# Growing
# SWEET CORN
# in Arizona

Agricultural Experiment Station
University of Arizona
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# SUMMARY

**VARIETIES** should be selected for yielding ability, quality and/or specific uses. The Golden Cross variety is currently the most popular.

**PLANTING DATES** must be considered in relation to seasons of production. The spring crop should be seeded between February 15 and March 15 with the preferable period being March 1 to 7. The fall crop should be planted between July 20 and August 10 with the preferable period being August 5 to 10.

**SOIL PREPARATION** should be thorough but not excessive.

**PLANTING** may be accomplished in a raised bed or flat seed bed. However, regardless of method selected, the seed should be in moist soil at a depth of 1½ to 2 inches.

**IRRIGATE** with a preplant irrigation to replenish the subsoil moisture. Subsequent irrigations should be made according to plant demands. Irrigation frequency during ear formation and maturation is very important. During this period never allow the plants to show water stress.

**FERTILIZE** with 100 to 150 pounds of actual nitrogen per acre. On phosphate-responsive soils, use 50 pounds of $P_2O_5$ plus the suggested amount of nitrogen. Use preplant application and/or early side dressing before plants are 12 inches tall.

**SUCKERING** has no effect on yield, quality, or speed of maturity (earliness) in sweet corn.

**HARVESTING** should be done in the forenoon to take advantage of cooler temperatures. Cool the harvested ears to 38 to 40 degrees F. as quickly as possible after removal from plants and hold in cold storage to prevent build-up of temperature. Husks should be kept moist to prevent drying out.

**CORN EARWORM** must be controlled if quality sweet corn is to be produced. Use 5 percent DDT dust applied to the silk with a stencil brush or puff duster. Treatment should begin as soon as silks appear and be repeated every two to three days for at least five applications.

**LESSER CORN STALK BORER AND SOUTHWESTERN CORN BORER** attack only the fall crop but may cause considerable damage and are almost impossible to control with insecticides. Therefore, crop sanitation and proper disposition of crop residues offer the best means of control for these insects.

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# Growing Sweet Corn In Arizona

By W. D. Pew and L. Hopkins[1]

Although Sweet Corn *(Zea Mays rugosa)* as a commercial crop has experienced a disastrous, insect ridden past, it currently faces a most promising future.

In the past the lack of interest among potential commercial growers has resulted chiefly from two difficulties, namely, improper pollination[2] and fill[3] and the ravages of the corn ear worms. Improper pollination and fill has been found to be closely associated with hot dry climatic conditions during the silking and pollination period.

During the past four years, much progress has been made through experimentation to provide ways to improve pollination and fill. With these difficulties almost entirely overcome, sweet corn may well become a commercially important crop.

## TEMPERATURE EFFECTS ON MATURITY

Sweet corn is indexed by the number of days from planting to harvest.

Sweet corn responds markedly in both growth and maturity to the accumulation of available heat during the growing season. The available heat index for sweet corn can be calculated by summations of all mean daily temperatures during growing period above 50°F. The higher the temperature the more rapid available heat accumulates and the sooner the corn reaches maturity. This means that if an unseasonably warm growing period occurs, the corn will mature in fewer days than normally indicated. If a cooler than average growing period prevails, the number of days from seeding to harvest will be greater. Therefore, temperature becomes an important unpredictable factor in the production of this crop. Planting and harvesting dates as used in this publication are, therefore, based on **average temperatures** for the growing season.

## SOIL TYPE

Most soil types found in Arizona will produce a good crop of sweet corn if properly handled. If a grower has a choice of soil types he should select a medium-textured soil with good drainage and good water-holding capacity. A sandy loam is an excellent soil for sweet corn production.

The proper selection of soil type is not a substitute for proper seed bed preparation or production practices.

## VARIETIES

**Golden Cross:** This is the major variety in Arizona adapted to a wide variety of conditions. It matures in 85 days under normal temperature conditions. Kernels are of medium depth and width, with rich yellow color. The ears approximate 8 inches in length and 1½ to

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[1]Associate Horticulturist, formerly Assistant Entomologist, respectively, University of Arizona.

