GEORGESON BOTANICAL GARDEN

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Growing Sweetcorn in Interior Alaska

by

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Sweetcorn can be dependably grown in Interior Alaska as judged from my 20 consecutive successful seasons. However, extra effort is required. Most easily grown are the early maturing varieties such as 'Polar Vee,' which gives good-sized ears and ripens in July. Good performers also include early strains of Twilley 'Summer Flavor' and Stokes 'Northern Super Sweet.'

Corn originated from tropical grasses and is cold sensitive. Once cold-shocked, corn turns light yellow, quits growing, and can take a week to recover. Thus, chilling temperatures should be avoided.

The cheapest way to warm the soil is to maximize solar collection. Since summer sun remains low near the Arctic, south-facing plots collect heat best. Rows should run east to west and be spaced sufficiently to allow sunlight over the roots. If the adjacent row is also corn, 12 feet are needed to prevent shading by the 6 – to 7–foot plants. Other obstructions should be cleared to take advantage of low sun to the north, east and west.

Many of our clear sunny days are in May and can be used to advantage for success with the larger varieties of corn. However, spring frosts are usual and cool nights are inevitable. To warm the soil early, the garden should be cleared of snow. Ashes help, but a better solution is a sprinkling of soil. A pass or two with a snow blower in early April brings up a little dry soil which collects heat well and speeds melting. While spring storms often add an additional covering of reflective snow, its albedo can be broken with a few sets of tracks. Planting should be near May 1, but a late May start can be successful with a late fall frost.

By covering rows with plastic sheeting, soil temperatures are easily brought above 100°F and the latent heat carries through the short spring nights. Six–foot strips of 6–mil polyethylene sheeting split from 12–foot rolls works well. Rows are prepared by digging two 4-inch trenches, 30 inches apart. Fertilize and lay irrigation tubing above the upper trench, and bury the edge of the polyethylene sheeting in the lower trench. Water well, then draw the sheeting across the row. Weigh the top edge down with 4 x 4–inch timbers.

Seeds should be germinated prior to sowing but not grown as transplants. Corn radiates a fine network of roots for two or three feet just under the surface of the soil. These roots can be damaged either by transplanting or late cultivation. Although transplants will take, their feeder root system is constrained. Start the seeds on wet paper towels on a plate. Cover with plastic wrap and warm to 75°F. Within two days the seeds will sprout. By this time the soil should be warm.

Plant the sprouts in groups of five at intervals of 10 inches along the north side and near the bottom of the moist trench. This seeding rate is three times the usual density, but since the rows are widely spaced, the yield is normal. Thick rows give good pollination without help from others nearby. Since the sides of the plants are sun-exposed, there is plenty of light. I average nearly two ears per stalk, whereas 1.5 ears is normal.

Seeds are placed toward the north side of the trench to collect sun. Day temperatures in the spring exceed 110°F under the mulch, which is enough to burn out some of the weeds. However, the corn is more heat tolerant, and temperatures are a little cooler near the bottom of the trench. The plants emerge within a few days.

As the plants grow, they bend down along the trench and also raise the plastic. Cut an occasional 1 inch hole in the plastic for ventilation. At about 10 inches, the corn produces new leaves rolled into stiff brittle tubes. On warm days, pull the plastic back to let the rolls of leaves unfurl in the wind and harden off. By mid June, the plants should be 18 to 24 inches in height. Leave the corn covered on a warm day which causes the plants to be slightly limp. Cut an 8-inch "X" in the plastic over each hill with a seam ripper. Reach through to the bottom of the stalks with both hands and pull all the leaves through with a thumb and forefinger circle. The otherwise turgid leaves will come through without damage. Water well in early July during tassel formation for good pollen formation, and side dress with fertilizer. Weeds sometimes appear in and above the row (south side weeds mostly burn out). These are tender and easily pulled from the top side of the row or through the X hole.

Sometimes frost comes in mid August so the early start is essential. Plants with developed ears take a little frost, and the corn will still ripen. However, there is loss of sweetness, which makes the early season start even more important. Even with a late start in 1992 the early varieties were ripe in July and most of the later varieties ripened before our early snow on Sept. 10.