

November 1979

A.E. Res. 79-24

**FRUIT AND VEGETABLE CROPS
COSTS AND RETURNS
FROM
FARM COST ACCOUNTS**

27 FARMS-1978

Darwin P. Snyder

Department of Agricultural Economics
Cornell University Agricultural Experiment Station
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

REPORTS
from
FARM COST ACCOUNTS

27 Farms, 1978

Enterprise data from the 1978 New York Farm Cost Account Project have been published in the following reports. Additional copies may be obtained from County Extension offices or directly from the Department of Agricultural Economics, Cornell University, Ithaca, New York 14853.

Overhead Costs	A.E. Res.	79-21
Livestock Costs and Returns	A.E. Res.	79-22
Field Crops Costs and Returns	A.E. Res.	79-23
Fruit and Vegetable Crops Costs and Returns	A.E. Res.	79-24

FRUIT AND VEGETABLE CROPS COSTS AND RETURNS, A.E. Res. 79-24

- Contents -

	Page
Introduction	1
Summary of Cost Account enterprises	6
Rates of return compared with other years	7
Apples	9
Sweet cherries	13
Red tart cherries	17
Peaches	21
Other fruits	24
Vegetable crops	26

INTRODUCTION

The New York Farm Cost Account Project is a research project which is a part of the Cornell Agricultural Management Information System (CAMIS). Since 1914 data have been published from detailed enterprise records kept by New York farmers in cooperation with the Department of Agricultural Economics at Cornell University. These publications provide College and field staff as well as farmers and others interested in agriculture with a continuous record of economic changes taking place on New York farms.

The farms are located in most of the farming areas of the State. They are generally well-managed, full-time, commercial farm businesses. They are representative of the "better" farms in New York.

The reports present the results for individual enterprises and the averages of the enterprise costs and returns for all farms. They show not only the averages of costs and returns but also indications of the variations and reasons for them. The factors for individual enterprises are arranged according to size of enterprise. The annual averages of the various factors are not averages of average costs but are weighted by the size of the enterprise.

Acknowledgements

The project was under the supervision of Darwin Snyder, who also did the field work necessary to complete the records. Editing and processing the data, closing the books, and the preparation of these reports was done by Barbara Wilcox and Florence Blodgett assisted by Oneta Shipe. Mary Chaffee typed and assembled the reports and assisted in processing the data.

The material on page 4 of this report was taken from A.E. Res. 79-6, Dairy Farm Management, Business Summary, New York, 1978 by C. A. Bratton.

Special acknowledgement is due the group of farmers who are willing to keep the detailed records so essential to such a system of enterprise cost accounting. Without their continuing efforts and willingness to provide this information, this important and accurate source of real farm data would not exist.

FRUIT

COMMERCIAL FRUIT UTILIZED PRODUCTION
New York and United States

Fruit	New York				United States			
	Average 1969-73	1976	1977	1978	Average 1969-73	1976	1977	1978
-- thousand tons --								
Apples	422	410	450	540	3,116	3,234	3,322	3,791
Grapes	141	174	101	188	3,555	4,093	4,296	4,318
Tart Cherries	16	7	6	9	131	73	105	91
Pears	16	8	16	19	668	821	785	727
Peaches	9	5	7	8	1,455	1,321	1,426	1,281
Sweet Cherries	5	2	2	4	129	168	147	155

Source: Non-Citrus Fruits and Nuts, 1978 Annual Summary; Midyear Supplement; Fr Nt 1-3(79); CRB, ESCS, USDA.

The 1978 apple crop in New York broke all production records for the State. Total utilized production was 20 percent over 1977 and 30 percent over 1976. National production was also at a record level. Grape production was the largest in recent years for both the State and nation-wide. Peach and pear production increased over 1977 for the State but were somewhat lower for the U.S. Although cherry production remained below average for the State, both tart and sweet cherry production was considerably higher than for 1976 and 1977. Nationally, we had a normal sweet cherry crop and a well below normal tart cherry crop.

AVERAGE FARM PRICES OF FRUITS
New York and United States

Fruit	New York				United States			
	Average 1969-73	1976	1977	1978	Average 1969-73	1976	1977	1978
-- dollars per ton --								
Apples:								
Fresh	180	256	274	270	154	230	274	276
Processed	65	104	104	103	63	108	122	117
All sales	105	158	172	170	115	182	210	206
Grapes	174	181	234	245	117	155	194	231
Tart Cherries	204	492	590	858	209	502	588	876
Pears	131	191	183	205	120	124	146	219
Peaches	214	340	350	370	133	192	198	242
Sweet Cherries	271	394	552	543	352	384	496	694

Source: Non-Citrus Fruits and Nuts, 1978 Annual Summary; Midyear Supplement; Fr Nt 1-3(79); CRB, ESCS, USDA.

