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1988 BUDGET GUIDE

ESTIMATED PRICES
for
CROP OPERATING INPUTS
and
CAPITAL INVESTMENT ITEMS

Darwin P. Snyder

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

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1988 Budget Guide

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The author appreciates and recognizes the help and data provided by many farm equipment and supply vendors across the State in compiling this report.

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Introduction

Anyone concerned with controlling production costs for farm enterprises knows the importance of planning ahead. The need to control costs becomes more important than usual in times of low commodity prices. Financial planning for the year ahead should include a degree of budgeting to determine what crop inputs and capital purchases will be needed.

This publication includes a compilation of prices acquired from several vendors. It is intended to serve as a guide for farm operators and those who work with them to use in the budgeting process. Most prices shown herein are averages of several samples obtained in early 1988. However, prices for dairy structures and equipment were obtained in 1986 but are considered reasonable for general planning purposes. The cost per cow for new facilities has been indexed to 1988.

Prices vary - sometimes widely - between vendors and depend on options, quality, and other factors. The producer should recognize this and should consider convenience and service as well as price in the purchase of any item. For crop inputs it is wise to consider carefully the quantity needed per acre based on cropping history, soil tests, and a realistic yield expectation with normal weather patterns. For capital purchases it is important to control fixed costs for equipment and structures by spreading the use over a large number of units. Idle investments are expensive.

The prices noted for tractors, trucks, and field equipment are averages of <u>list</u> prices for each item equipped as normally purchased. Accompanying notes are used in some cases to further identify features of a particular capital item.

A table of index prices paid by New York dairy farmers is included to provide a perspective of several years. The indices indicate how the major cost items for a dairy farm business have changed in recent years and provide an estimate of how they may be expected to change in 1988.

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*Research Associate at Cornell University.

CROP OPERATING INPUTS

Item	Number of responses	1988 Average price	Unit
Seed:			
Alfalfa	7	$2.93	pound
Timothy	6	1.49	pound
Corn	7	64.79	80-K unit
Oats	5	5.86	bushel
Wheat - winter	1	6.75	bushel
spring	1	9.50	bushel
Red kidney beans	2	0.55	pound
Soybeans	4	13.85	bushel
Lime: Spread, 85% ENV	5	25.50	ton
Fertilizer:			
Nitrogen (N)	3	0.20	pound
Phosphorus (P_2O_5)	3	0.22	pound
Potassium (K_2O)	3	0.14	pound
30-32% liquid N	5	126.00	ton
33.5-0-0 ammonium nitrate	2	177.50	ton
46-0-0 urea	4	177.25	ton
82-0-0 anhydrous ammonia	4	223.75	ton
0-46-0	4	220.25	ton
0-0-60	6	164.17	ton
11-52-0 MAP	7	263.00	ton
18-46-0 DAP	6	252.50	ton
6-24-24	6	202.50	ton
10-20-20	7	190.29	ton
15-15-15	7	180.00	ton

CROP OPERATING INPUTS continued

Item	Number of responses	1988 Average price	Unit
Pesticides:			
Herbicides:			
2,4-D	4	11.53	gallon
2,4-DB	2	20.18	gallon
Amiben	2	18.33	gallon
Atrazine 4L	6	8.48	gallon
Banvel	5	62.43	gallon
Bicep	5	20.82	gallon
Bladex 4L	6	18.41	gallon
Dual 8E	6	49.83	gallon
Eptam 7E	6	22.53	gallon
Eradicane	4	25.17	gallon
Lasso	4	20.54	gallon
Lorox L	4	66.57	gallon
Paraquat	3	34.49	gallon
Princep 4L	3	11.86	gallon
Prowl	6	22.65	gallon
Ranger	6	33.20	gallon
Roundup	3	80.09	gallon
Sencor 75WP	1	96.00	gallon
Treflan	6	27.16	gallon
Valpar	5	45.87	gallon

CROP OPERATING INPUTS continued

Item	Number of responses	1988 Average price	Unit
Insecticides:			
Corn/bean seed treatment	2	0.37	acre
Counter	5	1.43	pound
Diazinon 14G	2	1.48	pound
Dyfonate 20G	4	1.80	pound
Furadan 15G	5	1.45	pound
Lorsban 15G	5	1.47	pound
Malathion 5E	2	19.68	gallon
Methoxachlor 2E	2	13.51	gallon
Sevin	1	2.48	pound
Thimet 20G	5	1.32	pound
Fungicides:			
Benlate 50WP	3	14.36	pound
Other Operating Inputs:			
Labor - regular	*	7.44	hour
part-time, seasonal (includes nonwage costs)	*	5.31	hour
Interest	*	10.40	percent
Fire insurance, RE & chattel	*	5.75	per $1000 cov
Baling - twine	2	18.23	9000 ft bale
wire	2	33.00	cwt (6500 ft)
Fuel - diesel, field	*	0.79	gal, w/o tax
road	*	1.03	gallon
gas, field, regular	*	0.84	gal, w/o tax
road, unleaded	*	1.00	gallon
LP gas, propane	*	0.79	gallon

*Estimates based on indexed changes.

