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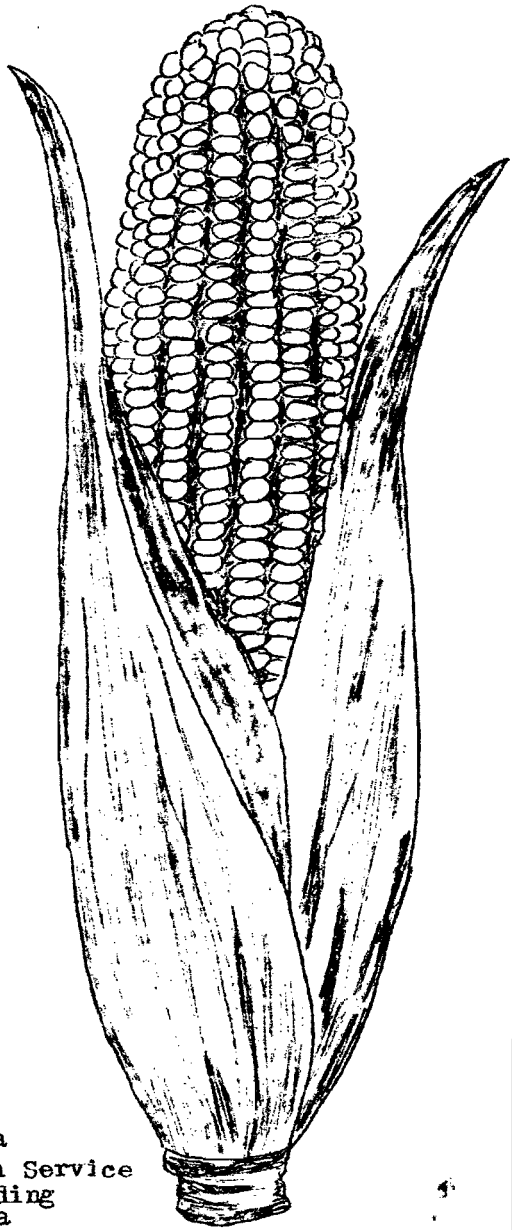
GROWING FIELD CORN

IN SACRAMENTO COUNTY

ON RIVER BOTTOM LAND



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GROWING FIELD CORN ON RIVER BOTTOM SOIL IN SACRAMENTO COUNTY

Field corn is well adapted on the deep soils in Sacramento County. Nearly all of our deep soil lies along the Sacramento River, the American River, or the Consumnes River. This soil is classed as grade 1-excellent, or grade 2-good. It is also classed according to its formation as alluvial and flood plain, or basin soil. Production on peat soil is covered in another leaflet.

Corn fits into the crop rotation system much the same as milo. Costs are higher because more nitrogen fertilizer and more water is required. Also, special harvesting equipment is needed which increases the cost, due to depreciation of this equipment. However, new developments are reducing investments required for harvesting equipment. The higher price of corn and possibly higher yield, offsets the lower cost of production of milo. Far more corn is fed to livestock and poultry in California than we produce in the State, therefore, the outlook is good. However, farm storage may be necessary in order to realize a good price. Information on storage is available at your Farm Advisor's Office.

VARIETY:

The variety selected depends mostly on the date of planting and whether the crop is intended for grain or silage. Best yield is obtained if the maturity time of the variety is such that it matches the growing season remaining after planting. However, harvesting equipment, drying facilities, labor requirements and efficiency of the over-all ranch operation must be considered. A grower can roughly set the time and rate of this harvest by dates of planting and the variety or varieties he chooses. The medium maturity varieties require roughly 4 months for silage production, and 5 months for grain production. The following table gives the planting dates which are usually most practical for the various maturity groups:

PLANTING DATES FOR MATURITY GROUPS

For Grain:	Before Apr.25	Apr.25-May 5	May 5-May 15	May 15-May 25
For Silage:	Before May 25	May 25-June 5	June 5-June 15	June 15-June 25
Maturity Time:	Late	Medium Late	Medium Early	Early
	Pioneer 302 De Kalb 1002 De Kalb 1022	De Kalb 666 Pfister 381 Vinton K22 Pioneer 300	Pfister 347 Pfister 383 Pioneer 352 Kingscrost K3A Kingscrost K14 De Kalb 459	Kingscrost KS6

SEED TREATMENT:

Nearly all hybrid corn seed is already treated with a fungicide, (Arasan, Phygon, or Spergon), therefore, further fungicide treatment is unnecessary. Usually the seed companies do not treat with an insecticide. Where wireworms or seed corn maggots may be a problem, use Lindane, 25% at 3 ounces or 75% at 1 ounce per 100 pounds of seed.