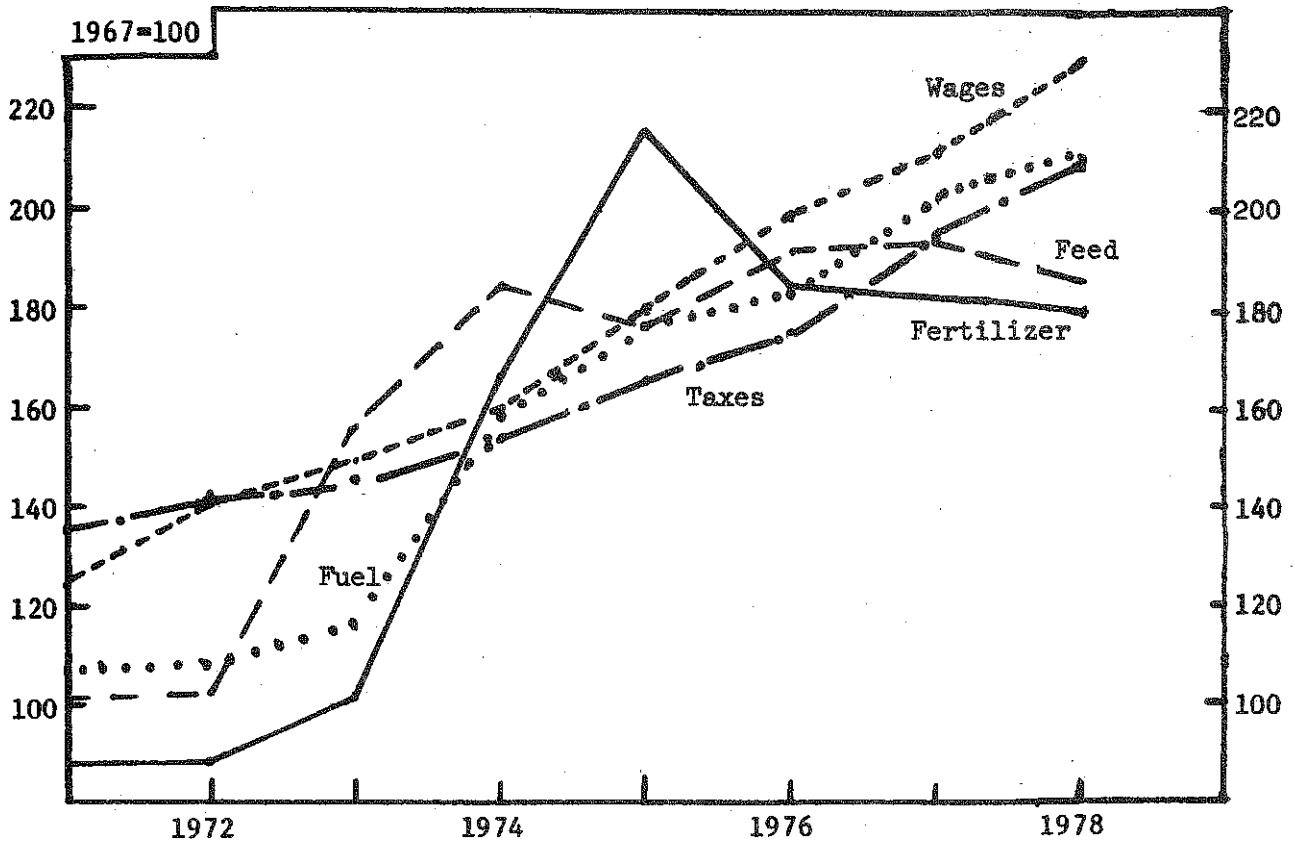
Apple prices were quite similar to 1977 levels for both fresh and processing grades. This was true for both New York and the U.S. Prices for grapes, peaches and pears strengthened over the levels experienced in recent years. For New York, sweet cherry prices remained at about 1977 levels but strengthened considerably for the national average. After three years of low production nationally, tart cherry prices reached record levels with an increase of 45 percent in the unit price for the New York crop.

VEGETABLES FOR PROCESSING AND FRESH MARKET
Acreage, Yield and Value per Unit
New York

Crop	1978 % of U.S. Total Production		Acres Harvested		Yield per Acre		Value per Unit				
	%		1976	1977	1976	1977	1976	1977			
Processing vegetables:											
Beans, snap	15		43	43	51	1.7	2.2	2.1	138	149	149
Beets	33		4.7	3.6	5.0	12	14	14	35	35	39
Cabbage, kraut	38		3.9	4.1	4.0	21	22	21	31	30	30
Sweet corn	4		21	17	20	3.9	5.7	4.9	45	46	54
Peas	2		4.1	5.2	5.6	1.4	1.4	1.4	265	248	252
Fresh market vegetables:											
	%		- 1,000 acres -			- cwt -			- \$/cwt -		
Beans, snap	9		7.4	7.4	6.0	33	36	40	22.30	22.40	25.90
Cabbage* - Summer	20		3.7	3.8	3.5	355	380	390	2.94	3.05	4.22
- Fall	43		9.1	9.4	8.8	335	385	410	9.20	5.69	8.32
Carrots*	3		1.8	1.9	1.9	350	310	300	7.60	13.10	7.58
Cauliflower* - Summer	7		1.4	1.2	1.2	76	77	65	22.10	23.90	21.00
- Fall	13		1.7	1.8	2.0	115	125	100	16.70	19.60	17.10
Celery*	2		0.9	0.6	0.7	340	420	420	8.44	8.47	15.70
Cucumbers	4		2.2	2.2	2.5	115	115	105	11.30	10.70	11.40
Lettuce	1		2.8	3.3	3.5	180	200	190	11.80	8.71	9.95
Onions*	12		13.7	13.3	13.9	265	305	310	10.60	7.81	7.85
Sweet corn	10		21	21	21	65	74	63	7.54	6.12	6.69
Tomatoes	1		2.7	3.0	3.0	115	93	110	18.70	21.20	20.20

Source: Vegetables, 1978 Annual Summary, CRB, ESCS, USDA.
* Includes data for both fresh market and processing crops.

PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1971-1978



Since 1972, all prices paid by New York dairy farmers have risen but some more than others. Fertilizer and motor fuel prices jumped sharply in 1974 and 1975, then fertilizer dropped in 1976. Feed and fertilizer have held relatively steady since 1976, while wages, fuel, and taxes have continued to rise. Fuel, wages and taxes have more than doubled since 1967 (table 3).

Table 3. PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1972-1978

Year	Index 1967=100				
	Feed	Fertilizer	Fuel	Wages	Taxes
1972	112	94	108	140	142
1973	157	102	116	150	146
1974	185	167	159	160	154
1975	177	217	177	180	166
1976	192	185	187	199	176
1977	194	182	203	212	195
1978	186	180	211	229	210
Percent increase:					
1972 to 1978 (av.)	11%	15%	16%	11%	8%
1976 to 1977	1%	-2%	9%	7%	11%
1977 to 1978	-4%	-1%	4%	8%	8%

SOURCE: U.S.D.A. - Agricultural Prices.