[2]POLLINATION as used in this publication refers to the proper pollination and development of kernels occurring in the body and base of the ear. It does not include those kernels on the tip 1½ inches of the ear.

[3]FILL as used in this publication means the extent to which the kernels are pollinated and developed on the tip of the ear.

1¾ inches in diameter. It tapers from the base to the tip. Plants are medium to deep green in color, show medium vigor, and sucker profusely. The plants will average about 7 feet in height. Currently this is the most popular variety.

**Seneca Chief:** Seneca Chief is an excellent sweet corn for freezing on the cob. Matures in 85 days under normal temperature conditions. Kernels are deep and slender, with yellow color. Ears are approximately 8 inches long and 1½ inches in diameter. Ear is cylindrical with little difference in width from base to tip.

**Ioana:** A hardy variety, maturing in about 87 days. Kernels are medium depth and narrow, with light yellow color. Ears are approximately 8 inches in length and 1½ inches in diameter.

**Iochief:** A non-suckering recent introduction maturing in approximately 90 days. Ears are approximately 8½ inches long and 1½ to 1¾ inches in diameter. Kernels, deep with medium width, and golden in color. It is typically a tall stalk with two large ears. Quality is not equal to Golden Cross.

Other varieties for higher elevations that are commonly used in Northern Arizona are Aristogold Bantam, Marcross, Flagship, Lincoln, Stowell's Evergreen Hybrid (white), and Seneca 60 (small ears, matures at high elevations from 60 to 70 days).

## PLANTING DATES

Because of the nature of this crop and its genetic uniformity, the time required from planting time to harvest can be calculated on the basis of heat units and the information could then be used in determining the planting dates and in predicting harvest time. In fact, **timely planting** has in itself provided an effective way to overcome poor pollination. Further, the nature of the seasons in Arizona and the wise use of proper planting date information makes it possible to produce two crops of sweet corn each year in the major producing areas of the Salt River and Yuma Valleys.

The planting of these two crops is as follows:

**Spring Crop:** For the spring crop, best results have been experienced when seeding is completed as soon as danger of frost has passed, which is about mid-February in most areas of the Salt River Valley. When planted at this time of year, the plants will silk and pollination will occur before the hot, dry summer days, thus practically eliminating the possibility of poor pollination. Under these conditions, the crop is normally harvested during early or mid-May. The generally accepted planting period extends from February 15 through March 15. The most desirable planting time within this period is March 1 to 7. The planting date in Yuma County may be advanced to late January or early February.

**Fall Crop:** In planting the fall crop, it is desirable to seed as late as is possible with the only precaution being to avoid extending the growing period into the beginning of the frost damage season. Usually a crop timed to mature by mid-November will escape any danger of frost damage. If this procedure is followed, the summer days will have passed and the plant will silk at the proper time so that pollination will not be hampered by the hot, dry air.

The generally accepted planting period for Salt River Valley extends from July 20 through August 10. The most desirable planting

time within this period is August 5 to 10. In the Yuma area this date may be delayed until the latter part of August or early September.

**Higher Elevation Growing Areas:** In the eastern counties of Arizona —Cochise. Graham, Greenlee and the Verde Valley of Yavapai County, where the elevation ranges from 3000 to 4500 feet, sweet corn can be planted between April 20 and July 15 either for home gardens or commercial purposes. Earlier plantings by a week or ten days could be made in the lower extremes of these elevations.

In the higher elevations of Arizona in Yavapai, Coconino, Navajo, Apache, and Gila Counties, where the elevation ranges between 4500 and 6000 feet, the planting dates range from May 10 to July 1.

In elevations above 6000 feet in Coconino. Navajo, and Apache Counties, the planting dates will range between May 20 and June 15.

To lengthen the harvesting season in any of the higher elevation areas, a succession of plantings two to three weeks apart should be made during the planting season.

## PLANTING RATES

Planting rates will vary considerably, depending on variety, seed size, row spacing and germination. Generally from 7 to 10 pounds per acre will give a satisfactory stand. It is wise to check the size and germination of sample of the seed to be used to make an accurate determination of the poundage necessary to obtain a good stand and yet not have to thin the planting to the preferred stand. If thinning is practiced, 10 to 12 pounds of seed is recommended, with thinning to one plant per foot of row.

