

UNIVERSITY OF CALIFORNIA AGRICULTURAL EXTENSION SERVICE

# Sacramento County Hop Cost Study

## 1961



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UC Cooperative Extension

*Hops*

# TABLE OF CONTENTS

<u>Subject</u>	<u>Page Number</u>
GENERAL INFORMATION	1
CULTURAL Sample Costs (Detailed)	2 & 3
HARVEST Sample Costs (Detailed)	4
INVESTMENT, DEPRECIATION & INTEREST Sample Costs (Detailed)	5
SUMMARY OF CULTURAL Sample Costs	6
SUMMARY OF HARVEST Sample Costs	7
SUMMARY OF INVESTMENT, DEPRECIATION & INTEREST Sample Costs	7
SUMMARY OF TOTAL Sample Costs	8
COSTS PER POUND To Grow Hops	8
Table of Net Income Per Acre for Hops	9
Details and Explanation of Table	10

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# GENERAL INFORMATION

June 1961

1

ACKNOWLEDGEMENT: The assistance rendered by hop growers and brokers in the preparation of this study is gratefully acknowledged. Without their patience and tireless assistance the task could not have been accomplished.

## FACTORS USED IN HOP COST STUDY

GENERAL: The figures presented are the best estimates which could be obtained through the cooperative efforts of the Hop Industry in Sacramento County and the Agricultural Extension Service.

NOTE: IT MUST BE UNDERSTOOD THAT THESE ESTIMATES DO NOT APPLY TO ANY GIVEN HOP RANCH. THEY ARE "SAMPLE COSTS". PERHAPS THERE IS NO HOP RANCH TO WHICH THEY CAN BE APPLIED DIRECTLY. IF GROWERS DO NOT PERFORM ALL OF THE LISTED OPERATIONS, THOSE WHICH ARE NOT EMPLOYED SHOULD BE RULED OUT TO OBTAIN AN ACCURATE ESTIMATE FOR A PARTICULAR HOP RANCH. AS CHANGES OCCUR IN COSTS, EFFICIENCY AND YIELD THE INFORMATION INCLUDED HEREIN SHOULD BE ADJUSTED ACCORDINGLY. THIS STUDY WAS PREPARED ONLY AS A GUIDE FOR GROWERS TO USE IN DEVELOPING THEIR OWN PRODUCTION COSTS AND AS A TOOL IN ANALYZING THEIR OPERATIONS.

LABOR COSTS: (As of March, 1961): Pre-harvest Common Labor \$1.32 per hour (includes \$1.15/hr. cash wages, labor contractor fees, camp fees and transportation fees). Harvest Common Labor \$1.42 per hour (includes \$1.25/hr. cash wages plus all of the above). Skilled Labor \$1.50 per hour throughout entire season (includes cash wages, housing and miscellaneous). Supervisory Labor \$1.80 per hour throughout entire season (includes cash wages, housing and miscellaneous). Social Security and Workmans Compensation are NOT included in direct labor costs in one column, but are listed in the table under "Miscellaneous". They ARE included in the second ( ) column.

SOIL TYPES: Hanford very fine sandy loam, Hanford loamy fine sand.

HILL SPACINGS: Vary between 7' x 7' (889 hills per acre) and 6.5' x 6.5' (1031 hills per acre).

YIELD PER ACRE: Average California hop yield per acre over 12 year period 1949-60 was 1540 pounds per acre (8.24 bales) of dry baled hops ready for market. Information obtained from USDA Hop Market News dated January 5, 1961. Seedless hops of the Late Cluster variety at approximately 8% moisture are used in yield figures. Average bales are assumed to weigh 200 lbs. gross, 187 lbs. net and measure 22 x 28 x 56 inches.

ECONOMIC UNIT OF HOP PRODUCTION: A ninety (90) acre Sacramento County hop yard with one picking machine, one three-kiln dryer, one cooler building and one baling press is considered to be an economic unit of production. Ten additional acres of less productive land are devoted to buildings.