Growing Conditions

Table 1. TEMPERATURE, PRECIPITATION AND GROWING SEASON
Selected Stations, 1941-70 and 1978

	Average temperature		Precipitation				Length of growing season*	
	May - Sept.		May - Sept.		Total Annual		1947-67 1978	
	1941-70	1978	1941-70	1978	1941-70	1978	1947-67	1978
	degrees		inches				days	
Albany	65.7	63.5	15.4	15.5	33.4	33.5	---	145
Alfred	61.8	61.3	17.2	15.4	36.7	35.7	125	145
Aurora	64.6	63.7	13.8	16.7	40.0	35.0	160	166
Batavia	64.1	65.3	15.3	13.9	32.6	30.3	154	158
Binghamton	63.3	63.7	17.9	14.7	37.4	34.3	154	161
Canton	63.0	62.0	16.5	14.0	34.5	31.7	127	129
Glens Falls	---	63.6	17.8	22.3	39.3	44.0	---	129
Ithaca	63.8	62.4	17.2	13.1	34.8	32.0	145	145
Lowville	62.5	62.6	16.5	14.3	38.5	38.7	123	129
Utica	63.5	64.7	18.1	16.4	40.6	36.9	157	145

* Days between the last temperature of 32 degrees in the spring and the first in the fall.

Source: Climatological Data, NOAA, Environmental Data Service, Annual Summary, New York, 1978, Vol. 90, No. 13.

Weather is a factor to be considered when studying a farm business for a specific year. The growing conditions have a marked effect on the crops for that year. It is for this reason that data are presented on the growing conditions for 1978 and for the period 1941-70.

Average temperatures during the May through September growing season were about normal in 1978. Most weather stations indicated a longer than normal growing season. Rainfall for the growing season tended to be below normal in most areas especially during the first half or planting season. More normal rainfall well dispersed throughout the fall along with an abnormally long season resulted in as ideal a harvesting season in 1978 as one could special order.

Data are presented for ten weather stations. Rainfall is reported by months for the growing season (Table 2).

Table 2. GROWING SEASON RAINFALL
Selected Stations, 1941-70 and 1978

Station	May		June		July		August		September	
	1941-70	1978	1941-70	1978	1941-70	1978	1941-70	1978	1941-70	1978
	inches									
Albany	3.32	1.96	3.00	4.60	3.12	4.04	2.87	3.06	3.12	1.87
Alfred	3.76	3.81	3.76	2.34	3.73	2.83	3.00	3.85	2.93	2.52
Aurora	2.98	2.18	2.54	4.41	3.03	1.85	2.81	4.68	2.46	3.55
Batavia	3.17	2.67	2.69	1.84	3.05	2.23	3.50	2.57	2.87	4.62
Binghamton	3.83	2.55	3.59	3.85	3.83	2.54	3.61	4.61	3.02	1.16
Canton	3.37	1.88	2.91	2.97	3.43	1.73	3.47	5.11	3.31	2.28
Glens Falls	3.63	2.57	3.77	7.60	3.68	4.92	3.42	4.39	3.31	2.79
Ithaca	3.55	1.91	3.40	2.64	3.67	2.33	3.49	4.25	3.08	1.94
Lowville	3.42	2.27	2.94	2.55	3.26	2.27	3.58	2.94	3.31	4.23
Utica	3.52	1.86	3.55	4.59	4.17	3.16	3.54	2.22	3.32	4.61

Source: Climatological Data, NOAA, Environmental Data Service, Annual Summary, New York, 1978, Vol. 90, No. 13.

YIELDS FOR CROPS AND LIVESTOCK
New York State and Farm Cost Account Averages

Item	Unit	New York State*				Cost
		1957-61	1967-71	1977	1978	Account 1978
Hay	tons	1.9	2.2	2.0	2.1	2.2
Corn silage	tons	11	14	13.0	13.0	12.3
Corn grain	bu.	57	85	80	79	92
Oats	bu.	52	60	53	59	66
Wheat	bu.	32	39	39	35	30
Milk per cow	lbs.	7,914	10,361	11,190	11,360	15,051

*Source: Crop Production, 1978 Annual Summary; Crop Reporting Board, U.S.D.A.
NY Economic Handbook, 1979; Department of Agricultural Economics, Cornell
University, Ithaca, N.Y.; A.E. Ext. 78-37, December 1978.

FARM COST ACCOUNT SUMMARY, 1978

Crop Enterprises

Crop	Number of enter- prises	Average acres per enter- prise	Yield per acre	Hours of labor per acre*	Return per		Profit per acre	Profit on enter- prise
					Hour of labor	Dollar of cost		
					\$	\$	\$	\$
<u>Forage:</u>								
Hay	19	76	2.2 tn	5	3.31	0.94	-8	-569
Hay crop silage	17	137	4.9 tn	4	-2.52	0.79	-31	-4,290
Corn silage	20	123	12.3 tn	5	4.46	0.98	-5	-566
<u>Grain:</u>								
Corn for grain	8	153	92 bu	3	0.00	0.92	-17	-2,721
High moist. corn	12	119	3.5 tn	4	6.98	1.04	8	1,005
Oats	9	45	66 bu	3	-3.92	0.77	-25	-1,118
Wheat	10	42	30 bu	4	-4.11	0.75	-36	-1,520
<u>Fruit:</u>								
Apples	12	108	529 bu	88	7.61	1.19	200	21,553
Sweet cherries	5	17	4,937 lb	95	7.45	1.29	268	4,567
Red tart cherries	8	32	5,715 lb	47	43.59	3.43	1,912	60,880

* To grow and harvest the crop.

