

# **WATERMELON**

## **Projected Production Costs**

**Imperial County  
1989 - 1990**

## Watermelon Projected Production Costs 1989-1990

Mechanical operations at custom rates. Hand labor at \$5.75 per hour (\$4.50 plus Social Security, unemployment insurance, transportation, supervision and fringe benefits).

Yield--13 tons per acre. 120 days to maturity.

Hybrid variety

OPERATION	CUSTOM RATE	MATERIALS		HAND LABOR		COSTS Per Acre
		Type	Cost	Hours	Dollars	
<b>LAND PREPARATION</b>						
Stubble disc	18.25					18.25
Disc 1x	9.50					9.50
List beds	18.50					18.50
Rerun beds	10.00					10.00
<b>TOTAL LAND PREPARATION</b>						<b>56.25</b>
<b>GROWING PERIOD</b>						
Fumigation	12.50	Fumigant	96.00			108.50
Plant, shape beds and fertilize	19.00	Seed 2# @ 115.00	230.00			249.00
		35 gal. 10-34-0	56.00			56.00
Pollination		1 1/2 hives @18.00	27.75			27.75
Back fill furrows	9.50					9.50
Thin				5	28.75	28.75
Spike	10.00					10.00
Center beds	13.75					13.75
Cultivate 1x	14.00					14.00
Fertilize (inject) (water-run)	14.00	100# N @ .31	31.00			45.00
		100# N @ .31	31.00			31.00
Hand weed 2x				12	69.00	69.00
Irrigate 6x		Water 3 ac/ft	33.00	7	40.25	73.25
Insect control 8x	5.00	Insecticides	72.00			112.00
Disc out beds	9.50					9.50
<b>TOTAL GROWING PERIOD</b>						<b>857.00</b>
<b>GROWING PERIOD &amp; LAND PREPARATION COSTS</b>						<b>913.25</b>
Land Rent (net acres)						200.00
Cash Overhead--		12% of preharvest costs & land rent				133.59
<b>TOTAL PREHARVEST COSTS</b>						<b>1246.84</b>
<b>HARVEST</b>						
Pick, load, haul, sort and sell		13 tons/ acre @	60.00/ton			780.00
<b>TOTAL ALL COSTS</b>						<b>2026.84</b>

### PROJECTED INCOME ABOVE COSTS (PER ACRE)

		price/ton					Breakeven \$/ton
		130.00	145.00	160.00	175.00	190.00	
Tons	10	-547	-397	-247	-97	53	185
per	12	-407	-227	-47	133	313	164
acre	14	-267	-57	153	363	573	149
	16	-127	113	353	593	833	138
	18	13	283	553	823	1093	129

## WATERMELON CULTURE

1989-1990

<u>YEAR</u>	<u>ACRES</u>	<u>YIELD/ACRE (TONS)</u>	<u>VALUE/TON</u>
1988	4275	8.4	\$ 188
1987	4456	13.4	170
1986	3327	12.7	172
1985	5111	6.5	113
1984	4516	7.8	156

**PLANTING DATES:** Watermelons are planted from January to March, and harvested late May until approximately July 15.

**VARIETIES:** "Calsweet" is the most popular open pollinated variety. It has a striped skin, and red flesh. Hybrid "Royal Sweet", with a dark pink flesh and striped skin, is also widely grown. Royal Sweet's flesh is said to increase in red color after harvest. Both varieties yield more than the old standard "Peacock Improved" which was highly prone to sunburn. Open pollinated seed is 6-7 times less costly than hybrids. Many shippers are using seedless varieties which are very expensive to grow. Triploid seedless needs a temperature of roughly 80°F for germination. Therefore, growers use transplants or they must use the plastic midbed trench system of production to obtain the high temperature necessary for germination. Seedless watermelons need one row of pollinator (a standard open pollinated variety) for every 2-3 rows of seedless. Commonly used seedless varieties include: Nova, Laurel, Quality and Jack-of-Hearts. The seed is expensive and costs \$750-1000 per pound.

