The Livestock Sector Submodel: A Description of Coefficient and Activity Development

by

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CHAPTER I. INTRODUCTION

The purpose of this paper is to provide an insight into the methodology used in calculating coefficients for the livestock sector of the Center for Agricultural and Rural Development's (CARD) linear programming models. The livestock sector consists of four basic livestock activities -- feeder cattle producing, feeder cattle finishing, dairy producing, and pork producing. These activities produce agricultural livestock commodities and nitrogen waste while requiring feed, water, energy, and capital. Four basic sources are used for the construction of the livestock sector -- The Federal Enterprise Data System (FEDS), Nutrient Requirements for Beef Cattle, Dairy, and Swine published by the National Research Council, Utilizing Animal Waste as a Source of Nitrogen and Agricultural Resource Assessment System Technical Committee unpublished working papers.

The FEDS budgets updated and disseminated by the Economic Research Service at Oklahoma State University, are used not only for cost of production information but also for feed coefficient estimation and byproduct coefficient estimation. Also, use of the FEDS budgets allowed for easy construction of variable size (technology) activities thus allowing for the capture of various scales of production in one market region. The basic data used in the preparation of these budgets are obtained

through surveys conducted with individual producers to determine production practices and input use. These budgets thus represent average management production practices, and performance.

Feeder Cattle Production Activities

Categories of feeder cattle activities

The purpose of the feeder cattle production activities is to produce calves and/or yearlings for the cattle feeding operations. Thus, three different feeder cattle production activities are identified -- cow-calf, cow-yearling, and cow-calf-yearling. Examples of the budgets are shown in Figures 1, 2, and 3. Each of these types of activities is defined as production 100 pounds of feeder animals.

Construction of feeder cattle activities

The first step in constructing the feeder cattle production activities is to relate the regions used by the FEDS to the market regions incorporated in CARD's linear programming models (Figures 4 and 5). The FEDS feeder cattle production budgets are defined for five large regions and then disaggregated into many smaller subregions accounting for 95 percent of the nation's beef cow production (Committee on Agriculture, Nitrition, and Forestry, 1981). On the other hand our market regions total to 28. The matching process is accomplished by comparing employed FEDS region and market region maps. Each FEDS budget is

Figure 1. Beef cow-calf enterprise less than 100 cows, Piedmont. SE-1 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
LIVESTOCK	34830.00	696.60	34830.00	696.60
EQUIPMENT	15429.67	308.59	6085.65	121.71
*TRACTORS AND TRUCKS	39765.00	795.30	26801.61	536.03
*OTHER MACHINERY	3232.00	64.64	2178.37	43.57
TOTAL	92973.12	1859.46	69612.06	1392.24

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
STEER CALVES	CWT.	18.00	4.70	91.75	431.22	7762.05	
HEIFER CALVES	CWT.	10.00	4.40	77.00	338.80	3388.00	
CULL YRLNG HFR	CWT.	1.00	7.50	65.50	491.25	491.25	
CULL COWS	CWT.	6.00	8.70	55.85	485.50	2915.37	
TOTAL RECEIPTS						14556.65	291.13

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FESCUE PASTURE	ACRE	120.0	31.30	3756.00	75.12
CTL BERMUDA PAST	ACRE	75.0	30.40	2280.00	45.60
CROP RESIDUE	ACRE	38.0	0.0	0.0	0.0
GRASS HAY	TN.	50.0	34.20	1710.00	34.20
31-35% PRO. FEED	CWT.	21.5	10.30	221.45	4.43
CORN	CWT.	44.5	4.68	208.26	4.17
SALT & MINERALS	CWT.	16.0	8.75	140.00	2.80
VET & MED	DOL.	178.0	1.00	178.00	3.56
LVSTK HAULING	DOL.	65.0	1.00	65.00	1.30
SALE COMM.	DOL.	211.0	1.00	211.00	4.22
MACH FUEL & LUBE				894.21	17.83
MACHINERY REPAIR				571.61	11.43
EQUP FUEL & LUBE				1.27	0.03
EQUIP REPAIR				272.22	5.44
EQUIPMENT LABOR	HRS.	60.81	3.05	185.48	3.71
LIVESTOCK LABOR	HRS.	750.00	3.05	2287.50	45.75
INTEREST ON OPER CAPITAL	DOL.	6066.94	0.10	618.83	12.38
TOTAL VARIABLE COSTS				13600.78	272.02