ENTERPRISE RATES OF RETURN
FARM COST ACCOUNT RECORDS, 1975-78

Enterprise	Return per hour of labor				Return per dollar of cost			
	1975	1976	1977	1978	1975	1976	1977	1978
	\$	\$	\$	\$	\$	\$	\$	\$
<u>Livestock:</u>								
Dairy cows	6.29	6.73	5.07	9.01	1.09	1.10	1.03	1.13
<u>Forage:</u>								
Hay	5.36	4.90	5.15	3.31	1.11	1.05	1.05	0.94
Hay crop silage	9.48	6.79	3.19	-2.52	1.19	1.09	0.96	0.79
Corn silage	7.92	5.10	6.73	4.46	1.11	1.03	1.07	0.98
<u>Grain:</u>								
Corn for grain	5.02	-0.32	-0.99	0.00	1.02	0.91	0.87	0.92
High moisture corn	12.52	5.80	7.10	6.98	1.16	1.04	1.07	1.04
Oats	5.16	-3.44	-17.76	-3.92	1.06	0.80	0.54	0.77
Wheat	19.13	-0.23	-2.13	-4.11	1.34	0.88	0.84	0.75
<u>Fruit:</u>								
Apples	1.15	8.63	8.72	7.61	0.72	1.33	1.36	1.19
Sweet cherries	4.64	-0.98	7.32	7.45	1.15	0.59	1.23	1.29
Red tart cherries	4.85	21.18	17.71	43.59	1.06	1.91	1.64	3.43

Fruit Crops -

Growing costs begin accumulating with trimming and mousebaiting, etc. after harvest of the previous year's crop. The "Orchard or vineyard overhead" cost is based on the value of the land and improvements and includes depreciation, if any, maintenance, drainage, taxes and interest on the investment.

Harvesting costs include costs for the normal harvest activities as performed on each farm. Cost accumulation ceases when the crop is loaded on a truck for hauling off the farm or when the crop is placed in storage or a processing or marketing facility on the farm.

Storing and selling costs include the cost of hauling the crop to an off farm destination at harvest time. Custom packing and storage costs, if any, are included. Costs related to major CA storage facility and/or processing and marketing activities on the farm are excluded from the fruit enterprise. A wide range of post-harvest costs are included in these fruit enterprises.

Returns represent the amount the grower received for his crop when sold or the value when delivered to a farm marketing, processing or CA storage facility.

Most apple enterprises involve varying quantities marketed as fresh and processing fruit depending on market conditions. Cost and return allocation difficulties preclude any meaningful distinction between fresh and processing fruit.

APPLES
 COSTS AND RETURNS PER ACRE
 1,296 ACRES ON 8 COST ACCOUNT FARMS, 1978

ITEM	AVERAGE PER ACRE
COSTS: GROWING:	
LABOR 26 HR - - - - -	\$ 123
TRACTOR 6 HR - - - - -	29
TRUCK, EQUIP, CUSTOM WORK, EQ RENT - -	49
ORCHARD OR VINEYARD OVERHEAD - - - - -	100
FERTILIZER - - - - -	25
SPRAY, DUST MATERIALS - - - - -	85
INTEREST - - - - -	11
ALL OTHER - - - - -	41
TOTAL GROWING COSTS - - - - -	463
HARVESTING:	
LABOR 62 HR - - - - -	351
TRACTOR, TRUCK - - - - -	35
EQUIPMENT - - - - -	70
CUSTOM WORK, EQUIP RENT - - - - -	6
ALL OTHER - - - - -	44
TOTAL HARVESTING COSTS - - - - -	506
TOTAL PRODUCTION COSTS - - - - -	\$ 969
STORING AND SELLING:	
LABOR 3 HR - - - - -	14
TRACTOR, TRUCK, EQUIP - - - - -	25
BUILDING USE - - - - -	1
DIRECT SELLING COSTS * - - - - -	32
ALL OTHER - - - - -	21
TOTAL STORING AND SELLING COSTS - -	93
TOTAL COSTS - - - - -	\$ 1,062
RETURNS:	
CROP - YIELD: 529 BU - - - - -	\$ 1,256
OTHER RETURNS - - - - -	6
TOTAL RETURNS - - - - -	\$ 1,262
PROFIT: - - - - -	\$ 200

	AVERAGE
OTHER FACTORS: COST PER BU TO:	
GROW	\$ 0.88
HARVEST	0.96
STORE AND SELL	0.18
NET** COST PER BU	1.94
NET** RETURN PER BU	2.32
PROFIT PER BU	0.38
LABOR RETURN PER ACRE	\$ 688
PRODUCTION PER HOUR OF LABOR	6 BU
RETURN PER HOUR OF LABOR	\$ 7.61
RETURN PER DOLLAR OF COST	1.19

* ADVERTISING, CONTAINERS, COMMISSION, CUSTOM PACKING,
 STORAGE AND TRUCKING, AND EQUIPMENT RENTAL
 ** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 12 ENTERPRISES OF APPLES
8 COST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF FRUIT)

FARM NO	ACRES PER ENIR AC	AVERAGE		PROD PER HR OF LABOR BU	SPRAY CCST \$	AVERAGE		
		PER YIELD BU	ACRE LABOR* HR			PER ACRE PROD COST*	TOTAL COST \$	TOTAL RETURN \$
833	572.2	455	76	6	76	875	959	1,103
802	143.4	435	99	4	90	933	990	1,084
862	125.0	560	85	7	56	772	918	1,409
832	104.5	567	79	7	84	1,101	1,262	1,314
802	81.7	707	109	6	156	1,210	1,276	1,648
822	70.4	493	72	7	72	855	934	842
848	62.5	904	118	8	95	1,550	1,682	2,097
828	58.2	475	81	6	71	822	900	1,146
802	45.0	969	196	5	173	1,911	1,992	2,521
802	15.7	575	47	12	82	618	646	1,386
858	10.0	270	55	5	64	701	760	622
802	7.0	151	36	4	92	528	531	262

ANNUAL AVERAGES- ALL ENIR; WEIGHIED BY ACRES

1978	108.4	529	88	6	85	969	1,062	1,262
1977	97.2	437	75	6	96	815	899	1,227
1976	69.3	459	73	6	95	819	945	1,253
1975	59.6	414	66	6	78	658	792	571
1974	57.4	405	79	5	95	705	828	985