FARM IMPLEMENT RATES: Costs of operation for tractors, discs, plows, etc., used in this study were obtained from standard tables of the University of California, College of Agriculture, Dept. of Agricultural Economics, Davis, California. For Tractors: One 20HP track layer used 1,000 hrs. per year costs 90¢ per hour to operate; one 20HP wheel tractor used 750 hrs. per year costs 80¢ per hour to operate.

Operations listed are arranged chronologically starting with post-harvest subsoiling in September and continuing through August of the following year.

CULTURAL SAMPLE COSTS TO PRODUCE HOPS (HIGH TRELLIS)

JUNE 1961

90 Acre Economic Unit  
Yield - 1540#/A Dried Hops (12 yr. Ave.)

SACRAMENTO COUNTY 1960-61

Operation	Hours Per Acre	Cash and Labor Cost Per Acre				Total		Growers Actual Cost
		Labor <sup>a</sup> (Excludes WC & SS)	Fuel and Repairs	Materials	Excludes WC & SS	(Includes WC & SS)		
Subsoil 1X	1.0	\$ 1.50	\$ 1.05		\$ 2.55	\$( 2.64)		
Spread Manure	1.5	2.25	3.25	12 yds @ \$2.50	35.50	( 35.63)		
Ridge for Irrigating 2X	.5	.75	.55		1.30	( 1.34)		
Pre-irrigate for cover crop	6.0	7.92	1.86	2/3 acre ft @ \$3.00	11.78	( 12.32)		
Knock ridges & Disc 1X	.7	1.05	.74		1.79	( 1.85)		
Plant Cover Crop	.5	.75	.65	25# barley @ 3 1/2¢	2.28	( 2.33)		
Prepare Coir Twine for Stringing	6.0	7.92	( 8.46)	180# Coir Twine @ 17¢	38.52	( 39.06)		
Fertilize	.5	.75	(.80)	150# nitrogen @ 10¢	16.65	( 16.70)		
Trellis repair	8.7	11.48	( 12.27)	Lumber	22.38	( 23.17)		
Disc under cover crop	.7	1.05	( 1.11)		3.66	( 3.88)		
Flow 2X (3M 2/3 hr.)	2.0	2.73	( 2.95)		26.40	( 28.20)		
Grub & Prune	20.0	26.40	( 28.20)		5.14	( 5.32)		
Replant 50 hills	2.0	2.64	( 2.82)	100 roots @ \$2.50	3.51	( 3.64)		
Disc cultivate 2X	1.4	2.10	( 2.23)	30# Sulfur @ 10¢	3.92	( 3.99)		
Treat crowns for mildew	.7	.92	(.99)		1.79	( 1.85)		
Disc cultivate 1X	.7	1.05	( 1.11)		2.64	( 2.82)		
Soak Coir Twine	2.0	2.64	( 2.82)		15.69	( 16.68)		
String field	11.0	14.70	( 15.69)		1.79	( 1.85)		
Disc cultivate 1X	.7	1.05	( 1.11)		4.62	( 4.94)		
Cut back shoots	3.5	4.62	( 4.94)		7.50	( 7.50)		
Dust for Mildew 1X	20.0	26.40	( 28.20)	50# Zineb & Sulfur @ 10¢ + \$2.50 plane	26.40	( 28.20)		
First training				50# Zineb & Sulfur @ 10¢ + \$2.50 plane	7.50	( 7.50)		
Dust for Mildew 1X	7.0	9.24	( 9.87)		9.24	( 9.87)		
Second training	1.0	1.50	( 1.59)		2.56	( 2.65)		
Disc cultivate 1X	7.0	9.24	( 9.87)		9.24	( 9.87)		
Third training and sucker	.7	1.05	( 1.11)		1.89	( 1.95)		
Ridge for irrigation 2X	8.0	10.56	( 11.28)	3/4 acre ft. @ \$3.00	14.90	( 15.62)		
First crop irrigation	3.0	3.96	( 4.23)	10# Coir Twine @ 17¢	5.66	( 5.93)		
Prepare twine & tie vines	1.0	1.50	( 1.59)		2.56	( 2.65)		
Knock ridges & disc 1X							Cont.	

