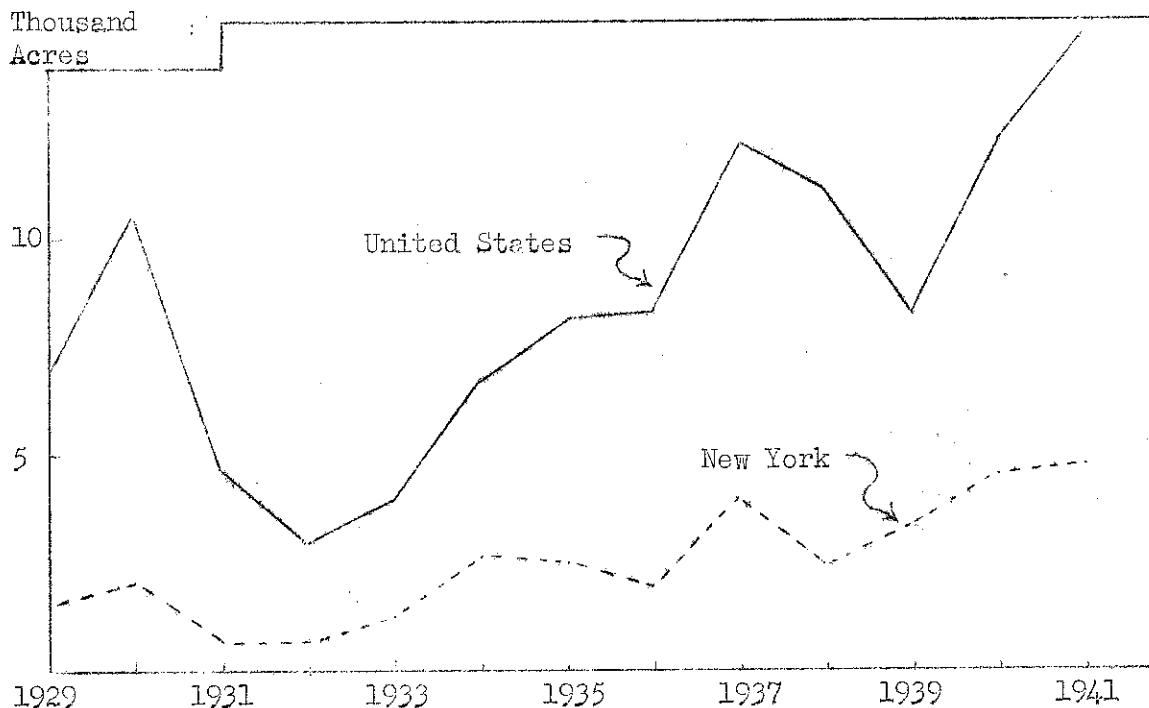


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Costs and Returns in
Growing and Harvesting

CANNING FACTORY BEETS

14 farms, Ontario County, 1941



ACREAGE OF BEETS FOR CANNING IN NEW YORK AND UNITED STATES 1929 TO 1941

The acreage of beets in both New York and the United States has increased. Because of the increased importance of beets, a study has been made of the cost and returns of this enterprise.

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CANNING FACTORY BEETS

TREND IN ACREAGE AND PRODUCTION IN NEW YORK AND UNITED STATES

The acreage of beets for canning has increased in both New York and the United States during the past ten years. The acreage in the United States decreased from about 10,720 acres in 1929 to 2,970 acres in 1932, but has gradually increased to about 14,870 acres in 1941 (see cover page). In New York, the trend in acreage has been irregularly upward from 750 acres in 1931 and 1932 to a total of 4,800 acres in 1941. During the past five years (1937-1941) New York has grown about one-third of the acreage of beets for canning in the United States.