CAPITAL PURCHASES

Item	Number of Responses	1988 Avg. List Price
Tractors - diesel and equipped as normally purchased, without cab, pto hp.		
12 hp (gas), lawn & garden, hydro	4	$ 3,700
25 hp	4	10,900
40 hp	4	16,750
50 hp	4	18,800
60 hp	4	21,500
60 hp w/front wheel assist	4	26,850
80 hp	4	25,100
80 hp w/front wheel assist	4	31,150
100 hp	4	39,150
100 hp w/front wheel assist	4	47,300
120 hp	4	44,500
120 hp w/front wheel assist	4	53,350
140 hp	4	49,050
175 hp 4WD, with cab	4	65,000
Tractor cab w/air	4	6,600
Trucks		
Pickup - 3/4T, auto, V8, 2WD	3	12,775
3/4T, auto, V8, 4WD	3	14,500
Large road truck - 400 cu. in. gas, 5 speed trans., 18 ft. grain box w/hoist, heavy tires, single rear axle	3	28,500
Primary Tillage Equipment		
Moldboard plow - auto reset, semi-mounted		
4-16"	3	8,700
5-16"	3	9,950
5-18"	3	10,200
6-18"	3	11,550

CAPITAL PURCHASES continued

Item	Number of Responses	1988 Avg. List Price
Primary Tillage Equipment continued		
Chisel plow - w/front disc		
11 ft, 7 shank	5	$ 7,600
13 ft, 9 shank	5	8,950
Offset disc - 13 ft, 26" disc	5	10,800
Secondary Tillage Equipment		
Disc - 14 ft	5	6,750
20 ft	5	13,350
Drag - spring tooth harrow		
16 ft	4	1,900
20 ft	4	2,900
Cultimulcher - 12 ft	5	6,250
15 ft	5	7,400
Field cultivator - 16-18 ft	4	4,350
Cultipacker - 12 ft	3	1,700
14 ft	3	1,850
30 ft	3	8,550
Land roller - 24 ft	1	5,400
Ridge cultivator (builder) - 6 row	2	4,950
Planting Equipment		
Drill - w/seeder, dry fertilizer		
15 x 7"	1	5,000
21 x 7"	2	6,850
24 x 7"	1	7,000
Cultipacker seeder - 10 ft	2	4,400
12 ft	2	7,000
No-till seeder	1	10,000

CAPITAL PURCHASES continued

Item	Number of Responses	1988 Avg. List Price
Planting Equipment continued		
Corn planter - plateless w/dry fertilizer		
4 row	4	$ 9,700
6 row	4	14,000
8 row	3	17,300
12 row	2	27,500
No-till plateless w/dry fertilizer		
4 row	3	11,150
6 row	3	15,200
8 row	3	19,100
Growing Equipment		
Cultivator - 4 row	3	2,250
6 row	3	2,900
8 row	3	4,500
12 row	2	9,200
Sprayer - 28 ft, 300 gallons	3	3,250
40 ft, 500 gallons	2	7,300
Harvesting Equipment		
Rotary mower - 5 ft	4	930
6 ft	1	900
10 ft	1	4,000
Mower conditioner - 9 ft	5	10,250
12 ft	4	15,600
Side delivery rake - 9 ft	4	3,550
Baler w/kicker, mid size, twine	4	14,500
Large round baler - 5 ft	4	11,650
Flail chopper - 6 ft	2	7,600

CAPITAL PURCHASES

Item	Number of Responses	1988 Avg. List Price
Harvesting Equipment continued		
Forage harvester - pto base unit w/o metal detector		
2 row	4	$14,350
3 row	4	17,700
Windrow pickup head - 5.5 ft	4	2,650
7.5 ft	4	3,800
Corn head - 2 row	4	4,400
3 row	4	8,500
Snapper head - 2 row	2	7,350
Blower - 4 to 5 ft diameter	5	3,350
Combine - SP, diesel, 2WD		
4 row power unit	3	63,350
4 row corn head	3	13,300
4 row bean head	1	13,000
13 ft grain head	2	7,750
6 row power unit	4	86,150
6 row corn head	4	19,450
6 row bean head	1	17,000
15 ft grain head	3	7,450
4 wheel drive option	4	9,750
Dry bean cutter - 6 row	1	4,300
Dry bean windrower - 6 row	1	9,350
Dry bean combine - trailed	1	38,500