90 Acre Economic Unit  
CULTURAL SAMPLE COSTS CONTINUED

SACRAMENTO COUNTY

JUNE 1961

Yield - 1540#/A Dried Hops (12 yr. Ave.)

Operation	Hours Per Acre	Cash and Labor Cost Per Acre			Total b/ (Excludes (Includes WC & SS) WC & SS)	Growers Actual Cost
		Labor a/ (Excludes (Includes WC & SS) WC & SS)	Fuel and Repairs	Materials		
Treat for Spider Mites	.2	\$.30	\$.24	1 qt. Demeton or 6# Keithane (ave)	\$ 7.00	(\$ 7.02)
Ridge for Irrigation 2X	.7	1.05	.84		1.89	( 1.95)
Second Crop Irrigation	7.0	9.24	2.09	3/4 acre ft. @ \$3.00	13.58	( 14.21)
Knock ridges & disc 1X	1.0	1.50	1.06		2.56	( 2.65)
Strip Vines	7.0	9.24			9.24	( 9.87)
Ridge for Irrigation 2X	.7	1.05	.84		1.89	( 1.95)
Third Crop Irrigation	7.0	9.24	1.86	2/3 acre ft. @ \$3.00	13.10	( 13.73)
Knock ridges & disc 1X	1.0	1.50	1.06		2.56	( 2.65)
Ridge for Irrigation 2X	.7	1.05	.84		1.89	( 1.95)
Fourth Crop Irrigation	7.0	9.24	1.86	2/3 acre ft. @ \$3.00	13.10	( 13.73)
Knock ridges and disc 2X	2.0	3.00	2.12		5.12	( 5.30)
Install & Remove Field Bracing	2.5	3.30	1.10		4.40	( 4.62)
Miscellaneous						
Supervisory labor	3.3	6.00			6.00	( 6.00)
Workmans Comp., Social Security				WC @ 4.5%, SSS 3% cash wages	17.00	c/
Insurance except WC & SS (bids, liability, supplies, consequential, crop, autos, etc)					40.00	( 40.00)
Taxes (as of 1960)					31.00	( 31.00)
Miscellaneous Labor	10.0	13.20	4.75		13.20	( 14.10)
Office, Phone, Interest on operating capital					19.50	( 19.50)
TOTAL CULTURAL COSTS	167.9	\$226.63	\$ 39.09	\$228.39	\$494.11	\$(491.96)
	167.9		\$ 39.09	(211.39)		

a/ LABOR RATES: The first column shows labor charges excluding Workmans Compensation (WC) and Social Security (SS). In this case WC & SS are lumped in the table under "Miscellaneous". The second column shows labor charges including WC & SS. In this case WC & SS have been removed from "Miscellaneous". USE ONE COLUMN OR THE OTHER.

b/ TOTAL CHARGES: The first "Total" column should be used in conjunction with the first column of "LABOR". The second "TOTAL" column should be used with the second column of "LABOR". Use one or the other, not both. Do not mix columns.

c/ WORKMANS COMPENSATION & SOCIAL SECURITY have been included in labor charges for individual operations and are withdrawn from "Miscellaneous".

HARVEST  
90 Acre Economic Unit  
Yield - 1540#/A Dried Hops (12 yr. Ave.)

