

UNIVERSITY OF CALIFORNIA
Agricultural Extension Service
Los Angeles County

HYBRID FIELD CORN

in the
Antelope Valley
of
Los Angeles County



- USE ONLY FIRST GENERATION HYBRID SEED CORN
- PLANT BETWEEN MAY 15 and JUNE 10
- GET A PERFECT STAND - A PLANT EVERY 9 INCHES
IN ROWS SPACED 40 INCHES APART
- PRE-IRRIGATE AND LIST ON A FLAT FIELD
- CULTIVATE FOR WEED CONTROL ONLY
- ON SLOPES OVER 3 INCHES PER 100 FEET, RUN
SMALLER HEADS OF WATER, LONGER
- PROVIDE 150 POUNDS OF ACTUAL NITROGEN PER
ACRE FROM ANY ONE OF THE MANY SOURCES

Hybrid field corn is a warm season crop. If grown right, it offers the greatest net return per acre of all the irrigated grains in the Antelope Valley. It is not adapted to dryland farming in the Antelope Valley.

Weather conditions will seldom permit planting earlier

than May 15. Corn requires a warm soil for uniform germination (60°F.). Poor germination results in poor stands, weeds, low yield and consequently, no profit. The hybrid varieties will mature before frost if planted between May 15 and June 10.

Plant later for silage so the crop will be ready after haying season.

Prepared by Lloyd Peterson, Farm Advisor

VARIETY TO PLANT

There are five recommended varieties for the Antelope Valley. These five have been top in the four year test at the Antelope Valley Field Station, Lancaster. *

PIONEER 302
PIONEER 300
PIONEER 352
KINGSCROST K3A (earliest)
Northrup King
DEKALB 1002

A grower will be safe in choosing one or more of the above varieties. Availability of seed from the valley seed merchants may determine the variety.

Twelve pounds of seed corn will plant one acre.

SEEDBED PREPARATION

Land that is to be planted to corn must be plowed. An old alfalfa field must be plowed quite deep, ten to twelve inches. If the land was irrigated before plowing, one may get by without pre-irrigating before planting. In every case, however, have the field in an ideal moisture condition just prior to listing; just dry enough so the lister planter will work without difficulty.

In brief, the steps are as follows:

1. Plow
2. Disc and float
3. Build dikes or furrows
4. Pre-irrigate
5. Float until flat
6. List

LISTING

Listing is the practice of breaking open and planting in the bottom of furrows all in one operation. It is economical and it is an ideal way to start a corn crop. Only on very sandy soils would this practice be questionable.



Listing on the University Farm
Lancaster, California
May, 1952

Use equipment that will make a deep listed furrow. Lister shovels large enough to go six inches below the original grade and leave a furrow ten to twelve inches deep are best.

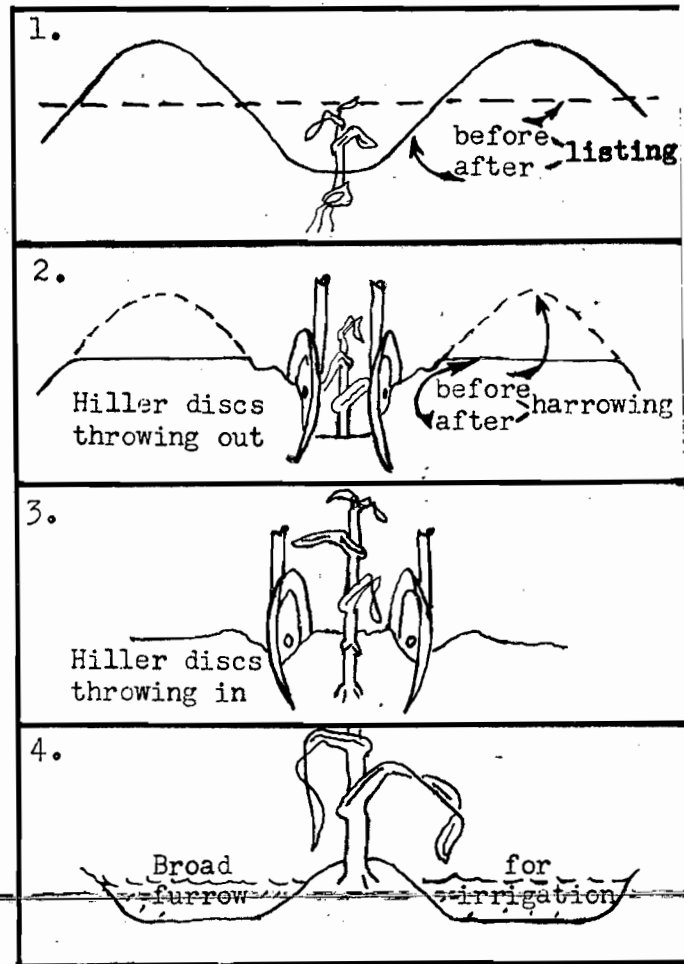
The rows should be forty inches apart. This spacing is best suited for mechanical picking. A perfect stand is one with plants averaging nine inches apart in the row. Plant spacing trials at the Davis Experiment Station have shown that the nine inch spacing will produce the highest yield of shelled corn per acre.*

