

## Vegetable Garden

### Management Highlights

- Target pH: **6.0**
- Apply starter fertilizer applications as outlined below. See Soil Test Note 11 -- *Fertilizing Home Vegetable Gardens* -- to determine if sidedressing of individual vegetable plants is recommended to obtain a good harvest.

### Introduction

Vegetable gardens can provide a good source of fresh vegetables to homeowners as well as a being a source of pride and relaxation. With the proper fertilization and management, these plantings will continue to perform well throughout the growing season.

### Soil pH and Liming

The target pH for vegetable gardens on Delaware soils is **6.0**. The lime recommendation for a particular site is calculated from the soil pH and buffer pH measurements using the steps outlined in *Calculating the Lime Requirement -- Chapter 4, Section 4.4*. Avoid overliming in order to encourage good plant growth and prevent deficiency of micronutrients such as iron.

In most cases, the lime requirement can be met by either calcitic or dolomitic limestone. *Dolomitic limestone* is recommended if:

- soil test Mg is less than 50 FIVs, or
- soil test Mg is between 50 and 100 FIVs *and less than soil test Ca*.

*Calcitic limestone* is recommended if:

- soil test Mg is greater than 100 FIVs, or
- soil test Mg is between 50 and 100 FIVs *and greater than soil test Ca*.

Lime should be applied in the fall prior to planting since it may take several months for the lime application to be fully effective. Incorporation of the liming material will increase the rate of reaction and the effectiveness of the application.

### Nutrient Recommendations

Nutrient recommendations for vegetable gardens can be grouped into two broad classes: *starter applications*, designed to correct any problems in the soil and establish an optimum level of

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fertility prior to planting, and *sidedress applications*, which are designed to provide additional nitrogen to later in the season when needed by the plants.

*Starter applications* are based on the nutrient requirements of the plant and the soil test values for P and K. To determine the nutrient recommendation for a specific site, select the **P-K Index Value** from Table 1 using the soil test P and soil test K values shown on the Soil Test Report Form. Next, using that index value, select the appropriate nutrient recommendation from Table 2, below.

*Sidedress applications* are plant specific and required at particular stages of plant growth. Not all vegetable plants require sidedressing. Some, in fact, respond negatively to sidedress treatments and become vegetative rather than producing fruit. See Soil Test Note 11 (APP-7) for more information on sidedressing vegetable plants.

**Table 1. P-K Index value as a function of soil test P and soil test K.**

Soil Test K (FIVs)	Soil Test P (FIV)s			
	1 - 25	26 - 50	51 - 100	101 - 150
1 - 25	1	2	3	4
26 - 50	5	6	7	8
51 - 100	9	10	11	12
101 - 150	13	14	15	16

**Table 2. Starter nutrient recommendations for vegetable gardens as a function of the P-K index value.**

PK Index Value	Nutrient Recommendation
1,2	Apply 50 lbs 5-10-10 or equivalent water-soluble fertilizer per 1000 square feet. Apply 2/3 of the recommended fertilizer and work in by spading, plowing or rototilling. Apply the other 1/3 to the surface and rake in just before planting.
3,4	Apply and work in by spading, plowing or rototilling 6 lbs muriate of potash (0-0-60) per 1000 square feet. Apply 20 lbs 10-10-10 or equivalent water-soluble fertilizer to the surface and rake in just before planting.

PK Index Value	Nutrient Recommendation
5,6	Apply 40 lbs 5-10-10 or equivalent water-soluble fertilizer per 1000 square feet. Apply 2/3 of the recommended fertilizer and work in by spading, plowing or rototilling. Apply the other 1/3 to the surface and rake in just before planting.
7,8	Apply and work in by spading, plowing or rototilling 3 lbs muriate of potash (0-0-60) per 1000 square feet. Apply 20 lbs 10-10-10 or equivalent water-soluble fertilizer to the surface and rake in just before planting.
9,10	Apply 40 lbs 5-10-5 or equivalent water-soluble fertilizer per 1000 square feet. Apply 2/3 of the recommended fertilizer and work in by spading, plowing or rototilling. Apply the other 1/3 to the surface and rake in just before planting.
11,12	Apply 20 lbs 10-10-10 or equivalent water-soluble fertilizer per 1000 square feet. Apply 2/3 of the recommended fertilizer and work in by spading, plowing or rototilling. Apply the other 1/3 to the surface and rake in just before planting.
13,14	Apply and work in by spading, plowing or rototilling 8 lbs triple superphosphate (0-46-0) per 1000 square feet. Apply 20 lbs 10-6-4 or equivalent water-soluble fertilizer to the surface and rake in just before planting.
15	Apply 20 lbs 10-6-4 or equivalent water-soluble fertilizer per 1000 square feet. Apply 2/3 of the recommended fertilizer and work in by spading, plowing or rototilling. Apply the other 1/3 to the surface and rake in just before planting.
16	Apply 3 lbs ammonium nitrate or urea per 1000 square feet and work in by spading, plowing or rototilling. Apply another 3 lbs ammonium nitrate or urea per 1000 square feet to the surface and rake in just before planting.

### Additional Information

See Soil Test Notes 1 and 11 (Appendix APP-7) for additional information about nutrient management of home vegetable gardens. Fact sheets about vegetables in the home garden are also available at your local Cooperative Extension office.