* TO GROW AND HARVEST THE CROP

** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 12 ENTERPRISES OF APPLES
8 COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER BU			RETURN PER HOUR		PROFIT ON	
LABOR	HARV	NET**	OF	OF	ENTER-	FARM		
PROFIT RETURN	COST	COST RETURN	LABOR	COST	PRICE	NO		
\$	\$	\$	\$	\$	\$	\$	\$	
144	580	0.99	2.07	2.39	7.34	1.15	81,930	833
94	604	1.07	2.22	2.44	5.91	1.10	13,582	802
491	869	0.77	1.46	2.34	9.85	1.53	61,359	862
52	531	0.98	1.93	2.02	6.64	1.04	5,422	832
372	981	0.91	1.78	2.30	8.78	1.29	30,374	802
91-	282	0.75	1.89	1.71	3.50	0.90	6,484-	822
415	1,252	0.96	1.84	2.30	10.23	1.25	25,980	848
246	741	1.01	1.82	2.34	8.99	1.27	14,278	828
529	1,555	1.11	2.03	2.58	7.84	1.27	23,829	802
740	1,021	0.61	1.12	2.41	21.17	2.15	11,619	802
137-	138	1.05	2.81	2.30	2.29	0.82	1,377-	858
268-	61-	1.63	3.50	1.73	1.71-	0.49	1,882-	802

ANNUAL AVERAGES-- ALL ENTR; WEIGHED BY ACRES

200	688	0.96	1.94	2.32	7.61	1.19	21,553	1978
328	700	0.92	1.98	2.73	8.72	1.36	31,662	1977
308	682	0.84	1.95	2.63	8.63	1.33	21,274	1976
221-	85	0.67	1.78	1.25	1.15	0.72	13,095-	1975
157	495	0.75	1.92	2.31	5.75	1.19	8,957	1974

Sweet Cherries -

See Fruit Crop notes on page 8.

SWEET CHERRIES
 COSTS AND RETURNS PER ACRE
 85 ACRES ON 4 COST ACCOUNT FARMS, 1978

ITEM	AVERAGE PER ACRE
COSTS: GROWING:	
LABOR 11 HR - - - - -	\$ 49
TRACTOR 4 HR - - - - -	20
TRUCK, EQUIP, CUSTOM WORK, EQ RENT - -	50
ORCHARD OR VINEYARD OVERHEAD - - - - -	111
FERTILIZER - - - - -	30
SPRAY, DUST MATERIALS - - - - -	108
INTEREST - - - - -	9
ALL OTHER - - - - -	24
TOTAL GROWING COSTS - - - - -	401
HARVESTING:	
LABOR 84 HR - - - - -	397
TRACTOR, TRUCK - - - - -	9
EQUIPMENT - - - - -	27
CUSTOM WORK, EQUIP RENT - - - - -	44
ALL OTHER - - - - -	34
TOTAL HARVESTING COSTS - - - - -	511
TOTAL PRODUCTION COSTS - - - - -	\$ 912
STORING AND SELLING:	
LABOR 1 HR - - - - -	6
TRACTOR, TRUCK, EQUIP - - - - -	12
BUILDING USE - - - - -	0
DIRECT SELLING COSTS * - - - - -	0
ALL OTHER - - - - -	10
TOTAL STORING AND SELLING COSTS - -	28
TOTAL COSTS - - - - -	\$ 940
RETURNS:	
CROP - YIELD: 4,937 LB - - - - -	\$ 1,208
OTHER RETURNS - - - - -	0
TOTAL RETURNS - - - - -	\$ 1,208
PROFIT: - - - - -	\$ 268

	AVERAGE
OTHER FACTORS: COST PER LB TO: GROW	\$ 0.08
HARVEST	0.10
STORE AND SELL	0.01
NET** COST PER LB	0.19
NET** RETURN PER LB	0.24
PROFIT PER LB	0.05
<hr/>	
LABOR RETURN PER ACRE	\$ 720
<hr/>	
PRODUCTION PER HOUR OF LABOR	52 LB
<hr/>	
RETURN PER HOUR OF LABOR	\$ 7.45
RETURN PER DOLLAR OF COST	1.29

* ADVERTISING, CONTAINERS, COMMISSION, CUSTOM PACKING,
 STORAGE AND TRUCKING, AND EQUIPMENT RENTAL
 ** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 5 ENTERPRISES OF SWEET CHERRIES
4 COST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF FRUIT)

FARM NO	ACRES PER ENIR AC	AVERAGE		PRCD PER HR OF LABOR LB	SPRAY COST \$	AVERAGE		
		PER YIELD LB	ACRE LABOR* HR			PER ACRE PROD COST* \$	TOTAL COST \$	TOTAL RETURN \$
833	51.3	4,951	97	51	50	694	726	1,284
802	20.0	4,651	103	45	225	1,437	1,454	1,008
848	5.5	3,971	119	33	100	1,058	1,087	974
822	5.2	4,123	48	86	125	712	734	1,006
802	3.2	9,472	55	171	293	1,195	1,241	1,981

ANNUAL AVERAGES- ALL ENIR; WEIGHIED BY ACRES

1978	17.5	4,937	95	52	108	912	940	1,208
1977	14.1	2,707	34	78	50	479	500	616
1976	11.6	2,512	41	61	88	555	574	339
1975	9.8	9,996	140	71	72	945	1,015	1,168
1974	14.1	3,070	31	99	79	448	476	597

* TO GROW AND HARVEST THE CROP

** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 5 ENTERPRISES OF SWEET CHERRIES
4 COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER LB			RETURN PER HOUR		PROFIT ON	
LABOR	HARV	NEI**	OF	OF	ENTER-	FARM		
PROFIT RETURN	COST	COST RETURN	LABOR	COST	LABOR	LABOR	LABOR	NO
\$	\$	\$	\$	\$	\$	\$	\$	\$
558	962	0.08	0.15	0.26	9.82	1.77	28,598	833
445-	133	0.16	0.31	0.22	1.27	0.69	8,926-	802
112-	613	0.19	0.27	0.25	5.00	0.90	623-	848
272	505	0.07	0.18	0.24	10.14	1.37	1,415	822
740	1,043	0.06	0.13	0.21	18.43	1.60	2,369	802

ANNUAL AVERAGES- ALL ENTR; WEIGHTED BY ACRES

268	720	0.10	0.19	0.24	7.45	1.29	4,567	1978
116	266	0.08	0.18	0.23	7.32	1.23	1,579	1977
235-	41-	0.09	0.23	0.13	0.98-	0.59	2,614-	1976
153	671	0.06	0.10	0.11	4.64	1.15	1,438	1975
121	238	0.06	0.16	0.19	7.20	1.25	1,659	1974

Red Tart Cherries -

See Fruit Crop notes on page 8.

