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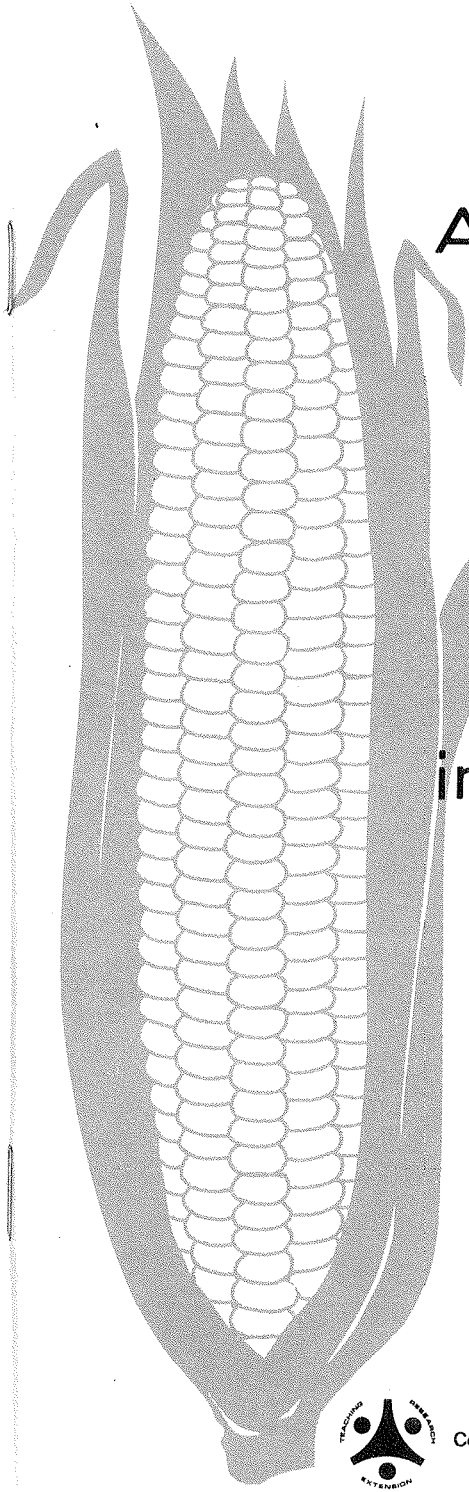

A Guide for Producing Top Quality Sweetcorn in NEBRASKA

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A Guide for Producing Top Quality Sweetcorn in Nebraska

R. E. Neild, W. C. Whitney, D. S. Nuland[1]

Adults eat more and children considerably less but the average Nebraskan consumes about 16 ears of sweet corn each year. No source can equal the quality of home or locally grown sweet corn. Many families produce no corn and a market for large quantities exists for specialized growers. Research trials involving numerous plantings at 11 locations in east, central and western Nebraska show high yield is possible in all areas. Steps important to successful sweet corn production are discussed in this circular.

Step 1—Plant Recommended Varieties

Many new varieties are available. As a general rule, those that have received an all-American award, indicated by a red, white and blue shield on the packet, have performed well in many areas. Table 1 shows characteristics of varieties that have done well in Nebraska. In general, earlier varieties are lower in yield and quality than later varieties.

Table 1. Characteristics of sweet corn varieties.

Variety group	Characteristics	Variety (days)[a]	
Small—early	Under 70 days to harvest	Earliking	(65)
	5-5½ foot plant	Spring Gold	(67)
	6-6½ inch ear		
Small—second early	70-80 days to harvest	Harvest Cream	(74)
	5½-6 foot plant	Northern Belle	(77)
	6½-7 inch ear	Golden Bantam	(78)
Large—main season	81-85 days to harvest	Gold Cup	(81)
	6½-7 foot plant	Wonder Gold	(83)
	7½-8 inch ear	NK 199	(84)
		Golden Security	(86)
Large—late	Over 85 days to harvest	Victory Golden	(86)
	7-8 foot plant	Iochief	(87)
	7½-8 inch ear	Stowell's Evergreen	(90)

[a]Days to harvest may vary from year to year and be longer in western Nebraska.

[1]Associate Professor of Horticulture, Extension Horticulturalist and District Extension Horticulturalist, respectively. Acknowledgment is made to Extension Staff Members of Agronomy, Entomology, Plant Pathology and Agricultural Engineering for review and helpful suggestions.

Step 2—Good Soil Preparation

Sweet corn may be successfully grown on any good, well drained soil. Have the soil tested before applying fertilizer. Most Nebraska soils are well supplied with phosphorus and potassium. If the soil is not tested, if sweet corn does not follow alfalfa or another legume, or if the soil has not recently received an application of manure or compost, sweet corn will probably benefit from nitrogen fertilizer.

Apply 1 to 1½ lb. of actual nitrogen per 1000 sq. ft. (about 40-60 lb. of N per acre). This could be broadcast and plowed down ahead of planting or, better, ½ applied before planting with the remaining ½ side-dressed prior to tasseling. Soil should not be plowed or worked when wet. Squeezing a handful makes a good test. It should crumble but not feel sticky.

