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COST OF PRODUCTION

Update

For 1981

GREEN PEAS for PROCESSING

POTATOES - Long Island

CROPLAND RENTAL RATES

NEW YORK STATE

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Introduction

The agricultural industry in New York has long benefited from a continuing research project dealing with specific farm enterprise cost and return data. Commonly known as the New York Farm Cost Account project, this program has provided information for livestock and crop enterprises most prevelant in the State. Some crops, however, are not adequately represented in the records kept by the cooperating farmers to provide enough data to be meaningful to the whole industry. These include various crops grown in sufficient volume to merit specific study to maintain up to date cost of production information.

Special crop studies for the 1981 crop year were undertaken for Long Island potatoes and green peas for processing. In addition to these crop studies, an effort was made to gather current data for cropland rental rates throughout New York State. This publication presents the results of these studies.

Because of a grant from Curtice Burns, Inc., one of the major vegetable processors in the State, the processing pea study was expanded to include data from Wisconsin growers as well as from New York growers. This publication includes only data from New York growers. Copies of the complete report are available as The Economics of Producing Green Peas for Processing in New York State and Wisconsin, A.E. Res. 82-19, D. P. Snyder, Department of Agricultural Economics, Cornell University, Ithaca, New York 14853-0398.

For a third consecutive year, data was gathered on production costs for Long Island potatoes in the fall of 1981. This final effort makes possible a comparison of three years of cost and return data to document the changing economics of potato production on Long Island.

Cropland rental rates for all agricultural counties in New York are listed in this publication. Further detail of rented cropland costs by townships and more detailed comments are available in Cropland Rental Rates in New York States, 1981, A.E. Res. 82-5, D. P. Snyder, Department of Agricultural Economics, Cornell University, Ithaca, New York 14853-0398.

Procedure -

Through the cooperation of industry and extension personnel, growers were identified and given the opportunity to participate in the processing pea and Long Island potato cost and return studies for 1981. Eighteen pea growers and 15 potato growers agreed to provide the necessary information. Data collection involved a detailed interview with each grower using a procedure developed in recent years for crop production cost studies by Cornell University. The questionnaire was designed to determine the grower's cash costs for the crop and to estimate and allocate appropriate overhead costs including labor, tractor, equipment, land and other costs related to the production and disposition of the crop. The approach used relies heavily upon results and experience from the Cornell Farm Enterprise Cost Account research project for various cost factors not available apart from continuing supervised records kept by cooperating farm operators.

A detailed explanation of the procedure and forms used to accumulate crop costs and to analyse the crop enterprise is available in a bulletin published by Cornell.*

Data for the cropland rental rate study was obtained from questionnaires distributed to farmers throughout the State via agricultural agents in each county. Responses were collected by the agents and summarized and analysed at the College.

The Growing Season in 1981

Weather has a major influence on crop production in New York State. Even though good cultural practices are followed, good yields are highly dependent upon timing and amount of rainfall and temperatures and on the length of the growing season. The following two tables indicate climatic conditions during the 1981 growing season in several areas of the State.

Temperatures throughout the State during the 1981 growing season were generally normal except for September which introduced a cool, wet harvest season. Temperatures and precipitation during April and May provided good planting conditions. June provided fairly normal temperatures but tended to be somewhat wetter than normal throughout the month. In the pea producing areas of the State - the Central and Great Lakes areas - harvest conditions were quite wet especially in some areas.

In general, the 1981 growing season produced good crops, but harvest conditions for many crops were unusually wet resulting in less than a complete crop harvest.

* Enterprise Analysis: A Guide for Determining Field and Vegetable Crop Costs and Returns, A.E. Ext. 76-4, D. P. Snyder, Department of Agricultural Economics, Cornell University, Ithaca, New York 14853-0398.

Table 1.

Growing Season Temperature, Degrees F
Selected Stations, New York, 1941-70 and 1981

Station	May		June		July		August		September		Growing Season Average	
	1941-70	1981	1941-70	1981	1941-70	1981	1941-70	1981	1941-70	1981	1941-70	1981
Albany	57.7	58.9	67.5	66.7	72.0	69.3	69.6	68.5	61.9	58.8	65.7	64.4
Alfred	54.6	53.4	63.5	63.4	67.0	66.0	65.2	64.5	58.9	56.7	61.8	60.8
Aurora		55.8		65.9		69.9		67.4		57.6	64.6	63.3
Batavia	55.8		65.9		69.7	71.8	67.9	68.2	63.9	59.4	64.1	66.5
Binghamton	55.1	57.3	64.8	65.2	69.1	69.4	67.3	67.8	60.2	58.4	63.3	63.6
Canton	54.8	54.5	64.7	64.0	69.2	68.8	67.0	65.4	59.3	57.5	63.0	62.0
Glens Falls		57.8		65.2		70.6		67.9		58.9		64.1
Ithaca	55.2	55.3	65.0	64.6	69.4	68.2	67.5	66.5	60.7	58.7	63.6	62.7
Lowville	54.6	54.3	64.2	61.9	68.3	67.4	66.2		59.3	55.5	62.5	59.8
Utica		57.8		65.5		70.1		67.8		57.7	63.5	63.8

Source: Climatological Data; NOAA, Environmental Data Service, Monthly Reports, New York, 1981, Vol. 93, Nos. 5 to 9.

Table 2.

Growing Season Precipitation
Selected Stations, New York, 1941-70 and 1981

Station	May		June		July		August		September		Growing Season Total	
	1941-70	1981	1941-70	1981	1941-70	1981	1941-70	1981	1941-70	1981	1941-70	1981
Albany	3.26	2.44	3.00	2.78	3.12	3.50	2.87	1.76	3.12	3.45	15.4	13.9
Alfred	3.76	2.55	3.76	3.52	3.73	6.53	3.60	1.70	2.93	4.96	17.2	19.3
Aurora	2.98	1.95	2.54	3.82	3.03	4.07	2.81	4.34	2.46	6.95	13.8	21.1
Batavia	3.17		2.69		3.05	3.20	3.50	5.07	2.87	5.67	15.3	
Binghamton	3.83	1.94	3.59	3.42	3.83	1.99	3.61	1.99	3.02	3.40	17.9	12.7
Canton	3.37	2.90	2.91	3.88	3.43	2.27	3.47	5.23	3.31	5.93	16.5	20.2
Glens Falls	3.63	2.81	3.77	2.47	3.68	3.81	3.42	2.35	3.31	6.40	17.8	17.8
Ithaca	3.55	1.78	3.40	2.57	3.67	4.03	3.49	3.63	3.08	4.98	17.2	17.0
Lowville	3.42	2.98	2.94	3.20	3.26	5.11	3.58		3.31	5.27	16.5	
Utica	3.52	2.01	3.55	3.42	4.17	4.06	3.54	2.75	3.32	11.09	18.1	23.3

Source: Climatological Data; NOAA, Environmental Data Service, Monthly Reports, New York, 1981, Vol. 93, Nos. 5 to 9.