SAMPLE COSTS TO HARVEST HOPS (HIGH TRELLIS)  
SACRAMENTO COUNTY 1960-61

JUNE 1961

Operation	Hours Per Acre	Cash and Labor Cost Per Acre				Total b/ (Excludes (Includes WC & SS) WC & SS)	Growers Actual Cost
		Labor a/ (Excludes (Includes WC & SS) WC & SS)	Fuel and Repairs	Materials			
Harvest							
Cut & Load Vines	15.0	\$ 21.30	\$ .50		\$ 21.80	\$( 23.30)	
Haul Vines to Shed	12.5	18.75	2.00		38.25	( 39.38)	
Pick at Picking Shed	37.5	53.25	33.24	4 trucks hired 2.5 hr.ea.@1.75/hr \$ 17.50	86.49	( 90.24)	
Chop Spent Vines and Remove	1.0	1.50	2.90		4.40	( 4.49)	
Mechanic	3.0	7.50			7.50	( 7.50)	
Dryer Supervisor	2.4	6.00			6.00	( 6.00)	
Dry & Convey to Cooler Bldg.	10.0	14.20	15.24	44 yds. hop cloth@39¢, white oil	29.44	( 30.44)	
Bale	7.0	9.94	.50	.6 lb. sewing twine @ \$2.00	28.80	( 29.50)	
Haul to Shipping Point	1.0	1.50		Truckage	2.00	( 2.09)	
Miscellaneous	1.0	1.80			1.80	( 1.80)	
Supervisory Labor					10.18	c/	
Workmans Comp & Social Security				WC @ 4.5%, SS @ 3% cash wages			
TOTAL HARVEST COSTS	90.4	\$135.74	\$ 54.38		\$236.66	\$(234.74)	
	90.4	\$(144.00)	\$ 54.38				
Total Cash & Labor Cost For	258.3	\$362.37	\$ 93.47		\$730.77	\$(726.70)	
Cultural and Harvest	258.3	\$(385.48)	93.47				

c/ WORKMANS COMPENSATION & SOCIAL SECURITY have been included in labor charges for individual operations and are withdrawn from "Miscellaneous".

SAMPLE COSTS TO PRODUCE HOPS (HIGH TRELLIS)

SACRAMENTO COUNTY 1960-61

90 Acre Economic Unit  
Yield - 1540#/A Dried Hops (12 yr. Ave.)

INVESTMENT, DEPRECIATION AND INTEREST

Total Initial New Cost	Investment	New Cost Per Acre	Life	Depreciation	Annual Cost Per Acre Interest 6%	(3% of new cost per acre except land @ 6%.)
\$ 67,500	LAND	\$ 750		\$	\$ 45.00	
5,000	90 A Crop @ \$750	500			30.00	
22,500	10 A Utility @ \$500	250	10 yrs	25.00	7.50	
30,000	Implement	333	20	16.67	9.99	
35,000	Picking Machine	389	30	12.97	11.67	
18,000	Dryer, 3 kilns	200	30	6.67	6.00	
7,000	Cooler Bldg.	78	30	2.60	2.34	
13,500	Baling Press, Compl.	150	20	7.50	4.50	
63,000	Irrigation System	700	20	35.00	21.00	
1,600	Trellis	18	10	1.80	.54	
4,000	Vine Chopper, Compl.	45	30	1.50	1.35	
5,000	Bunk House (20-25 man)	56	30	1.87	1.68	
10,000	Cook House	111	30	3.70	3.33	
10,000	Superintendants House	111	30	3.70	3.33	
7,000	Misc. Houses	78	25	3.12	2.34	
	Shop Bldgs. & Tools					
\$299,000		\$3,769		\$122.10*	\$150.57*	

Total Annual Interest and Depreciation  
\$272.67

\*Only these items form the total.