Step 3—Proper Planting

Time of planting—Do not plant sweet corn until the soil has become warm (55° F) and the danger of frost is slight. Latest planting should provide enough time for the crop to mature before frost in the fall. The earliest and latest planting and earliest and latest harvest dates for different regions of the state are shown in Table 2. Plantings in May usually produce the highest yield and quality.

Table 2. Planting and harvest season.

Region of State	Planting	Harvest
East	4/26 - 7/23	7/15 - 10/6
Central	5/2 - 7/10	7/24 - 9/24
Panhandle	5/11 - 6/22	8/5 - 9/28

Planting Method--Make rows straight and parallel by use of a taut string between two stakes or by properly operating a planter. Seed may be drilled in shallow 1 or 1½ inch furrows made with the edge of a hoe or by a planter. They may also be planted 3-4 seeds per hill. Small early varieties may be planted closer than the larger late ones (Table 3).

Table 3. Sweet corn plant spacing.

	Method of Planting		
	Drilled		Hills
Variety group	Row width	Between plants	Checked
Small—early	30"	10"	32" x 32"
	32"	10"	
Large—main season	32"	14"	36" x 36"
	36"	12"	
Large—late	36"	14"	40" x 40"
	40"	12"	

Step 4—Schedule Planting for Successive Harvest

Sweet corn on the plant remains in eating quality for about 5-10 days, depending on temperature. To avoid having an excess ready for harvest at one time and to provide highest quality ears for the longest period of time, schedule plantings. A planting schedule in Table 4 may be used as a guide.

Step 5—Control Weeds

Hoeing and cultivating are preferred methods in small gardens. Herbicides as well as some cultivation may be used to control weeds in larger plantings. *Potential weed problems may be prevented by proper seed bed preparation and timely cultivation. Weeds are easiest to kill when small.* Some herbicides for field corn may be used for sweet corn. Table 5 shows recommendations for Nebraska.

Atrazine is likely to remain in the soil several months or a year, which causes injury to fall cover crops and vegetables (except sweet corn). Its residual effect is harmful especially for onions and cucumbers. Using a low rate, less than 2 lb. of active chemical per acre as weeds are emerging, is the best way to reduce the total amount of Atrazine per crop acre. Mixtures with Ramrod reduce carryover. Ramrod-Atrazine may cause skin irritation. Be careful when using these chemicals.

Table 4. Schedule for planting sweet corn for peak harvest.

Planting	Variety group	Planting date	Estimated harvest date
		7 days apart	
		Eastern Nebraska	
1	Second early	April 26	July 15
	Main season	April 26	July 21
2	" "	May 17	July 28
3	" "	May 30	Aug. 4
4	" "	June 8	Aug. 11
5	" "	June 17	Aug. 18
6	" "	June 24	Aug. 25
7	" "	July 1	Sept. 1
8	" "	July 7	Sept. 8
9	" "	July 12	Sept. 15
10	" "	July 16	Sept. 22
11	" "	July 20	Sept. 29
12	" "	July 23	Oct. 6
		Central Nebraska	
1	Second early	May 3	July 24
	Main season	May 3	July 31
2	" "	May 24	Aug. 7
3	" "	June 5	Aug. 14
4	" "	June 14	Aug. 21
5	" "	June 21	Aug. 28
6	" "	June 27	Sept. 9
7	" "	July 2	Sept. 10
8	" "	July 7	Sept. 17
9	" "	July 10	Sept. 24
10	" "	July 13	Oct. 1
		Western Nebraska	
1	Early	May 11	Aug. 5
	Second early	May 11	Aug. 10
	Main season	May 11	Aug. 19
2	" "	May 31	Aug. 26
3	" "	June 11	Sept. 4
4	" "	June 18	Sept. 11
5	" "	June 22	Sept. 18

Table 5. Herbicide recommendations for sweet corn.

Herbicide	Lb. active ingredient needed[a]	Apply this amount commercial product[a]	Application time	Remarks
AAtrex	2 to 3	2.5 to 3.75 lb.	Preplant or preemergence	AAtrex may not control.
Ramrod + Atrazine	1 + 2.4	Use 5 lb. Ramrod-Atrazine mixture	Preemergence	Fall Panicum, Crabgrass or Sandburs. Ramrod controls primarily grassy weeds.
Londax	3	6.7 lb. Londax WP or 20 lb. Londax G	Preemergence	Eastern Nebraska only.

Step 6—Irrigate Properly

Sweet corn requires a continuous moisture supply to produce high yields, yet suffers from excessive water if the soil becomes waterlogged. Lack of water at any time may reduce yields and quality but shortly before and during silking is the most critical period.

In general, the crop requires about 16 inches of water or rainfall or irrigation during the growing season. Irrigation will be necessary during hot dry periods in June, July and August when summer rain does not fall. After sweet corn is 18-24 inches tall it should receive 1.5-2.0 inches of water from rainfall or irrigation each week. Irrigation amounts less than 1 inch at a single application are less effective.