## SEED BED PREPARATION AND SEEDING

A desirable seed bed for sweet corn can be prepared in several ways. Regardless of the method, corn should be planted in a moist seed bed. A moist seed bed allows for easy seedling emergence which would otherwise be hindered by soil crusting when irrigation follows planting in a dry soil.

Soil preparation and planting is very similar to that used for grain sorghum.

The field should be properly plowed, bordered or furrowed out, and irrigated. When the land is dry enough to work, it should be harrowed. In flat plantings the harrowing provides a mulch to prevent excessive drying and to enable proper seed placement. For ridge planting, the harrow or similar implement flattens the peak of the ridge ready for planting. Planting should follow the harrowing as soon as possible. Repeated tillage operations are not recommended. Excessive tillage and land preparation in seed bed preparation will reduce yields. Therefore, tillage operations should be adequate but not excessive.

Any feasible method of planting which places the seed in moist soil is satisfactory, provided it is not placed too deep. The ideal depth of seed placement is in 1½ to 2 inches of moist soil, following the prescribed seed bed preparation. It is desirable to cover the moist seed bed soil with a dry soil mulch, after the seed is planted to prevent rapid or excessive drying. This is done with a knife, disc, or shovel coverers attached to the planter.

The width of the rows depends largely on existing equipment. Row

widths vary from 30 to 42 inches apart. Plants should not average more than one per foot of row.

## IRRIGATION

Irrigation procedure is very important in quality sweet corn production. Fields to be planted should receive at least a 6-inch pre-plant irrigation. This allows for ample moisture for planting and for wetting the sub-soil sufficiently deep to provide the plants with ample moisture during the heavy water-demand periods. The first irrigation after planting is applied about 21 to 30 days following seeding in a moist seed bed. Subsequent irrigations are made at approximately 2-week intervals until the tasseling and silking stage. During the silking and ear formation stage the plants should never be allowed to stress for water. Irrigation applications during this stage will vary from 5- to 10-day intervals. The amount and frequency will depend on weather, soil conditions, and soil type.

## FERTILIZATION

Nitrogen is by far the most important single fertilizer element. General requirements range from 100 to 150 pounds of actual nitrogen per acre during the growing season. The source or kind of nitrogen makes little difference. All commonly used sources are effective if applied properly.

Nitrogen can be applied by three methods: (1) dissolved in the pre-plant irrigation water, (2) broadcast after the pre-plant irrigation and before planting, or (3) injected into the soil before the pre-plant irrigation. If a pre-plant application is not desired, under some conditions it may be preferable to apply fertilizer as a side-dressing, either by injecting, or in the irrigation water when plants are 8 to 12 inches tall. When side dressing, the fertilizer should not be placed closer to the plants than 5 to 6 inches. Place the fertilizer 2 to 4 inches deep. The injection of anhydrous ammonia should be no closer to the plants than 10 to 12 inches on either side of the row and about 6 inches deep.

For soils which show a response to phosphate fertilizers, about 50 pounds of $P_2O_5$ per acre are recommended. For best results with phosphates, they should be applied where nitrogen is used and never as the only fertilizer.

Because most Arizona soils adapted to sweet corn production have more than enough potash, this nutrient need not be included in a fertilizer program for this crop.

The entire amount of fertilizer should be applied before the corn is two feet high or 60 days old. If fertilizer materials are applied in accordance with the above suggestions, later applications will not be necessary.

## CULTIVATION

Sweet corn is cultivated for one or more of the following reasons.

1. To control weeds—(by far the most important reason).
2. To break up surface crusts.
3. To hill the plants, cover small weeds, prevent lodging, and discourage suckering on varieties which have a tendency to sucker.
4. To shape beds for irrigation.

Do not cultivate more often than is necessary to accomplish one or more of the above objectives. Certainly avoid cultivation when fields are too wet.