RED TART CHERRIES
 COSTS AND RETURNS PER ACRE
 255 ACRES ON 5 COST ACCOUNT FARMS, 1978

ITEM	AVERAGE PER ACRE
COSTS: GROWING:	
LABOR 12 HR - - - - -	\$ 56
TRACTOR 4 HR - - - - -	20
TRUCK, EQUIP, CUSTOM WORK, EQ RENT - -	40
ORCHARD OR VINEYARD OVERHEAD - - - - -	112
FERTILIZER - - - - -	28
SPRAY, DUST MATERIALS - - - - -	69
INTEREST - - - - -	8
ALL OTHER - - - - -	29
TOTAL GROWING COSTS - - - - -	362
HARVESTING:	
LABOR 35 HR - - - - -	161
TRACTOR, TRUCK - - - - -	11
EQUIPMENT - - - - -	95
CUSTOM WORK, EQUIP RENT - - - - -	24
ALL OTHER - - - - -	31
TOTAL HARVESTING COSTS - - - - -	322
TOTAL PRODUCTION COSTS - - - - -	\$ 684
STORING AND SELLING:	
LABOR 2 HR - - - - -	7
TRACTOR, TRUCK, EQUIP - - - - -	10
BUILDING USE - - - - -	0
DIRECT SELLING COSTS * - - - - -	4
ALL OTHER - - - - -	80
TOTAL STORING AND SELLING COSTS - -	101
TOTAL COSTS - - - - -	\$ 785
RETURNS:	
CROP - YIELD: 5,715 LB - - - - -	\$ 2,697
OTHER RETURNS - - - - -	0
TOTAL RETURNS - - - - -	\$ 2,697
PROFIT: - - - - -	\$ 1,912

	AVERAGE
OTHER FACTORS: COST PER LB TO: GROW	\$ 0.06
HARVEST	0.06
STORE AND SELL	0.02
NET** COST PER LB	0.14
NET** RETURN PER LB	0.47
PROFIT PER LB	0.33
<hr/>	
LABOR RETURN PER ACRE	\$ 2,136
<hr/>	
PRODUCTION PER HOUR OF LABOR	121 LB
<hr/>	
RETURN PER HOUR OF LABOR	\$ 43.59
RETURN PER DOLLAR OF COST	3.43

* ADVERTISING, CONTAINERS, COMMISSION, CUSTOM PACKING,
 STORAGE AND TRUCKING, AND EQUIPMENT RENTAL
 ** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 8 ENTERPRISES OF RED TART CHERRIES
5 COST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF FRUIT)

FARM NO	ACRES PER ENIR AC	AVERAGE		PROD PER HR OF LABOR LB	AVERAGE			
		PER YIELD LB	ACRE LABOR* HR		SPRAY COST \$	PER ACRE PROD COST* \$	TOTAL COST \$	TOTAL RETURN \$
833	107.3	5,341	55	97	45	557	695	2,489
832	40.5	6,515	62	104	117	1,066	1,160	3,300
802	32.7	7,746	34	233	71	732	807	3,641
802	22.5	4,706	26	186	69	511	566	2,078
802	20.0	2,981	19	156	100	558	593	1,274
822	12.2	5,093	27	194	71	650	718	2,180
802	12.1	5,418	19	290	55	343	429	2,687
848	7.5	9,700	143	68	95	1,684	1,829	4,811

ANNUAL AVERAGES- ALL ENIR; WEIGHTED BY ACRES

1978	32.3	5,715	47	121	69	684	785	2,697
1977	23.5	3,082	24	128	65	483	531	874
1976	27.4	3,768	29	130	44	510	546	1,045
1975	26.3	6,318	44	145	44	563	614	647
1974	26.5	4,655	29	159	58	508	541	657

* TO GROW AND HARVEST THE CROP

** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 8 ENTERPRISES OF RED TART CHERRIES
5 COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER LB			RETURN PER HOUR \$		PROFIT ON	
LABOR	HARV	NEI**	OF	OF	ENTER-	FARM		
PROFIT RETURN	COST	COST RETURN	LABOR	COST	PRICE	NO		
\$	\$	\$	\$	\$	\$	\$	\$	
1,794	2,032	0.05	0.13	0.47	36.42	3.58	192,549	833
2,140	2,495	0.09	0.18	0.50	39.44	2.85	86,681	832
2,834	2,957	0.04	0.10	0.47	84.15	4.51	92,658	802
1,512	1,624	0.04	0.12	0.44	57.81	3.67	34,009	802
681	756	0.04	0.20	0.43	34.35	2.15	13,618	802
1,462	1,607	0.05	0.14	0.43	57.99	3.04	17,837	822
2,258	2,334	0.03	0.08	0.49	04.21	6.27	27,321	802
2,982	3,865	0.10	0.19	0.50	26.14	2.63	22,366	848

ANNUAL AVERAGES- ALL ENIR; WEIGHTED BY ACRES

1,912	2,136	0.06	0.14	0.47	43.59	3.43	60,880	1978
343	449	0.06	0.17	0.28	17.71	1.64	7,878	1977
499	641	0.06	0.14	0.28	21.18	1.91	13,462	1976
33	218	0.04	0.09	0.10	4.85	1.06	876	1975
116	235	0.05	0.12	0.14	7.84	1.21	3,016	1974

Peaches -

See Fruit Crop notes on page 8.