GREEN PEAS FOR PROCESSING - 1981

The processing pea crop is one of five major processing vegetable crops grown in New York State. The crop ranks third behind snap beans and sweet corn in terms of acres planted to the crop. In 1981, an estimated 7,900 acres of peas were grown in the state. This was the largest acreage for peas in the state in over 10 years. New York's 1981 crop represented over two percent of the national crop.

Yields for peas in New York have consistently exceeded the national average. Of the major pea producing states only Washington has pea yields that average higher than New York over a period of time.

The following analysis of 1981 processing pea enterprises in New York is based on information obtained from 18 western and central New York producers. Interviews were held with each grower in the fall. The data were summarized and are presented in the following tables.

Growing Costs -

Costs to grow processing peas in New York State during 1981 are summarized in Table 3. The 18 farms in the study had an average of 106 acres of peas which yielded 1.8 tons of paid weight per acre. This yield was equal to the state average for 1981 and 20 percent above the national average.

Each of the cost items listed in Table 3 includes all of the fixed and variable costs inherent to the item. Labor costs include employers' costs for worker's compensation, social security, and fringe benefits, as well as cash wages. Tractor and equipment costs include depreciation, interest, fuel, repairs, and insurance, etc. Land costs are an average of the costs of owned land and rented land as experienced by these growers.

Table 3. Green Peas for Processing
Growing Costs
1,906 Acres on 18 Farms
New York, 1981

Item	Rates per acre	Cost Per acre	Cost Per ton
Number of farms		18	
Acres per enterprise		106	
Yield per acre planted, paid tons		1.8	
Labor	2.3 hours	$ 17	$ 9.70
Tractor	1.4 hours	15	8.35
Equipment, large trucks		14	8.05
Custom work, equipment rent		5	2.62
Land use		54	30.36
Lime, cover crop, manure		4	2.17
Fertilizer: lbs. N-46, P-57, K-55		35	19.89
Seed	262 lbs.	91	51.49
Chemicals		5	2.76
Interest on operating capital		5	2.66
All other		6	3.97
Total growing costs		$251	$142.02

Total growing costs for processing peas averaged $251 per acre. With the 1981 yield averaging 1.8 tons per acre, growing costs amounted to $142 per ton. The largest single cost to grow peas is for seed which cost $91 per acre. However, since seed is provided by the processor (and deducted from the grower's returns), the grower does not have to disburse that cost directly. The major direct cash costs for peas are for fertilizer, chemicals, and fuel which together would total about $50 per acre. The out of pocket cost to plant the pea crop is low relative to most other cash crops.

Harvesting Costs -

Only five of the 18 pea growers surveyed had their own harvesting equipment. Custom operators were used to harvest the crop for 13 growers. Table 4 shows the harvesting costs for these two groups.

The growers with their own harvesting equipment grew an average of 240 acres of peas and had yields averaging 1.7 tons per acre planted. Their harvesting costs averaged $144 per acre or $85 per ton. These costs were basically for labor, tractors, and equipment.

Table 4. Green Peas for Processing
Harvesting Costs
1,906 Acres on 18 Farms
New York, 1981

Item	Owned Equipment	Custom Harvest
Number of farms	5	13
Acres per farm	240	55
Yield per acre planted, paid tons	1.7	1.9
	- cost per acre -	
Labor	$ 28	$--
Tractor	26	--
Truck, equipment	79	--
Custom harvest	--	169
All other	11	10
Total harvesting costs	$144	$179
Harvesting costs per paid ton	$ 85	$ 95

Growers who hired their pea harvesting done by a custom operator had enterprises averaging 55 acres in size. Their yields averaged 1.9 tons per acre. Total harvesting costs averaged $179 per acre or $95 per ton. The availability of custom operators makes it feasible for growers to plant small acreages to peas. The necessary investment in harvesting equipment prohibits the small grower from owning a harvester.

The new pod stripper, which replaces several large drum harvesters, cutters, and several workers, simplifies the logistics of the harvest operation. However, to avoid the harvest operation ceasing due to the breakdown of one machine, pod strippers are best used in pairs. With an investment of over a quarter million dollars in two pod strippers, the owner isn't likely to have acres enough of his own to harvest and so will likely rely on custom harvesting to keep his costs under control.

Selling Costs -

Selling costs for processing peas consisted mainly of the cost to haul the crop to the processor. Because of delayed payment schedules for the grower's crop, interest was charged, as a selling cost, on the portion of the crop proceeds carried by the grower as an account receivable.

Selling costs as experienced by this group of 18 New York pea growers are outlined in Table 5. Hauling costs varied depending on the distance from the grower to the plant. However, hauling costs for New York growers averaged $19 per acre or $11 per ton. Interest on accounts receivable, due to the delayed payment schedule, amounted to $15 per acre or $8 per ton. Thus, selling costs for New York pea growers totalled $34 per acre or $19 per ton.

Table 5. Green Peas for Processing
Selling Costs
1,906 Acres on 18 Farms
New York, 1981

Item	Cost	
	Per Acre	Per Paid Ton
Number of farms	18	
Acres per enterprise	106	
Yield per acre planted, paid tons	1.8	
Paid tons hauled	3,364	
	- per acre -	
Labor	$ 5	$ 3
Truck	7	4
Custom haul	7	4
Total hauling costs	$19	$11
Interest on accounts receivable	15	8
Total selling costs	$34	$19

Item	Self haul	Custom haul
Number of farms	10*	12*
Gross tons hauled	2,628	1,288
	- cost per gross ton -	
Labor	$3.45	$ --
Truck	5.66	--
Custom haul	--	10.20
Total hauling costs	$9.11	$10.20

*Four farmers hired some custom hauling to supplement their own trucks.

The pea crop was hauled to the processor on both grower owned and custom owned trucks. Table 5 also shows the hauling costs for these two groups. Grower hauling cost about a dollar less per ton than custom hauling.

Costs and Returns -

With growing costs of $251 and harvesting costs of $157 per acre, production costs for processing peas in 1981 averaged $408 per acre for these 18 growers. Adding to that figure the selling costs of $34 per acre brings the total cost to produce and market processing peas to $442 per acre or $250 per ton (Table 6). All costs are covered including a cost for the operator's labor and management chargeable to this crop.