CAPITAL PURCHASES

Item	Number of Responses	1988 Avg. List Price
Transport Equipment		
Running gear - chassis w/tires		
8 ton	4	$ 1,100
12 ton tandem	4	1,750
Bale wagon w/8T gear, 4 tires	4	2,000
Round bale mover - 3 pt hitch	3	400
Flat bed transport	1	3,000
Side unloading forage wagon		
heavy gear, 6 tires, roof	4	9,400
Dump wagon - hydraulic, heavy gear, tires, roof		
12 ft	2	8,450
14 ft	2	9,400
Gravity grain wagon		
300 bu, 8T gear	3	2,150
Manure spreader - hyd gate		
225 bu ±	5	5,650
350 bu ±	5	8,050
Slurry spreader		
2,400 gallons	2	13,500
Feed mixer wagon w/scales, chassis, tires		
300-350 bu	5	15,750

DAIRY BARN AND MILKING COMPLEXES FOR TWO HERD SIZES
ESTIMATED COSTS
NEW YORK, 1986

Item	125 Cows	250 Cows
Barn & holding area - includes site prep & all concrete work; stall beds concrete	$ 99,500	$162,000
Milking center - includes milk room	47,000	58,000
Feed bunk - adequate for herd size	2,300	4,400
Freestalls - metal	5,700	11,300
Mechanical manure scraper	13,000	18,000
Parlor equipment - no feeders	4,800 (D-4)	6,400 (D-6)
Milking system - includes pump, condenser, pipeline, water heater, heat exchanger, etc.	18,000	22,000
Bulk tank - sized for 18,000 pound herd average & 5 milkings	18,400	26,100
Other features:		
Auto takeoffs	4,000	5,800
Weigh meters	7,300	11,000
Crowd gate	2,100	2,500
Plumbing, wiring, etc. - waterers, lighting	10,000	13,000
Well - 200 feet deep, 100 feet of 6" casing with pump installed	3,500	3,500
Total	$235,600	$344,000
Per cow (1986)	$1,885	$1,376
Per cow (indexed to 1988)*	$1,913	$1,397

*Using the index for building supplies from page 15.

Notes:

1. Vendors were asked to estimate current turnkey costs for the components listed for two herd sizes.
2. Barn complex - four or six rows of freestalls; center feed bunk drive through design; cold, pole construction with attached masonry, insulated parlor and milk house. All barn equipment installed.
3. Excludes feed storage facilities.
4. Data are averages of two to four responses.

Source: 1986 Survey of Vendors, D.P. Snyder, May 1986.

HORIZONTAL SILOS
ESTIMATED COSTS
New York, 1988

Size	Capacity	Cost	
		Total	Per Ton
W x L X H in feet	Tons @ 70% mc	$	$
40 x 80 x 8	512	16,528	32
10	672	18,768	28
40 x 100 x 8	640	17,904	28
10	840	20,144	24
50 x 80 x 8	640	18,420	29
10	840	20,660	25
12	1,056	22,900	22
50 x 100 x 8	800	22,380	28
10	1,050	25,180	24
12	1,320	27,980	21
60 x 100 x 8	960	24,616	26
10	1,260	27,416	22
12	1,584	30,216	19
60 x 120 x 8	1,152	28,920	25
10	1,512	32,280	21
12	1,900	35,640	19
80 x 100 x 8	1,280	29,088	23
10	1,680	31,888	19
12	2,112	34,688	16
80 x 120 x 8	1,536	34,080	22
10	2,016	37,440	19
12	2,534	40,800	16

Notes: (Silo is concrete with open ends.)

1. Capacity is within the silo walls and based on the following average densities for various wall heights:

   8 foot wall - 40 lbs./cu. ft; 10 ft - 42 lbs./cu. ft.;
   12 ft. - 44 lbs./cu. ft.

2. Cost includes site preparation at $0.30 per square foot of floor area.

   Floor area includes two full width aprons 15 feet long and reinforcing. Average cost at $1.42 per square foot.

   Walls are erected and in place with necessary supports, footers, and reinforcing. Average cost at $7.00 per square foot.