TABLE 1. PRODUCTION, YIELD, AND PRICE PER TON OF BEETS FOR CANNING IN THE IMPORTANT PRODUCING STATES, 1936 to 1941

State	Production		Yield per Acre		Price per Ton	
	Average for 1936-40	1941	Average for 1936-40	1941	Average for 1936-40	1941
	- tons -		- tons -			
NEW YORK	19,460	40,300	5.9	8.4	\$13.66	\$14.40
Wisconsin	17,000	30,700	6.1	7.3	10.06	10.00
Michigan	4,480	6,000	5.6	6.7	9.88	11.30
Oregon	4,220	6,900	6.9	9.8	16.02	16.00
New Jersey	3,240	3,500	5.6	5.0	10.20	21.30
Indiana	920	1,200	3.8	4.9	10.36	10.20
Other States	9,848	18,100	4.7	5.5	11.06	11.26
United States	59,168	106,700	5.6	7.2	\$11.83	\$12.71

Source: U.S.D.A. Crop Reports

New York ranks first among the states in the production of beets for canning (table 1). Wisconsin ranked second in production for both 1941 and the 1936-40 average. New York produced 40,300 tons in 1941 as compared with an average of 19,460 tons from 1936 to 1940. Production in the United States in 1941 amounted to 106,700 tons compared with an average of 59,168 tons per year from 1936 to 1940. Production in each of the more important states was higher in 1941 than for the average of the previous five years.

Although part of the increased production in 1941 was due to an increased acreage over previous years, a large part was also due to higher yields in 1941. In the United States, the yield of 7.2 tons per acre in 1941 was 27 per cent above the 1936-40 average yield of 5.6 tons per acre. In New York, the 1941 yield of 8.4 tons per acre was 42 per cent above the average yield of 5.9 tons during the previous five years. Only one state, Oregon, had a higher average yield in 1941 than did New York. The 1936-40 average yield in New York of 5.9 tons per acre was .3 ton above the United States average yield for that period. Only Oregon and Wisconsin have higher average yields than New York.

Prices paid to growers for beets for canning in the United States average \$11.83 per ton for the five years 1936 to 1940. The average price in 1941 was \$12.71 per ton. Prices paid growers in New York have been about \$2.00 per ton above the average for the United States during the past years. The average reported in 1941 for New York was \$14.40. Only Oregon and New Jersey had higher average prices than did New York in 1941.

BEET ACREAGE IN NEW YORK BY COUNTIES

The United States Census reports the acreage of beets grown for all purposes by counties. From 1919 to 1939 the acreage in the State more than tripled (table 2). The acreage increased more in counties producing beets for the canning factory than in those producing mostly market beets. The largest increase occurred in Ontario County where the 1,138 acres in 1939 accounted for 28 per cent of the beets in the State as compared with 79 acres or 6 per cent of the beets in the State in 1919. The next two most important counties producing beets for canning were Livingston and Wayne, each of which had about 400 acres in 1939.

TABLE 2. ACREAGE OF BEETS IN NEW YORK

County	Acreage of Beets		
	1919	1929	1939
Counties producing beets for canning			
Ontario	79	481	1,138
Livingston	143	67	403
Wayne	95	234	409
Yates	9	51	112
Total	326	833	2,062
Counties producing beets for market			
Nassau	136	119	524
Suffolk	29	42	261
Erie	192	36	186
Monroe	46	52	159
Albany	15	21	108
All other counties	547	300	698
Total	965	570	1,936
State	1,291	1,403	3,998

PACK AND CARRYOVER IN THE UNITED STATES

The pack of 3,719,000 cases of beets in 1940 was 25 per cent larger than the average pack from 1936 to 1940 (table 3). However, consumption increased proportionately and the carryover at the beginning of the 1941 season of 205,000 cases was less than one-half the average during the preceding five years. The pack in 1941, of 5,600,000 cases, was 50 per cent larger than the pack of 1940 and 88 per cent larger than the five-year average (1936-40) pack. Based upon movement of stocks up to January 1, 1942, the 1941-42 consumption has been estimated at 4,400,000 cases. This would leave stocks on hand at the beginning of the 1942 season of 1,405,000 cases, or about 25 per cent of the 1941 pack.

TABLE 3. PACK, DISAPPEARANCE, AND STOCKS OF CANNED BEETS

	Average for 1936-40	1940	1941
(thousands of cases 24 No.2 cans)			
Carryover at first of season	504	265	205
Pack	<u>2,973</u>	<u>3,719</u>	<u>5,600*</u>
Total supply	3,477	3,984	5,805*
Disappearance	2,965	3,779	4,400/
Stocks at end of season	512	205	1,405/

Based on statistics in Vegetable Situation, January, 1942.

*Preliminary

/Estimated

COSTS AND RETURNS IN PRODUCING BEETS

What does it cost to grow and harvest a ton of beets? Growers have been interested in this problem for a number of years, and in the spring of 1941 an account book was prepared so growers could keep their receipts and expenses on the beet enterprise. These books were distributed to growers in Ontario County who were interested in keeping such a record.