**SPECIAL CULTURAL PRACTICES:** The plastic midbed trench system of culture is becoming more popular. A thin 1.5 mil sheet of 30 inch polyethylene film is placed over the top of a six inch deep x twenty inch wide groove down the center of a flat bed. Melon seed is planted into the soil at the bottom of the trench prior to laying the plastic. The beds are irrigated and the melons are allowed to grow for 35-45 days. The plastic is then ventilated for a few days and removed. The advantages reported for midbed trench include: frost protection, bird protection, insect exclusion, water savings and earlier planting. Watermelons are also grown on conventional south sloped 80" beds. Covering the melons with vines helps to prevent sunburn.

**SOILS:** Watermelons are best grown on non-saline, sandy loam or silt loam soils. Soil temperatures of 95° are optimum for germination. Black asphalt mulch is occasionally used to improve temperatures in the seedline.

**IRRIGATION:** After planting, the first irrigation should run until the beds are completely subbed. Following emergence, water may be withheld for long periods of time; however, watermelons should not be stressed for water near harvest.

**FERTILIZERS:** Thirty to thirty five gallons of 10-34-0 may be applied preplant during planting-shaping. Up to 200 pounds of nitrogen are later sidedressed in split applications. There is less fertilizer needed when watermelons follow a lettuce crop.

**PEST CONTROL:** Cutworms, aphids, spider mites, darkling ground beetles, leafhoppers, cabbage loopers, and leafminers are the most serious pests of watermelon. Zucchini yellow mosaic and watermelon mosaic virus can severely distort the fruit and vines, reducing yield. Charcoal rot and powdery mildew may also require control. For latest information, consult your farm advisor.

**HARVESTING:** A sharp knife is used to cut melons from the vines. Pulled melons may crack open. Melons are picked on the basis of color change, blossom end conditions, and rind roughness. Color change is the most reliable.

Loss of natural protection on the fruit can increase sunburn. Exposed fruit are covered with vines during the harvest period to prevent sunburning each time the field is harvested. A field may be covered more than five times to protect the fruit.

Most fields are picked twice and some a third time depending upon market value and the degree of sunburned fruit. The melons are sorted and packed in large, sturdy fiberboard bins.

GUIDELINES TO PRODUCTION COSTS AND PRACTICES  
IMPERIAL COUNTY CROPS, CIRCULAR 104  
 1989 - 1990

CUSTOM RATE CHARGES

HEAVY TRACTOR WORK

	<u>PRICE/ACRE</u>
Plow	\$ 24.75
Subsoil 2nd Gear	29.25
Disc, Regular	9.50
Disc, Stubble	18.25
Float	8.25
Triplane	8.75
List, Regular	11.50
List, and Rerun 80" Melon Beds	22.00
Reshape 80" Melon Beds	10.00
Landplane	10.00
Chisel	20.75

PLANTING AND CULTIVATING

Plant and Shape Melon Beds	16.75
Precision Plant 42" Beds	14.50
Plant Carrots	13.75
Plant Onions	16.75
Cultivate 4-Row 42" Beds	10.75
Cultivate Melon Beds	14.00
Spike and Furrow Out (2 row)	10.50
Lilliston	9.50
Furrow out alone	8.00
Move N-Side 80" Beds for Irrigation	9.50

INCORPORATING, BORDER AND BED WORK

Power Incorporate herbicides	20.25
Border, Cross checks and Break Borders	15.00
Bust Melon Beds	9.00
Roll Beds	5.00

FERTILIZER APPLICATION

Broadcast Fertilizer	6.00
Inject Fertilizer (Flat)	9.00
Fertilize and Furrow Out 42" Beds	10.50
Fertilize and Furrow Out 80" Beds	10.50

IRRIGATION

Custom Sprinkle	135.00-145.00
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MISCELLANEOUS

Motor Grader/Hour	42.75
Chop Broccoli, Corn Stalks, Etc.	10.00
Water truck/Hour	34.00
Cultipacker	6.00
Ground Spray Pesticides (4 Row)	7.00
Aerial Spray 5 Gal. (Insecticides)	4.50
Aerial Spray 10 Gal. (Fungicides)	5.00