4. INCOME ABOVE VARIABLE COSTS	955.88	19.12
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	2119.22	42.38
EQUIPMENT	1216.79	24.34
LIVESTOCK	3649.49	73.31
LAND TAXES	612.93	12.26
TOTAL OWNERSHIP COSTS	7614.44	152.29
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	14639.62	292.79
GEN FARM OVERHEAD	585.00	11.70
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	1483.11	29.66
TOTAL OTHER COSTS	16707.73	334.15
7. TOTAL OF ABOVE COSTS	37922.95	758.46
8. RETURN TO RISK	-23366.29	-467.33

FOOTNOTE: CALVING RATE 78%; DEATH LOSSES 6.0% CALVES, 1.9% CATTLE; CALVES BORN JAN - MARCH, SOLD IN SEPT.; PASTURE AND PRODUCED HAY (SURPLUS PASTURE FORAGE) PRICED AT COP; PURCHASED HAY (REQUIRED BECAUSE OF DROUGHT) PRICED AT FEB. PRICES RECEIVED BY FARMERS; CROP RESIDUES GRAZED 1 MONTH.

10-15-78
GILLIAM
12/09/80

ENTERPRISE CODE: 111311172
AREA CODE _1/45/_3/_0
FILE NO. 101
HEAD REPRESENTED 695.7 (000)
PRODUCTION UNIT DIVISOR 50.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 20
DATE PRINTED:

MACHINERY COMPLEMENT NO. 26
EQUIPMENT COMPLEMENT NO. 7
PARAMETER SET 45
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 23900
LAG-OTHER EQUIPMENT 4

