

POTATOES

# IRISH POTATOES

## Sample Costs of Production

Cultural  
Practices

University of California  
Farm and Home Advisors Office  
Kern County

Revised January, 1970

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.*

BRIEFS ON GROWING POTATOES  
David N. Wright - Farm Advisor

SOIL REQUIREMENTS

Potatoes can be grown on a variety of soils, but like any other crop, thrive best on certain types. The most favorable soils for potatoes are fertile, well-drained and of rather loose texture.

VARIETIES

The majority of the potatoes grown in Kern County are of the White Rose variety produced principally for the fresh market. An additional relatively small but important, acreage of Russet Norgold and Red La Soda is also produced for fresh market consumption.

During recent years the production of potatoes for processing has been of increasing importance. Kennebec is the principal variety grown for this purpose.

SEED

Seed is certified by the State of California Department of Agriculture. Potato growers are advised to plant only certified seed to guard against unnecessary losses from seed-borne diseases.

SOIL PREPARATION AND PLANTING

Prior to planting it is usually necessary to pre-irrigate, after which the ground is worked to prepare a fine seedbed. The potato planting machine makes the beds, plants the seed and places the fertilizer, all in one operation.

SAMPLE COSTS PER ACRE TO PRODUCE EARLY POTATOES IN KERN COUNTY <sup>1/</sup>

With a yield of 325 sacks gross and 270 marketable

1969

David N. Wright\*

Edward A. Yeary\*\*

Operation	Hours per acre	Cash and Labor Costs per Acre			Per Acre Sample Costs	Your Costs
		Labor	Fuel & repairs	Material and Other Costs		
<b>PRE-HARVEST:</b>						
Land Preparation: 80 h.p. tractor	3.0	6.30	9.60		15.90	
Cut and dip seed: 17 sacks plant and fertilizer				Contract \$18 per acre	18.00	18.00
Shape beds and cultivate	.5	1.05	.65	Seed: \$5 cwt. Fert.\$35	120.00	120.00
Weeding	3.0	5.70				1.70
Irrigation prep: 2 men & tractor	.5	2.00	.65			5.70
Pre-irrigation & crop irrigations	16.0	30.40	4.00	Water: 2½ Ac.Ft.@ \$18	45.00	2.65
Pest & disease control: 6 air appl.				Sprinkler rental	85.00	79.40
				Application	9.00	85.00
				Material	24.00	9.00
County taxes, paid by tenant					19.00	24.00
Rent: ½ year					50.00	19.00
Soil treatment and misc. costs		15.00	1.30	Soil treatment \$14.80	14.80	50.00
Office & business costs					26.70	31.10
<b>TOTAL PRE-HARVEST COSTS</b>		<b>60.45</b>	<b>16.20</b>		<b>411.50</b>	<b>488.15</b>
<b>HARVEST:</b>						
Vine removal & rolling				Contract:	6.00	6.00
Digging				Contract:\$4.50 field ton	73.13	73.13
Loading & hauling				Contract:\$1.65 field ton	26.81	26.81
Shed costs incl. sales & brokerage				\$1 per salable sack	270.00	270.00
<b>TOTAL HARVEST COSTS</b>					<b>375.94</b>	<b>375.94</b>
<b>TOTAL CASH AND LABOR COSTS</b>						<b>864.09</b>

**SAMPLE COSTS AT VARYING YIELDS**

Yield	Sacks	Costs/Cwt.
Gross	Marketable	Marketable
240	200	\$ 3.90
300	250	3.38
360	300	3.04
420	350	2.80
480	400	2.61

**INVESTMENT COSTS**

Depreciation	Interest @ 7% <sup>2/</sup>
Irrigation Equipment	
\$150 15 years	5.25
Other equipment	
\$ 40 10 years	1.40
Tractors: hourly basis	6.65 ½ yr.
TOTAL COST PER ACRE	2.72
Less Credit for 5500 lbs. Culls at \$4 per ton	10.33
Net Cost Per Acre for Sacks marketable	9.52
Net Cost Per Sack for 270 Sacks marketable	883.94
	- 11.00
	872.94
	3.23

1/ Man labor at \$1.90 and \$2.10 per hour total. Tractors: 80 h.p. tracklayer and 45 h.p. wheel diesel. Cash costs per hour \$3.20 and \$1.30, depreciation \$1.80 and 70¢, interest 72¢ and 28¢.

2/ Figured on ½ of original cost of tenants investment.

\* Farm Advisor, Kern County

\*\* Farm Advisor-Statewide, Farm Management

Usually the rows are spaced 32 inches apart. The seed is generally planted approximately 8 inches below the top of the bed.

### PLANTING RATE

The amount of seed planted per acre will vary, depending on the size of seed potatoes and the number and spacing of the eyes on the seed potatoes. Usually about 1500 to 2000 pounds of seed per acre are adequate.

### FERTILIZERS

Heavy fertilizer applications are needed to produce a good crop of potatoes. Various mixtures are used, as well as simple fertilizers such as ammonium sulfate. In terms of pounds of nutrients per acre, a general recommendation is 150 to 225 pounds of nitrogen per acre. Best results have been obtained when the nitrogen is from an ammoniacal source.

The response to phosphorus and potassium is quite variable in the different areas. In deficient areas, a yield increase usually results from 100 to 150 pounds of  $P_2O_5$ , and  $K_2O$ .

### CULTIVATION AND WEEDING

After planting but just before the young shoots emerge, potato fields are cultivated to destroy the young weeds which may have started. The crust which has formed is broken and the beds are shaped at the same time.

### IRRIGATION

A uniform supply of available moisture is essential for maximum yields and quality. Under average conditions, the first irrigation is delayed until after the potato shoots have emerged. After the regular irrigation season is under way,

common practice is to irrigate alternate rows on alternate days. This may be varied according to the water holding capacity of the soil and the pattern of the weather, especially during the early part of the season. In general, it is estimated that approximately 30 to 40 acre inches of water are used during the growing season of the spring crop of potatoes.

Of increasing importance is the use of sprinklers as a means of supplying water. The trend is toward the establishment of solid-set systems which are installed shortly after planting and remain in the field until harvest.

Under sprinklers, weed control is obtained through the use of herbicides applied before the sprinkling system is established in the field.

## HARVESTING

Potato harvesting in Kern County is largely done by contract. The current trend is toward the use of combine harvesters and bulk handling to the grading and washing shed. In some areas canvas "stub sacks" are still in use, but the number of fields harvested in this manner is rapidly diminishing.

## YIELDS

Yields will vary somewhat from year to year depending on the weather and the age at which the potatoes are harvested. Average yields in the county are slightly in excess of 300 cwt. of marketable potatoes per acre. Many growers achieve yields of 350 to 450 cwt. per acre and in some years a few growers will average 500 or more cwt. of marketable potatoes per acre in some fields.