

BUDGETING FOR SUCCESSFUL MANAGEMENT*

by

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Successful management is made up of much more than just budgeting, but sky-high interest rates and other cost increases are forcing managers to take a hard look at investments before they decide to commit funds. This paper reports a computer-assisted procedure for estimating the financial consequences of different courses of action.

The recent "Cost of Production Survey", to which many of you responded, provided the base for the two dairies budgeted in this paper. As you will see, there are still some holes in the data that make up our example, but when the survey analysis is completed, we will plug those holes. Then we will have a set of information that will make it possible to analyze most of the alternatives that Florida dairymen will want to consider.

Dairymen interested in cutting feed costs are currently asking about silage so to analyze the effect of adding a silage operation, we first developed a budget for a 450 cow dairy which was buying all its feed. Then we examined the effect of buying more land and developing a silage feeding program for the same size dairy. This example emphasizes the budgeting process, not the answer we got. Different individuals, with different data, would get different results. Once the bugs are worked out of this system, we will make this planning process available to Florida dairymen. Then dairymen will be able to use their own

*This paper was developed from information provided by Florida dairymen who responded to the "Cost of Production Survey." Dr. Bill Ocumpaugh provided technical assistance with silage budgets, and David Zimet compiled the survey data. Paper was presented at the Dairy Production Conference, May 6, 1980, Gainesville.

ata, supplemented with information stored in the computer, to tailor-make a plan for their own operation.

450 Cow Dairy Budget

Table 1 contains a budget for a medium-sized dairy in Central Florida. This dairy has 450 cows, raises one-half of the heifer calves as replacements, and buys all its feed. Feed costs are 62% of variable costs, and one-fourth of the total costs are fixed costs, which include interest on investment in assets, and depreciation on buildings and equipment.

A brief explanation of the major budgeting items follows:

- Milk production is 12,770 pounds per cow per year, sold at an average price of \$15.30 per hundredweight.
- Complete feed purchased at an average price of \$160 per ton (\$8 per hundredweight).
- Replacement heifers entering the milking herd were priced at \$1,000 per head. (Raising replacements in drylot appears to cost about \$1,000, and purchased heifers recently ranged from \$900 to about \$1,200 each [Fieser, 1980]). Cows stayed in the herd about three lactations.
- No management time is charged, only hired labor.
- Interest was charged at 10 percent on capital investment, including cows.
- Net returns of \$12.49 per cow. This amounts to about \$5,620 on a 450 cow dairy, which is probably lower than most dairies of that size are realizing.

to consider the effect of adding a silage operation and feeding silage.

Buying Silage

This silage production plan rests on buying:

Land:

450 acres @ \$750 per acre =	\$337,500
Down payment =	97,500
Debt	<u>\$240,000</u>

Annual payment @ 10% for 20 years	\$28,190.40
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TABLE 1.

DAIRY PRODUCTION COSTS AND RETURNS PER COW
450 COW DAIRY
CENTRAL FLORIDA

ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST
1. GROSS RECEIPTS					
MILK	1.00	CWT.	15.30	127.70	1953.81
DAIRY BULL CALV	1.00	HD.	50.00	0.46	22.80
DAIRY COWS	12.50	CWT.	25.00	0.24	75.00
DAIRY AGED BULL	16.00	CWT.	25.00	0.01	4.00
DAIRY HFR CALVES	1.00	HD.	75.00	0.24	18.00
TOTAL					<u>2073.61</u>
2. VARIABLE COSTS					
15-16% PRO. FEED		CWT.	8.00	120.60	964.80
VET & MED.		HD.	2.00	12.00	24.00
HAULING & MKTG.		HD.	5.62	12.00	67.44
TRUCKING		HD.	0.03	12.00	0.36
HAY		LBS.	0.03	540.00	18.90
BREEDING FEES		HD.	1.15	12.00	13.80
DAIRY AGED BULL		HD.	1500.00	0.01	15.00
SALES COMM.		HD.	0.25	12.00	3.00
CHEMICALS		HD.	0.08	12.00	0.96
MISC OTHER		HD.	0.30	12.00	3.60
DAIRY HEIFERS		HD.	1000.00	0.30	300.00
MACHINERY(FUEL,LUBE,REP)		DOL.			7.24
EQUIPMENT(FUEL,LUBE,REP)		DOL.			6.67
LABOR, TRACTOR & MACHINERY		HRS.	3.25	2.88	9.36
LABOR, EQUIPMENT		HRS.	3.00	0.14	0.42
LABOR, LIVESTOCK		HRS.	3.00	36.50	109.50
TOTAL VARIABLE COSTS					<u>1545.06</u>
3. INCOME ABOVE VARIABLE COSTS					528.55
4. FIXED COSTS					
INT. ON LIVESTOCK CAPITAL		DOL.	0.10	945.00	94.50
INT. ON OTHER EQUIPMENT		DOL.	0.10	74.31	7.43
DEPR. ON DAIRY COW		DOL.			300.00
DEPR. ON DAIRY HEIFER		DOL.			52.50
DEPR. ON OTHER EQUIP.		DOL.			52.58
OTHER FC, MACH & EQUIP.		DOL.			9.05
TOTAL FIXED COSTS					<u>516.06</u>
5. TOTAL COSTS					2061.11
6. NET RETURNS					12.49