In January 1942 each of these growers was visited. There were 7 growers whose books were fairly complete and these were checked over to see that nothing had been omitted. For 7 other growers whose books were incomplete, the necessary information was obtained by the survey method. These records are fairly accurate because on these farms most of the weeding and topping was hired. These two items make up nearly 50 per cent of the cost of growing and harvesting beets. The cost of fertilizer and seed were also easy to obtain, because the farmer had a record of these expenses. The amount of manure applied and value of land can be obtained as accurately by survey as by keeping accounts.

The 14 farms had 230 acres of beets and produced 3,765 tons in 1941. This was about 10 per cent of the total tonnage of beets grown for canneries in New York State.

SUMMARY OF COSTS AND RETURNS

The average cost of growing beets to harvest time was \$75 per acre (table 4). Weeding and commercial fertilizer each made up about one-quarter of the growing cost. With the high average yield, 16.4 tons per acre in 1941, the average cost per ton to harvest time was \$4.60 (table 5). The yield per acre on these farms in Ontario County in 1941

TABLE 4. COSTS AND RETURNS FROM BEETS
 14 farms, Ontario County, 1941
 (16 acres per farm)

	Quantity per acre	Rate	Cost per acre	Per cent of total cost
<u>Growing</u>				
Man labor				
Weeding	58.9 hrs.	\$.31	\$18.09	9.7
Other	11.4 hrs.	.38	4.36	2.4
Horse labor	7.9 hrs.	.20	1.58	.9
Tractor	5.7 hrs.	.66	3.76	2.0
Equipment			2.58	1.4
Fertilizer				
Mixed	578 lbs.	\$.021	\$12.20	6.6
Nitrate	181 lbs.	.021	3.81	2.0
Borax	41 lbs.	.033	1.36	.7
Manure	4.2 tons	2.00	8.46	4.6
Green manure			.38	.2
Seed	9 lbs.	.59	5.58	3.0
Use of land			10.82	5.8
Interest on costs at 3%			2.19	1.2
			<hr/>	
Total growing costs			\$75.17	40.5
<u>Harvesting and hauling</u>				
Topping	619 bu.	\$.112	\$69.55	37.5
Other man labor	36.7 hrs.	.41	14.92	8.0
Truck - farmer's			6.46	3.5
hired	8.7 tons	1.03	8.99	4.8
Other costs			.31	.2
			<hr/>	
Total harvesting and hauling			\$100.23	54.0
<u>Storing</u>				
Man labor	6.6 hrs.	\$.36	\$ 2.39	1.3
Storage	7.7 tons	1.00	7.75	4.2
Other costs			.03	-
			<hr/>	
Total storing			\$ 10.17	5.5
			<hr/>	
Total cost			\$185.57	100.0
			<hr/>	
Total returns	16.4 tons	\$21.06	\$344.43	
			<hr/>	
Profit per acre			\$158.86	
			<hr/>	
Returns per hour of labor			\$.97	

TABLE 5. COSTS AND RETURNS PER TON OF BEETS
14 farms, Ontario County, 1941

	Costs and Returns		
	As found in study	If yield were the same as the State average for	
		1941	1936-40
Average yield per acre (tons)	16.4	8.4	5.9
<u>Cost per ton</u>			
Growing	\$ 4.60	\$ 8.95	\$12.74
Harvesting and hauling			
Topping	4.25	5.10*	5.31*
Loading and hauling	1.88	1.88	1.88
Total	6.13	6.98	7.19
Storing	.62	.62	.62
Total cost	\$11.35	\$16.55	\$20.55
<u>Price per ton</u>	\$21.06	\$21.06	
<u>Profit per ton</u>	\$ 9.71	\$ 4.51	

*The topping cost was increased 20 per cent in column 2 and 25 per cent in column 3 on the assumption that with the lower yield growers would have to pay more per bushel for this job.

was about double the yield for the State of 8.4 tons during the same year. Also the State average yield in 1941 was about 40 per cent higher than during the previous five years.

The State average yield from 1936 to 1940 was 5.9 tons per acre (table 2). With this yield and with a growing cost per acre of \$75 as found on these farms in Ontario County, the cost per ton to harvest time would have been \$12.74 (table 5).

