

CASTORBEANS

Sample

Costs of Production

Suggestions on Growing

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Farm and Home Advisor's Office
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UC Cooperative Extension

About These Cost Data---

The costs of production in any agricultural enterprise will vary considerably from ranch to ranch. The input and cost data in this booklet are sample costs. They are intended to be used only as educational guides in assisting you to appraise and plan your own crop and livestock program.

These cost data do not represent industry averages.

SUGGESTIONS ON GROWING CASTORBEANS

By

Roy M. Barnes - Farm Advisor

GENERAL:

Castorbeans are well suited to the areas of Kern County. Varieties which produce good yields on plants that are not objectionably tall have been developed and are available for planting. The yields and the value of the commodity are such that a reasonable profit can be realized. The castorbean is not a legume and is not a soil-reclaiming crop.

SOIL REQUIREMENTS:

The crop yields best on rather light soils. Any of the sandy loams, silt loams, or fine sandy loams grow castorbeans well if they do not contain large quantities of alkali.

VARIETY:

Dwarf varieties are recommended. Variety preference will probably be determined by the contract buyer.

SEED TREATMENT:

It is good insurance to treat the seed with a suitable seed disinfectant. Two to four ounces of new improved Ceresan per 100 pounds of seed can be recommended.

PREPARATION OF SOIL AND PLANTING:

The castorbean is a big seed and requires ample moisture in a good firm seedbed during the 10 to 14 day germination period. Pre-irrigation is necessary to provide the correct amount of moisture at planting time. Planting dry and irrigating up

COST ANALYSIS WORK SHEET

SAMPLE COSTS TO PRODUCE CASTORBEANS IN KERN COUNTY - 1965

Based on man labor at \$1.20 and \$1.40 per hour; 35 H.P. wheel tractor cash cost per hour \$1.10;
Depreciation \$.60; Interest \$.23

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Operation	Hours Per Acre	Cash and Labor Cost Per Acre				Sample Costs	My Costs
		Labor	Fuel and Repairs- Equipment	Material and Other Costs			
Cultural:							
Land preparation	2.0	\$ 2.80	\$ 2.20			\$ 5.00	
Plant & fertilize (2 men)	.5	1.30	.55	Seed: 12 lbs. @ 40¢	\$ 4.80		
				Nitrogen: 80 lbs. @ 12¢	9.60	16.25	
Irrigate: 1 pre & 5 crop	7.0	8.40	2.50	Water: 2 1/2 ft. @ \$6.00	15.00	25.90	
Hoe	4.0	4.80				4.80	
Cultivate: 2 times	1.0	1.40	1.10			2.50	
Taxes					12.50	12.50	
Miscellaneous overhead		4.00	2.90		4.00	10.90	
Total Cultural Costs		\$22.70	\$ 9.25		\$45.90	\$ 77.85	
Harvest:							
Defoliate (Av. 1 1/2 Applications)			1 1/2 qts. Dinitro + 22 1/2 gal. diesel fuel		\$ 7.00	\$ 7.00	
			Plane: \$1.00 + 15¢/gal./application		4.88	4.88	
Harvest			3,000 lbs. @ 1¢		30.00	30.00	
Haul			3,000 lbs. @ \$5.00 per ton		7.50	7.50	
Total Harvest Costs						\$ 49.38	
Total Cash and Labor Costs						\$127.23	
							Cash and Labor Cost per cwt. @ 3,000 lbs. yield (\$ 4.24)
Costs at Varying Yields							
		<u>Investment</u>	<u>Per Acre</u>	<u>Annual Cost</u>			
				<u>Depreciation</u>	<u>Interest</u>		
Pounds	Total Cost	Land	\$900.00		\$54.00		
<u>Seed Per Acre</u>	<u>Per CWT.</u>	Irrigation System	200.00	\$15.00	6.00		
		Tractor 5 1/2 hrs.		3.30	1.27		
2,000	\$9.85	Equipment	20.00	2.00	.60		
3,000	6.98	Total		\$20.30	\$61.87		
4,000	5.55					\$ 82.17	
							TOTAL COST PER ACRE
							\$209.40
							TOTAL COST PER CWT. @ 3,000 LBS. YIELD
							\$ 6.98

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is not generally recommended. A good method to use is to furrow the land deeply in row widths of 38 inches. Pre-irrigate in these furrows; then plant on the ridges--making sure to open the ridges deep enough to get moisture. The best planter to use is that designed for either lima beans or shell peanuts. Being a brittle seed, care should be used to prevent seed breakage. The harvester is designed for 38 inch rows.

PLANTING RATE:

Twelve pounds of seed is recommended. This amount should produce the desired stand of about one plant each 12 inches.

PLANTING TIME:

Castorbeans should be planted at the same time as cotton. In Kern County, this would be late March to April 15th.

PLANTING DEPTH:

The planting depth should be governed by soil moisture, but should not exceed 2 1/2 inches.

FERTILIZATION:

Nitrogen rate tests have indicated that from 60 to 90 lbs. of nitrogen per acre produced satisfactory yields. A good guide to follow is to apply about 60% of the amount of nitrogen that would be applied to cotton in this field.

IRRIGATION:

As a rule, castorbeans require less moisture than cotton. The first irrigation will probably be needed sooner than for cotton. Frequency of irrigation will depend upon the kind of soil and

its ability to retain moisture. Usually an irrigation every 12 to 15 days is required. Water should be withheld so as to complete harvest before wet weather. This will vary from 2 to 4 weeks depending upon how green the plants are at this time.

CULTIVATION:

Often two cultivations are sufficient, since the crop quickly shades the ground, hampering weed growth. Shallow cultivation is best to avoid disturbing the important shallow roots. Also, the soil will usually dry out as deeply as it is stirred.

HARVESTING:

Castorbeans should be harvested when a majority of the spikes have turned brown. Defoliation is recommended at this point to dry the plant and the few spikes at the top which still may be green. Direct harvest is the common practice.

YIELDS:

With good soil and proper management, yields of 3,000 to 4,000 pounds may be expected.

INSECTS:

Insects do not appear to present a serious problem in castorbean production.

DISEASES:

The primary disease affecting castorbeans is Alternaria. This is a fungus disease that affects any part of the plant, the spikes being the most sensitive.