Table 6. Green Peas for Processing
Costs and Returns
1,906 Acres on 18 Farms
New York, 1981

Item		Cost or Return	
		Per acre planted	Per paid ton
Number of farms		18	
Acres per enterprise		106	
Yield per acre planted, paid tons		1.8	
Costs to:	Grow	$251	$142
	Harvest	157	89
	Produce	$408	$231
	Sell	34	19
	Total costs	$442	$250
Returns		$568	$322
Profit		$126	$ 72
Return per dollar of cost		$1.29	

Returns to these New York growers averaged $322 per ton of paid weight. With an average yield of 1.8 tons per acre, gross returns averaged $568 per acre. These returns are based on estimates of the processor's final commercial market value for processing peas adjusted for quality. No attempt has been made to include an estimate of cooperative earnings that might be received by the growers for their 1981 crop.

Table 6 shows that New York pea growers had a good year in 1981. Profits averaged $126 per acre or $72 per ton and each dollar of cost returned $1.29 to the grower.

Selected Factors -

The following three tables contain summary and analysis data for all 18 pea enterprises in the study for 1981. Table 9 provides a listing of selected factors for each enterprise to illustrate ranges and variations between enterprises.

Table 7. NEW YORK FARM COST ACCOUNTS FOR ALL FARMS
FISCAL YEAR 1981 SUMMARY AND ANALYSIS OF CROP ENTERPRISE 4220 PEAS- PROC

DEBITS

	QTY	UNIT	TOTAL $	COST/ ACRE $
GROWING COSTS - OPER 1:				
1. LABOR	4,340	HR	32,628	17
2. TRACTOR	2,757	HR	28,078	15
3. TRUCK			1,114	1
4. EQUIPMENT			25,967	14
5. CUSTOM WORK, EQUIP RENT			8,807	5
6. LAND USE			102,140	54
7. MANURE, COVER CROPS			3,347	2
8. LIME			3,968	2
9. FERTILIZER-N*	88,293	LB		
10. P*107,891		LB		
11. K*105,355		LB	66,910	35
12. SEED, PLANTS	459,641	LB	173,216	91
13. SPRAY, DUST MATERIALS			9,273	5
14. INTEREST			8,945	5
15. ALL OTHER			13,352	7
HARVESTING COSTS - OPER 2:				
16. LABOR	5,027	HR	33,605	18
17. TRACTOR	3,342	HR	30,750	16
18. TRUCK			61	0
19. EQUIPMENT			94,677	50
20. CUSTOM WORK, EQUIP RENT			119,572	63
21. ALL OTHER			20,172	11
STORING & SELLING COSTS - OPER 3:				
22. LABOR	1,320	HR	9,068	5
23. TRACTOR, TRUCK			14,878	8
24. EQUIPMENT			0	0
25. BUILDING USE			0	0
26. INTEREST			28,419	15
27. ALL OTHER			13,142	7
28. TOTAL COSTS			$842,129	
29. GAIN			240,527	
30. TOTAL DEBITS			$1,082,656	

* DETERMINED BY COST ACCOUNT STAFF

** VALUE OF BY-PRODUCT DEDUCTED

CREDITS

	QTY	UNIT	TOTAL $
31. CROP	3,364	TN	1,082,656
32. BY-PRODUCT			0
33. OTHER RETURNS			0
34. TOTAL RETURNS			$1,082,656
35. LOSS			0
36. TOTAL CREDITS			$1,082,656

FACTORS

A. ACRES *	1,906.0	AC
B. TOT GROW COST (SUM 1 THRU 15)	$ 477,745	
C. TOT HARV COST (SUM 16 THRU 21)	$ 298,877	
D. PRODUCTION COST (B+C)	$ 776,622	
E. TOT S & S COST (SUM 22 THRU 27)	$ 65,507	
F. NET** CROP COST (28-32)	$ 842,129	
G. TOT LABOR HOURS (1+16+22)	10,687	HR
H. TOT LABOR COST (1+16+22)	$ 75,301	
I. LABOR RETURNS (H+29-35)	$ 315,828	

AVERAGE PER ACRE

J. YIELD	(31/A)	1.8	TN
K. FERTILIZER - N	(9/A)	46	LB
L. P	(10/A)	57	LB
M. K	(11/A)	55	LB
N. SEED, PLANTS	(12/A)	262	LB
O. GROWING COST	(B/A)	$ 251	
P. HARVESTING COST	(C/A)	$ 157	
Q. PRODUCTION COST	(O+P)	$ 408	
R. TOTAL COSTS	(28/A)	$ 442	
S. TOTAL RETURNS	(34/A)	$ 568	
T. PROFIT	(S-R)	$ 126	
U. LABOR TO: GROW	(1/A)	2	HR
V. HARVEST	(16/A)	3	HR
W. PRODUCE	(U+V)	5	HR
X. LABOR RETURNS	(I/A)	$ 166	
Y. TRACTOR: GROW	(2/A)	1	HR
Z. HARVEST	(17/A)	2	HR

AVERAGE PER UNIT

AA. GROWING COST	(B/31)	$ 142
BB. HARVESTING COST	(C/31)	$ 89
CC. NET** PRODUCTION COST	(D-32)/31	$ 231
DD. STORE & SELL COST	(E/31)	$ 19
EE. TOTAL COSTS	(28/31)	$ 250
FF. NET COST **	(F/31)	$ 250
GG. TOTAL RETURNS	(34/31)	$ 322
HH. NET RETURNS **	(34-32)/31	$ 322
II. PROFIT	(HH-FF)	$ 72

RETURNS

JJ. PROD / HR OF LABOR	(31/(1+16))	0.4 TN
KK. RETURN PER HR OF LABOR	(I/G)	$ 29.55
LL. RETURN PER $ OF COST	(34/28)	$ 1.29