PEACHES
 COSTS AND RETURNS PER ACRE
 54 ACRES ON 3 COST ACCOUNT FARMS, 1978

ITEM	AVERAGE PER ACRE
COSTS: GROWING:	
LABOR 40 HR - - - - -	\$ 180
TRACTOR 8 HR - - - - -	43
TRUCK, EQUIP, CUSTOM WORK, EQ RENT - -	74
ORCHARD OR VINEYARD OVERHEAD - - - - -	104
FERTILIZER - - - - -	33
SPRAY, DUST MATERIALS - - - - -	102
INTEREST - - - - -	14
ALL OTHER - - - - -	14
TOTAL GROWING COSTS - - - - -	564
HARVESTING:	
LABOR 42 HR - - - - -	182
TRACTOR, TRUCK - - - - -	15
EQUIPMENT - - - - -	40
CUSTOM WORK, EQUIP RENT - - - - -	0
ALL OTHER - - - - -	15
TOTAL HARVESTING COSTS - - - - -	252
TOTAL PRODUCTION COSTS - - - - -	\$ 816
STORING AND SELLING:	
LABOR 0 HR - - - - -	0
TRACTOR, TRUCK, EQUIP - - - - -	3
BUILDING USE - - - - -	0
DIRECT SELLING COSTS * - - - - -	1
ALL OTHER - - - - -	4
TOTAL STORING AND SELLING COSTS - -	8
TOTAL COSTS - - - - -	\$ 824
RETURNS:	
CROP - YIELD: 89 BU - - - - -	\$ 484
OTHER RETURNS - - - - -	0
TOTAL RETURNS - - - - -	\$ 484
PROFIT: - - - - -	\$ 340-

	AVERAGE
OTHER FACTORS: COST PER BU TO: GROW	\$ 6.35
HARVEST	2.84
STORE AND SELL	0.10
NET** COST PER BU	9.27
NET** RETURN PER BU	5.43
PROFIT PER BU	3.84-
<hr/>	
LABOR RETURN PER ACRE	\$ 21
<hr/>	
PRODUCTION PER HOUR OF LABOR	1 BU
<hr/>	
RETURN PER HOUR OF LABOR	\$ 0.26
RETURN PER DOLLAR OF COST	0.59

* ADVERTISING, CONTAINERS, COMMISSION, CUSTOM PACKING, STORAGE AND TRUCKING, AND EQUIPMENT RENTAL
 ** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 5 ENTERPRISES OF PEACHES
3 CCST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF FRUIT)

FARM NO	ACRES PER ENIR AC	AVERAGE		PRCD PER HR OF LABOR BU	SPRAY COST \$	AVERAGE		
		PER YIELD	ACRE LABOR* HR			PER ACRE PROD COST# \$	TOTAL COST \$	TOTAL RETURN \$
833	34.7	61	80	1	82	739	742	490
822	6.5	244	52	5	114	1,113	1,147	573
802	5.6	86	75	1	71	641	650	429
802	5.0	100	145	1	225	1,225	1,236	500
802	2.0	40	86	0	174	655	659	200

ANNUAL AVERAGES- ALL ENIR: WEIGHTED BY ACRES

1978	11.2	89	82	1	102	816	824	484
1977					NOT AVERAGED			
1976					NOT AVERAGED			
1975	8.8	118	89	1	74	663	683	758
1974	10.8	103	106	1	61	632	660	696

* TO GROW AND HARVEST THE CROP
** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM 5 ENTERPRISES OF PEACHES
3 COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER BU			RETURN PER HOUR \$		PROFIT ON	
LABOR	HARV	NEI**		OF	OF	ENTER-	FARM	
PROFIT RETURN	COST	COST RETURN		LABOR	COST	PRISE	NO	
\$	\$	\$	\$	\$	\$	\$	\$	
251-	130	3.31	12.12	7.99	1.62	0.66	8,760-	833
573-	324-	2.16	4.64	2.30	6.14-	0.50	3,730-	822
220-	65	1.41	7.59	5.00	0.86	0.66	1,242-	802
735-	258-	4.41	12.36	5.00	1.77-	0.40	3,682-	802
458-	165-	2.54	16.46	5.00	1.93-	0.30	917-	802

ANNUAL AVERAGES - ALL ENIR; WEIGHTED BY ACRES

340-	21	2.84	9.27	5.43	0.26	0.59	3,665-	1978
			NOT AVERAGED					1977
			NOT AVERAGED					1976
75	345	1.86	5.70	6.33	3.76	1.11	621	1975
36	346	2.07	6.25	6.59	3.19	1.05	368	1974

FACTORS FROM OTHER FRUIT ENTERPRISES
COST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF FRUIT)

FARM NO	ACRES PER ENTR AC	AVERAGE PER ACRE		PROD PER HR OF LABOR UN	SPRAY COST \$	AVERAGE PER ACRE		
		YIELD UN	LABOR* HR			PROD COST* \$	TOTAL COST \$	RETURN \$
GRAPES								
822	13.4	$\frac{TN}{1.3}$	65	$\frac{TN}{0.02}$	14	623	652	351
802	11.8	4.1	88	0.05	57	974	1036	715
PEARS								
833	48.6	$\frac{BU}{150}$	39	$\frac{BU}{4}$	109	493	526	571
822	6.9	497	47	11	32	495	578	977
802	5.0	293	100	3	322	1279	1315	1758
PRUNES								
802	17.2	$\frac{BU}{76}$	30	$\frac{BU}{3}$	92	524	575	580

* TO GROW AND HARVEST THE CROP

** DIRECT SELLING COSTS DEDUCTED

FACTORS FROM OTHER FRUIT ENTERPRISES
COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER UNIT			RETURN PER HOUR		PROFIT ON		FARM NO
LABOR	RETURN	HARV COST	NET** COST RETURN		OF LABOR	OF COST	ENTER- PRISE		
\$	\$	\$	\$	\$	\$	\$	\$		
GRAPES									
			PER TN						
300-	3-	53	514	277	0.05-	0.54	4035-	822	
320-	27-	30	241	162	0.31-	0.69	3791-	802	
PEARS									
			PER BU						
45	234	1.03	3.50	3.80	6.02	1.09	2188	833	
399	620	0.41	1.16	1.97	12.78	1.69	2756	822	
443	926	1.43	4.49	6.00	9.30	1.34	2215	802	
PRUNES									
			PER BU						
5	181	2.60	6.99	7.05	6.12	1.01	75	802	