It is important that a wide, flat, cotton-type sweep be used in fur-

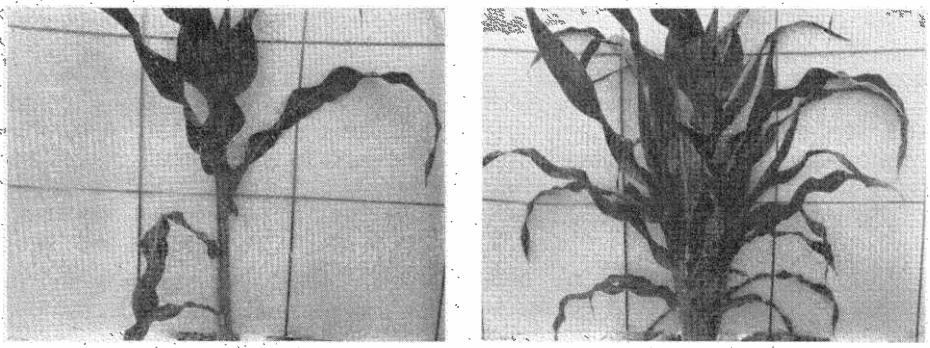

**Fig. 1. A typical single plant of Golden Cross sweet corn before and after "Suckering." Note profuse production of side stems normally produced by this variety.**

rowing out following the last "lay-by" cultivation. This type of sweep leaves a wide, flat, smooth furrow which makes walking down the rows easier when dusting ears and harvesting.

## SUCKERING

The term "suckering" is applied to the practice of removing secondary or side stems (called shoots, tillers and suckers) from sweet corn.

Certain of the most popular varieties produce a large number of side shoots or suckers. Many growers become alarmed when they notice this development of side shoots, and are inclined to want to remove them. Experimental evidence indicates that "suckering" (the removal of suckers) does not improve individual ear size or total yield. Further, it does not appear to affect the maturity date.

Suckering is not profitable unless there is a specific profitable reason for doing so, such as ease of ear dusting and harvesting. If the grower feels that the production of side shoots at the base of the corn plants is undesirable from a dusting or harvesting standpoint, he should select a variety which does not sucker freely. There are several varieties in this category. Two examples are Seneca Chief and Ioana. The most popular variety now grown — Golden Cross — suckers freely and should not be used if that characteristic is objectionable to the grower.

## HARVESTING

For best eating quality, sweet corn should be picked when in the milk stage. In this stage the corn contains approximately 6% sugar. Since quality in sweet corn depends largely on the sweetness flavor, every effort should be made to keep the sugars from changing to starch. The conversion of this sugar to starch is directly proportional to the temperature of the harvested corn. The temperature of the harvested ears may vary from 70° to 95° during a 24-hour period. It is very important to cool the product as soon as possible after it is picked. To take advantage of the cooler temperatures, corn should be harvested during the forenoon. The conversion of sugar to starch begins very soon after the ear is removed

from the stalk. Therefore, sweet corn should be cooled by vacuum cooling procedures or in an ice water bath as individual ears or in the wire-bound crate. A 20-minute immersion period in an iced water bath will reduce the temperature of the ear to 38° to 40° F.

After the corn is cooled it is necessary to store it in cold rooms to prevent any increases in temperature of the ear. The corn should also be kept moist to prevent the husk from drying out.

Vacuum cooling procedures are presently being tested as a feasible means of cooling commercial sweet corn. Early reports indicate very favorable results. The acceptance of vacuum cooled corn was excellent in the spring of 1954 when it was first tried.

## YIELD

Sweet corn which has been properly grown will yield from 175 to 235 crates per acre. Much of the difference in yield per acre is the result of plant population as determined by row and plant spacings. The average yield per plant is 1 to 1½ ears.

A commercially packed crate of sweet corn contains 5 dozen ears. Although the size of sweet corn ears will vary somewhat, the most desirable ears will — after the husk is removed — measure a minimum of 8 inches in length and 1½ to 1¾ inches in diameter.

## INSECTS

CORN EARWORM *Heliothis armigeria* (Hubner).