**CULTURAL SUMMARY OF SAMPLE COSTS TO PRODUCE HOPS (HIGH TRELLIS)**

JUNE 1961

90 Acre Economic Unit  
Yield -- 1540 lbs./Acre Dried Hops

**SACRAMENTO COUNTY 1960-61**

Operation	Hours Per Acre	Cash and Labor Cost Per Acre				Total (Excludes (Includes WC & SS) WC & SS)	Growers Actual Cost
		Labor (Excludes (Includes WC & SS) WC & SS)	Fuel and Repairs	Materials			
1. Soil Preparation	13.2*	\$ 19.53*	\$( 20.75)* \$12.64*		\$ 32.17*	\$( 33.39)*	
a. Subsoil 1X, Plow 2X, Disc 12X							
2. Fertilizers	2.5*	3.75*	( 3.98)* 4.80*	Manure, Seed, Chemical Fert.	54.43*	( 54.66)*	
3. Irrigation	3.3	4.95	( 5.23)		8.86	( 9.14)	
a. Ridge Up	35.0	46.20	( 49.35)		66.46	( 69.61)	
b. Irrigate 5X	38.3*	51.15*	( 54.58)* 13.67*	3.5 Acre Feet Water	75.32*	( 78.75)*	
*SUB-TOTAL							
4. Plant & Twine Manipulations	22.0	29.04	( 31.02)	Replant Stock	31.54	( 33.52)	
a. Grub, Prune, Replant	44.5	58.74	( 62.75)		58.74	( 62.75)	
b. Cut Back, Train 3X, Strip, Sucker	22.0	29.22	( 31.20)	Coir Twine	62.51	( 64.49)	
c. Prepare Twine, String, Tie Vines	88.5*	117.00*	(124.97)* .99*		152.79*	(160.76)*	
*SUB-TOTAL							
5. Disease & Pest Control	.7	.92	( .99)	Dust and Airplane	18.92	( 18.99)	
a. Downy Mildew 3X	.2	.30	( .32)	Dust or spray	7.00	( 7.02)	
b. Spider Mites 1X	.9*	1.22*	( 1.31)* .24*		25.92*	( 26.01)*	
*SUB-TOTAL	11.2*	14.78*	( 15.79)* 2.00*	Lumber & Wire	26.78*	( 27.79)*	
6. Trellis Repair & Bracing	13.3*	19.20*	( 20.10)* 4.75*	Miscellaneous	126.70*	(110.60)*	
7. Overhead							
<b>Total Cash &amp; Labor Cost For Cultural</b>	<b>167.9</b>	<b>\$226.63</b>	<b>\$ 39.09</b>		<b>\$228.39</b>	<b>\$494.11</b>	
	<b>167.9</b>	<b>\$(241.48)</b>	<b>39.09</b>		<b>\$(211.39)</b>	<b>\$491.96</b>	

\*ONLY these figures are added to form the total.

HARVEST SUMMARY OF SAMPLE COSTS TO PRODUCE HOPS (HIGH TRELLIS)

SACRAMENTO COUNTY 1960-61

June 1961

7

90 Acre Economic Unit  
Yield - 1540#/A Dried Hops (12 yr. Ave.)

OPERATION	Hours Per Acre	Cash and Labor Cost Per Acre					Total (Excludes WC & SS)	Total (Includes WC & SS)	Growers Actual Cost
		Labor (Excludes WC & SS)	Fuel and Repairs	Materials	Investment	Interest			
1. Picking	27.5	\$ 40.05	\$ 2.50	Hired Trucks	\$17.50	\$ 60.05	\$( 62.68)		
a. Cut, Load, Haul	41.5	( 66.09)	36.14			98.39	(102.33)		
b. Pick, Chop & Remove Vines	69.0*	(108.77)*	38.64*		17.50*	158.44*	(164.91)*		
*SUB-TOTAL	12.4*	20.20*	15.24*			35.44*	( 36.44)*		
2. Drying	7.0*	9.94*	.50*	Burlap, Twine, Etc.	18.36*	28.80*	( 29.50)*		
3. Baling	1.0*	1.50*		Hired Truck	.50*	2.00*	( 2.09)*		
4. Hauling	1.0*	1.80*		Miscellaneous	10.18*	11.98*	( 1.80)*		
5. Overhead									
TOTAL CASH & LABOR COST FOR HARVEST	90.4	\$135.74	\$54.38		\$ 46.54	\$236.66	\$(234.74)		
	90.4	\$(144.00)	\$54.38		\$(36.36)				