The largest item in the cost of producing beets is topping. This amounted to about \$70 per acre or 37 per cent of the total cost. This was nearly as much as the total cost to harvest time. The topping, loading and hauling of the beets amounted to \$100 per acre or \$6.13 per ton.

Some growers stored their beets. If the beets were stored in a building, \$1 per ton was charged whether or not the storage was hired. Where the beets were stored in the open the cost of covering the pile was included as an expense. Storage amounted to \$10 per acre or 62 cents per ton.

The total cost of growing and marketing the beets on these farms in 1941 was \$185 per acre or \$11.35 per ton. With the State average yield from 1936 to 1940 the average cost per ton would have been about \$20.

The average price received for beets varied from \$14 to \$30 per ton. Some growers were fortunate enough to sell their crop early at \$30 per ton when it was thought the crop would be short. Thus they had the unusual combination of a high yield and a high price. The average price received was \$21.06 per ton and the returns per acre were \$344.

The profit per acre after paying all costs was about \$159 per acre or \$9.71 per ton.

Man Labor

About 60 per cent of the cost of producing beets is for labor. Weeding required 59 hours per acre, topping 164 hours, loading and hauling done by the farmer 37 hours, and all other labor 17 hours (table 6). A total of 277 hours of man labor per acre was required with the high yield of 16.4 tons in 1941.

The labor rate per hour was calculated for each farm. The monthly cash wage paid year men plus the value of privileges was divided by 234 hours (26 days x 9 hours per day) per month. The operator's time when given on a yearly basis was divided by 2808 hours per year (234 hours per month x 12 months) to obtain the rate per hour. On this basis the cost for the operator and regular hired help averaged 38 cents per hour.

Weeding is the largest item in the cost of growing beets to harvest time. Groups of workers were employed for this purpose and the usual rate in 1941 was \$2.75 for a 9-hour day or 31 cents per hour. Weeding required 59 hours per acre and cost \$18. This operation amounted to one-quarter of the growing cost, and 10 per cent of the total cost of producing beets.

TABLE 6. COSTS OF PRODUCING BEETS, BY OPERATIONS
 14 farms, Ontario County, 1941
 (16 acres per farm)

	Man Hours		Cost	
	Per acre	Per cent of total	Per acre	Per cent of total
<u>Growing costs</u>				
Flowing	1.5	.6	\$2.23	1.2
Fitting	2.8	1.0	3.48	1.9
Fertilizing	2.0	.7	1.50	.8
Seeding	1.0	.4	1.01	.5
Cultivating	3.9	1.4	3.95	2.1
Weeding	58.9	21.2	18.09	9.7
Miscellaneous	.2	-	.11	.1
Fertilizer and borax			17.37	9.4
Manure			8.46	4.6
Green manure			.38	.2
Seed			5.58	3.0
Use of land			10.82	5.8
Interest on costs			2.19	1.2
<u>Total growing</u>	<u>70.3</u>	<u>25.3</u>	<u>\$75.17</u>	<u>40.5</u>
<u>Harvesting and hauling costs</u>				
Topping	163.9*	59.1	\$69.55	37.5
Loading and hauling	36.7	13.2	30.68	16.5
<u>Total harvesting and hauling</u>	<u>200.6</u>	<u>72.3</u>	<u>\$100.23</u>	<u>54.0</u>
<u>Storing costs</u>	<u>6.6</u>	<u>2.4</u>	<u>\$ 10.17</u>	<u>5.5</u>
<u>Total Costs</u>	<u>277.5</u>	<u>100.0</u>	<u>\$185.57</u>	<u>100.0</u>

*Topping was done mostly by piece work. To obtain the hours of labor for topping it was assumed that the workers earned an average of 40 cents per hour.

Horse Labor

Horses were used only 11 hours per acre growing beets and this was charged at 20 cents per hour. The average cost for horse labor on cost account farms in the State was about 18 or 19 cents per hour from 1937 to 1939. This was increased slightly because of the higher cost for man labor caring for horses and for feed in 1941.

Tractor and Other Equipment

The costs for use of equipment were obtained by arbitrarily adding 20 per cent to those reported by J. P. Hertel in a study of farm equipment for 1936 (table 7). About one-half of the farms studied by Hertel were in Ontario County.

