

Rec April '56

CARROTS IN THE COACHELLA VALLEY

YIELDS

Yields range from 200 to 400 crates per acre, 250 crates is a good average. Time of planting, spacing, irrigation, weed control, pest control (nematodes and others) and fertilizer practices all have considerable influence on ultimate yields.

SOIL REQUIREMENTS

Soft, well drained soils (Sandy loams and loams) grow the best carrots. However, carrots can be grown on a wide range of soils from sands to clays.

PREVIOUS CROPS:

Recent research indicates that the decomposing crop residue of certain crops tends to support high populations of harmful soil organisms. Certain of these organisms attack carrots (and other crops), often killing the growing point in the root. Re-growth in the root causes pronging or splitting, reducing the yield of marketable roots. Carrots planted too soon after sesbania (as an example) often have a high percentage of pronging.

VARIETIES

Imperator and Long Imperator are the varieties most commonly grown.

PLANTING

Carrots are planted August 15th to September 25th. 3-4 pounds of seed per acre are planted 1/8 to 1/2 inch deep in double bands on beds having 42 inch centers.

GERMINATION

Carrot seed germinates best at soil temperatures of 50° F. to 85° F., surface soil temperature is often much higher than this in the summer months. High temperatures require continuous irrigation of the crop during early stages of growth in order to cool the beds and provide sufficient soil moisture for seed germination. When furrow irrigated, the subbing tends to increase the salt content of the surface soil to levels toxic to germinating seedlings. Recent research indicates that variations in bed shapes may help to overcome the salt problem.

FERTILIZERS

One hundred pounds of "N" per acre is needed on most soils. Phosphorous needs will depend on the soil and should be used where field tests show a deficiency. Where possible, band the fertilizer in the shoulder of the bed, 4 inches out from the seed row and about 4 inches deep. Certain types of fertilizers when not properly placed, may cause a high percentage of short stubby carrots, as well as splits.

IRRIGATION

A continuous supply of moisture is needed during germination and the early stages of growth. Growers should be sure that they have a large enough water supply to properly irrigate the acreage planted to the crop. Staggering small acreages about 7 to 10 days apart will help to overcome this problem where water supply is limited.

IRRIGATION cont

Carrots need from 2 to 3 acre feet of water, depending on soil and climatic conditions. Uniform irrigation is necessary to produce rapidly growing roots of good quality. An inadequate moisture supply will increase roughness and decrease the size of roots.

WEED CONTROL

Carrots can be sprayed with carrot oils when they have from 1 to 4 true leaves. Earlier spraying can kill the plants and later spraying may give an oily flavor to the carrots. Oil spraying will control most weeds, although 2 or 3 cultivations and some hand weeding may be necessary to complete the control. In the last cultivation soil is often moved up on the crowns to prevent sunburning.

DISEASE AND PEST CONTROL

Root knot nematodes is the most serious pest of carrots in the area. If soil is suspected of being infected with nematodes, treatment of the ground before planting is desirable. Apply soil fumigants for nematode control according to the manufacturers directions.

Worms or larvae of certain moths or butterflies will sometimes attack the tops of carrots. D,D.T. will control many of these. Contact your farm advisor about these problems.

HARVESTING, PACKING, AND MARKETING

Carrots are loosened from the soil by running a blade under them. This tool cuts the tap roots from the edible portions of the roots. After this stage the operation and its cost varies according to whether the carrots are to be shipped with tops, topped in Celo-paks, or topped and loose. After digging, the succeeding operations in harvest are contracted. The roots are topped if they are to be shipped that way, and then hauled to sheds where they are washed, cooled, and packed. Current costs for these operations are:

Bunched, with tops, 6 dozen bunches per crate - \$2.15 per crate
Topped, Celo-paks, 48-1 pound bunches per crate - \$2.35 per crate
Topped and loose, 45 pounds per box - \$.80 per box

Carrots should be iced if shipped to distant markets or if stored. Bunched carrots will retain good appearance for about 2 weeks if stored at 32° F. and 95% relative humidity.

AVERAGE WHOLESALE PRICE FOR IMPERIAL & COACHELLA VALLEY CARROTS
AT THE LOS ANGELES MARKET DURING DECEMBER & JANUARY
6 dozen bunches per crate, iced

1949	1950	1951	1952	1953
\$2.70	\$2.40	\$2.85	\$2.85	\$3.05

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CARROT PRODUCTION IN THE COACHELLA VALLEY

Big Tractor @\$2.00 per hour
 Small Tractor @\$1.25 per hour

Yield 200 crates per acre
 Labor \$.90 per hour

ITEM	Sample Costs		150	300	Your Costs	
	Per Acre	Per Crate	crates acre	crates acre	per acre	per crate
<u>Land Preparation and Planting</u>						
Disc 1x	\$ 2.00				.....	.....
Plow 1x	3.00				.....	.....
Disc 1x	2.00				.....	.....
Land plane 2x (or float 2x) .	4.00				.....	.....
Mulch	3.00				.....	.....
Furrow out.	1.75				.....	.....
Shape beds & plant(1 operation)	2.00				.....	.....
LAND PREPARATION & PLANTING TOTAL	\$ 17.75	\$.09	\$.12	\$.06	.....	.....
<u>Cultural Labor & Field Power</u>						
Cultivate 2x.	\$ 3.00				.....	.....
Hand weeding 1x (?)	10.00				.....	.....
Oil 1x (Weed control)	1.50				.....	.....
Fertilizer application (2x) .	4.00				.....	.....
Pest control	1.75				.....	.....
Irrigate (12x).	12.00				.....	.....
CULTURAL LABOR & FIELD POWER TOTAL	\$ 32.25	\$.16	\$.215	\$.11	.....	.....
<u>Materials</u>						
Seed: 3 lbs. @\$2.05 per lb. .	\$ 6.15				.....	.....
Fertilizer: 100 lb N @13¢ lb.	13.00				.....	.....
Irrigation water: 3 acre feet	7.50				.....	.....
Pest control: 35 lbs. DDT . .	2.45				.....	.....
Oil: Weed control 40 gal@20¢ gal	8.00				.....	.....
MATERIALS TOTAL	\$ 37.10	\$.19	\$.25	\$.12	.....	.....
<u>Cash Overhead</u>						
General expense @ 5% of above	\$ 4.36				.....	.....
Taxes: 50% to carrots	5.00				.....	.....
Insurance: \$1.25.	1.25				.....	.....
CASH OVERHEAD TOTAL	\$ 10.61	\$.05	\$.07	\$.035	.....	.....
TOTAL CASH COST PRIOR TO HARVEST.	\$ 98.11	\$.49	\$.65	\$.33	.....	.....
Land rent: 50% to carrots . . .	25.00	.125	.17	.08	.....	.....
TOTAL COST PRIOR TO HARVEST	\$123.11	\$.62	\$.82	\$.41	.....	.....
<u>Harvesting & marketing</u>						
Digging	\$ 2.00	\$.01	\$.013	\$.007	.....	.....
Harvest: Contracted @\$2.15/ crate includes lifting, bunching, hauling to shed, washing, packing & icing	430.00	2.15	2.15	2.15	.....	.....
Brokerage: 10%	61.80	.31			.....	.....
HARVESTING & MARKETING TOTAL	\$493.80	\$ 2.47	\$2.163	\$2.152	.....	.....
TOTAL ALL COSTS	\$616.91	\$ 3.095	\$3.32	\$2.85	.....	.....