SUMMARY OF INVESTMENTS, DEPRECIATION AND INTEREST

Total Initial New Cost	Investment	New Cost Per Acre	Annual Cost	Total/Acre
\$299,000	Equipment and Facilities	\$3,769	Depreciation \$122.10* Interest \$150.57*	\$272.67

\* Only these figures are added to form the total.

SUMMARY OF TOTAL SAMPLE COSTS TO PRODUCE HOPS (HIGH TRELLIS)

June 1961

SACRAMENTO COUNTY 1960-61

90 Acre Economic Unit  
Yield - 1540#/A Dried Hops (12 yr. Ave.)

OPERATION	Hours Per Acre	Cash and Labor Cost Per Acre					Int. & Depr. Per Acre	Total Per Acre	Grower Total/Acre	Total Per lb.	Grower Total Per lb.
		Labor (Excludes WC & SS)	Fuel and Repairs	Materials (Includes WC & SS)	Materials (Excludes WC & SS)						
CULTURAL	167.9	\$226.63*	\$ 39.09*	\$228.39*	\$(211.39)		\$ 494.11*			\$0.321	
HARVEST	90.4	135.74*	\$ 54.38*	\$ 46.54*	\$( 36.36)		236.66*			0.154	
OTHER						\$272.67	272.67*			0.177	
<b>TOTAL</b>	<b>258.3</b>	<b>\$362.37*</b>	<b>\$ 93.47*</b>	<b>\$274.93*</b>	<b>\$(247.75)</b>	<b>\$272.67</b>	<b>\$1003.44*</b>			<b>\$0.652</b>	

COSTS PER POUND TO GROW HOPS (1540#/A YIELD)

OPERATION	Man Hours	Labor (Excludes WC & SS)	Fuel and Repairs	Materials (Includes WC & SS)	Depreciation & Interest	Total Per Acre	TOTAL	
							CULTURAL	Cultural & Harvest
CULTURAL	0.109	\$0.147	\$ 0.025	\$ 0.148	—	\$ 0.320	\$ 0.474	
HARVEST	0.059	\$0.088	0.035	0.030	—	0.154		
OTHER	—	—	—	—	\$ 0.177	0.177		
<b>TOTAL</b>	<b>0.168</b>	<b>\$0.235</b>	<b>\$0.060</b>	<b>\$0.178</b>	<b>\$ 0.177</b>	<b>0.652</b>		

Minor discrepancies in this table can be attributed to rounding off of figures.