The costs for horses and equipment in growing beets to harvest time were less than 5 per cent of the total cost. Thus, any error in rate used for the different pieces of equipment would have little effect on the cost of producing beets.

The tractor cost averaged 66 cents per hour.

TABLE 7. APPROXIMATE COST OF OPERATING FARM MACHINERY IN 1941*

	Rate used cents		Rate per acre cents
Tractor - 1 plow	48 per hour	Tractor plow	59
2 plow	59 per hour	Disc	13
3 plow	86 per hour	Harrow	7
Truck	7.5 per mile	Cultipacker or roller	7
Auto	5.0 per mile	Grain drill	32
Seeder	/	Cultivator - 1 horse	10
		2 horse	20
		tractor	43

*The above data are from cost accounts or from Cost of Farm Power and Equipment by J. P. Hertel and Paul Williamson, Cornell Exp. Sta. Bul. 751, p. 20. 1941. Twenty per cent was arbitrarily added to obtain the costs for 1941.

/No data were available on the cost of seeders, so these were charged at the same rate as cultivators.

Fertilizer

All growers applied a mixed fertilizer. The two most common ratios were 5-10-5 (10-20-10) and 4-8-8 (8-16-16). About one-half of those using these analyses of fertilizer used the double strength. Two growers used 4-16-4, and one grower home mixed a 6-12-6, which is the 1-2-1 ratio the same as the 5-10-5, or 10-20-10.

The rate of application varied from 225 pounds of mixed fertilizer per acre to 1412 pounds of 8-16-16. The median¹ rate of application was about 500 pounds per acre. The average cost for mixed fertilizer was \$42 per ton.

One-half of the growers top dressed their beets with nitrate of soda. The median rate of application was 250 pounds per acre. Eleven of the fourteen growers reported the purchase of borax, and the other three probably obtained this ingredient with their mixed fertilizer. The median rate of application was 50 pounds per acre.

Amount of Fertilizer Applied and Profit per Acre

The growers that applied less than 600 pounds of single strength mixed fertilizer had a median yield of 13.1 tons per acre, as compared with 19.0 tons where 600 pounds or more were applied (table 8). All of the growers using the most mixed fertilizer per acre also top dressed their beets with nitrate of soda, while only two growers in the other group used nitrate in this way.

The use of the larger amount of fertilizer per acre increased the cost per acre of growing beets to harvest about as much as the increase in yield, so the cost per ton was about the same for both groups. Also there was little difference in the profit per ton. Because of the greater tonnage produced per acre, the profit per acre for those applying the most fertilizer was \$187 as compared with \$131 for those applying the least fertilizer.

¹The median is center figure; that is, there were as many growers applying over 500 pounds per acre as there were applying less than this amount. The median is not affected, as is the average, by the extremely large amount of fertilizer applied by one grower.

TABLE 8. RELATION OF AMOUNT OF FERTILIZER APPLIED AND PROFIT PER ACRE
14 farms, Ontario County, 1941

Pounds of single strength fertilizer*	Number of farms	Median pounds of single strength fertilizer*	Median pounds of nitrate of soda	Median tons of beets per acre	Median cost per acre to harvest	Median cost per ton for growing	Profit per acre ²
Less than 600 pounds	9	400	0 ¹	13.1	\$60	\$4.29	\$131
600 pounds or more	5	1250	333	19.0	89	4.47	187

*For those using 10-20-10 and 8-16-16, the pounds applied were multiplied by two for the above table.

¹Only two of the nine growers in this group top dressed with nitrate. One applied 90 pounds per acre and the other 109 pounds.

²Profit per acre was obtained as follows: (1) the average harvesting and marketing cost of \$6.75 per ton was deducted from the average price of \$21.06. (2) From this difference of \$14.31 was deducted the growing cost per ton for each group in the above table. (3) This profit per ton was multiplied by the yield per acre.

Manure

Information was obtained concerning the amount of manure applied during the past four years. It was assumed that the 1941 beet crop used 40 per cent of the manure applied to the beet field in 1941, 30 per cent of that applied on that field in 1940, 20 per cent of that in 1939, and 10 per cent of that applied in 1938. By this method the beets were charged with 4.3 tons of manure per acre. It was assumed that the manure was worth \$2 per ton after it had been applied to the land². Thus the cost for manure was \$8.60 per acre, or about 10 per cent of the costs to harvest time.

