

SAFFLOWER PRODUCTION IN TULARE COUNTY

Safflower is an oil seed crop that is beginning to attract attention in California. At the present time most safflower is produced in the Nebraska-Colorado-Wyoming area, where 15,000 acres were planted to this crop in 1948, 40,000 acres in 1949, and probably about 100,000 acres in 1950.

Plant Characteristics - Safflower belongs to the thistle family. It has a coarse central stem with many branches, each branch ending in a flower head. Many seeds are produced in each head. Present varieties are covered with stout spines which develop shortly before the plants flower.

Varieties and Planting Dates - Many varieties are being tested in California, but N 852 appears to be the best variety available at present.

In California safflower is generally grown the same time as winter grain. It is extremely important to prepare a seedbed free of weed and other crop seeds, because safflower grows slowly in the early stages and cannot meet much competition. For this reason the crop should not be planted until after volunteer seeds are sprouted by rain or pre-irrigation and destroyed by cultivation. Time of planting does not materially affect the date of maturity which will be in late July or early August.

Little information is available on the soil requirements of safflower. However, any good crop soil will probably prove satisfactory.

Seeding Rate and Row Spacing - Due to necessity of cultivation to control weed growth during winter and spring, it appears advisable, in this area, to plant safflower in rows 18 to 24 inches apart rather than a solid stand as with grain. Approximately 25 pounds seed per acre should be sufficient. Seed should be drilled 1 to 2 inches deep in a smooth well prepared seedbed. Treating the seed before planting with a mercuric dust, such as New Improved Ceresan, is recommended to reduce seedling disease. 2 to 4 ounces dust per 100 pounds seed should be used, applied at least 24 hours before seeding.

Irrigation - Safflower, in Tulare County, must be irrigated. Unless heavy fall rains occur, the land should be pre-irrigated before planting. The crop matures 4 to 6 weeks later than wheat and will probably require at least 2 irrigations during the spring. Safflower should have an ample supply of moisture until blossoming is completed but should not be irrigated thereafter.

Harvest - Safflower may be harvested with the same equipment used for grain. The cylinder speeds should be slowed, however, to 500 to 700 r.p.m. Higher cylinder speeds will crack the seed. Careful field observation will indicate whether other minor adjustments should be made in operation of the harvester.

Crop Uses - Safflower seed oil is used mainly as a substitute for linseed oil in paints and varnishes because it has non-yellowing properties. Variety N 852 contains from 30 to 35 per cent oil. The residue (seed meal) after extraction of the oil is about equal to soybean meal when fed to livestock on an equal protein basis.

The only market for safflower is the processor of oil bearing seeds. Only a limited number of processors are now interested in the crop. For this reason it should not be grown without making prior arrangements with a processor to purchase the seed.

Tulave
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WHAT WILL IT COST ME TO GROW SAFFLOWER
WITH A YIELD PER ACRE OF 2,000 LBS.?

Sample costs Man Labor 85¢ hour. Big Tractor \$2.50 hr., Small Tractor \$1.20 hr.

	Sample Costs		My Costs	
	Per acre	Per cwt.	Per acre	Per cwt.
Land preparation 2 hr. man and heavy tractor at \$3.35	6.70			
List and smooth beds 20 to 30", 1/2 hr. with light tractor	1.03			
Planting and fertilizing 4 rows, 2 men, small tractor, .6 hr.	1.74			
Irrigation 3 times, 6 hr.	5.10			
Cultivation 4 times at 1/2 hr. each	4.10			
Combine, contract	6.00	.30		
Haul out in bulk \$1.50 per ton contract	1.50	.08		
Total labor and field power cost	26.17	1.39		
Irrigation water, power to pump 1 1/2 ac. ft. at \$2.50	3.75			
Seed, 25 lb. at 30¢	7.50			
Fertilizer to provide 60 lb. of N.	9.00			
Total material cost	20.25	1.01		
General expense	2.40			
County taxes, \$60 value at \$6.00 rate	3.60			
Repairs misc. and comp. ins.	2.00			
Total cash overhead costs	8.00	.40		
TOTAL CASH COSTS	54.42	2.72		
Depreciation on Irrigation Facilities \$100 per A. at 20 yrs.	5.00			
Tillage eqt. and misc. other than tractors \$12 per acre total over 10 years	1.20			
Total depreciation	6.20	.21		
Interest on investment at 5% on half cost of equipment and irrigation facilities.	2.80			
Land at \$300 per acre	15.00			
Total interest on investment	17.80	.59		
TOTAL ALL COSTS	78.42	3.92		