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### CELERY PRODUCTION IN CENTRAL COAST DISTRICT

Celery acreage in the Salinas-Watsonville district in recent years has varied from 4310 to over 5410 acres or about one-half the acreage in California. The main harvest season runs from July through December. Yields vary from 600 to 1400 crates per acre. This coastal area has a mild, cool climate which provides a location for production of large yields of high quality celery.

Requirements: Celery grows best on deep, well-drained, very fertile soils that are free from salt and alkali. The crop prefers a heavier, textured soil. Cool days (60-70° F) during the last month of the growing season are essential for high quality celery. However, celery withstands heat during the first part of the growing season after seedlings are established.

Irrigation: From 3½' to 6' of water in 14 to 20 irrigations is required to mature a crop of celery. Two to four irrigations are normally required to germinate celery seed. Celery seed requires soil moisture near field capacity to germinate.

Varieties: Various selections of Utah 52-70 are direct seeded from early March through August. Very early plantings from January to March are usually seeded to a slow bolt variety such as 96 or No. 12.

Planting: In planting the fields, the soil is first furrowed out forming beds. This is followed by 2 or 4-row planters for direct seedling. Row spacing varies from 40" to 42" apart from the center of the beds with 2-bed rows 11" to 13" apart on the top of each bed. Approximately 1#/A of "raw" celery seed is usually seeded in dry soils followed by an irrigation. Plants are thinned to 8" apart. Precision planting using "minimum coat seed" is now being used in many fields in Salinas. Celery is transplanted either by hand or machine. In Monterey County there is a period when no celery may be grown in order to help control Western celery mosaic.

Fertilization: Manure is applied to part of the acreage every few years. A common fertilizing practice would be to broadcast 8-12-12 fertilizer at the rate of 1000#/A -- then followed by side dressing with a complete fertilizer after thinning. Celery is usually fed nitrogen in the irrigation water at the rates of 20 to 40 lbs. per acre per month or about every second or third irrigation. There is a very heavy demand for nutrients the three weeks before harvest. Total amounts of nutrients applied would vary from 350-500 lbs. nitrogen per acre and 150-200 lbs. per acre of both P and K.

Harvest: Harvest normally begins when at least 50% of the celery has reached the 2-dozen per crate packing grade. Celery is both field packed and shed packed in this area. The celery stalks are cut and trimmed by hand. If packed in sheds, the stalks are loaded onto a trailer by hand or with the aid of conveyor belts. In packing, the stalks are trimmed to a uniform length and sorted into sizes according to diameter -- 2, 2½, and 3-dozen per crate are the most common.

Diseases and Insects: Viruses and pink root are two of the most common diseases in this area. Celery is attacked by a variety of insects which would include springtail, aphid and worms. The University of California issues a publication recommending chemical control for these problems. This publication can be obtained from the Farm Advisor's office.

SAMPLE COSTS FOR CELERY PRODUCTION (Rented Land)  
Salinas-Watsonville District - 1967

600-acre farm -- 125 acres of celery double cropped to cauliflower

Based on a yield of 1000 crates per acre	Man Labor	60 h.p. Tractor Hours per acre	30 h.p. Tractor	Cost Per Acre
Land preparation, disk 2 times & chisel	3.0	3.0		\$ 14.10
Land plane, two times	1.5	1.5		7.05
Disk & chisel	1.0	1.0		4.70
Insecticide - soil - disk	1.0	.5	.5	4.05
Preplant fertilizer and list contract				3.50
Bed shape - roll	1.0		1.0	3.40
Plant - 2 men	1.0		.5	2.57
Irrigation - 15 times	30.0			52.50
Herbicide (oil)				3.00
Side dress - 4 times contract				10.00
Thin	56.0			98.00
Hand hoe	20.0			35.00
Cultivate - 7 times	7.0		7.0	23.80
Apple insecticide - 6 times				13.50
<b>Total Cultural-Labor</b>	<b>120.5</b>	<b>6.0</b>	<b>8.0</b>	<b>275.17</b>
Irrigation, 4.5 acre ft.				19.00
Insecticide				45.00
Oil				18.00
Manure (1/2 cost)				35.00
Fertilizer N.P.K.				113.30
Seed 1#/acre				18.00
<b>Total Material Cost</b>				<b>248.30</b>
<b>Total Cost of Material and Cultural-Labor</b>				<b>523.47</b>
General Expense - 5% of above				26.17
Management				10.00
County taxes, equipment				1.50
Repairs, except tractors & trucks, plus misc.				6.00
Lease - \$130 (2/3 double cropped)				86.67
<b>Total Cash Overhead Costs</b>				<b>130.34</b>
<b>Total Cash Costs</b>				<b>653.81</b>
<b>Investment</b>	<b>Inv./acre</b>	<b>Annual Depreciation</b>	<b>Interest on 1/2 Cost</b>	
Power (tractors, etc.)	127	\$12.70	\$3.81	
Implements	82	8.20	2.46	
Irrigation	43	4.30	1.29	
Building	18	1.80	.54	
<b>Total Depreciation</b>		<b>27.00 (2/3 to celery)</b>		<b>18.00</b>
Interest on investment @ 6%			8.10 x 2/3	5.40
<b>Total Cost to Harvest (cost per crate \$.68)</b>				<b>677.21</b>
Harvest and Pack (\$1.75 per crate)				1750.00
<b>Total Costs and Depreciation (cost per crate \$2.43)</b>				<b>\$2427.21</b>

Labor costs, including Social Security and compensation insurance, are figured at the following hourly rates: tractor driver, \$2.20; other labor, \$1.75. Cash costs of fuel, oil, repairs for 60 h.p. diesel crawler, \$2.50 per hour and 30 h.p. wheel tractor, \$1.20.