Step 7—Control Pests

Flea beetles may damage early spring plantings. Corn rootworms are more likely to be problems on continuous corn ground. First generation corn borers are a greater threat to early planted corn. The second generation may be severe on late planted or developing corn. Corn earworms are very destructive to sweet corn. When uncontrolled, the severity of damage by this insect increases as the harvest season progresses. All can be controlled with proper use of insecticides. Materials for controlling the most important sweet corn insects are given in Table 6. **Be certain to read the label regarding rates and precautions in application. . .**

Symptoms and control of some diseases that may affect sweet corn are given in Table 7.

Table 6. Sweet corn insect control.

Insect	Material	Remarks
Rootworms	Diazinon 14% granules Bux 10% granules	Apply as a band over the row at time of planting, work into the upper ½ to 1 inch of soil or apply on each side of row about June 1 and cultivate or hoe to cover granules.
Corn flea beetles	Sevin 50% WP 2 tbsp. per gal. water	Spray plants as soon as injuries (small holes) are noticed.
Corn borers	Sevin 50% WP 2 tbsp. per gal. water	Apply four times at 7-day intervals beginning June 15.
Corn leaf aphids	Malathion 50% EC 2 tsp. per gal. water	Apply to foliage when aphids are present.
Earworms and corn rootworm beetles (silks)	Sevin 50% WP 2 tbsp. per gal. water	Apply to silks every 2 or 3 days for 10 days after silks begin to emerge.

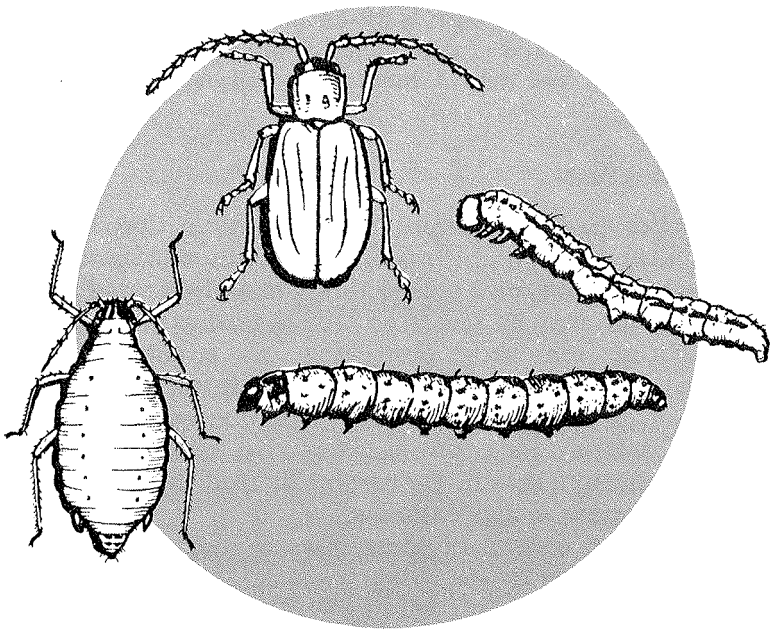

Table 7. Potential sweet corn diseases and their control.

Disease	Symptoms	Control	Remarks
Seed rots and seedling blights	Stand poor and uneven. Seedlings wilt; may die.	Use high quality seed. Use seed-protectant fungicide such as captan or thiram.	Availability of good seed and fungicide have reduced losses in recent years.
Ear and kernel rots	Kernels, ears and cobs moldy and rotted.	Use resistant hybrids and recommended control of ear-feeding insects.	Greatest susceptibility is from silk to harvest under high moisture conditions.
Leaf blight	Elongate dead areas on leaves.	Maneb + Zinc 2 tbsp. per gal. water or Polyram 2 tbsp. per gal. water.	Apply to foliage when blight first occurs with repeat applications at 14-day intervals.
Stewart's disease	Rapid wilting of plants; stunting; streaked dead areas on leaves may also occur.	Use of resistant hybrids such as Golden Cross Bantam. Use recommended corn flea beetle control.	Adequate levels of potassium in soil tend to minimize disease.
Common rust	Small, reddish-brown pustules on leaves.	No specific control measure. Most hybrids have broad based resistance.	Rust is almost universal and can cause leaf damage during cool, humid weather.
Common smut	Silvery galls, filled with black dust, anywhere on plant above ground.	Avoid mechanical injury or insect injury to the plant. Plant hybrids with some resistance.	In home garden, remove galls before they rupture.

Step 8—Harvest at Peak Quality

Harvest ears when kernels are in the milk stage. When this occurs, the silks are brown and dry beyond the end of the husk. The kernels are plump and well colored, yet tender enough to exude a thick milky juice when pressed by the thumb. Ears are full sized and when squeezed by the hand, the husk feels tightly fitted about the ear. Ears remain in prime quality on the plant from 3 to 7 days, depending on the temperature. Quality deteriorates rather quickly unless ears are cooled after picking. Pick ears shortly before eating or refrigerate immediately for later use.