

CABBAGE PRODUCTION - WATSONVILLE DISTRICT

Cabbage acreage in the Watsonville growing district in recent years has varied from 750 to 1,000 acres, according to the Agricultural Commissioner's reports. This coastal area has a mild, cool climate, which provides an ideal location for producing large yields of high quality cabbages most of the year. Yields per acre will vary from 300 to 920 cartons per acre, depending upon market price and growing condition.

REQUIREMENTS: Cabbage grows best in a deep, well-drained soil of medium texture that is free from salt and alkali. However, cabbage can produce good yields on a wide variety of soil texture, provided wet spots, or soil with high water tables, are avoided. This crop is a cool season vegetable, and both yields and quality can be hurt by high temperature (above 85° F.) and low temperature (below 34° F.). During December and January, cabbage grows very slowly in this area.

IRRIGATION: From 1-1/2 to 2-1/2 feet of water applied in 4 to 7 irrigations will be required to mature a crop of cabbages.

VARIETIES: Golden Acres is the main variety planted in this area from December through February. Copenhagen Market is usually planted for summer harvest. Recently, some Summer Acreage has been planted to several hybrid varieties of cabbage. Most growers avoid planting cabbage during October and November.

PLANTING: In planting the fields, the soil is first furrowed out, forming beds. This is followed by 2- or 4-row planters for direct seeding. Row spacing varies from 40" to 42" apart from the center of the bed with two rows 11" to 13" apart on the top of each bed. Approximately 1/2-pound of seed is usually planted in dry soil, followed by irrigation. In some fields, soil crusting is a problem. Under these circumstances, the field is pre-irrigated and then seeded. Plants are thinned 10" to 12" apart within the rows. Precise planting is now beginning to be used.

FERTILIZATION: Lime should be applied every two to three years to help maintain a pH above 7. This provides an unfavorable environment for establishment of club root disease. Manure is applied to part of the acreage every few years. A common fertilizer practice would be to broadcast or side dress 12-12-12 at the rate of 600-lb per acre, then followed by a side dress, after thinning, of 400-lb of ammonium sulfate per acre. Total amount of nitrogen needed is 130-170 lbs. per acre.

HARVEST: Harvest normally begins when heads reach the size and firmness desired by the market. Cabbage heads are both field- and shed-packed in this area; some are moved in bulk bins. For shed-packing the heads are cut by hand, trimmed if needed, and placed on trailers. Most cabbage heads are packed in cartons, holding 50 pounds of produce. Three harvests per field are normal for this area.

DISEASES AND INSECTS: Aphids, various worms, cabbage maggots, and nematodes are the most common pests. Most of the cabbage acreage is fumigated with a nematicide because of the presence of a high population of cyst nematodes in most of our soil farmed to cole crops. Occasional leaf disease and seedling damping off can cause problems. Club root threatens many areas, and growers should be careful not to introduce it into their fields.

SAMPLE COSTS FOR CABBAGE PRODUCTION (Rented Land)
Watsonville District - 1972

| Based on Yield of 560 Ctns. (2 doz.) Per Acre) | Hours per acre | | | | Cost Per Acre |
|---|----------------|-----------------|-----------------|------------------|---------------------|
| | Man Labor | 60 hp Tract. | 30 hp Tract. | Truck- Pickup | |
| Land preparation - disk, chisel, etc. | 3.5 | 3.5 | | | \$ 21.34 |
| Preplant, list, contract, fumigate | | | | | 4.50 |
| Bed shape and roll | 0.5 | | 0.5 | | 2.07 |
| Plant, 2 men, 4-bed planter | 1.0 | | 0.5 | | 3.14 |
| Irrigation, 5 times | 10.0 | | | 0.2 | 22.00 |
| Thin | 24.0 | | | | 51.60 |
| Side dress fertilizer, 2 applications @ 2.75 contract | | | | | 5.50 |
| Apply insecticides, 3 times @ 3.00 contract | | | | | 9.00 |
| Cultivation, 5 times | 3.0 | | 3.0 | | 10.35 |
| Herbicide incorporation, contract \$6.00 | | | | | 6.00 |
| Weed, 1 time | 12.0 | | | | 25.80 |
| Misc., work (includes labor--roads, drains, etc.) | 3.0 | 0.2 | 0.3 | 1.0 | 8.29 |
| TOTAL CULTURAL LABOR AND FIELD POWER | 57.0 | 3.7 | 4.3 | 1.2 | \$ 169.59 |
| Irrigation water power to pump 2.5 A. | | | | | 13.00 |
| Seed, 1/2 lb. | | | | | 4.00 |
| Herbicide | | | | | 10.00 |
| Nematicide | | | | | 21.00 |
| Fertilizer materials, incl. portion of costs for manure every other year | | | | | 42.00 |
| Insecticide and Fungicide materials | | | | | 42.50 |
| TOTAL MATERIAL COSTS | | | | | \$ 132.50 |
| TOTAL LABOR, FIELD POWER AND MATERIALS | | | | | \$ 302.09 |
| General expense, office, car, etc., estimated at 5% of above | | | | | \$ 14.78 |
| Management | | | | | 20.00 |
| County Taxes, equipment | | | | | 1.80 |
| Repairs, except tractors and trucks | | | | | 6.80 |
| Land rent, \$170/A double crop | | | | | 85.00 |
| TOTAL CASH OVERHEAD COST | | | | | \$ 128.38 |
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| Overhead (equipment and buildings) based on 500 acres, 2 times cropped | | Depreciation | | | |
| Trucks, tractors | | \$10.32 | | | |
| Other equipment (tillage, etc.) | | 3.87 | | | |
| Shop equipment repairs | | 2.98 | | | |
| TOTAL DEPRECIATION | | \$17.17 | | | \$ 17.17 |
| TOTAL CASH AND DEPRECIATION COSTS | | | | | \$ 447.64 |
| Interest on investment at 6% | | | | | 5.20 |
| TOTAL COSTS UP TO HARVEST (Cost per carton \$.86) | | | | | \$ 452.84 |
| Harvesting, packing, hauling, etc. at \$1.35 per carton | | | | | 756.00 |
| TOTAL COST OF PRODUCTION (Cost per carton \$2.16) | | | | | \$1,208.84 |

Labor costs hourly rates, including Social Security and compensation insurance; irrigators or hand labor, \$2.15; tractor drivers, \$2.85; cash cost per hour for a 60 hp crawler diesel tractor, \$3.25; 30 hp gas wheel tractor, \$1.30; 1/2-ton pickup, \$2.00.

Overhead is based on 500 acres of crop land. Land lease--3 years at 170 per acre per year.