Only one farmer had planted a green manure crop prior to the beet crop.

²It was assumed that the manure was worth \$1.50 per ton in the barn and cost account records show it costs about 50 cents per ton to spread it on the land.

Use of Land

The value of the land used by beets was obtained and interest was charged at the rate of 5 per cent. Taxes (county, town and school) and other costs were assumed to be 3 per cent of the value of the land.

The most common value of land was \$100 per acre. One grower with very productive land for truck crops valued his land at \$300 per acre. The average value of land was \$135 per acre. With interest, taxes and other costs at 8 per cent, the charge to beets for use of land was \$10.82 per acre.

Interest on Costs

Costs on beets are incurred throughout the season from the time the ground is plowed until the beets are sold. Money is tied up for a certain period of time. Interest was charged on the costs to harvest time at the rate of 6 per cent for 6 months, or 3 per cent on the total growing costs. This amounted to \$2.19 per acre.

HARVESTING AND MARKETING

Topping

This is largely a hand operation. Only one grower used a topping machine. Most of the growers hired workers to pull and top their beets by the bushel. The price paid per bushel varied from 10 to 13 cents and averaged 11.2 cents.

To obtain the number of hours required to top the beets it was assumed that the workers earned an average of 40 cents per hour. On this basis about 164 hours per acre were required for the topping operation, or about 60 per cent of the labor on beets. The cost for topping was \$69 per acre or \$4.25 per ton.

Loading and Hauling

Most of the growers hired their beets hauled to the canning factory for \$1 per ton. The loading and harvesting other than topping amounted to 88 cents per ton, making a total loading and hauling cost per ton of \$1.88.

Storing

About one-half the beets on these farms were stored. Most of the stored beets were put in a building and \$1 per ton was charged for the use of the building. When the storage cost was divided by the total tonnage of beets the average cost was \$10 per acre or 62 cents per ton.

SUMMARY

The average yield of beets in 1941 was 16.4 tons on these 14 farms in Ontario County, as compared with 8.4 tons for New York State. Beet yields in New York in 1941 were 42 per cent higher than during the previous five years. With the high yield per acre it cost these growers about \$11 per ton to produce beets in 1941. If the yield had been the same as the State average for 1936 to 1940 (5.9 tons) the cost would have been about \$20 per ton.

The price per ton received by the 14 growers varied from \$14 to \$30 and averaged \$21.

Because of the high yield of beets and the favorable price in 1941, beets paid well on these 14 farms in Ontario County. The profit per acre was \$158 and the profit per ton nearly \$10. The profit from beets per farm ranged from \$228 to nearly \$8000.

Labor made up 59 per cent of the cost of producing beets. Weeding and topping required four-fifths of the labor used.

The growers that used more than 500 pounds of mixed fertilizer and who top dressed with nitrate, had higher yields and larger profit per acre than the growers using less fertilizer.

CONCLUSIONS

1. Use liberal amounts of fertilizer on beets in 1942. Fertilizer prices in 1942 will be only about 10 per cent higher than in 1941. It will be cheap compared with other costs, especially labor.
2. Place fertilizer where it will do the most good.
3. Use any and all means that will reduce the amount of weeding required.

Below are some possibilities:

- a. Do a good job of fitting before seeding.
 - b. Harrow shallow the last time before seeding so as not to turn up ungerminated weed seed.
 - c. Do a good job of cultivating.
 - d. Do the weeding job on time.
4. Use any and all means that will reduce the labor required for topping.

