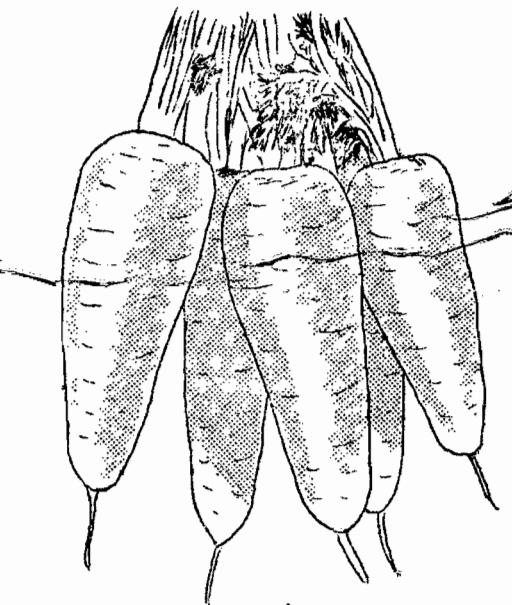


carrots  
sample costs  
and  
production



University of California  
Agricultural Extension Service  
Imperial County  
Court House, El Centro

CARROTS--SAMPLE PRODUCTION COSTS

ITEMS	SAMPLE COSTS Per Acre
<b>LAND PREPARATION</b>	
Plow 1x	\$ 8.00
Disc 2x	3.50
Float 1x	1.50
Border	1.25
Irrigate 1x	2.00
Knock down borders	.75
Disc 1x	1.75
Float 1x	1.50
Fertilize (pre-plant)	2.75
List	2.75
Ditching	.75
TOTAL LAND PREPARATION	\$ 26.50
<b>CULTURAL LABOR AND POWER</b>	
Mulch beds	\$ 2.25
Planting	2.75
Cultivate 2x	6.00
Fertilization 1x	2.00
Weed control 1x (oil)	2.50
Irrigation 8x	7.00
Pest control 3-4	4.00
TOTAL LABOR AND POWER	\$ 26.50
<b>MATERIALS</b>	
*Water - 3 acre ft.	\$ 6.00
Seed - 3 lbs./acre	7.00
Fertilizer - 120 N + 150 P <sub>2</sub> O <sub>5</sub>	30.00
Insecticide	25.00
Weed oil	13.50
TOTAL MATERIALS	\$ 81.50
<b>CASH OVERHEAD</b>	
General expense 8% of the above	11.00
<b>LAND RENT</b>	65.00
TOTAL ALL COSTS	\$210.50

\*IID sells water at \$4 per sec. ft.

## ACREAGE

During 1960-1961 3,010 acres of carrots were grown in Imperial County. In previous years as high as 10,000 acres were planted to carrots.

## YIELDS

Average yield is 18-20 tons per acre. Yields of 650 crates or more per acre have been reported by some growers. To get high yields, there must be a very low percentage of malformed (pronged) carrots.

Several factors may promote pronging. These are: misplacement of fertilizer, close cultivation, carrots following sesbania, nematode injury, insect injury, certain diseases, and soil structure.

## VARIETIES

Varieties most extensively used by Imperial County growers are Imperator and Long Imperator. Difference between the two varieties is in length. They have the same color and bunching quality. Long Imperator tends to be a little earlier than other varieties.

## SOILS

Carrots can be grown on many of the soil types in the county. Best root development is obtained in the lighter soils. Soils that tend to be on

the salty side are not desirable for carrot production.

## LAND PREPARATION

Crop history will determine the type of land preparation followed by grower. (see table)

## PLANTING DATES

Early carrots are planted the last week in August and early September. Later maturing carrots are planted in October and early November.

## IRRIGATION

First irrigation or "subbing" the beds for seed germination in August or early September is important. At this time of the year the air temperatures are usually high, so beds have to be wet constantly until after seedling emergence.

When plants are well established, the irrigation schedule should be set up to give maximum growth. Weather and soil type are factors that will help determine when to irrigate.

## FERTILIZERS

Previous crop history will help in determining fertilizer requirements. Nitrogen is most often required for maximum

yields. Phosphate when used is usually applied ahead of planting. One hundred twenty pounds of nitrogen and 150 pounds of phosphate are usually ample.

## PESTS AND DISEASES

Crickets, grasshoppers, and cutworms can be a problem when the seedlings emerge. Later in the season aphids and spider mites may be a problem in the fronds. One dark colored aphid often attacks the crowns at the soil level. Cutworms will also seriously damage the crown of the carrots at the soil level. Darkling ground beetle larvae will make small holes on the side of the carrot down to the growing tip. Frequent field inspections are important to determine whether control measures are necessary.

Diseases that can be a problem in the valley are nematodes, damping-off, and root rot. Nematodes can be controlled by fumigation and damping-off by seed treatment. Root rot is usually not a problem where good cultural practices have been followed.

Bed should not be allowed to become dry and hard during seedling development. Hard, dry soil can cause injury to the root and

this results in malformed carrots.

For control recommendations consult the University of California Vegetable Crop Pest and Disease Control Guide for Imperial County. Copies are available at the Farm Advisors' office.

## HARVESTING

Carrots are removed from the beds by tractor and carrot lifter.

How the carrots are to be marketed will determine handling in the field.

Carrots sold in bunches with tops are graded and bunched in the field and hauled to the shed for cleaning and crating.

Cello-pack carrots are hauled from the field without tops in burlap bags and cleaned and packed in the shed. Canning carrots are topped in the field and hauled to the processor.

The trend in carrot marketing is toward cello-pack.

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