The corn earworm is the most important insect pest of corn and

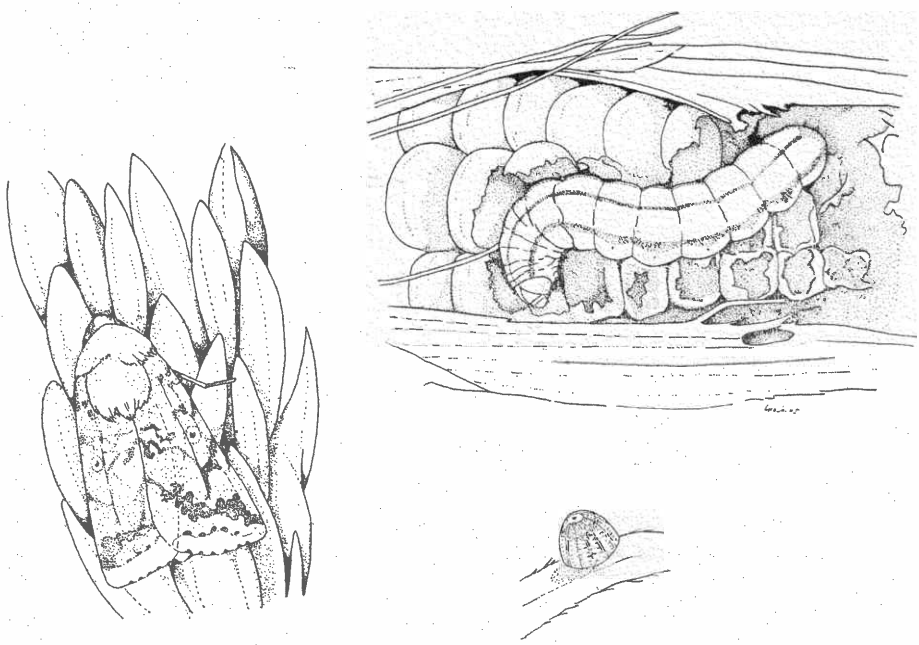

**Fig. 2. Corn Earworm. Left: Moth at rest on tassel. Top: Earworm larva in ear of corn. Bottom: Egg on silk.**

is the limiting factor in production of quality sweet corn.

The worms (larvae) may attack the corn plant at any stage of growth. In the fall they may be found in the "whorl" of the young plant where they may destroy the center bud. They are also commonly found feeding in the tassels, sometimes doing considerable damage, even detasseling many plants. The greatest damage results when these insects invade the developing ears. Ears that they enter will be unmarketable.

When full grown the worms are about 1½ inches in length and vary in color from green with tinges of red or brown to almost black. Regardless of the general color there is a pair of dark lines down the middle of the back, a band extending lengthwise above the spiracles (breathing pores along the body) and a corresponding but narrower band below the spiracles. The spiracles are usually prominent.

The full grown worms bore out of the ears, drop to the ground, enter the soil a few inches and pupate. They remain in this stage from 8 days to 2 weeks. The moths (adults) emerge, mate, and lay eggs singly on fresh silks if available; otherwise, they may be laid on other parts of the plant. A single female may lay as many as 1000 eggs.

The newly hatched worms start feeding down the silks and into the ear. Once the worms have reached the tip of the ear, commercial control is impossible.

Successful control depends on two factors; namely, proper timing and thorough insecticide application. Since eggs hatch in 2 to 3 days after being laid, it is essential that the insecticide be applied prior to hatching and reapplied at two to

**Fig. 3. Dusting sweet corn for Ear Worm control using the Stencil Brush Method.**

three day intervals until the silks are dry. At least five applications are usually necessary. The moths prefer fresh silks on which to lay their eggs. Drying and dried silks are unattractive. As the silks grow, the moth tends to place her eggs near the tip of the ear where the silk is freshest. Consequently, the mere act of dusting the silks may not control the earworms. The insecticide must be deposited in the silk channel (neck of the ear) between the ear tip and eggs.

Equipment for control is very important. Control can be obtained with a puff type duster or by using stencil brushes. Stencil brushes are preferred since it is a surer method of getting proper and adequate coverage. The use of rotary type dusters, large field equipment, and aircraft are not effective and are not recommended. The recommended insecticide is 5% DDT dust.