Table 8. NEW YORK

PEAS- PROC

COSTS AND RETURNS PER ACRE

1,906 ACRES ON 18 COST ACCOUNT FARMS, 1981

ITEM		AVERAGE PER ACRE	
COSTS: GROWING:			
LABOR 2 HR	$ 17		
TRACTOR 1 HR	15		
TRUCK, EQUIPMENT	14		
CUSTOM WORK, EQUIP RENT	5		
LAND USE	54		
MANURE, LIME, COVER CROP	4		
FERT - LBS N- 46, P- 57, K- 55	35		
SEED, PLANTS 262 LB	91		
SPRAY, DUST MATERIALS	5		
INTEREST, ALL OTHER	11		
TOTAL GROWING COSTS		$	251
HARVESTING:			
LABOR 3 HR	18		
TRACTOR 2 HR	16		
TRUCK, EQUIPMENT	50		
CUSTOM WORK, EQUIP RENT	63		
ALL OTHER	10		
TOTAL HARVESTING COSTS			157
TOTAL PRODUCTION COSTS		$	408
STORING AND SELLING:			
LABOR 1 HR	5		
TRACTOR, TRUCK, EQUIP	8		
BUILDING USE	0		
INTEREST, ALL OTHER	21		
TOTAL STORING AND SELLING COSTS			34
TOTAL COSTS		$	442
RETURNS:			
CROP - YIELD: 1.8 TN	$ 568		
BY-PRODUCT, OTHER RETURNS **	0		
TOTAL RETURNS		$	568
PROFIT:		$	126

		AVERAGE
OTHER FACTORS: COST PER TN TO:	GROW	$ 142
	HARVEST	89
	STORE AND SELL	19
TOTAL (OR NET*) COST PER TN		250
TOTAL (OR NET*) RETURN ** PER TN		322
PROFIT PER TN		72
LABOR RETURN PER ACRE		$ 166
PRODUCTION PER HOUR OF LABOR		0.4 TN
RETURN PER HOUR OF LABOR		$ 29.55
RETURN PER DOLLAR OF COST		1.29

* VALUE OF BY-PRODUCTS, IF ANY, DEDUCTED

** RECEIPTS FROM GOVERNMENT PROGRAMS NOT INCLUDED

Table 9. Green Peas for Processing
Selected Factors
New York, 1981
1,906 acres on 18 farms

Farm No.**	Yield per acre	Average per acre planted: Grow cost	Harvest cost	Profit	Average per ton*: Cost	Return	Return per $ of cost
	tn.*	$	$	$	$	$	$
601	1.6	224	125	5	245	248	1.01
602	1.7	267	167	161	276	371	1.34
603	1.9	258	141	244	225	352	1.56
604	2.1	229	182	217	210	312	1.49
605	2.1	267	245	308	259	404	1.56
606	1.9	209	139	277	202	347	1.72
Weighted Av. of 6	1.9	243	167	202	237	340	1.45
607	2.2	334	198	105	262	310	1.18
608	1.5	221	139	55	261	298	1.14
609	1.7	256	165	92	264	318	1.21
610	1.9	270	187	148	276	356	1.29
611	1.1	261	117	36-	375	342	0.91
612	1.7	290	163	53	282	313	1.11
Weighted Av. of 6	1.7	272	162	70	287	323	1.14
613	1.2	278	112	110-	364	270	0.74
614	2.3	277	180	62	225	252	1.12
615	1.7	235	144	30	235	252	1.07
616	1.5	197	137	60	234	273	1.17
617	2.0	262	157	49	220	245	1.11
618	2.1	292	177	87	243	285	1.17
Weighted Av. of 6	1.9	257	152	30	254	263	1.06
Range	1.1 to 2.3	197 to 334	112 to 245	110- to 308	202 to 375	245 to 404	0.74 to 1.72
Weighted Av. of 18	1.8	251	157	126	250	322	1.29

*Paid weight

**Ranked from largest to smallest acreage
Enterprise size: Group 1 - 236 acres average
2 - 56 acres average
3 - 26 acres average

LONG ISLAND POTATOES - 1981

For three consecutive years, data on the economics of Long Island potato production have been gathered from cooperating producers. These data provide a continuity of changes in potato production costs especially in view of the fact that ten of the growers involved have provided data for all three years. The study for 1981 also includes a larger number of growers from the South Fork than for the previous two years.

The potato crop on Long Island in 1981 came from 18,500 acres yielding an average of 290 hundredweight per acre. Harvested acreage was down only slightly from 1980 but down 15 percent from the 1979 acreage. Acreage in 1981 was the lowest in more than ten years (Table 10). A more favorable growing season caused yields in 1981 to rebound from 1980's poor weather related yield. At 290 hundredweight per acre, the yield reported by the Crop Reporting Board was ten percent above the average for the most recent ten year period.

Table 10. Long Island Potatoes
Historical Data
New York, 1972-81

Crop year	Acres harvested	Yield per acre	Production	Season ave. price
	thousand	cwt.	1,000 cwt.	$/cwt.
1972	27.0	207	5,585	3.57
1973	25.0	215	5,375	5.75
1974	27.0	250	6,750	2.95
1975	23.3	260	6,085	5.60
1976	23.9	310	7,409	4.10
1977	22.8	315	7,182	3.36
1978	23.3	265	6,175	3.99
1979	21.8	295	6,431	3.65
1980	18.8	235	4,794	9.50
1981	18.5	290	5,365	5.50*

*Preliminary

Source: New York Agricultural Statistics, 1980; Crop Production, 1981 Annual Summary, Crop Reporting Board, USDA.

Results of the 1981 Study

The group of 15 cooperating growers had potato enterprises ranging in size from 50 to 367 acres and averaging 184 acres per enterprise. Nine of the growers were located on the North Fork of the Island and six were located on the South Fork. Yields for the overall group averaged 314 hundredweight per acre which was somewhat above the estimated average yield for the Island in general.

Growing Costs -

Growing costs for potatoes on Long Island continued to increase in 1981. On the 15 study farms, growing costs averaged $1,187 per acre as shown in Table 11. Major direct cash costs to grow the crop included fertilizer, seed, and chemicals. These three items totalled $754 per acre or 64 percent of the total growing cost.

Land was the largest single cost item. Cropland cost an average of $134 per acre for its agricultural value which does not include any value for development rights. This cost is an average of the cost of owned and rented land as experienced by these growers.

The cost of labor, at $59 per acre, includes all employer costs as well as cash wages to employees. It also includes the cost of the operator's labor and management.

Table 11 also shows the growing costs of each input item per hundredweight. Based on the average yield of 314 hundredweight per acre, 1981 growing costs for these growers averaged $3.78 per hundredweight.

