

CELERY GROWING IN ORANGE COUNTY

Climatic Requirements: Celery is quite exacting in its temperature requirements. Average temperatures below 55° F. for two weeks or more may result in a high percentage of plants developing premature seed stalk formation. Temperatures above 90° F. may cause blackheart, particularly if soil moisture is low.

Growing Areas and Seasons: Celery can be grown in nearly all irrigated areas of the county. However, due to more favorable weather throughout the year, most plantings are within about 5 miles of the coast. Plantings for winter harvest are increasing in the Irvine area. Celery is harvested practically every month except the heat hazardous period of August and September. However, nearly all is grown for winter and spring harvest. Present trends are for individuals to specialize in growing and producing celery for harvest over extended periods.

The time required to grow a crop varies with the growing season and to some extent the variety. Winter grown crops may require up to 120 days from transplanting to harvest, while spring and fall crops may mature in 85 days.

Varieties: All varieties grown are green. Principal factors to consider in selecting a variety include length and conformation of petioles, resistance to "bolting," or premature seed stalk formation, and "crack-stem," or boron deficiency. Other factors include early development of pithiness, resistance to blackheart, blights, and magnesium deficiency chlorosis. Winter and early spring varieties are predominately Utah 52-70 and 52-70H. These two have numerous long, well-shaped petioles and are resistant to crack-stem and smog injury.

Soil, Fertilizer and Water Requirements: Celery can be grown on sandy loam to clay soils. Preference is for the heavier soils, however, and fields which are practically flat.

Heavy rates of fertilization are usually needed to get maximum yields and top quality. The common practice is to broadcast before planting 600 to 1000 cu.ft. per acre of chicken manure. Cyanamid (a 20% nitrogen-containing fertilizer) is applied at this time also if fields are infested with pink rot. One or two side dressings of mixed fertilizers are applied from 2 to 6 weeks after transplanting. Nutrient sprays are sometimes needed. These include boron and magnesium. A calcium spray has also been demonstrated to help prevent blackheart.

Planting, Cultivation and Scratching: Celery is usually transplanted by making furrows spaced about 2 feet, then setting the plants from 5 to 10 inches apart half way up the side of each furrow.

Scratching (a hand weeding process) and cultivating are later done to control weeds and re-shape the beds so the rows are on top the beds and not in the furrows.

Harvesting and Marketing: Most Orange County celery is shed packed and shipped. However, growers with smaller operations often field pack into used lettuce crates and ship to the Los Angeles market.

Insects and Diseases: Aphids, cutworms, caterpillars, loopers and other insects will often attack celery. Large older loopers are difficult to control, therefore control of small young ones is very important. Proper selection and use of insecticides is important for all these pests.

Blights often occur during damp weather. Preventative copper or zineb sprays when properly applied will hold these diseases under control.

Operation	Hours Per Acre	Cash and Labor Cost Per Acre				
		Labor	Fuel and Repairs	Materials	Total	
Cultural:						
Disc 3 times, 40 HP track, 10½' disc	1.0	1.65	3.35		\$ 5.00	
Subsoil, 40 HP track, 2 point	1.0	1.65	3.05		4.70	
Plow, 40 HP track 3-16"	.6	1.00	2.00		3.00	
Disc 5 times, 40 HP track, 10½' disc	1.7	2.80	5.70		8.50	
Landplane 2 times, 40 HP track, 10' x 40' plane	.6	1.00	2.00		3.00	
Fertilizer applied				Chicken manure 800 cu. ft. \$	64.00 64.00	
Pinkrot control				Cyanamid 900 lb. applied	44.00 44.00	
Disc 2 times, 40 HP track, 10½' disc	.7	1.15	2.35		3.50	
Chisel and harrow 2 times	.7	1.15	2.20		3.35	
Furrow out, 20 HP wheel, 3 row	.5	.85	1.15		2.00	
Plant	37.5	41.25		Plants 350 flats @ \$0.65	227.50 268.75	
Irrigate 11 times	11.0	13.75		Water 2' @ \$15.00	30.00 43.75	
Scratch	20.0	22.00			22.00	
Cultivate 7 times, 3 men, 10 HP wheel, 2 cult	4.5	22.35	9.00		31.35	
Fertilize 2 times, 20 HP wheel, 4 row	1.0	1.65	2.25	8 - 8 - 4, 2 ton @ \$55.00	110.00 113.90	
Dust 2 times, 10 HP wheel, 8 row	.4	.65	.80	DDT 5%, Toxaphene 15%		
				Parathion 2%, 50 lb. @ \$22.50	11.25 12.70	
Spray 3 times, 20 HP wheel, 300 gal.	1.5	2.50	4.35	Copper 75 lb. @ \$0.40		
				Parathion 1 gal. @ \$12.00	42.00 48.85	
Weed 2 times	6.0	6.60			6.60	
TOTAL CULTURAL COSTS		122.00	38.20		\$ 536.75 \$ 688.95	
EQUIPMENT INVESTMENT						
Tractor, 40 HP track	\$ 11,000					
20 HP wheel	3,100					
10 HP wheel	1,700					
Pickup	2,400					
Disc 10½'	1,500					
Subsoiler 4'	1,000					
Plow 3-16"	850					
Landplane 10' x 40'	2,840					
Chisel 10'	800					
Harrow 12'	300					
Cultivator 2 row	350					
Fertilizer spreader	300					
Duster	400					
Sprayer	1,000					
	\$ 27,540					
		Miscellaneous overhead		35.00		
		Management 5% of \$1,750		87.50		
		TOTAL MISCELLANEOUS			\$ 122.50	
		Rent ½ of \$200.00			100.00	
		Annual Cost				
		<u>Depreciation</u>		<u>Interest</u>		
		27.55		8.25		
		27.55		8.25 (½ to celery)		
		TOTAL PRE HARVEST COST		\$ 929.35		
		Cut, trim pack, haul, brokerage @ \$1.55 per crate				1,550.00
		TOTAL COST PER ACRE				\$2,479.35
		Cost per crate at 1,000 crates per acre				\$ 2.48