENDATIONS FOR ESTABLISHED VEGETABLES

(Always take a soil sample prior to planting and prior to the addition of lime, fertilizer or soil amendments)

After July 1

If Nitrogen is low:

A complete fertilizer (one which contains nitrogen, phosphorus and potassium) is not effective at this time.

Plants can benefit from additional nitrogen. Mix the recommended fertilizer in 2 gallons of water to cover 100 square feet.

If soil pH is: <6.5 apply: ½ lb of calcium nitrate (16-0-0) per 100 sq.ft.
<7.3 ¼ lb. of ammonium nitrate (33-0-0) per 100 sq.ft.
>7.3 ½ lb. of ammonium sulfate (20-0-0) per 100 sq.ft or
>7.3 ¼ lb. of urea (45-0-0) per 100 sq.ft.

After July 1

If Nitrogen is high:

A complete fertilizer is not effective at this time.

Plants can often benefit from additional nitrogen mid-season; however, if the nitrogen level of your soil is high, do not add fertilizer at this time.

Mid-season recommendations end after the first of September and only pre-planting spring recommendations should be given.

Reviewed 4/13, 6/16 Walt Nelson

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