Table 11. Long Island Potatoes
Growing Costs
2,757 Acres on 15 Farms
New York, 1981

Item	Rates per acre	Cost	
		Per acre	Per cwt.
Number of farms		15	
Acres per enterprise		184	
Yield per acre, cwt.		314	
Labor	8.7 hours	$ 59	$ .19
Tractor	4.0 hours	31	.10
Equipment, large truck		77	.25
Custom work, equipment rent		14	.05
Land use		134	.43
Cover crop, lime		32	.10
Fertilizer: lbs. N-188, P-352, K-176		195	.62
Seed	2,131 lbs.	268	.85
Chemicals		291	.93
Interest on operating capital		39	.12
All other		47	.14
Total growing costs		$1,187	$3.78

Harvesting Costs -

Harvesting costs for potatoes included vine killing, the harvest operation, and the costs to place the crop in farm storage or on a truck if marketed out of the field. No grading, storage or marketing costs are included. Labor and harvesting equipment were the major cost items. Together these two items accounted for two-thirds of the total harvesting costs of $152 per acre as shown in Table 12. The table also shows the cost per hundredweight for the individual cost items. Total harvesting costs were $.48 per hundredweight with a yield of 314 hundredweight per acre.

Table 12. Long Island Potatoes
Harvesting Costs
2,757 Acres on 15 Farms
New York, 1981

Item	Rates per acre	Cost	
		Per acre	Per cwt.
Number of farms		15	
Acres per enterprise		184	
Yield per acre, cwt.		314	
Labor	7.2 hours	$ 48	$.15
Tractor	1.8 hours	15	.05
Truck		13	.04
Equipment		53	.17
Custom work, equipment rent		—	--
All other		23	.07
Total harvesting costs		$152	$.48

Storing Costs -

Because most potato growers harvest their crop in a volume too large to market at harvest time, it is essential that they have access to a storage facility. Normally, the potato storage is located on the farm. Potatoes, not sold at harvest time, are placed in storage to be graded and marketed after harvest.

To recognize this cost to the grower, a cost of $.33 per hundredweight stored was charged against each potato enterprise as a storage building cost. In addition, the cost to load the stored potatoes out of storage was estimated and included in the storing costs shown in Table 13. These costs averaged $62 per acre for these growers in 1981 or $.20 per hundredweight. No additional costs for grading, packing, hauling or interest on the stored crop are included.

Table 13. Long Island Potatoes
Storing Costs
2,757 Acres on 15 Farms
New York, 1981

Item	Cost	
	Per acre	Per cwt.
Number of farms	15	
Acres per enterprise	184	
Yield per acre, cwt.	314	
Labor	$ 4	$.01
Tractor	4	.01
Storage building	54	.18
All other	--	--
Total storing costs*	$62	$.20

*See text for description of storing costs.

Costs and Returns -

Costs and returns are summarized in Table 14. The total cost to produce potatoes on these farms was $1,339 per acre. Additional costs to provide a storage building for part of the crop and to load those potatoes out of storage averaged $62 per acre. Thus, total costs for this study added to $1,401 per acre or $4.46 per hundredweight.

Returns for the potato enterprises in the study include the ungraded farm value of all potatoes sold at harvest, the value of all B grade potatoes, and the value of stored potatoes as of November 1st. Using these values, potatoes returned an average of $5.30 per hundredweight, and with a yield of 314 hundredweight per acre, returns averaged $1,664.

Profits for the 15 potato growers averaged $263 per acre or $.84 per hundredweight. Expressed another way, growers received $1.19 for each dollar of cost to produce potatoes in 1981.

Table 14. Long Island Potatoes
Costs and Returns
2,757 Acres on 15 Farms
New York, 1981

Item		Cost Per acre	Cost Per cwt.
Number of farms		15	
Acres per enterprise		184	
Yield per acre, cwt.		314	
Costs to:	Grow	$1,187	$3.78
	Harvest	152	.48
	Produce	$1,229	$4.26
	Store*	62	.20
	Total costs	$1,401	$4.46
Returns		$1,664	$5.30
Profit		$ 263	$ .84
Return per dollar of cost		$1.19	

*See text under "Storing Costs" for explanation.

Selected Factors -

The following three tables contain summary and analysis data for the 15 Long Island potato enterprises in the study for 1981. Table 17 provides a listing of selected factors for each enterprise to illustrate ranges and variations between enterprises.

Table 15.

NEW YORK FARM COST ACCOUNTS

FISCAL YEAR 1981 — SUMMARY AND ANALYSIS OF CROP ENTERPRISE 4230 POTATOES- MKT — FOR 15 FARMS Long Island, N.Y.

DEBITS

	QTY	UNIT	TOTAL $	COST/ ACRE $
GROWING COSTS - OPER 1:				
1. LABOR	23,862	HR	162,845	59
2. TRACTOR	11,140	HR	86,209	31
3. TRUCK			12,142	4
4. EQUIPMENT			200,416	73
5. CUSTOM WORK, EQUIP RENT			39,850	14
6. LAND USE			370,589	134
7. MANURE, COVER CROPS			67,220	24
8. LIME			20,994	8
9. FERTILIZER-N	517,536	LB		
10. P	970,920	LB		
11. K	485,440	LB	538,969	195
12. SEED, PLANTS	56,741	CW	738,219	268
13. SPRAY, DUST MATERIALS			802,780	291
14. INTEREST			106,690	39
15. ALL OTHER			125,877	46
HARVESTING COSTS - OPER 2:				
16. LABOR	19,797	HR	133,239	48
17. TRACTOR	4,996	HR	40,700	15
18. TRUCK			35,424	13
19. EQUIPMENT			147,069	53
20. CUSTOM WORK, EQUIP RENT			1,175	0
21. ALL OTHER			62,150	23
STORING & SELLING COSTS - OPER 3:				
22. LABOR	1,613	HR	11,155	4
23. TRACTOR, TRUCK			10,697	4
24. EQUIPMENT			0	0
25. BUILDING USE			148,283	54
26. INTEREST			0	0
27. ALL OTHER			0	0
28. TOTAL COSTS			$3,862,692	
29. GAIN			724,430	
30. TOTAL DEBITS			$4,587,122	

* DETERMINED BY COST ACCOUNT STAFF

** VALUE OF BY-PRODUCT DEDUCTED

CREDITS

	QTY	UNIT	TOTAL $
31. CROP	865,653	CW	4,587,122
32. BY-PRODUCT			0
33. OTHER RETURNS			0
34. TOTAL RETURNS			$4,587,122
35. LOSS			0
36. TOTAL CREDITS			$4,587,122

FACTORS

A. ACRES *		2,757.0 AC
B. TOT GROW COST (SUM 1 THRU 15)		$3,272,800
C. TOT HARV COST (SUM 16 THRU 21)		$ 419,757
D. PRODUCTION COST (B+C)		$3,692,557
E. TOT S & S COST (SUM 22 THRU 27)		$ 170,135
F. NET** CROP COST (28-32)		$3,862,692
G. TOT LABOR HOURS (1+16+22)		45,272 HR
H. TOT LABOR COST (1+16+22)		$ 307,239
I. LABOR RETURNS (H+29-35)		$1,031,669