COSTS AND RETURNS FROM BEETS ON YOUR FARM AS COMPARED
TO THE AVERAGE FOR ONTARIO COUNTY, 1941

	Average of 14 farms			YOUR FARM
	Quantity per acre	Rate	Cost per acre	Cost per acre
<u>Growing</u>				
Man labor				
Weeding	58.9 hrs.	\$.31	\$18.09	\$ _____
Other	11.4 hrs.	.38	4.36	_____
Horse labor	7.9 hrs.	.20	1.58	_____
Tractor	5.7 hrs.	.66	3.76	_____
Equipment			2.58	_____
Fertilizer				_____
Mixed	578 lbs.	\$.021	12.20	_____
Nitrate	181 lbs.	.021	3.81	_____
Borax	41 lbs.	.033	1.36	_____
Manure	4.2 tons	2.00	8.46	_____
Green manure			.38	_____
Seed	9 lbs.	.06 ^{.57}	5.58	_____
Use of land			10.82	_____
Interest on costs at 3%			2.19	_____
Total growing costs			\$75.17	\$ _____
<u>Harvesting and hauling</u>				
Topping	619 bu.	\$.112	\$69.55	\$ _____
Other man labor	36.7 hrs	.41	14.92	_____
Truck - farmer's			6.46	_____
hired	8.7 tons	1.03	8.99	_____
Other costs			.31	_____
Total harvesting and hauling			\$100.23	\$ _____
<u>Storing</u>				
Man labor	6.6 tons	\$.36	\$ 2.39	\$ _____
Storage	7.7 tons	1.00	7.75	_____
Other costs			.03	_____
Total storing			\$ 10.17	\$ _____
Total cost			\$185.57	\$ _____
Total returns	16.4	\$21.06	\$344.43	\$ _____
Profit			\$158.86	\$ _____

COSTS AND RETURNS PER TON OF BEETS ON YOUR FARM AS COMPARED TO THE AVERAGE FOR ONTARIO COUNTY, 1941

	Average for 14 farms	YOUR FARM
Acres of beets per farm	16	_____
Average yield per acre	16.4	_____
<u>Cost per ton</u>		
Growing	\$4.60	\$ _____
Harvesting and hauling		
Topping	4.25	_____
Loading and hauling	1.88	_____
Total	6.13	_____
Storing	.62	_____
Total cost	\$11.35	\$ _____
<u>Price per ton</u>	\$21.06	\$ _____
<u>Profit per ton</u>	\$ 9.71	\$ _____

COSTS OF PRODUCING BEETS, BY OPERATIONS, ON YOUR FARM AS COMPARED TO THE AVERAGE FOR ONTARIO COUNTY, 1941

	<u>Man hours per acre</u>		<u>Cost per acre</u>	
	Average for 14 farms	YOUR FARM	Average for 14 farms	YOUR FARM
<u>Growing costs</u>				
Plowing	1.5	_____	\$ 2.23	\$ _____
Fitting	2.8	_____	3.48	_____
Fertilizing	2.0	_____	1.50	_____
Seeding	1.0	_____	1.01	_____
Cultivating	3.9	_____	3.95	_____
Weeding	58.9	_____	18.09	_____
Other growing costs	0.2	_____	44.91	_____
Total growing	70.3	_____	\$75.17	\$ _____
<u>Harvesting and hauling</u>				
Topping	163.9	_____	\$69.55	\$ _____
Loading and hauling	36.7	_____	30.68	_____
Total harvesting & hauling	200.6	_____	\$100.23	\$ _____
<u>Storing</u>	6.6	_____	\$ 10.17	\$ _____
<u>Total</u>	277.5	_____	\$185.57	\$ _____

WHAT WILL IT COST TO PRODUCE BEETS IN 1942?

	Average for 14 farms Ontario County, 1941		Estimated wages and prices in 1942	Estimated cost per acre in 1942
	Quantity per acre	Wages and prices		
<u>Growing</u>				
Man labor				
Weeding	59 hrs.	\$.31	_____	_____
Other	11 hrs.	.38	_____	_____
Horse labor	8 hrs.	.20	_____	_____
Tractor	6 hrs.	.66	_____	_____
Equipment				3.00
Fertilizer				
Mixed	578 lbs.	.021	_____	_____
Nitrate	181 lbs.	.021	_____	_____
Borax	41 lbs.	.033	_____	_____
Manure	4.2 tons	2.00	_____	_____
Green manure				_____
Seed	9 lbs.	.59	_____	_____
Use of land (value per acre x 8 per cent)				_____
Total				\$ _____
Interest on costs at 3 per cent				_____
Total growing costs				\$ _____

WHAT WILL IT COST PER TON?

	Estimated wage in 1942	Estimated cost per ton in 1942
Growing cost (cost per acre ÷ estimated yield) _____ tons	\$ _____	\$ _____
<u>Harvesting and hauling</u>		
Topping _____ bu. per ton	_____ per bu.	_____
Other man labor (average 2.2 hrs. per ton)	_____ per hr.	_____
Trucking (average \$1.00 per ton in 1941)		_____
<u>Storing</u>		
Extra man labor _____ hours	_____ per hr.	_____
Storage		_____
Total cost		\$ _____