328 TOTAL ACRES
BAHIA PASTURE
PREPARED BY: MELTON

DATE: 5/1/80

Silos:

6 upright, 400 F capacity @ \$20,000	=	\$120,000
Down payment	=	20,000
Debt		<u>\$100,000</u>

Annual payment @ 10% for 7 years \$20,540.50

Machinery:

55 hp tractor @	\$ 9,200
83 hp tractor @	13,000
100 hp tractor @	16,750
Truck	10,800
M.B. Plow	2,550
Tandem disk	1,300
Rolling cultivator	1,380
Planter	2,200
Sprayer	300
Silage cutter	8,200
Silage wagon	7,200
Grain drill	2,300
	<u>\$74,180</u>
Down payment	10,000
Debt	<u>\$64,180</u>

Annual payment @ 10% for 5 years \$16,930.52

Thus, even going with mostly used equipment, a dairyman would have to come up with downpayments of \$127,500. This silage production plan involves producing:

Table 2 -- 300 acres of corn and sorghum silage, double-cropped, 14 tons corn silage per acre, 5 tons sorghum silage.

Table 3 -- 100 acres of small grain silage at 4 tons per acre.

Table 4 -- 50 acres of corn and small grains double-cropped, at 14 and 4 tons per acre, respectively.

This amounts to about 7,000 tons of silage annually, and figuring a 25 percent loss would get to 5,250 tons produced. Feeding about 30 percent of their dry matter requirements as silage, the milking herd would require about 2,300 tons, and raising the replacements would take another 820 tons, so the dairy would use about 3,120 tons of silage.

At this writing, we had no decent estimate of the extra cost of feeding the silage to the cows, as compared to feeding all "dry" feed. You will notice there is something over 2,000 tons of silage left over. We employed what one

TABLE 2.

**CORN - SORGHUM SILAGE
FOR DAIRY COW USE
CENTRAL FLORIDA, 1979 PRICES**

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST
1. GROSS RECEIPTS FROM PRODUCTION				
CORN SILAGE	TONS	0.0	14.00	\$ 0.0
SORGHUM SILAGE	TONS	0.0	5.00	0.0
TOTAL				\$ 0.0
2. VARIABLE COSTS				
PREHARVEST				
N&P&K	LBS.	0.04	1000.00	\$ 45.00
N&P&K	LBS.	0.05	850.00	42.50
NITROGEN	LBS.	0.07	150.00	10.50
LIME	TONS	20.60	1.00	20.60
CORN SEED	80K	46.60	0.50	23.30
FTE 503	LBS.	0.17	30.00	5.10
LISSO	GAL.	17.40	0.50	8.70
AATREX	GAL.	8.28	0.50	4.14
FURADAN	LBS.	0.84	20.00	16.80
MESURDL	LBS.	1.05	7.00	7.35
PARAQUAT	GAL.	43.50	0.25	10.88
SORGHUM SEED	LBS.	0.40	15.00	6.00
IRRIG&CHEM APPL.	ACRE	2.00	1.00	2.00
MACHINERY	ACRE	4.34	1.00	4.34
TRACTORS	ACRE	19.65	1.00	19.65
LABOR(TRACTOR & MACHINERY)	HOURL	3.25	5.03	16.36
INTEREST ON OP. CAP.	DOL.	0.10	102.32	10.23
SUBTOTAL, PRE-HARVEST				\$ 253.45
HARVEST COSTS				
SUBTOTAL, HARVEST				\$ 0.0
TOTAL VARIABLE COST				\$ 253.45
3. INCOME ABOVE VARIABLE COSTS				\$-253.45
4. FIXED COSTS				
MACHINERY	ACRE	32.44	1.00	\$ 32.44
TRACTORS	ACRE	14.23	1.00	14.23
TOTAL FIXED COSTS				\$ 46.67
5. TOTAL COSTS				\$ 300.12
6. NET RETURNS				\$-300.12