AVERAGE PER ACRE

J. YIELD (31/A)		314 CW
K. FERTILIZER - N (9/A)		188 LB
L. P (10/A)		352 LB
M. K (11/A)		176 LB
N. SEED, PLANTS (12/A)		21 CW
O. GROWING COST (B/A)	$	1,187
P. HARVESTING COST (C/A)	$	152
Q. PRODUCTION COST (D+P)	$	1,339
R. TOTAL COSTS (28/A)	$	1,401
S. TOTAL RETURNS (34/A)	$	1,664
T. PROFIT (S-R)	$	263
U. LABOR TO: GROW (1/A)		9 HR
V. HARVEST (16/A)		7 HR
W. PRODUCE (U+V)		16 HR
X. LABOR RETURNS (I/A)	$	374
Y. TRACTOR: GROW (2/A)		4 HR
Z. HARVEST (17/A)		2 HR

AVERAGE PER UNIT

AA. GROWING COST (B/31)	$	3.78
BB. HARVESTING COST (C/31)	$	0.48
CC. NET** PRODUCTION COST (D-32)/31	$	4.27
DD. STORE & SELL COST (E/31)	$	0.20
EE. TOTAL COSTS (28/31)	$	4.46
FF. NET COST ** (F/31)	$	4.46
GG. TOTAL RETURNS (34/31)	$	5.30
HH. NET RETURNS ** (34-32)/31	$	5.30
II. PROFIT (HH-FF)	$	0.84

RETURNS

JJ. PROD / HR OF LABOR (31/(1+16))		20 CW
KK. RETURN PER HR OF LABOR (I/G)	$	22.79
LL. RETURN PER $ OF COST (34/28)	$	1.19

Table 16.

NEW YORK
POTATOES- MKT
COSTS AND RETURNS PER ACRE
2,757 ACRES ON 15 COST ACCOUNT FARMS, 1981

ITEM		AVERAGE PER ACRE
COSTS: GROWING:		
LABOR 9 HR	$ 59	
TRACTOR 4 HR	31	
TRUCK, EQUIPMENT	77	
CUSTOM WORK, EQUIP RENT	14	
LAND USE	134	
MANURE, LIME, COVER CROP	32	
FERT - LBS N- 198, P- 352, K- 176	195	
SEED, PLANTS 21 CW	268	
SPRAY, DUST MATERIALS	291	
INTEREST, ALL OTHER	96	
TOTAL GROWING COSTS		$ 1,187
HARVESTING:		
LABOR 7 HR	48	
TRACTOR 2 HR	15	
TRUCK, EQUIPMENT	66	
CUSTOM WORK, EQUIP RENT	0	
ALL OTHER	23	
TOTAL HARVESTING COSTS		152
TOTAL PRODUCTION COSTS		$ 1,339
STORING AND SELLING:		
LABOR 1 HR	4	
TRACTOR, TRUCK, EQUIP	4	
BUILDING USE	54	
INTEREST, ALL OTHER	0	
TOTAL STORING AND SELLING COSTS		62
TOTAL COSTS		$ 1,401
RETURNS:		
CROP - YIELD: 314 CW	$ 1,664	
BY-PRODUCT, OTHER RETURNS **	0	
TOTAL RETURNS		$ 1,664
PROFIT:		$ 263

	AVERAGE
OTHER FACTORS: COST PER CW TO: GROW	$ 3.78
HARVEST	0.48
STORE AND SELL	0.20
TOTAL (OR NET*) COST PER CW	4.46
TOTAL (OR NET*) RETURN ** PER CW	5.30
PROFIT PER CW	0.84
LABOR RETURN PER ACRE	$ 374
PRODUCTION PER HOUR OF LABOR	20 CW
RETURN PER HOUR OF LABOR	$ 22.79
RETURN PER DOLLAR OF COST	1.19

* VALUE OF BY-PRODUCTS, IF ANY, DEDUCTED
** RECEIPTS FROM GOVERNMENT PROGRAMS NOT INCLUDED

Table 17. Long Island Potatoes
Selected Factors
2,757 Acres on 15 Farms
New York, 1981

Farm No.*	Yield per acre	Average per acre planted			Average per ton		Return per $ of cost
		Grow cost	Harvest cost	Profit	Cost	Return	
	cwt.	$	$	$	$	$	$
401	386	1,167	148	802	3.47	5.55	1.60
402	278	1,148	169	100	4.85	5.21	1.07
403	315	1,217	128	266	4.46	5.31	1.19
404	267	1,164	123	67	5.03	5.28	1.05
405	300	1,153	108	179	4.47	5.60	1.13
Weighted Av. of 5	310	1,170	136	283	4.46	5.28	1.21
406	299	1,272	159	14	5.07	5.12	1.01
407	300	1,109	174	217	4.53	5.25	1.16
408	250	1,053	140	60	5.05	5.29	1.05
409	373	1,268	186	669	4.05	5.85	1.44
410	363	1,292	154	252	4.28	4.97	1.16
Weighted Av. of 5	317	1,199	163	242	4.60	5.30	1.16
411	348	1,115	198	455	4.09	5.30	1.16
412	325	1,321	173	59	4.90	5.09	1.04
413	296	1,106	177	241	4.43	5.25	1.18
414	300	1,390	136	-141	5.39	4.92	0.91
415	290	1,206	237	14	5.23	5.28	1.01
Weighted Av. of 5	312	1,228	185	126	4.81	5.19	1.09
Weighted Av. of 15	314	1,187	152	263	4.46	5.30	1.19
Range	267 to 386	1,053 to 1,390	108 to 237	-141 to 802	3.47 to 5.39	4.92 to 5.85	0.91 to 1.60

*Ranked from largest to smallest acreage

Enterprise size: Group 1 - 300 acres average
Group 2 - 164 acres average
Group 3 - 87 acres average

North and South Fork Growers -

Because of climate and soil differences between the North Fork and South Fork areas on the eastern end of Long Island, one might expect some differences in the economics of producing potatoes in the two areas. Soils tend to be heavier and summer temperatures cooler on the South Fork. Considerably less irrigating is used by growers on the South Fork. Yields were significantly higher on the South Fork.

Table 18 details the growing costs for each area and shows the economic differences as supported by the data obtained from both groups of growers for the 1981 crop.

The average enterprise size for the two groups was quite similar at about 180 acres. However, South Fork growers had yields 22 percent higher than the North Fork group. Although total growing costs were essentially the same for both areas, there were differences in various input costs to grow the crop. Less irrigation on the South Fork showed up in lower labor and equipment costs. Land costs were higher on the South Fork. Growers on the South Fork had higher costs for cover crop and seed and lower costs for fertilizer and chemicals.