   Costs are for silo built within 30 miles of dealer's plant.

3. Capacity would be greater and cost per ton lower if average depth of silage exceeded wall height.

4. Costs are calculated from data supplied by four vendors.

Source: 1988 Survey of Vendors, D.P. Snyder, February 1988.

TOWER CONCRETE SILOS AND TOP UNLOADERS
ESTIMATED COSTS
New York, 1988

Silo Size	Capacity	Cost Silo	Cost Per Ton	Unloader
Dia x H in feet	Tons @ 70% mc	$	$	$
16 x 50	260	12,700	49	} 5,960
60	340	15,700	46	
18 x 60	430	17,450	41	} 6,260
70	540	19,350	36	
20 x 60	530	19,400	37	} 6,600
70	660	22,550	34	
22 x 60	640	23,600	37	} 6,400
70	790	27,400	35	
24 x 60	760	24,800	33	} 7,350
70	940	28,400	30	

Notes:

1. Includes site preparation, foundation, roof, chute, ladder, pipe.
2. Most silo manufacturers contacted do not offer silos larger than 24 feet in diameter.
3. Data for the unloaders is generally from four dealers. Data for the silos is generally from five dealers.

Source: 1988 Survey of Vendors, D.P. Snyder, February 1988.

FARM MACHINE STORAGE BUILDINGS
COST ESTIMATES
NEW YORK, 1988

General Specifications of Structure -

- About 3,000 to 5,000 square feet, metal shell, timber column, large end and side doors, passage door, basic wiring, no concrete floor, delivered and erected on prepared site.

- Average cost - about	$ 7.90	per square foot erected
Site preparation - about	0.70	per square foot
Floor - Gravel and concrete - about	2.30	per square foot installed
Total cost	$10.90	per square foot

Source: 1988 Survey of Vendors, D.P. Snyder, February 1988, data from five vendors.

SELECTED MANURE SYSTEM COMPONENTS
COST ESTIMATES*
NEW YORK, 1986

Method of Cleaning Barn		Equipment for Loading Storage		Storages**		Equipment for Agitation & Hauling	
	Range in Thousands $						
Tractor Scraper	2-14	Loading Dock	3-6	Earthen Bottom & Ramp (hard surface)	3-7	Pump Agitator	6-8
Alley Scraper / Gutter Cleaner	5-7	Conveyor Stacker	5-6		3-6	Liquid Manure Tanks	6-11
Slotted Floor	11-24	Ram Pump	7-11	Above Grade Steel	30-35	Front End Loader	3-6
Flush	3-8	Liquid Pump (submersible)	6-12	Mono-lithic	21-28	Gravity Load Structure	3-6
		Gravity Structure & Pipe	2-6	Bunker Wood & Concrete	11-18	Conv. Spreader	5-9
		Surface or Subsurface Sluiceways	4-6	Below Slats	16-25	Irrigation	20-30

*100 cows, freestall barn.
**Six month storage (except for earthen which is for one year).

Source: R. Guest, D. Snyder, May 1986.

INDEX OF PRICES PAID BY NEW YORK DAIRY FARMERS
(1977=100)

Item	Weight	1982	1983	1984	1985	1986	1987*	1988**
Feed	.31	129	141	141	119	118	112	116
Purchased animals	.03	217	195	170	163	156	173	170
Fuel & energy	.05	209	205	206	204	178	176	185
Fertilizer	.05	149	139	142	134	127	128	138
Seed	.02	157	160	169	169	167	166	171
Machinery	.18	161	172	181	185	185	189	193
Building & fencing supplies	.08	135	138	138	136	136	137	138
Farm services & rent	.08	143	147	149	152	150	148	151
Agricultural chemicals	.01	119	125	128	128	127	124	124
Interest rates	.07	161	145	151	146	141	134	136
Farm wage rates	.09	141	151	158	169	185	195	203
Taxes	.03	142	152	161	176	181	190	195
Prices Paid, Not Including Assessment		148	153	156	150	149	149	153
Prices Paid, Including Assessment & Promotion Deduction		--	159	162	152	154	152	N/A

Source: New York Crop Reporting Service, Agricultural Situation and Outlook, A.E. Ext. 87-32.

*Preliminary
**Projected

For 1988, the index of prices paid is projected to increase about three percent. Fertilizer, fuel and energy, and farm wage rates are likely to show the largest increase. None of the cost categories are expected to decrease, but agricultural chemicals are likely to be stable in 1988. With no assessment or a very small assessment projected for 1988, the index including the assessment was discontinued.