FERTILIZER: 4-12-18, 15-6-15, 33-0-0
SOMEWHAT POORLY DRAINED ACID SANDS
PREPARED BY: MELTON 4/25/80

BUDGET IDENTIFICATION NUMBER--- 131864060 101 1
ANNUAL CAPITAL MONTH 6

PROCESSED BY FARM SYSTEMS LAB - FOOD & RESOURCE ECON. DEPT., U. OF FLORIDA
PROGRAM DEVELOPED BY DEPT. OF AG. ECON., OKLAHOMA STATE UNIVERSITY
DATE PRINTED: 01 MAY 1980

BREAKEVEN PRICES	
IF	ARE PRODUCED:
14.00 TONS CORN SILAGE	
TO COVER VARIABLE INPUTS	16.204
TO COVER VARIABLE INPUTS AND INTEREST	18.113
TO COVER VARIABLE INPUTS AND LABOR	17.372
TO COVER VARIABLE INPUTS INTEREST AND LABOR	19.281
TO COVER ALL COSTS EXCEPT LAND OVERHEAD RISK AND MANAGEMENT	21.437

TABLE 3.

SMALL GRAIN SILAGE
FOR DAIRY COW USE
CENTRAL FLORIDA, 1979 PRICES

	UNIT	PRICE OR COST/UNIT	QJANTITY	VALUE OR COST
1. GROSS RECEIPTS FROM PRODUCTION				
SM. GRAIN SILAGE	TONS	0.0	4.00	\$ 0.0
TOTAL				\$ 0.0
2. VARIABLE COSTS				
PREHARVEST				\$
N&P&K	LBS.	0.05	450.00	22.50
LIME	TONS	20.60	1.00	20.60
FTE 503	LBS.	0.17	30.00	5.10
GRAIN SEED	LBS.	0.10	120.00	12.00
IRRIG&CHEM APPL.	ACRE	2.00	1.00	2.00
MACHINERY	ACRE	2.23	1.00	2.23
TRACTORS	ACRE	8.77	1.00	8.77
LABOR(TRACTOR & MACHINERY)	HOOR	3.25	2.20	7.15
INTEREST ON OP. CAP.	DOL.	0.10	52.23	5.22
SUBTOTAL, PRE-HARVEST				\$ 85.56
HARVEST COSTS				\$
SUBTOTAL, HARVEST				\$ 0.0
TOTAL VARIABLE COST				\$ 85.56
3. INCOME ABOVE VARIABLE COSTS				\$ -85.56
4. FIXED COSTS				\$
MACHINERY	ACRE	15.59	1.00	15.59
TRACTORS	ACRE	6.34	1.00	6.34
TOTAL FIXED COSTS				\$ 21.93
5. TOTAL COSTS				\$ 107.49
6. NET RETURNS				\$ -107.49

SOMEWHAT POORLY DRAINED ACID SANDS
FERTILIZER: 15-6-15
PREPARED BY: MELTON

DATE: 4/25/80

BUDGET IDENTIFICATION NUMBER--- 131864060 101 1
ANNUAL CAPITAL MONTH 6

PROCESSED BY FARM SYSTEMS LAB - FOOD & RESOURCE ECON. DEPT., U. OF FLORIDA
PROGRAM DEVELOPED BY DEPT. OF AG. ECON. , OKLAHOMA STATE UNIVERSITY
DATE PRINTED: 01 MAY 1980