Returns per hundredweight were similar for both groups but the higher South Fork yields caused the returns and profit per acre to be significantly higher than for North Fork enterprises. The higher yield also resulted in lower total costs and higher profits per hundredweight for South Fork growers.

North Fork growers received $1.08 per dollar of cost compared to a return of $1.36 per dollar of cost for South Fork growers.

Table 18. Long Island Potatoes
Costs and Returns
North Fork and South Fork
New York, 1981

Item	North Fork	South Fork
Number of farms	9	6
Acres per enterprise	187	179
Yield per acre, cwt.	289	353
	- average per acre -	
Costs: Growing		
Labor	$ 62	$ 54
Tractor	29	34
Truck, equipment	80	72
Custom work	24	0
Land use	113	168
Cover crop, lime	26	41
Fertilizer	204	182
Seed	247	300
Chemicals	317	250
Interest	40	37
All other	46	46
Total	$1,189	$1,184
Harvesting	151	154
Storing*	62	61
Total Costs	$1,402	$1,399
Total returns	$1,510	$1,906
Profit	$ 108	$ 507
	- average per cwt. -	
Costs to: Grow	$4.11	$3.35
Harvest	.52	.44
Store*	.22	.17
Total cost	$4.85	$3.96
Total return	$5.22	$5.40
Profit	$0.37	$1.44
Return per dollar of cost	$1.08	$1.36

*See text under "Storing Costs" for explanation.

Comparison of Data for Three Years -

With three consecutive years' data, and most of it from the same farms each year, a comparison will reveal some significant changes, trends, and similarities in production costs and practices. Table 19 summarizes the production costs for the potato enterprises included in the 1979, 1980, and 1981 studies. These data show a 41 percent increase in production costs from 1979 to 1981 as costs rose from $947 to $1,339 per acre.

The lower portion of Table 19 compares data gathered for the same 10 farms for the three years. Acreage for these farms declined about 10 percent while yields reflected the effects of weather. Production costs increased 44 percent as they increased from $947 per acre in 1979 to $1,363 per acre in 1981 for these same farms.

Table 19. Long Island Potatoes Production Costs for 1979, 1980, and 1981 Compared New York

Item	Cost Per acre 1979	1980	1981	Cost Per cwt. 1979	1980	1981
Number of farms	10	13	15			
Acres per farm	159	168	184			
Yield per acre, cwt.	287	273	314			
Costs to: Grow	$829	$1,011	$1,187	$2.89	$3.71	$3.78
Harvest	118	150	152	.41	.55	.48
Produce	$947	$1,161	$1,339	$3.30	$4.26	$4.26
Same farms	10	10	10			
Acres per farm	159	148	143			
Yield per acre, cwt.	287	250	311			
Costs to: Grow	$829	$1,040	$1,201	$2.89	$4.16	$3.86
Harvest	118	151	162	.41	.60	.52
Produce	$947	$1,191	$1,363	$3.30	$4.76	$4.38
Selected Factors (same farms):						
Grow & harvest labor cost	$ 99	$116	$122			
Grow & harv. equip. cost*	$158	$205	$208			
Seed cost	$153	$156	$262			
Chemical cost	$183	$265	$291			
Fertilizer cost	$154	$191	$201			
Pounds of N	192	193	190			
P	346	348	355			
K	173	174	177			

*Includes tractors, trucks, equipment, and custom work.

Differences in several selected factors are shown at the bottom of Table 19. Labor and equipment costs increased 23 and 32 percent respectively. The increase in seed costs reflects the effect of the high potato price received for the 1980 crop. Chemical costs increased from $183 to $291 per acre. This 59 percent increase in two years resulted from the substitution of other spray materials for Temik as well as a general increase in price levels. Fertilizer costs increased 30 percent - from $154 to $201 per acre - with no change in the quantity of nutrients applied.

The 1981 study showed the continuation of production cost increases for potatoes on Long Island. The comparison of the three years' data shows the effect of weather on yield and the importance of considering a long term average yield in assessing the profitability of a crop. With increasing input costs, the optimum use of those inputs becomes more critical in controlling production costs. Yields and potato prices will vary but they must be such that profits are generally positive for the potato industry of Long Island to remain healthy.

CROPLAND RENTAL RATES

Most New York farmers depend, to some extent, on rented cropland to supplement owned cropland in forming the land resource for their farm operation. Because of the widespread practice of renting cropland and the demand for information on the subject, a study was undertaken to obtain current information on rental rates throughout the State.

To obtain as broad a response as possible from all parts of the State, a simple questionnaire was distributed to extension agents in all agricultural counties of the State. The agents, in turn, sent the questionnaire to the appropriate audience to be completed and returned. The intent of the questionnaire was to obtain cash rental data for open cropland used for field and vegetable crop production.

Extension agents sent survey responses to the College where the data was processed and summarized. The information in the following tables show cropland rental rates by county throughout the State. Copies of the complete report, which include rental rates by townships within the counties, are available as indicated on page one in the Introduction.

The study included 3,477 parcels of cropland used for field and vegetable crops. These parcels represent 137,651 acres of land which is about three percent of the four and one-half million acres of open cropland in the State.

The following tables show that cash rent for all cropland averaged $24 per acre with a typical or most common cost of $20 per acre. Field cropland rent averaged $22 per acre and vegetable cropland rented for an average of $49 per acre. Only 20 percent of the parcels were rented under a formal lease arrangement.