FACTORS FROM VEGETABLE CROP ENTERPRISES
COST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF CROP)

FARM NO	ACRES PER ENIR AC	AVERAGE		PROD	AVERAGE			
		PER YIELD	ACRE LABOR*	PER HR OF LABOR	GROW COST	PER HARV COST	PER ACRE TOTAL COST**	TOTAL RETURN
		UNIT	HR	UNIT	\$	\$	\$	\$
DRY BEANS								
858	56.0	LB 970	4	LB 247	149	45	198	130
SNAP BEANS- PROC								
827	1855.5	IN 2.0	5	IN 0.4	185	39	238	298
848	467.5	2.8	4	0.6	200	65	292	421
833	424.8	1.7	5	0.3	175	59	255	251
TABLE BEETS								
827	199.0	IN 25.3	18	IN 1.4	316	102	583	1,072
CABBAGE- MKT								
827	26.0	IN 11.7	97	IN 0.1	659	484	1,814	1,926
833	15.0	6.7	68	0.1	624	203	631	178
828	13.5	20.4	75	0.3	376	225	610	741
858	10.0	27.8	88	0.3	587	421	1,135	1,111
CABBAGE- PROC								
827	117.0	IN 23.6	41	IN 0.6	474	177	760	752
848	19.0	24.2	64	0.4	684	228	977	643
CARROTS								
827	318.0	IN 23.4	23	IN 1.0	380	139	713	1,035

* TO GROW AND HARVEST THE CROP

** INCLUDES STORING AND SELLING COSTS

*** VALUE OF BY-PRODUCTS, IF ANY, DEDUCTED

(RECEIPTS FROM GOVERNMENT PROGRAMS NOT INCLUDED)

FACTORS FROM VEGETABLE CROP ENTERPRISES
COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER UNIT***		RETURN PER HOUR \$		PROFIT ON	
PROFIT	LABOR RETURN	NET COST	NET RETURN	OF LABOR	OF COST	ENTER- PRISE	FARM NO
\$	\$	\$	\$	\$	\$	\$	
DRY BEANS							
		PER LB					
68-	47-	0.20	0.13	11.17-	0.66	3,824-	858
SNAP BEANS- PROC							
		PER IN					
60	93	120	149	18.18	1.25	110,099	827
129	176	106	153	32.31	1.44	60,153	848
4-	25	153	150	4.05	0.98	1,877-	833
TABLE BEETS							
		PER IN					
489	645	23	42	27.12	1.84	97,239	827
CABBAGE- MKT							
		PER IN					
112	963	155	164	7.45	1.06	2,897	827
453-	99-	95	27	1.43-	0.28	6,801-	833
131	420	30	36	5.56	1.21	1,763	828
24-	383	41	40	3.96	0.98	238-	858
CABBAGE- PROC							
		PER IN					
8-	299	32	32	6.41	0.99	966-	827
334-	125	40	27	1.90	0.66	6,335-	848
CARROTS							
		PER IN					
322	522	30	44	17.19	1.45	102,348	827

FACTORS FROM VEGETABLE CROP ENTERPRISES
COST ACCOUNT FARMS, 1978
(ARRANGED BY ACRES OF CROP)

FARM NO	ACRES PER ENTR AC	AVERAGE		PROD	AVERAGE			
		PER YIELD	PER ACRE LABOR*	PER HR OF LABOR UNIT	PER GROW COST	PER HARV COST	TOTAL COST**	TOTAL RETURN
		UNIT	HR	UNIT	\$	\$	\$	\$
CUCUMBERS- MKT								
848	28.0	<u>BU</u> 679	92	<u>BU</u> 7	329	676	1,102	869
PEAS- PROC								
827	372.0	<u>IN</u> 1.9	9	<u>IN</u> 0.2	198	94	329	449
836	28.8	2.0	1	1.4	161	151	340	554
POTATOES- MKT								
827	35.0	<u>CW</u> 307	36	<u>CW</u> 9	752	317	1,975	1,159
POTATOES- PROC								
827	138.0	<u>CW</u> 301	36	<u>CW</u> 8	696	317	1,239	1,449
SWEET CORN- PROC								
105	62.0	<u>IN</u> 4.0	3	<u>IN</u> 1.2	151	47	199	253
822	41.7	3.6	8	0.4	183	31	241	233
836	36.7	4.4	2	2.9	127	29	180	270
SPRING SPINACH								
827	71.0	<u>IN</u> 5.9	12	<u>IN</u> 0.5	300	33	367	416

* TO GROW AND HARVEST THE CROP

** INCLUDES STORING AND SELLING COSTS

*** VALUE OF BY-PRODUCTS, IF ANY, DEDUCTED

(RECEIPTS FROM GOVERNMENT PROGRAMS NOT INCLUDED)

FACTORS FROM VEGETABLE CROP ENTERPRISES
COST ACCOUNT FARMS, 1978
(READ ACROSS BOTH PAGES)

AVERAGE PER ACRE		AVERAGE PER UNIT***		RETURN PER HOUR	PROFIT ON		
LABOR	RETURN	NET	NET	OF	OF	ENTER-	FARM
PROFIT	RETURN	COST	RETURN	LABOR	COST	PRISE	NO.
\$	\$	\$	\$	\$	\$	\$	
CUCUMBERS- MKT							
233-	497	PER BU		5.14	0.79	6,524-	848
		1.62	1.28				
PEAS- PROC							
120	189	PER IN		17.86	1.36	44,431	827
214	222	177	242	60.03	1.63	6,168	836
		172	280				
POTATOES- MKT							
816-	309-	PER CW		4.02-	0.59	28,563-	827
		6.44	3.78				
POTATOES- PROC							
210	465	PER CW		11.99	1.17	28,889	827
		4.11	4.81				
SWEET CORN- PROC							
54	67	PER IN		20.71	1.27	3,313	105
8-	33	50	64	3.94	0.96	362-	822
90	102	67	64	52.70	1.50	3,305	836
		41	62				
SPRING SPINACH							
49	141	PER IN		10.15	1.14	3,516	827
		62	71				