BREAKEVEN PRICES
IF 4.00 TONS SM. GRAIN SILAGE ARE PRODUCED:

TO COVER VARIABLE INPUTS	18.298
TO COVER VARIABLE INPUTS AND INTEREST	21.532
TO COVER VARIABLE INPUTS AND LABOR	20.085
TO COVER VARIABLE INPUTS INTEREST AND LABOR	23.319
TO COVER ALL COSTS EXCEPT LAND OVERHEAD RISK AND MANAGEMENT	26.874

TABLE 4.

**CORN SILAGE - GRAIN SILAGE
FOR DAIRY COW USE
CENTRAL FLORIDA, 1979 PRICES**

	UNIT	PRICE OR COST/UNIT	QJANTITY	VALUE OR COST
1. GROSS RECEIPTS FROM PRODUCTION				
CORN SILAGE	TONS	0.0	14.00	\$ 0.0
GRAIN SILAGE	TONS	0.0	4.00	\$ 0.0
TOTAL				\$ 0.0
2. VARIABLE COSTS				
PREHARVEST				
N&P&K	LBS.	0.04	1000.00	\$ 45.00
N&P&K	LBS.	0.05	850.00	42.50
NITROGEN	LBS.	0.07	150.00	10.50
LIME	TONS	20.60	1.00	20.60
CORN SEED	80K	46.60	0.50	23.30
FTE 503	LBS.	0.17	30.00	5.10
PARAQUAT	GAL.	43.50	0.25	10.88
GRAIN SEED	LBS.	0.10	120.00	12.00
IRRIG&CHEM APPL.	ACRE	2.00	3.00	6.00
MACHINERY	ACRE	3.13	1.00	3.13
TRACTORS	ACRE	20.44	1.00	20.44
LABOR(TRACTOR & MACHINERY)	HOUR	3.25	4.77	15.50
INTEREST ON OP. CAP.	DOL.	0.10	86.38	8.64
SUBTOTAL, PRE-HARVEST				\$ 223.58
HARVEST COSTS				
SUBTOTAL, HARVEST				\$ 0.0
TOTAL VARIABLE COST				
				\$ 223.58
3. INCOME ABOVE VARIABLE COSTS				
				\$ -223.58
4. FIXED COSTS				
MACHINERY	ACRE	30.39	1.00	\$ 30.39
TRACTORS	ACRE	14.83	1.00	14.83
TOTAL FIXED COSTS				\$ 45.22
5. TOTAL COSTS				
				\$ 268.80
6. NET RETURNS				
				\$ -268.80

SOMEWHAT POORLY DRAINED ACID SANDS
FERTILIZER: 4-12-18, 15-6-15, 33-0-0
PREPARED BY: MELTON DATE: 4/25/80

BUDGET IDENTIFICATION NUMBER--- 131864060 101 1
ANNUAL CAPITAL MONTH 6

PROCESSED BY FARM SYSTEMS LAB - FOOD & RESOURCE ECON. DEPT., U. OF FLORIDA
PROGRAM DEVELOPED BY DEPT. OF AG. ECON., OKLAHOMA STATE UNIVERSITY
DATE PRINTED: 01 MAY 1980

IF 14.00 TONS CORN SILAGE ARE PRODUCED:		
TO COVER VARIABLE INPJTS		14.246
TO COVER VARIABLE INPUTS AND INTEREST		16.011
TO COVER VARIABLE INPUTS AND LABOR		15.353
TO COVER VARIABLE INPUTS INTEREST AND LABOR		17.118
TO COVER ALL COSTS EXCEPT LAND OVERHEAD RISK AND MANAGEMENT		19.200

world-class economist called a "heroic assumption", and assumed this extra silage could be sold to a neighboring dairyman for enough money to cover the extra cost of feeding the silage. In Tables 2, 3, and 4, the per acre costs are for silage in the wagon, ready to go into the silo.

Given time, we could estimate the missing costs, and/or recalculate the silage systems, different amounts of land, and different crops. The computerized budgeting procedure makes it possible to do this rather easily, once we get all the necessary data.