	10¢	20¢	30¢	40¢	45¢	50¢	55¢	60¢	65¢	70¢	75¢	80¢	85¢	90¢
1100	Gross Income	110	220	330	440	495	550	605	660	715	770	825	880	935
	Cost	940	940	940	940	940	940	940	940	940	940	940	940	940
	Net Income	-830	-720	-610	-500	-445	-390	-335	-280	-225	-170	-115	-60	-5
1200	Gross Income	120	240	360	480	540	600	660	720	780	840	900	960	1020
	Cost	955	955	955	955	955	955	955	955	955	955	955	955	955
	Net Income	-835	-715	-595	-475	-415	-355	-295	-235	-175	-115	-55	5	65
1300	Gross Income	130	260	390	520	585	650	715	780	845	910	975	1040	1105
	Cost	970	970	970	970	970	970	970	970	970	970	970	970	970
	Net Income	-840	-710	-580	-450	-385	-320	-255	-190	-125	-60	5	70	135
1400	Gross Income	140	280	420	560	630	700	770	840	910	980	1050	1120	1190
	Cost	985	985	985	985	985	985	985	985	985	985	985	985	985
	Net Income	-845	-705	-565	-425	-355	-285	-215	-145	-75	-5	65	135	205
1500	Gross Income	150	300	450	600	675	750	825	900	975	1050	1125	1200	1275
	Cost	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
	Net Income	-850	-700	-550	-400	-325	-250	-175	-100	-25	50	125	200	275
1600	Gross Income	160	320	480	640	720	800	880	960	1040	1120	1200	1280	1360
	Cost	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
	Net Income	-855	-695	-535	-375	-295	-215	-135	-55	25	105	185	265	345
1700	Gross Income	170	340	510	680	765	850	935	1020	1105	1190	1275	1360	1445
	Cost	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
	Net Income	-860	-690	-520	-350	-265	-180	-95	-10	75	160	245	330	415
1800	Gross Income	180	360	540	720	810	900	990	1080	1170	1260	1350	1440	1530
	Cost	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045
	Net Income	-865	-685	-505	-325	-235	-145	-55	35	125	215	305	395	485
1900	Gross Income	190	380	570	760	855	950	1045	1140	1235	1330	1425	1520	1615
	Cost	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060
	Net Income	-870	-680	-490	-300	-205	-110	-15	80	175	270	365	460	555
2000	Gross Income	200	400	600	800	900	1000	1100	1200	1300	1400	1500	1600	1700
	Cost	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075
	Net Income	-875	-675	-475	-275	-175	-75	25	125	225	325	425	525	625
2100	Gross Income	210	420	630	840	945	1050	1155	1260	1365	1470	1575	1680	1785
	Cost	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
	Net Income	-880	-670	-460	-250	-145	-40	65	170	275	380	485	590	695
2200	Gross Income	220	440	660	880	990	1100	1210	1320	1430	1540	1650	1760	1870
	Cost	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105
	Net Income	-885	-665	-445	-225	-115	-5	105	215	325	435	545	655	765

DETAILS AND EXPLANATION OF NET INCOME TABLE

GROSS INCOME is computed by multiplying the yield per acre of dried hops times the total price per pound (including premiums) received by the grower. (1500#/A x 60¢ per pound = \$900/A gross income).

COSTS include Total Cultural Cost (\$494.11/A) Plus Total Depreciation & Interest Cost (\$272.67/A) PLUS Total Harvest Costs adjusted for yield. Harvest Costs are assumed to increase or decrease by \$15 with each corresponding 100 lb. change in yield. At 1540#/A, harvest cost is \$236.66/A or \$0.154 per pound. At 1500#/A, harvest costs are \$6.16/A less, or \$230.50/A. When this is added to Total Cultural (\$494.11) plus Depreciation & Interest (\$272.67) costs, the grand total is \$997.28/A. For practical reasons the Total Cost figure of \$1000/A will be used in this table for the 1500#/A level.

EXAMPLE: Calculations are based on 1540#/A yield. Entries in the table are centered about the 1500#/A yield level (adjusted from 1540#/A) and show costs and returns both above and below the 1500#/A level.

1. At 1500#/A yield and 60¢ per pound price:	Gross Income (1500#/A x \$.60)	\$ 900/A
	Cost	\$1000/A
	NET INCOME	- \$ 100/A (Net Loss)
2. At 1800#/A yield and 60¢ per pound price:	Gross Income (1800#/A x \$.60)	\$1080/A
	Cost (\$1000 Plus \$45) \$1000/A at 1500#/A yield Plus 3 X \$15 for increased yield at 1800#/A	\$1045/A
	NET INCOME	+ \$ 35/A (Net Profit)

NOTE: It is recognized that in some cases operating efficiencies in the Harvest Operation are realized with increased yield per acre which will reduce the Harvest Costs below those indicated in this study. These variables are quite difficult to analyze or estimate and therefore have NOT been considered in the above calculations.