If the worms in the tassels are numerous, they may be controlled with 10% DDT dust. In commercial fields this may be applied by aircraft.

CORN FLEA BEETLE *Chaetocnema pulicaria* (Melsheimer).

The corn flea beetle is a small polished black beetle that jumps

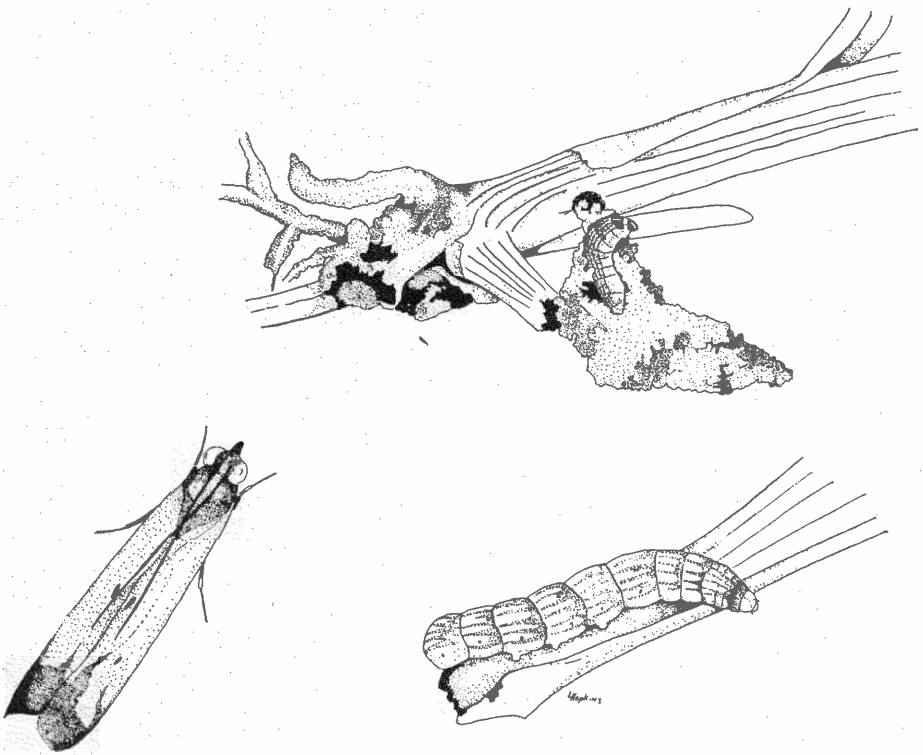

**Fig. 4. Lesser Corn Stalk Borer. Left: Male moth at rest. Top: Corn seedling showing entrance hole made by larva at ground line and the silken escape tube spun by the larva. Bottom: Mature larva.**

readily when disturbed. The larvae (worms) feed on the roots of various plants including some weeds. The beetles have a wide host range, but corn and sorghums are preferred. The flea beetle attacks corn from the time it emerges until it is almost mature; however, injury results only when the corn is small.

The beetles feed by rasping away the upper surface of the leaves between the veins, leaving a dried, dead spot on the leaf. A heavy infestation of beetles will injure a plant severely, causing retarded growth or, if severe enough, may kill the plants.

The corn flea beetle is not difficult to control. Dusting with 10% DDT will do a thorough job. The effect of this dusting may be only temporary and if a new infestation occurs, it may become necessary to repeat the application after 1 to 3 weeks, depending on the extent of migration of beetles into the field.

LESSER CORN STALK BORER *Elasmopalpus lignosellus* (Zeller).

The lesser corn stalk borer attacks the corn seedling killing it in relatively short time. The larvae gain entrance into the plant by boring into the crown just at the soil line. Once inside the plant, the worm girdles the plant, first killing the center growing point and finally the entire plant. One larva is capable of destroying several plants. The larvae are about ¾

inches long when mature and are nile green in color with reddish-brown bands across the back of each segment. They are very active when disturbed.

So far no adequate chemical control has been found. Some success has been obtained by flooding the fields when the worms first appear.

FALL ARMYWORM *Laphygma frugiperda* (Smith and Abbott).