While we don't yet have all the data assembled that we need, a lot of very useful information is already stored in the computer. Table 5 shows the operations involved in double-cropping corn and sorghum silage. This information becomes an input in the cash flow, and it is vital for more rigorous farm planning approaches such as linear programming.

Because fuel is becoming so scarce and high priced, dairymen might want to know what the fuel use requirements are for producing corn and sorghum silage. That information is in Table 6. I was surprised that it took more than 17 gallons of fuel to double-crop corn and sorghum silage.

The Comparison

Keeping the cow herd the same size and feeding silage reduces purchased feed costs from \$964.80 per cow to \$678.40 (Table 7). Also, we reduced the per cow production to 11,570 pounds per cow. The net effect of these changes is to increase the profitability to \$166.64 per cow or \$74,988 for the 450 cow herd.

But we have not yet accounted for the costs of producing the silage, or making the extra land payments. The silage production costs were:

TABLE 5.

CORN - SORGHUM SILAGE
FROM DAIRY CORN USE
CENTRAL FLORIDA, 1979 PRICES

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	ITEM	TYPE	CON
1 CORN SILAGE	0.0	0.0	0.0	0.0	0.0	14.00	0.0	0.0	5.00	0.0	0.0	0.0	0.0	0.0	3.133	2.	0.	
2 SORGHUM SILAGE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.134	2.	0.	
OPERATING INPUTS	RATE/UNIT												PRICE	NUMER	UNIT	ITEM	TYPE	CON
11 N6PK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.045	0.0	12.	553.	3.	0.
12 N6PK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.070	0.0	12.	593.	3.	0.
13 NITROGEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.070	0.0	12.	593.	3.	0.
14 LIME	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.581	0.0	408.	3.	0.	
15 CORN SEED	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.600	0.0	0.0	3.	0.	
16 FTE 503	0.0	30.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.170	0.0	571.	3.	0.	
17 LASSO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.490	0.0	0.0	3.	0.	
18 AATREX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.280	0.0	0.0	3.	0.	
19 FUPADAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.840	0.0	0.0	3.	0.	
20 MESURROL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.050	0.0	0.0	3.	0.	
21 PARACUAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.500	0.0	0.0	3.	0.	
22 SORGHUM SEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.400	0.0	0.0	3.	0.	
23 IRRIGCHEM APPL.	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.0	0.0	3.	0.	
MACHINERY REQUIREMENTS	TIMES OVER												XXXXX	XXXXX	POWER	MACH	TYPE	CON
38 M.B. PLOW 5	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	32.	32.	4.	0.
39 TANDEN DISK	0.0	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.	45.	4.	0.
40 PLANTER	0.0	1.00	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.	70.	4.	0.
41 SPRAYER	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.	84.	4.	0.
42 ROLL CULTIVATOR	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.	98.	4.	0.
43 SILAGE CUTTER	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.	10.	4.	0.
44 SILAGE WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.	0.	0.

CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	ACRE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL EXPENSES	ACRE	21.83	107.90	0.84	0.0	0.0	30.82	47.41	10.50	0.0	0.0	0.0	0.0	226.86
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														-226.86

ANNUAL CAPITAL	DOL.	7.27	16.27	16.34	16.34	16.34	0.0	3.95	4.83	4.83	5.35	5.35	5.46	102.32
MACHINERY LABOR	HR.	0.21	0.97	0.24	0.0	0.0	1.70	0.55	0.0	0.0	1.15	0.0	0.21	5.03

