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Sweet Corn

Sweet Corn (*Zea mays*) is a member of the grass family, which includes other cereal crops such as wheat, oats, barley, sorghum and rice. Corn require plenty of space to grow, and therefore, is recommended for large gardens.

Soil Preparation:
Sweet corn grows best in fertile, loamy, well-drained soil where plants will receive fill sunlight throughout the day. Well-rotted manure compost, green manure crops or similar materials will improve water holding capacity of the soil and is recommended for best crop production. Three to four bushels of well-rotted manure or similar material per 100 feet of row would be adequate when worked into the soil prior to planting.

Lime and Fertilizing:
A soil pH of 6.0-7.0 is preferred for sweet corn. Strongly acid soils should be limed according to recommendations. Have your soil tested and follow the recommendations given. For instructions and an order form from the UMass Extension Soil and Plant Tissue Testing Lab, go to http://www.umass.edu/soiltest/ . Lime (if needed) is most effective when worked into the soil in the fall. Many nutrients deficiency symptoms that may appear early in the season are often due to low pH.

Apply three to four pounds of 10-10-10 fertilizer per 100 square feet. Fertilizer should be broadcast evenly and worked into the top two to three inches of soil prior to seeding.

When corn is 12 inches tall it is a good idea to apply a sidedressing of fertilizer. This is especially important on light sandy soils. To sidedress, apply 8 ounces of 10-10-10 fertilizer to every 10 linear feet or row. For best results, work fertilizer into two with a light cultivation. Watering at this time would also be beneficial.

To avoid burning roots, bands of fertilizer should be placed three to four inches away from the plant on each side. Fertilizer injury is more severe in dry weather and may result in stunting or killing the plants.

Natural Fertilizers:
Natural fertilizers can be very effective when the right choice is made from the many types available.

Planting:
Corn requires plenty of space and recommended for only larger gardens exposed to full sunlight. It does best planted in rows 30 to 36 inches apart with single plants spaced approximately ten inches apart in the row. Overcrowding corn plants will reduce the ear yield and keep the ears from developing fully.

Never plant one long row of corn; always plant corn in blocks of four or more shot rows. That way it will insure complete pollination for full ears. If growing more than one type of corn (for instance Indian corn and sweet corn), never plant them together. Pollen from the Indian corn can contaminate sweet corn causing a mixture of kernels in the developing ears, which destroys

the quality of sweet corn. If more than one type is to be planted, they should be separated as far as if practical.

Follow these steps for planting sweet corn:

For satisfactory results, plant corn after the middle of May. If you want to gamble on an early crop, plant as early as mid-April, depending on the locale. Success may vary from year to year.

- Apply organic matter and recommended amounts of lime.
- Retotill into soil.
- Broadcast recommended amounts of fertilizer prior to planting and work into soil.
- Plant seeds one to two inches deep.

Four ounces of seed will plant a 100 foot row and approximately eight dozen ears may be expected per row.

Plant early, midseason and late varieties on the same day to extend the harvest season. The harvest season can also be extended by planting seeds of the same variety at different times. A common rule of thumb would be to wait for one planting to sprout before seeding the next planting. This will give a succession of crops. Remember, it is ideal to have three to four rows coming into production at the same time for adequate pollination.

Weed Control:
For best results, corn should be kept free of weeds. Cultivation should be shallow when the weeds are small so as to avoid damage to plant root systems. Many people cultivate and sidedress with fertilizer at the same time.

Watering:
Water when dry periods occur. Corn plants require at least one inch of water per week when temperatures are warm and growth is rapid. Mulches may be used to retain moisture. If water is needed, irrigate thoroughly early in the morning until the soil is moistened 8 to 12 inches deep. If rainfall is deficient, it may be necessary to water once a week, perhaps two times per week in sandy soils.

Pests:
The principle insect pests are European cornborers, cutworms, common stalk borers and fall army worms. Problems with these insects vary from year to year. Common diseases are rust, mosaic virus and smut. Corn smut should be cut out and destroyed as soon as it appears. There are no practical control measures for rust and mosaic virus.

Other Problems:

Problem: Uneven kernel development.
Cause: Inadequate pollination due to planting too close, inadequate moisture or fertilization. It is best to plant corn in a block or four or more rows, never in a single row.

Problem: Stunted plants.
Cause: Dry weather, low fertility, mosaic virus.

Problem: Kernel mixture on same ear.
Cause: Cross pollination. Two types of corn (such as Indian and sweet corn) should not be planted next to one another.

Harvesting:
Harvest sweet corn in the milk stage of maturity. At this stage, the kernel is sweet, tender and of the highest quality. Harvest while the juice will still squirt freely when then kernels are punctured.

Sugars convert to starch rapidly after harvest, therefore, keep the corn cool to slow down this conversion.

Corn can be kept for several days stored at temperatures of 32 – 38F but is best when consumed immediately after harvest.

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