Weed Control:
Most attention must be given to early weed control. By mid-season, castor beans have usually drawn all moisture from the surface soil and have shaded the ground. Suggested planting method A has the advantage of a pre-emergence cultivation. If suggested planting method B is used, dirt can be thrown into the rows to cover small weeds. Another useful operation is a light cross cultivation just before emergence. Do your hoeing early when the weeds are small and it is easy to hoe around the plants.

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Cultivate very shallow. Skillful, timely cultivations will cut hoeing costs.

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CASTOR BEANS IN THE DELTA

By:
Torrey Lyons
and
A. D. Reed

Costs and Suggestions for growing Castor Beans in the Delta area.

University of California
College of Agriculture Extension Service
300 Old Post Office Building
Sacramento, California.

UC Cooperative Extension
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Castor beans may be a profitable crop on many farms. They are well suited as a row crop to include in a rotation. Small plantings of a hybrid variety were made in the Delta in 1952. The cost data on these fields show that the crop is profitable at present prices. The future depends on world conditions and the actions of oil seed processors. High yields and efficient production will be necessary if castor beans are to take a permanent place in Delta agriculture.

Costs Except for Use of Land in Producing Castor Beans on Four Delta Ranches

In 1952

<table>
<thead>
<tr>
<th>Ranch</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Aver.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres</td>
<td>12.5</td>
<td>11.0</td>
<td>25</td>
<td>33</td>
<td>180.5</td>
</tr>
<tr>
<td>Yield lbs clean seed</td>
<td>3000</td>
<td>1845</td>
<td>1960</td>
<td>1650</td>
<td>2116</td>
</tr>
<tr>
<td>Per cent dockage</td>
<td>2.9</td>
<td>7.5</td>
<td>5.0</td>
<td>10.5</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Cost per Acre

<table>
<thead>
<tr>
<th>Land preparation</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant</td>
<td>9.86</td>
<td>6.87</td>
<td>7.77</td>
<td>9.25</td>
<td>3.44</td>
</tr>
<tr>
<td>Fertilize</td>
<td>6.85</td>
<td>14.53</td>
<td>16.40</td>
<td>10.24</td>
<td>12.00</td>
</tr>
<tr>
<td>Cultivate</td>
<td>8.93</td>
<td>3.53</td>
<td>10.80</td>
<td>1.80</td>
<td>6.19</td>
</tr>
<tr>
<td>Hoe</td>
<td>27.00</td>
<td>10.00</td>
<td>20.25</td>
<td>16.00</td>
<td>18.31</td>
</tr>
<tr>
<td>Irrigate</td>
<td>.75</td>
<td>---</td>
<td>.75</td>
<td>3.50</td>
<td>1.25</td>
</tr>
<tr>
<td>Total Cultural</td>
<td>53.09</td>
<td>34.93</td>
<td>55.97</td>
<td>52.23</td>
<td>49.05</td>
</tr>
</tbody>
</table>

| Defoliate         | 10.50 | 10.50 | 10.50 | 10.50 | 10.51 |
| Harvest and Haul  | 27.10 | 31.38 | 26.35 | 27.00 | 27.99 |
| Total Harvest     | 37.60 | 41.88 | 35.85 | 37.53 | 38.47 |

Total Cost per Acre | 90.69 | 76.81 | 82.82 | 83.76 | 87.52 |
Cost per cwt. | 3.02 | 4.16 | 4.73 | 5.41 | 4.54 |

These figures include cost of labor, tractor, machinery, and material. Labor was charged at $1.00 per hour.

Tractor and machinery costs were figured on an hourly rate sufficient to cover fuel, oil, repairs, depreciation, taxes, interest, and shelter.

GROWING CASTOR BEANS

Soil Preparation:

Prepare a normal seed bed. You must have good moisture. In some cases a pre-irrigation will be necessary.

Variety:

A dwarf hybrid variety appears best. In test plots in 1952, hybrid varieties gave 15% to 25% higher yields than in-bred lines. However, the hybrid varieties were later maturing.

Seed Treatment:

Seed should be treated with a fungicide - 3 to 4 ounces of Arasan per 100 pounds of seed.

Planting:

Castor beans require at least 10 to 14 days for germination. They must be protected from drying north winds during this period. This can be done in either of two ways without the handicap of deep planting. (1) Plant down to moisture 1½ to 2½ inches deep and throw a mound over the row with two small disks. When the seed germinates, knock down this mound. (2) Plant 1½ to 2½ inches deep in the bottom of a furrow.

Plant in 36 inch rows because the combines are made to take this spacing.

Rate of Planting:

Use ten pounds of seed per acre.

Time of Planting:

The first warm spell in April. Try to have planting completed by May 15th. Do not plant after May 30th.

Fertilization:

No fertilizer should be needed on peat land. However, on other soils, around 50 pounds of actual Nitrogen per acre may be advantageous. Fertilizer trials on castor beans are needed.
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Fertilize
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Defoliate
Harvest and Haul
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