MACHINE	CODE	OPER	INSUR.	TAX	TOTAL	REPAIR	FUEL	LUB.	VARIABLE	TOTAL	INT.	HR/TIME
TRACTOR(1)	1	1.08	0.09	0.31	1.48	0.61	2.43	0.36	3.40	5.99	1.00	
TRACTOR(2)	2	1.53	0.13	0.43	2.09	0.86	3.67	0.55	5.07	1.40	1.00	
TRACTOR(3)	3	1.97	0.16	0.56	2.69	1.11	4.42	0.66	6.16	1.81	1.00	
TRUCK	10	2.16	0.12	0.43	2.71	1.10	3.80	0.57	5.23	1.30	1.00	
M.B. PLOW 5	32	0.84	0.05	0.20	1.10	0.27	0.0	0.0	0.27	0.60	0.15	
TANDEN DISK	35	0.97	0.06	0.24	1.27	0.24	0.0	0.0	0.97	0.71	0.15	
PLANTER	65	0.02	0.19	0.73	3.95	0.27	0.0	0.0	0.27	2.16	0.21	
SPRAYER	74	0.04	0.03	0.10	0.53	0.11	0.0	0.0	0.11	0.31	0.30	
ROLL CULTIVATOR	44	0.70	0.04	0.15	0.90	0.46	0.0	0.0	0.46	0.49	0.20	
SILAGE CUTTER	84	0.79	0.26	0.19	1.37	0.57	0.0	0.0	0.57	0.31	0.20	
SILAGE WAGON	98	4.74	0.0	0.96	5.96	0.67	0.0	0.0	0.67	2.91	0.17	

OPERATION	ITEM NO.	DATE	TIMES OVER	LABOR HOURS	MACHINE HOURS	FUEL PER ACRE	OIL PER ACRE	LUB. PER ACRE	REPAIR PER ACRE	FIXED COSTS
PLANTER	1.65	JUL	0.50	0.124	0.103	0.44	0.91	0.54	0.54	0.54
SPRAYER	1.74	JUL	1.00	0.182	0.151	0.58	0.82	0.54	0.82	0.82
ROLL CULTIVATOR	1.44	JUL	1.00	0.243	0.201	0.84	1.40	0.82	1.40	1.40
SILAGE CUTTER	3.84	OCT	1.00	0.693	0.573	4.22	14.40	1.40	14.40	14.40
SILAGE WAGON	2.98	OCT	0.75	0.156	0.129	0.81	1.64	0.81	1.64	1.64
TRUCK	19	DEC	0.25	0.390	0.280	1.31	1.00	1.00	1.00	1.00
M.B. PLOW 5	3.32	DEC	0.25	0.219	0.174	1.23	1.15	1.15	1.15	1.15
M.B. PLOW 5	3.32	JAN	0.50	0.210	0.174	1.23	1.15	1.15	1.15	1.15
TANDEN DISK	3.32	FEB	2.00	0.358	0.298	2.00	2.08	2.08	2.08	2.08

TABLE 6.

FUEL USE SUMMARY FOR BUDGET NUMBER 133864060 101 1

CORN - SORGHUM SILAGE
FOR DAIRY COW USE
CENTRAL FLORIDA, 1979 PRICES

FUEL USED IN GALLONS PER HOUR

TRACTOR(1)	2.640
TRACTOR(2)	3.984
TRACTOR(3)	4.800
TRUCK	4.000

FUEL ALLOCATED TO OPERATIONS IN GALLONS PER ACRE COVERED

MACHINE	GALLONS	POWER UNIT
M.B. PLOW 5	1.933	TRACTOR(3)
TANDEM DISK	0.781	TRACTOR(3)
PLANTER	0.596	TRACTOR(1)
SPRAYER	0.876	TRACTOR(1)
ROLL. CULTIVATOR	2.524	TRACTOR(1)
SILAGE CUTTER	3.753	TRACTOR(3)
SILAGE WAGON	0.753	TRACTOR(2)

FUEL ALLOCATED TO OPERATIONS FOR THE BUDGET UNIT

MACHINE	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	FUEL TYPE
M.B. PLOW 5	0.917	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.933	3
TANDEM DISK	0.0	1.562	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.562	3
PLANTER	0.0	0.596	0.0	0.0	0.0	0.298	0.0	0.0	0.0	0.0	0.0	0.0	1.192	3
SPRAYER	0.0	0.876	0.0	0.0	0.0	0.438	0.0	0.0	0.0	0.0	0.0	0.0	1.751	3
ROLL. CULTIVATOR	0.0	0.0	0.584	0.0	0.0	0.584	0.0	0.0	0.0	0.0	0.0	0.0	6.050	3
SILAGE CUTTER	0.0	0.0	0.0	0.0	0.0	3.025	0.0	0.0	0.0	3.025	0.0	0.0	6.050	3
SILAGE WAGON	0.0	0.0	0.0	0.0	0.0	0.565	0.0	0.0	0.0	0.565	0.0	0.0	1.130	3
TRUCK	0.0	0.0	0.0	0.0	0.0	1.000	0.0	0.0	0.0	1.000	0.0	0.0	2.000	1
TOTALS	0.917	3.034	0.584	0.0	0.0	5.909	1.320	0.0	0.0	4.590	0.0	0.0	17.270	