The fall armyworm may do considerable damage to corn by feeding on the whorl of the plant and killing the growing point. They are found far down in the whorl and are often overlooked until the ragged, partially eaten, leaves grow out. The larvae resemble the corn earworm very closely, but have shiny skins. The dark head contains an inverted white "Y," which will serve to distinguish it from the corn earworm.

The fall armyworm may be controlled by the use of 20% toxaphene dust or a mixture of 15% toxaphene and 5% DDT dust, providing good coverage is obtained and the dust is blown down into the whorl of the plant.

SEED CORN MAGGOT *Hylemya cilicrura* (Rondani).

This white maggot is the immature form of a small, greyish-brown fly that resembles the common house fly except that it is smaller and more hairy. Maggots are more abundant in damp, heavy soil that contains large amounts of decaying organic matter. Such areas should be avoided when selecting a field for sweet corn.

Seed treatment offers the best method of controlling this pest. Suggested treatment materials that will prevent damage are chlordane, lindane, or aldrin plus a fungicide.

Seed may be treated in several ways for protection from the seed corn maggot. The best method is the use of a slurry. In making the slurry use one of the following materials: ⅔ ounce of 75% Aldrin, 2⅔ ounces of 75% lindane, or 4 ounces of 50% chlordane, all as wettable powders, per 100 pounds of seed. This slurry is poured into the container with the seed and thoroughly mixed. After the seeds are evenly coated, they should be removed from the container and allowed to dry.

Other methods, such as the use of dusts on dry or damp seed may be satisfactory under some conditions, but are inferior to the slurry method.

SOUTHWESTERN CORN BORER *Diatraea grandiosella* (Dyar).

Although the southwestern corn borer is usually thought of primarily as a pest of field corn, it may attack and do considerable damage to sweet corn. As the acreage of sweet corn becomes larger, the seriousness of this pest will undoubtedly increase.

The adult female is a small whitish to tan moth that lays her eggs in small clusters anywhere on the corn plant. The larvae from these eggs feed on the leaves or other external parts. Shortly after hatching they bore into the stalk of the plant and tunnel throughout the center of the stalk, often tunneling into the butt of the ears. Several larvae may be found in the same stalk.

These insects stunt or completely destroy the crop. They also reduce the production of marketable ears. The mature active larvae are about 1¼ inch long, creamy white with numerous black spots. The overwintering larvae lose the black

spots and become a dirty creamy white color. The larvae pupate in the stalks, usually near the base, from which the moths emerge. In Arizona there are three generations each year. The third generation which occurs in August and September, is the worst on sweet corn.

Inasmuch as the overwintering larvae stay in the base of the plant during the winter, crop sanitation or destruction of the crop residue offers the best means of control. Proper disposition of crop residue is either by turning under the stubble to a depth of not less than 4 inches or by leaving it completely exposed. Such management will give good control of the overwintering forms. Chemical controls have not been completely satisfactory due to the extended period of egg laying.

## DISEASES*

COMMON SMUT *(Ustilago maydis* Cda.).

Corn plants infected with common smut disease exhibit characteristic swelling or galls of various sizes. These swellings are whitish at first, but later become blackened and filled with a black powder-like substance. The galls are most noticeable on the ears and tassels, but also may occur on or near the mid-veins of leaves, at the point where the leaf blade touches the stalk. and occasionally at the stalk joints. These galls may be smaller than a grain of corn or enlarged to the size of a baseball.

The black powder in a mature gall consists of millions of microscopic spores that may be carried by winds and thus spread the disease.

In Arizona common smut has not been economically important enough to require use of control measures. However, if severe outbreaks develop, it is advisable to avoid planting corn in such infested areas for two to three years. During this 2 to 3 year rotation period, corn should not be grown in nearby fields.

KERNEL ROT *(Gibberella fujikuroi* Wr.).

Kernel rot is a fungus disease that attacks the kernels of corn. The individual kernels or groups of kernels become pink or reddish-brown and are often covered with a cottony fungus.

This disease may produce spores that are carried by the wind or may be carried in the kernel. If seed is used that contains a high percentage of infected grains, a poor stand may result because of seedling infection. The stalk rot phase of the disease is seldom found in Arizona.