Plant corn two inches into moist soil.

CULTIVATING

Cultivating should begin when weeds start to grow, or when the corn is tall enough to fill in the listed furrows around the stalks. A spike tooth harrow can be used first. It will not injure corn plants six to ten inches tall in listed furrows, will get some weeds, and will make cultivating easier by leveling off the high ridges. Weeds may become a problem before the corn is tall enough to fill in the listed furrow. In this case, the hiller discs on the cultivator must be adjusted so they throw out, allowing the discs to operate as close to the corn as possible. (See diagram)

Cultivate for weed control only, establishing an irrigation furrow at the same time. Minimum tillage means lower cost of production and the old continuous root-pruning stunt to conserve moisture is out of date.



IRRIGATION

Hybrid field corn will need three and one half acre feet of water per acre, applied in six to nine applications.

Many fields have turned off poor yields, especially in the three quarter zone of the irrigation run because of too steep a slope resulting in poor penetration. Smaller heads of water in each furrow for longer periods will help. The ideal slope for corn on sandy loam and 660 foot runs is three inches per 100 feet

The leaves may roll on hot dry days even when moisture is available to the plant. This condition is not serious.

FERTILIZER

Corn requires 150 pounds of actual nitrogen per acre to produce 6000 pounds of shelled corn.* If this amount of nitrogen is not already in the soil, it must be applied through commercial fertilizers such as sulphate of ammonia, ammonium nitrate, Shell gas, or others. On fields where corn follows alfalfa or well managed legume pasture in the rotation, lower rates of application are required. Once the nitrogen requirement has been met, a grower should investigate the possible need for phosphate. Nitrogen, however, is the most important; fulfill that need first.

PEST CONTROL

There are four major pests of field corn in the Antelope Valley: corn earworm, pink rot, smut and WEEDS. The latter is the only one that greatly affects yield and can be controlled economically.

HARVESTING

Because the success of commercial hybrid field corn production in the Antelope Valley is largely dependent on the availability of mechanical pickers, a list of references for custom harvesting is given below. More may be available as the acreage of corn expands in the valley or adjacent areas.

- Leo and Roy Simi, Rt. 1,
Box 70, Lancaster, Calif.
- Johnson and Schaffert Impl.
Ave. I & IOW, Lancaster
- J. N. Provenzano, Wilsona Rt.,
Box 109A, Lancaster, Calif.

MARKET

Corn is a first choice grain concentrate for livestock and poultry rations. The present livestock and poultry industries in the valley can support several thousand acres of corn production. Also, economical domestic corn raising will encourage its use in place of the now more competitive grain concentrates.

Field corn can be sold in the valley for prevailing market prices. Last season, corn sold at harvest time for \$3.50 cwt.. Like most other commodities, however, one should expect lower prices in the future. This would not take field corn out of the alternate crop possibilities in the Antelope Valley. It would, however, make yield per acre even more important. Through high yield, a grower can maintain a satisfactory net return when commodity prices go down but production costs do not.

Other available literature on Field Corn Production

* "Hybrid Corn Tests in California" by Dale Smeltzer,
Department of Agronomy, Davis, California

"Cash Costs to Grow Corn in the Antelope Valley"
Farm Advisor, Los Angeles County

"Adjusting the Mechanical Corn Harvester"
Division of Agricultural Engineering
Iowa State College
Ames, Iowa