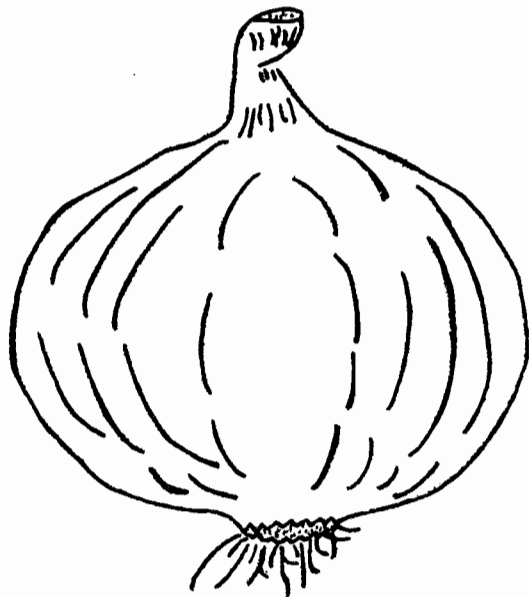


ONIONS

COSTS & GENERAL HINTS ON PRODUCTION



University of California
Agricultural Extension Service

Kern County

May, 1953

UC Cooperative Extension

BRIEFS ON GROWING EARLY ONIONS
David N. Wright - Farm Advisor

SOIL REQUIREMENTS

Onions are generally grown on sandy loam or silty loam soils. A soil which bakes before the seedlings are well established is not desirable. Since onions are relatively fast growing but have a limited root system, best results are obtained from soils high in fertility.

SOIL PREPARATION

Prior to planting seed or setting transplants, the ground is normally pre-irrigated. Following this the land is worked to prepare a fine seed bed. Rocks, hard clods or too much organic debris make the planting operation difficult.

VARIETIES

The majority of the Kern County early onions are of the San Joaquin variety. Southport White Globe is also planted but matures later and is primarily grown for dehydration. The cost figures presented here are for the early crop produced for fresh market.

GROWING THE TRANSPLANTS

Seed beds to produce "transplants" or "green sets" are established in September. Two and one-half to three pounds of seed will produce sufficient green sets to plant an acre. In the transplant beds the seed is planted in bands 3 to 4 inches wide by means of a special planter shoe. The rate of seeding in the plant bed varies from 25 to 100 pounds of seed per acre. Depending on the size of the transplants, they are lifted and pulled for field setting sometime between November 15th and January 1st. It is important that the transplants be no larger than "pencil size" at the time they are set in the field.

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WHAT WILL IT COST TO GROW EARLY-ONIONS IN KERN COUNTY?

May, 1953

David N. Wright*

Burt B. Burlingame**

Based on a yield of 700 fifty-pound sacks per acre
 Man labor at \$1.00 per hour

	Sample Costs		My Costs	
	Per Acre	Per 50# Sack	Per Acre	Per 50# Sack
<u>Pre-harvest Labor and Material Costs:</u>				
Pre-irrigate - 2 times incl. tractor work @ \$5.50	\$ 11.00			
Discing - 6 times over @ \$1.25	7.50			
Sulfur and gypsum - applied	18.00			
Make beds, shape, mark and fertilize	3.00			
Fertilizer at planting time - 400 pounds 16-20	18.00			
Transplanting \$60 plus contractor \$6	66.00			
Plants	20.00			
Irrigation labor, except pre: - 13 times	15.50			
Water: power for 2½ Acre ft. @ \$4.50	11.25			
Spray: DDT - applied (contract)	4.50			
Fall weeding - handwork	60.00			
Spring weeding - handwork	15.00			
Cultivate 6 times and spring fertilize	12.10			
Fertilizer: spring - dry and/or liquid	19.60			
Dusting: 2 times DDT apply 60 lbs. @ 5¢	3.00			
Dust: 60 lbs. 10% DDT @ 10½¢	6.30			
Miscellaneous labor and material	4.00			
Total pre-harvest labor, field power & material	\$294.75	\$.42		
<u>Harvesting Costs:</u>				
Lifting	4.00			
Pull, top, haul, shed costs (loaded in car) contract - at 70¢ per sack	490.00			
Total harvesting cost	494.00	.71		
<u>Cash Overhead Costs:</u>				
General expense (5% of pre-harvest labor & material)	14.74			
County taxes	6.25			
Miscellaneous repairs, insurance, etc.	5.00			
Total cash overhead costs	25.99	.03		
Total cash, labor and field power costs	814.74	1.16		
<u>Depreciation:</u>				
Irrigation facilities (original cost \$200)	15.00			
Equipment, except tractors & harvesting - cost \$24.00	2.40			
Total depreciation	17.40	.02		
<u>Interest on Investment at 5%:</u>				
Irrigation facilities on 1/2 original cost \$100	5.00			
Equipment - 1/2 cost \$12	.60			
Land at \$750	37.50			
Total interest on investment	43.10	.06		
Total cost of production	\$875.24	\$1.25		

* Farm Advisor, Kern County

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FIELD PLANTING

When the transplants are pulled, the tops and roots are normally clipped to facilitate handling. The practice of clipping will often reduce the yields, especially if the transplanting is done late.

Prior to the actual transplanting operation, the field is pre-irrigated and the plant beds formed and shaped. Bed spacing varies from 30 inches to 32 inches from center to center. A marking device is used to mark off two rows on each bed, one being on each shoulder. Normal practice is to space the plants $3\frac{1}{2}$ -4 inches apart in the row. The transplanting is done by hand, usually at a contracted price per acre, but sometimes hourly labor is used.

Some of the early crop is produced by means of direct seeding in the field. When this is done, the preparation of the beds is similar to that for transplants. In early October $3\frac{1}{2}$ to 4 pounds of seed are planted per acre. Two rows per bed is the usual practice, although several plantings using four rows have been made. In this case, the amount of seed needed per acre will have to be increased. A planting depth of $\frac{1}{2}$ to 1 inch is usually adequate.

FERTILIZERS

Experimental trials have indicated that onions need a relatively high level of fertility. A general recommendation is for the application of 120 pounds per acre of ammoniacal nitrogen and 120 pounds per acre of P_2O_5 (phosphorous). Best results have been obtained when this was applied directly under the transplant row at transplanting time. When the direct seeding method is used, the placement of the fertilizer on the shoulder at planting time is recommended.

IRRIGATION

Since onions have a relatively small compact root system, it is necessary to maintain adequate moisture

at all times in the top foot of ground. The number of irrigations necessary will vary with the amount of rainfall, but it is estimated that in general 30 acre inches of water will be used per crop.

CULTIVATION AND WEEDING

Cultivation is for the purpose of controlling weeds. The weed problem varies greatly in different fields, but in most Kern County plantings it is necessary to send hand crews through to take out the weeds in the plant rows which implements cannot reach. Chemical weed control has been used to some degree, but has not been too satisfactory to Kern growers.

HARVESTING

Most of the onion harvesting in Kern County is done on a contract basis. When mature, the onions are first loosened from the soil by means of a blade which lifts them slightly and loosens the soil. They are next pulled and the tops cut about 1/2 inch from the bulb and the roots trimmed. Shears are used for the topping and trimming. The bulbs are then placed in burlap field sacks and may be left in the field for several days to cure. They are then hauled to a packing shed where they are sorted, graded and placed in mesh bags, usually of 50 pound capacity.

YIELDS

Average yields for the entire county for the past five years are 580 fifty-pound sacks per acre. Most successful growers, however, are not satisfied with yields under 700 sacks per acre and there are cases of production over 1,000 sacks.