GALLONS FUEL BY TYPE

2.00 GAS
0.0 LP
15.27 DIESEL

FUEL TYPES
1=GAS
2=LP
3=DIESEL

TABLE 7.

DAIRY PRODUCTION COSTS AND RETURNS PER COW
450 COW DAIRY
CENTRAL FLORIDA

ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST
1. GROSS RECEIPTS					
MILK	1.00	CWT.	15.30	115.70	1770.21
DAIRY BULL CALV	1.00	HD.	50.00	0.46	22.80
DAIRY COWS	12.50	CWT.	25.00	0.24	75.00
DAIRY AGED BULL	16.00	CWT.	25.00	0.01	4.00
DAIRY HFR CALVES	1.00	HD.	75.00	0.24	18.00
TOTAL					<u>1890.01</u>
2. VARIABLE COSTS					
15-16% PRO. FEED		CWT.	8.00	84.80	678.40
VET & MED.		HD.	2.00	12.00	24.00
HAULING & MKTG.		HD.	5.62	12.00	67.44
TRUCKING		HD.	0.03	12.00	0.36
BREEDING FEES		HD.	1.15	12.00	13.80
DAIRY AGED BULL		HD.	1500.00	0.01	15.00
SALES COMM.		HD.	0.25	12.00	3.00
CHEMICALS		HD.	0.08	12.00	0.96
MISC OTHER		HD.	0.30	12.00	3.60
DAIRY HEIFERS		HD.	800.00	0.30	240.00
MACHINERY(FUEL,LUBE,REP)		DOL.			7.24
EQUIPMENT(FUEL,LUBE,REP)		DOL.			8.43
LABOR, TRACTOR & MACHINERY		HRS.	3.25	2.88	9.36
LABOR, EQUIPMENT		HRS.	3.00	0.19	0.58
LABOR, LIVESTOCK		HRS.	3.00	36.50	109.50
TOTAL VARIABLE COSTS					<u>1181.67</u>
3. INCOME ABOVE VARIABLE COSTS					
					708.33
4. FIXED COSTS					
INT. ON LIVESTOCK CAPITAL		DOL.	0.10	906.00	90.60
INT. ON OTHER EQUIPMENT		DOL.	0.10	206.31	20.63
DEPR. ON DAIRY COW		DOL.			300.00
DEPR. ON DAIRY HEIFER		DOL.			42.00
DEPR. ON OTHER EQUIP.		DOL.			70.18
OTHER FC, MACH & EQUIP.		DOL.			18.29
TOTAL FIXED COSTS					<u>541.70</u>
5. TOTAL COSTS					
					1723.37
6. NET RETURNS					
					166.64

328 TOTAL ACRES
BAHIA PASTURE

PREPARED BY: MELTON

DATE: 5/1/80

Table 2.--Corn-sorghum @ \$300 per acre, 300 acres	=	\$ 90,000
Table 3.--Small grain silage @ \$107 per acre, 100 acres	=	10,750
Table 4.--Corn-small grain silage @ \$267 per acre, 50 acres	=	<u>13,350</u>
		\$114,100

So the feed cost savings will not cover the extra cost of the silage program, even without the land payment.

Conclusion

Given the holes in our data, and the silage feeding program budgeted here, a silage feeding program won't work. But it quite possibly might with cheaper silos or different silage production techniques, or if more silage was substituted into the ration.

The usefulness of the computer-assisted budgeting approach underlying this example is that it can do the mountainous amount of arithmetic necessary to evaluate alternatives. When we get a little practice with this new system, Florida dairymen can describe what they are considering doing, and get a detailed budgeting analysis of the financial consequences. An investment can be tried out on paper before any money is invested, and we will be one step closer to "Budgeting For Successful Management".