

BRUSSELS SPROUT PRODUCTION IN THE CENTRAL COAST DISTRICT

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The coastal district of California from Half Moon Bay to Chualar produces 85 percent of the nation's crop of Brussels sprouts. Annual plantings range from 5,000 to 6,000 acres and are valued at \$6 to \$7 million.

REQUIREMENTS: Brussels sprouts grow best in well drained, fertile soils that are free from salt and alkali. Soil pH ranging from 6.5 to 7.4 is preferred by this crop. Brussels sprouts, like other members of the cabbage family, reach best quality if the crop develops and matures during cool weather. A three to five month period before harvest, with relatively cool temperatures, is needed for development of high quality sprouts. Warm weather during sprout development may result in soft or loose sprouts.

PLANTING: Seed beds in this area are planted from February to May. Plants are then transplanted, with the aid of 3-row transplanters, into fields beginning in April. One pound of seed is planted for every 3 to 4 acres to be transplanted. Harvest begins 90 to 120 days later, depending upon the variety planted. First harvest usually begins in late August and continues until February, with peak production from September to late November.

IRRIGATION AND FERTILIZATION: Immediately following transplanting, the fields are sprinkler irrigated. Sprinkler irrigation is then continued every 14 to 16 days until harvest, for a total of seven to nine irrigations, depending upon which variety is used. Single harvest varieties are usually not irrigated within two to three weeks of harvest to prevent development of soft and/or tender sprouts. A complete fertilizer, usually 12-12-12 at the rate of 1,000 pounds per acre, is disked or side dressed in before planting. Most of the varieties will receive an additional 100 pounds of nitrogen per acre as a side dressing or in irrigation water. Many fields of sprouts will receive annually 200 to 250 pounds nitrogen and two to six tons of manure, usually chicken. Minor elements are applied to many of the sprout fields.

VARIETIES: Jade Cross and Jade Cross E are the main varieties used for single harvest. Some acreage of Stabilo and Sweet Coastal are single harvested. Stabilo and Gravendeel are varieties that can be harvested once or twice by hand and then machine stripped for late winter harvest.

HARVEST: Single harvest plants have their terminal growing point removed about six weeks before harvest. The leaves are removed just prior to harvest by hand, knife, or by a power driven spring-loaded knife to aid mechanical sprout stripping.

At present, there are two methods of harvesting. Part of the acreage is now bought on the stalk by certain processing companies. In this system the stalks are usually cut by machine, then loaded on to a truck and hauled to a central stripping shed. The other system involves field stripping with rotary knives. One type of knife has a semi-fix blade with inside guides, and the other system has blades under spring tension which allows blades to open as stalks are fed into the machine. The sprouts are then stripped, starting from the butt end of the stalk, requiring a single pass through the machine.

Harvest machine costs vary from \$12,000 to \$23,000 depending upon size and if machines have rotary saws to cut stalks.

CLEANING: Sprouts, either in trailers or sacks, are hauled to central sheds and cleaned with the use of roller cage drums, and then hand sorted. The cost of cleaning varies greatly, depending upon where performed, yield, incidence of decay, and other defects. Total harvest and cleaning costs vary from 2½ to 4 cents per pound. Cost rise rapidly when yield goes below 4½ tons per acre.

PESTS: Plants are attacked by a number of diseases and insects. Clubroot, verticillium, and blackleg are three serious soil-borne diseases. Aphids, cabbage maggot and a variety of worms can cause severe losses in this crop. Nematodes are a problem in many soils of this area. Proper fumigation can reduce nematode population and improve yields.

For the latest pest control measures, contact your local farm adviser's office.

SAMPLE COST FOR SINGLE HARVEST BRUSSELS SPROUTS 1973

Yield 5 Tons, Plant Spacing 18" x 3', 100 Acres Single Cropped

	Hours per acre			Truck-Pickup	Cost Per Acre
	Man Labor	40 hp Tract	30 hp Tract		
CULTURAL					
Land Preparation	6	4.0	2.0	1.0	33.40
Fumigation contract, 1 time					4.25
Growing plants (includes fumigant, seed, fertilizer, and pest control)					35.80
Pull plants	18				41.40
Transplant & irrigation	16		3.2	3.0	50.48
Cultivation, 3 times	4		4.0		18.80
Hoe, 1 time	6			.5	14.80
Irrigate, 8 times	17		2.0	3.0	47.70
Herbicide, contract					6.00
Fertilize, 2 times, contract \$3					6.00
Pest Control, 7 times, contract \$3					21.00
Disc, 2 times (cleanup)	4	2.5	1.5	1.0	22.80
Miscellaneous work	3	0.2	0.3		8.26
TOTAL CULTURAL	74	6.7	13.0	8.5	\$ 310.69
MATERIALS					
Irrigation power to pump					17.00
Soil Fumigation					36.80
Herbicide					10.00
Fertilizer (12-12-12 1/2 + 100#NH ₃ SO ₄ + 5 ton chicken manure)					108.00
Pest Control Materials					79.00
TOTAL COST OF MATERIALS					\$ 250.80
TOTAL CULTURAL AND MATERIALS COST					\$ 561.49
CASH OVERHEAD					
General Expense, camp office, car, etc. (5% estimate of above)					27.26
Management					50.00
Repairs (except tractor and truck)					4.20
Rent					85.00
Promotion, grading and research					21.25
TOTAL CASH OVERHEAD					\$ 181.71
TOTAL CULTURAL-MATERIALS-CASH OVERHEAD					\$ 749.20
DEPRECIATION					
Irrigation equipment					16.72
Tillage equipment, etc.					5.43
Buildings and shop					8.20
TOTAL DEPRECIATION					\$ 30.35
INTEREST ON INVESTMENT 6% for \$500/Acre partial depreciation					\$ 30.00
TOTAL COST UP TO HARVEST					\$ 809.55
HARVEST					
Top	8			1.0	19.40
Harvest, deleaf, strip and clean 3¢/#					300.00
TOTAL HARVEST COST	8			1.0	\$ 319.40
TOTAL COST - Cost per pound 11.28¢					\$1128.95

Labor costs hourly rates, including Social Security, unemployment, health insurance and compensation insurance; irrigators or hand labor, \$2.30; tractor drivers, \$3.40; cash cost per hour for a 40 hp crawler diesel tractor, \$2.10; 30 hp gas wheel tractor, \$1.30; 1/2-ton pickup, \$2.00.