Like common smut, kernel rot has seldom been severe in Arizona.

It is also advisable to practice crop rotation and to plow under crop residue to eliminate the windborne spores that can develop on decaying corn trash that may be above ground.

*The authors wish to express their appreciation to Dr. R. B. Marlatt, Assistant Plant Pathologist, for supplying the information on diseases.

**PRODUCTION COST GUIDE**
**SWEET CORN**

| ITEMS | No. of Times | COSTS[1] Per Acre | Per Crate | YOUR COSTS Per Acre | Per Crate |
|---|---|---|---|---|---|
| LAND PREPARATION & PLANTING[2] | | | | | |
| Plowing | 1 | $ 3.00 | | | |
| Land Planing | 1 | 1.50 | | | |
| Disking | 2 | 1.00 | | | |
| Pre-Plant Irrigation | 1 | 1.00 | | | |
| Planting | 1 | 1.10 | | | |
| TOTAL | | $ 7.60 | $ .038 | | |
| CULTURE[2] | | | | | |
| Cultivating | 3 | 2.00 | | | |
| Thinning and Hoeing | 1 | 6.00 | | | |
| Irrigating | 11 | 15.00 | | | |
| Fertilizer Application | 2 | 3.40 | | | |
| Pest Control Labor | 4 | 49.00 | | | |
| TOTAL | | $ 75.40 | .377 | | |
| MATERIALS | | | | | |
| Irrigation Water (Pump, 3 Acre Ft.) | | 33.00 | | | |
| Fertilizer (150 lbs. Nitrogen) | | 23.00 | | | |
| Seed (15 lbs.) | | 5.95 | | | |
| Pest Control (250 lbs. 5% DDT Dust) | | 15.00 | | | |
| Crates (200 @ .39/Crate) | | 78.00 | | | |
| TOTAL | | $154.95 | .775 | | |
| HARVESTING | | | | | |
| Harvest, Pack, Haul | | 195.00 | | | |
| Vacuum Cooling and Loading | | 38.00 | | | |
| TOTAL | | $233.00 | 1.65 | | |
| FARM OVERHEAD | | | | | |
| General Farm Expense, 6 Mo.[3] | | 40.40 | | | |
| Equipment Depreciation & Expense, 6 Mo.[4] | | 12.50 | | | |
| Industrial Insurance | | 8.50 | | | |
| Interest on Investment, 6 Mo. @ 5% | | 10.00 | | | |
| Taxes, 6 Mo. | | 3.25 | | | |
| TOTAL | | $ 74.65 | .373 | | |
| GRAND TOTAL | | $545.60 | $2.728 | | |

[1]*Based on 1954 Survey of commercial costs for production of 200 (5 dozen ear) crates per acre yield.*

[2]*All items of Land Preparation, Planting, and Culture include labor, fuel, grease.*

[3]*General Farm Expense includes management, fence repair, weed control and miscellaneous items.*

[4]*Equipment Depreciation and Expense include depreciation on all equipment used to produce a corn crop.*

*Adapted from information prepared by Ray L. Milne, Assistant County Agricultural Agent, U of A Agricultural Extension Service, Maricopa County, Phoenix, Arizona.*

## MANAGEMENT CHECKLIST FOR GROWING SWEET CORN

(Listed in Normal Sequence)

### SOIL PREPARATION*

1. Plow
2. Land Plane (optional)
3. Disc
4. Fertilizer (Broadcast Application) (Optional)
5. Corrugate or Border
6. Pre-Irrigate
7. Float or Harrow Disc and Float or Harrow†

### PLANTING AND GROWING

8. Plant
9. Cultivate
10. Irrigate
11. Thin and Hoe
12. Fertilize
13. Irrigate
14. Cultivate
15. Irrigate
16. Cultivate (Optional)
17. Irrigate (3 Applications)
18. Dust (2 Applications)
19. Irrigate
20. Dust (2 Applications)
21. Irrigate
22. Dust
23. Irrigate (2 Applications)

*All listed operations are not always necessary.

†Where ridge method is practiced one should use a harrow or similar implement to flatten ridge for planting.

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