FERTILIZER:

Corn has a very high nitrogen requirement. The most profitable rate is usually from 150 to 200 pounds of actual nitrogen per acre. The fertilizer can be applied ahead of planting or side-dressed at the time of the first cultivation. Dry fertilizer, ammonia gas or aqua ammonia can be used.

Phosphate has not been found necessary except below Walnut Grove and on hardpan land. If phosphate is tried on a test strip, it should be drilled under or near the seed at planting time. Use thirty to forty pounds of actual phosphate per acre for testing. Phosphate can also be drilled with the seed, but this practice is not recommended because it is apt to burn. For testing, use treble super phosphate at the reduced rate of 1/2 sack per acre.

LAND PREPARATION AND PLANTING:

A finely worked seed bed is not necessary. Listing out with shovels on the back tool bar ahead of the planter is a good idea: (1) It puts the seed down into better moisture. (2) Weeds in the row can be killed by throwing dirt back into the furrows with the cultivator. Row spacing is 40" so a 2 row corn picker can be used. Space seed in the row 7 to 8 inches apart. Nine to 12 pounds of seed per acre will be needed. Plant into good moisture at a depth of 2 to 4 inches.

WEED CONTROL:

Timing of cultivations is important. Two or three cultivations are usually needed. Cultivate for weed control only; cultivation does not save moisture. A selective weed spray will probably be needed for broadleaf weed control. Use one pound of 2, 4-D per acre when corn is 16-24 inches high. The best equipment is a ground rig with drop nozzles to avoid spraying down on top of corn plants. Airplane spray can be used, but not in the 2, 4-D "Hazardous Area" after March 15. Check with your Agricultural Commissioner.

IRRIGATION:

For full yield, corn must have a very good moisture supply up to the time the grain starts to harden. Most water is needed at tasseling time. Furrow irrigation is most practical. Five or six irrigations will probably be needed unless the corn receives some moisture from the water table.

HARVEST FOR GRAIN:

A picker-sheller is most efficient, however, an attachment for an ordinary grain combine has been proven possible. Other methods are picking with a corn picker and hauling to a crib or sheller, or picking by hand and hauling to a crib or sheller. Harvest can be started at 25% moisture. Corn at this moisture can be cribbed provided the crib is not over 8 feet wide. However, shelled corn can not be stored over 15% moisture. Shelled corn can be dried commercially or it can be dried on the farm in a bin or building by forcing unheated air through the mass. The cost of the fan and air duct system is usually around 50 cents per hundred weight. Further information is available at your Farm Advisor's office.

HARVEST FOR SILAGE:

Corn is harvested for silage when the grain is beginning to harden and the lower leaves start to turn brown; proper moisture content is 60 to 70%. A field chopper is used and the chopped material hauled to the silo. Information on silos and making silage is available at your Farm Advisor's office.

WHAT WILL IT COST TO GROW FIELD CORN ON RIVER BOTTOM LAND
In
SACRAMENTO COUNTY

Based on 4,750 lbs. grain per acre,
bulk handled, or,
19 tons of silage

Labor $1.25 per hour
Irrigation labor @ $1.00 per hr.
Tractor @ $2.00 per hr.

Operations	Cost per Acre: Sample Costs	My Cost
Land Preparation:		
Plow man, 40 H.P. tractor, 4-14" plow - 1.5 hrs @ 3.50	$5.25	
Disk man, 40 H.P. tractor, 12' disk - .3 hrs @ 3.50	1.05	
Fertilize:		
Man 40 H.P. tractor, applicator - .5 hrs. @ $4.20	2.10	
Nitrogen - 150 lbs. @ 12½ cents	18.75	
Plant:		
Man 30 H.P. tractor, 4 row planter - .6 hrs. @ 3.50	2.10	
Seed - 9 pounds @ .25	2.25	
Cultivate, 2 times:		
Man 30 H.P. tractor, 4 row cultivator - 1.0 hrs. @ 3.50	3.50	
Irrigate, 6 times:		
Man 7.0 hrs. @ $1.00	7.00	
Power for water - 2¼ acre feet	4.00	
Total pre-harvest	46.00	
Overhead, taxes, interest, misc.	30.00	
Harvest-Grain:		
Pick and shell	10.00	
Haul 4750 pounds @ $2.00 per ton	4.75	
Dry " " @ $3.50 " "	8.30	
Total Harvest	23.05	
Total cost per acre for grain	99.05	
Cost per cwt. (4,750 lbs.)	2.09	
Harvest-Silage:		
Chop man, tractor, chopper - 2.0 hrs. @ $7.50	15.00	
Haul man, tractor, trailers - 2.0 hrs. @ $5.00	10.00	
Unload 2 men, blower - 2.0 hrs. @ $4.00	8.00	
Total harvest	33.00	
Total cost per acre for silage	109.00	
Cost per ton (19 tons)	5.74	