

# CASTOR BEANS

costs of production  
suggestions on growing

UNIVERSITY OF CALIFORNIA  
FARM AND HOME ADVISORS' OFFICE  
KERN COUNTY

REVISED JANUARY, 1960  
UC Cooperative Extension

CAUTION

CAUTION

CAUTION

READ BEFORE FOLLOWING PEST CONTROL RECOMMENDATIONS . .  
IN THIS PUBLICATION.

The recommendations in this publication for the use of any of the following types of chemicals--insecticides, fungicides, herbicides, rodenticides, nematocides, plant growth regulators, dessicants or defoliants--in crop production or protection may no longer be valid. Since this publication was originally issued, new information has been developed and new regulations have been put into effect in respect to the use of these chemicals. This information is now available in the current University of California pest control recommendations distributed by the farm advisors' offices in each county or the University Public Service Offices.

# SUGGESTIONS ON GROWING CASTOR BEANS

By

Roy M. BARNES - FARM ADVISOR

## GENERAL:

CASTOR BEANS 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 CASTOR BEAN 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 CASTOR BEANS WELL IF THEY DO NOT CONTAIN LARGE QUANTITIES OF ALKALI.

## VARIETY:

DWARF VARIETIES, SUCH AS PACIFIC HYBRID #6, BAKER 45, AND U.S. 415, ARE RECOMMENDED.

## 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 CASTOR BEAN IS A BIG SEED AND REQUIRES AMPLE MOISTURE IN A GOOD FIRM SEED BED 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 IS NOT GENERALLY RECOMMENDED. A GOOD METHOD TO USE

**COSTS TO PRODUCE CASTOR BEANS IN KERN COUNTY**

BASED ON MAN LABOR AT \$1.00 AND \$1.30 PER HOUR; 30 H.P. WHEEL TRACTOR CASH COST PER HOUR \$1.00;  
DEPRECIATION \$.41; INTEREST \$.19

\* ROY M. BARNES

\*\* BURT B. BURLINGAME

OPERATION	HOURS PER ACRE	CASH AND LABOR COST PER ACRE			SAMPLE COSTS	MY COSTS
		LABOR	FUEL AND REPAIRS - EQUIPMENT	MATERIAL AND OTHER COSTS		
<b>CULTURAL:</b>						
LAND PREPARATION	2.0	\$ 2.60	\$ 2.00		\$ 4.60	
PLANT & FERTILIZE (2 MEN)	.5	1.15	.50	SEED: 12 LBS. @ 40¢ \$ 4.80	16.05	
IRRIGATE: 1 PRE & 5 CROP	12.0	12.00	2.50	NITROGEN: 80 LBS. @ 12¢ 9.60	29.50	
HOE	4.0	4.00		WATER: 2 1/2 FT. @ \$6.00 15.00	4.00	
CULTIVATE: 2 TIMES	1.0	1.30	1.00		2.30	
TAXES					12.50	
MISCELLANEOUS OVERHEAD		3.60	2.70		9.80	
TOTAL CULTURAL COSTS		\$24.65	\$ 8.70		\$ 78.75	
<b>HARVEST:</b>						
DEFOLIATE (AV. 1 1/2 APPLICATIONS)				1 1/2 QT. DINITRO + 22		
				GAL. DIESEL FUEL \$ 7.50		
				PLANE: \$2.00 PER APPLI. 3.00		
HARVEST				3000 LBS. @ 1¢ 30.00		
HAUL				3000 LBS. @ \$5.00 PER TON 7.50		
TOTAL HARVEST COSTS					\$ 48.00	
TOTAL CASH AND LABOR COSTS					\$126.75	
<b>COSTS AT VARYING YIELDS</b>						
		<u>INVESTMENT</u>	<u>PER ACRE</u>	<u>ANNUAL COST</u>		
				<u>DEPRECIATION</u>	<u>INTEREST</u>	
<u>POUNDS SEED PER ACRE</u>	<u>COST PER CWT</u>	LAND	\$800.00		\$48.00	
		IRRIGATION FACILITIES	200.00	\$15.00	6.00	
		TRACTOR 5 1/2 HRS.		2.26	1.05	
		EQUIPMENT	20.00	2.00	.60	
		TOTAL		\$19.26	\$55.65	\$ 74.91
2,000	\$9.46					
3,000	6.72					
4,000	5.35					
TOTAL COST PER ACRE					\$201.66	
COST PER CWT @ 3,000 LBS. YIELD					\$ 6.72	

\* FARM ADVISOR

\*\* EXTENSION ECONOMIST  
IN FARM MANAGEMENT

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 DEEPLY 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:

CASTOR BEANS 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, CASTOR BEANS 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

UC Cooperative Extension

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:

CASTOR BEANS 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 CASTOR BEAN PRODUCTION.

### DISEASES:

THE PRIMARY DISEASE AFFECTING CASTOR BEANS IS ALTERNARIA. THIS IS A FUNGUS DISEASE THAT AFFECTS ANY PART OF THE PLANT, THE SPIKES BEING THE MOST SENSITIVE.