CROPLAND RENT COSTS BY COUNTY
New York State, 1981

County and State	Field Crops					Vegetable Crops				
			Cost per acre					Cost per acre		
	Par-cels	Acres	Avg	Range	Typ-ical	Par-cels	Acres	Avg	Range	Typ-ical
	#	#	$	$	$	#	#	$	$	$
Albany	46	2790	10	3- 30	10	12	151	25	7- 45	25
Allegany	82	2837	18	4- 61	15				-	
Broome	58	1688	17	5- 75	10				-	
Cattaraugus	81	2094	21	4- 50	20	1	12	75	75- 75	75
Cayuga	35	2081	34	10- 80	40				-	
Chautauqua	5	119	25	15- 40	20				-	
Chemung	30	1020	20	8- 50	10				-	
Chenango	128	4070	19	5- 44	20	1	66	10	10- 10	10
Clinton	35	1803	20	3- 50	20	3	55	14	12- 15	15
Columbia	36	1750	17	8- 34	20				-	
Cortland	102	2833	25	3- 55	10				-	
Delaware	34	813	17	5- 54	30				-	
Dutchess	55	3064	18	5- 30	20	10	1111	28	10- 35	30
Erie	150	4363	22	2-100	10	26	704	35	5-110	75
Essex	19	527	15	9- 25	10				-	
Franklin	2	200	10	10- 10	10				-	
Fulton	3	150	36	25- 40	40				-	
Genesee	90	4239	27	5- 90	20	17	911	34	10- 45	35
Greene	2	60	12	8- 15	15				-	
Herkimer	77	2149	18	4-100	20	1	61	40	40- 40	40
Jefferson	112	5843	15	1- 55	20				-	
Lewis	17	671	19	5- 50	15				-	
Livingston	6	535	25	18- 40	30	1	112	25	25- 25	25
Madison	36	1254	30	10- 50	30				-	
Monroe	64	2286	20	6- 45	15	19	1173	26	10- 40	25
Montgomery	5	156	20	5- 35	10				-	
Niagara	61	2144	13	1- 50	10				-	
Oneida	78	3005	27	4- 55	20	1	20	45	45- 45	45
Onondaga	25	1176	17	7- 47	16	1	160	10	10- 10	10
Ontario	211	13217	26	5- 80	20	20	1695	61	13-110	40
Orange	34	1284	16	7- 38	10	22	250	126	25-175	100
Orleans	32	1103	21	8- 45	20	17	714	30	18- 40	40
Oswego	3	122	7	5- 10	10				-	
Otsego	38	1037	19	4- 45	20	1	98	40	40- 40	40
Putnam	1	31	116	116-116	116				-	
Rensselaer	14	1062	30	12- 40	20				-	
St Lawrence	34	1983	12	3- 57	10				-	
Saratoga	7	402	17	10- 25	25	1	35	29	29- 29	29
Schoharie	11	265	26	3- 55	50				-	
Schuyler	55	1966	14	5- 30	10				-	
Seneca	12	317	25	12- 37	15				-	
Steuben	4	525	11	9- 20	20				-	
Suffolk	15	324	81	10-125	75	102	3588	75	10-175	60
Sullivan	73	2379	11	2- 43	15				-	
Tioga	65	1587	16	3- 45	10	1	8	20	20- 20	20
Tompkins	120	5570	27	1- 62	20	7	296	18	10- 40	15
Ulster	5	275	8	2- 13	10				-	
Washington	476	17370	21	2- 83	20	2	12	83	83- 83	83
Wayne	182	6193	22	8- 50	25	25	1254	37	15-100	25
Wyoming	228	8554	26	2- 80	20	4	295	36	30- 60	60
Yates	88	3584	30	10-150	25				-	
STATE TOTALS:	3182	124870	22	1-150	20	295	12781	49	5-175	40

CROPLAND RENT COSTS BY COUNTY (con'd)

New York State, 1981

County and State	All field and veg crops									
			Cost per acre			Per-	Avg cost per acre			
					Typ-	cent	Upland soils			Muck
	Par- cels	Acres	Avg	Range	ical	leased	Good	Fair	Poor	
	#	#	$	$	$	%	$	$	$	$
Albany	58	2941	11	3- 45	10	12	12	10	6	
Allegany	82	2837	18	4- 61	15	15	29	10	7	
Broome	58	1688	17	5- 75	10	31	22	14	11	
Cattaraugus	82	2106	21	4- 75	20	25	25	19	11	
Cayuga	35	2081	34	10- 80	40	34	37	30	22	
Chautauqua	5	119	25	15- 40	20		31	16		
Chemung	30	1020	20	8- 50	10		21	19	8	
Chenango	129	4136	19	5- 44	20	26	21	17	16	
Clinton	38	1858	20	3- 50	15	28	24	16	14	
Columbia	36	1750	17	8- 34	20	22	18	15		
Cortland	102	2833	25	3- 55	10	24	33	19	12	
Delaware	34	813	17	5- 54	30	8	21	15	11	
Dutchess	65	4175	21	5- 35	20	39	23	17		
Erie	176	5067	24	2-110	10	12	33	16	9	
Essex	19	527	15	9- 25	10	42	13	18	23	
Franklin	2	200	10	10- 10	10		10			
Fulton	3	150	36	25- 40	40	66	37	25		
Genesee	107	5150	28	5- 90	20	19	32	24	16	50
Greene	2	60	12	8- 15	15			12		
Herkimer	78	2210	18	4-100	20	11	23	15	12	9
Jefferson	112	5843	15	1- 55	20	21	21	12	9	
Lewis	17	671	19	5- 50	15	17	19	20		
Livingston	7	647	25	18- 40	30	42	28	18		
Madison	36	1254	30	10- 50	30	25	34	20	15	
Monroe	83	3459	22	6- 45	25	14	22	22	17	
Montgomery	5	156	20	5- 35	10		26	9		
Niagara	61	2144	13	1- 50	10	6	14	11	15	18
Oneida	79	3025	27	4- 55	20	13	30	20	8	
Onondaga	26	1336	17	7- 47	16	3	17	13		
Ontario	231	14912	30	5-110	20	17	37	22	15	
Orange	56	1534	34	7-175	10	17	24	22	20	123
Orleans	49	1817	25	8- 45	20	36	29	20		45
Oswego	3	122	7	5- 10	10		8	7		
Otsego	39	1135	21	4- 45	20	35	20	22	15	
Putnam	1	31	116	116-116	116			116		
Rensselaer	14	1062	30	12- 40	20	28	36	26		
St Lawrence	34	1983	12	3- 57	10	29	15	8		
Saratoga	8	437	18	10- 29	25	12	17	23		
Schoharie	11	265	26	3- 55	50	36	30	6		
Schuyler	55	1966	14	5- 30	10	23	15	13	10	
Seneca	12	317	25	12- 37	15	8	21	33		
Steuben	4	525	11	9- 20	20		20	10		
Suffolk	117	3912	76	10-175	60	39	84	60	55	
Sullivan	73	2379	11	2- 43	15	8	12	10	5	
Tioga	66	1595	16	3- 45	10	13	26	12	10	
Tompkins	127	5866	27	1- 62	20	32	30	21	18	
Ulster	5	275	8	2- 13	10	39	13	9	2	
Washington	478	17382	21	2- 83	20	18	24	19	17	
Wayne	207	7447	25	8-100	25	15	25	23	16	55
Wyoming	232	8849	27	2- 80	20	21	32	24	19	
Yates	88	3584	30	10-150	25	7	31	30	12	
STATE TOTALS:	3477	137651	24	1-175	20	20	28	20	15	68