

IRISH POTATOES



COSTS OF
PRODUCTION

SUGGESTIONS
ON GROWING

UNIVERSITY OF CALIFORNIA
AGRICULTURAL EXTENSION SERVICE
KERN COUNTY

REVISED MARCH, 1960
UC Cooperative Extension

BRIEFS ON GROWING POTATOES

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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 RED PONTIACS 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 TWO AGENCIES--THE KERN COUNTY SEED POTATO GROWERS ASSOCIATION AND 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

SAMPLE COSTS PER ACRE TO PRODUCE OLY POTATOES IN KERN COUNTY - 1960 1/
WITH A YIELD OF 300 SACKS GROSS AND 250 MARKETABLE

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OPERATION	HOURS PER ACRE	CASH AND LABOR COSTS PER ACRE			SAMPLE COSTS	YOUR COSTS
		LABOR	FUEL AND REPAIRS	MATERIAL AND OTHER COSTS		
PRE-HARVEST:						
LAND PREPARATION: 60 H.P. TRACK	3.0	\$ 3.90	\$ 7.20		\$ 11.10	
CUT AND DIP SEED: 15 SACKS		10.50		CONTRACT @ 70¢	10.50	
PLANT AND FERTILIZE: 3M & 40 H.P. TRAC.	1.0	3.30	1.65	15 SACKS SEED @ \$4.25	68.70	
HAUL SEED & FERTILIZER	1.0	1.30	1.62	FERTILIZER	32.92	
SHAPE BEDS & CULTIVATE	.5	.65	.50		1.15	
WEEDING	3.0	3.00			3.00	
IRRIGATION PREP.: 2 MEN & TRACTOR	.5	1.15	.50		1.65	
IRRIGATION & PRE-IRRIG.	16.0	20.80	2.50	WATER: 4-ACRE FT. @ \$6.00	47.30	
PEST CONTROL: 3 PLANE APPLICATIONS				MAT'L. \$10.50, APPLY @ \$7.50	18.00	
COUNTY TAXES					12.50	
MISCELLANEOUS		10.00	2.50	MANURE OR GYP. \$20; OTHER \$12	44.50	
TOTAL PRE-HARVEST					\$251.32	
HARVEST:						
VINE REMOVAL				CONTRACT	3.50	
DIGGING				CONTRACT	12.00	
PICKING (INCLUDING CONTRACTOR)				300 CWT. @ 16¢	48.00	
HAULING				@ \$2.20 PER TON UP TO 5 MI.	33.00	
SHED COSTS (INCLUDES FIELD & MKT. SACKS)				250 @ 70¢ + 3¢ INSPECTION	182.50	
TOTAL HARVEST					\$279.00	
TOTAL CASH AND LABOR COST					\$530.32	
COSTS AT VARYING YIELDS		INVESTMENT COSTS				
WITH 83-1/3% MARKETABLE		LAND @ \$800	DEPRECIATION		INTEREST AT 6% 2/	
YIELD, SACKS	COST PER CWT.	IRRIGATION SYSTEM: \$200 ORIGINAL	\$15.00		\$48.00	
GROSS MARKET	MARKETABLE	EQUIPMENT EXCEPT TRACTORS, TRUCK & HARVEST: \$40 ORIGINAL	5.00		6.00	
240	200	TRACTORS & TRUCK (HOURLY BASIS)	8.54		3.84	
300	250	TOTAL	\$28.54		\$59.04	87.58
360	300	TOTAL COST PER ACRE				\$617.90
420	350	LESS CREDIT FOR 5,000 LBS. CULLS @ \$4.00 PER TON				- 10.00
480	400	NET COST PER ACRE FOR 250 SACKS MARKETABLE				\$607.90
		NET COST PER CWT.				2.43

1/ MAN LABOR AT \$1.00 AND \$1.30 PER HOUR. TRACTORS - 60 H.P. TRACK, 40 H.P. TRACK & 30 H.P. WHEEL: CASH COST PER HOUR - \$2.40, \$1.65 & \$1.00; DEPRECIATION - \$2.00, \$1.27 & \$.41; INTEREST - \$.90, \$.58 & \$.19.

2/ FIGURED ON 1/2 OF ORIGINAL COST, EXCEPT FOR LAND.

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OPERATION. USUALLY THE ROWS ARE SPACED 32 INCHES APART. THE SEED IS GENERALLY PLANTED 6 TO 8 INCHES BELOW THE TOP OF THE BED.

PLANTING RATE

THE AMOUNT OF SEED PLANTED PER ACRE WILL VARY, DEPENDING ON 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 APPROXIMATELY 150 POUNDS OF NITROGEN PER ACRE. BEST RESULTS HAVE BEEN OBTAINED WHEN THE NITROGEN IS FROM AN AMMONIACAL SOURCE.

THE RESPONSE TO PHOSPHORUS IS QUITE VARIABLE IN THE DIFFERENT AREAS. IN THE GENERAL AREA NORTH OF BAKERSFIELD, A SMALL YIELD INCREASE USUALLY RESULTS FROM UP TO 60 POUNDS OF P_2O_5 . SOUTH OF BAKERSFIELD IS QUITE DEFICIENT. AS MUCH AS 150 POUNDS OF P_2O_5 HAVE BEEN PROFITABLY APPLIED.

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.

HARVESTING

POTATO HARVEST IN KERN COUNTY IS DONE MOSTLY BY CONTRACT. MECHANICAL DIGGERS BRING THE POTATOES TO THE TOP OF THE GROUND. THEY ARE PLACED IN CANVAS "STUB SACKS" WHICH HOLD APPROXIMATELY 55 POUNDS OF FIELD RUN POTATOES. THESE SACKS OF POTATOES ARE ELEVATED BY MEANS OF A PICKUP LOADER AND DUMPED INTO A BULK TRUCK. THEY ARE THEN HAULED TO THE PACKING SHED WHERE THEY ARE WASHED, GRADED AND SACKED. SINCE POTATO STORAGE IS NOT PRACTICED IN KERN COUNTY, THE POTATOES ARE SHIPPED AND SOLD AS SOON AS THEY ARE DUG.

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 250 CWT. OF MARKETABLE POTATOES PER ACRE. MANY GROWERS ACHIEVE YIELDS OF 300 TO 400 SACKS PER ACRE AND IN SOME YEARS A FEW GROWERS WILL AVERAGE 500 OR MORE SACKS OF MARKETABLE POTATOES PER ACRE IN SOME FIELDS.