AREA-_1/_1/_1/_0 ENTERPRISE-111111112 FILE LOCATION-_101 ANNUAL CAPITAL COEFF-_2 EDITION-__0

BEEF COW - CALF ENTERPRISE, LESS THAN 100 COWS, PIEDMONT SE-1 1979

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 STEER CALVES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	91.75	4.70	16.	13.	2.	0.
2 HEIFER CALVES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	77.00	4.40	16.	14.	2.	0.
3 CULL YRLNG HFR	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.50	7.50	16.	16.	2.	0.
4 CULL COWS	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.85	8.70	16.	17.	2.	0.
OPERATING INPUTS					RATE/UNIT								PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11 FESCUE PASTURE	0.0	0.0	0.0	120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.30	1.00	7.	148.	3.	0.
12 CTL BERMUDA PAST	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.40	1.00	7.	149.	3.	0.
13 CROP RESIDUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	0.0	0.0	0.0	1.00	7.	167.	3.	0.
14 GRASS HAY	19.0	14.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	34.20	1.00	3.	172.	3.	0.
15 31-35% PRC. FEED	9.0	8.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.30	1.00	16.	118.	3.	0.
16 CORN	15.5	14.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	4.68	1.00	16.	72.	3.	0.
17 SALT & MINERALS	1.2	1.1	1.3	1.2	1.3	1.4	1.5	1.6	1.8	1.2	1.2	1.2	8.75	1.00	16.	103.	3.	0.
18 VET & MED	0.0	89.0	0.0	89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	288.	3.	0.
19 LVSTK HAULING	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	35.0	0.0	0.0	0.0	1.00	1.00	15.	350.	3.	0.
20 SALE COMM	0.0	0.0	0.0	42.0	0.0	0.0	0.0	0.0	165.0	0.0	0.0	0.0	1.00	1.00	15.	395.	3.	0.
21 HAY (PURCH.)	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	1.00	3.	176.	3.	0.
22 GEN FARM OH	0.0	0.0	0.0	585.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	459.	3.	0.
MACHINERY REQUIREMENTS					HOURS								MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
50 PICKUP 1/2 T.	15.0	14.0	12.0	9.0	13.0	9.0	9.0	9.0	10.0	9.0	9.0	12.0	0.0	7.00	0.	12.	4.	0.
51 TRUCK, DUMP BED	4.0	4.0	4.0	8.0	4.0	4.0	4.0	4.0	12.0	4.0	4.0	4.0	0.0	7.00	0.	11.	4.	0.
52 BALE WAGON	31.0	28.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	4.00	1.	63.	4.	0.
53 BALE WAGON	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	22.0	14.0	14.0	0.0	9.00	2.	63.	4.	0.
EQUIPMENT REQUIREMENTS													NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
78 4 BARB FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.400	0.	0.50	1.	5.	0.
79 WOVEN FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	0.50	3.	5.	0.
80 ELECTRIC FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.300	0.	1.00	4.	5.	0.
81 FENCE CHARGER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	744.0	0.0	0.0	1.000	9.	1.00	5.	5.	0.
82 CORRAL FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	6.	5.	0.
83 WORKING CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	7.	5.	0.
84 LOADING CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	9.	5.	0.
85 POND,STOCK WATER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	66.	5.	0.
86 WELL, PUMP, TANK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	1.000	6.	0.00	19.	5.	0.
87 WATERER, UNHTD.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	65.	5.	0.
88 WATER LINE, 1 IN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	0.	1.00	20.	5.	0.
89 HAY SHED	13.0	10.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.000	1.	1.00	15.	5.	0.
90 FEED BUNK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.000	0.	1.00	12.	5.	0.
91 MINERAL FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	14.	5.	0.
LIVESTOCK INVESTMENT																		
95 BEEF COW 1													42.000	0.	1.00	97.	5.	0.
96 REPL. HEIFER 1													8.000	0.	1.00	98.	5.	0.
97 REPL. CALF 1													8.000	0.	1.00	99.	5.	0.
98 HERD BULL 1													2.000	0.	1.00	100.	5.	0.
99 LIVESTOCK LABOR	76.00	126.00	70.00	60.00	48.00	48.00	48.00	48.00	54.00	64.00	48.00	60.00						

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	1	0.0	0.0	0.0	3436.62	0.0	0.0	0.0	0.0	11150.04	0.0	0.0	0.0
TOTAL VAR. COST	1	1360.99	1395.45	809.22	7406.05	310.89	297.10	295.53	293.94	561.32	397.69	312.44	745.18

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
EQUIPMENT LABOR	1	HR.	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	60.8
LIVESTOCK LABOR	1	HR.	76.0	126.0	70.0	60.0	48.0	48.0	48.0	48.0	54.0	64.0	48.0	60.0	750.0
TOTAL LABOR	1	HR.	81.1	131.1	75.1	65.1	53.1	53.1	53.1	53.1	59.1	69.1	53.1	65.1	810.8
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	116.7	108.1	76.6	54.5	48.5	38.5	38.5	38.5	73.0	38.5	38.5	76.6	746.6
DIESEL	1	GAL.	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	47.5	30.2	30.2	380.2
ELECTRICITY	1	KWH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.5	0.0	0.0	29.5

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPOR. CHARGED	LIST PRICE	DEPREC-IATION	INTER-EST	INSUR-ANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERAT-ING/YR	HOURS LABOR
1	4 BARB FENCE	1.0	MILE	4.40	0.500	1333.00	146.63	53.34	0.0	5.23	205.20	58.65	0.0	58.65	4.40
3	WOVEN FENCE	1.0	MILE	1.00	0.500	2528.00	63.20	22.99	0.0	2.25	88.44	25.28	0.0	25.28	1.00
4	ELECTRIC FENCE	1.0	MILE	0.30	1.000	192.00	11.52	1.05	0.0	0.10	12.67	1.15	0.0	1.15	2.40
5	FENCE CHARGER	1.0	EACH	1.00	1.000	60.00	6.00	1.09	0.0	0.11	7.20	1.20	0.32	1.52	0.0
6	CORRAL FENCE	100.0	FEET	3.00	1.000	444.00	66.60	24.23	0.0	2.38	93.20	26.64	0.0	26.64	3.00
7	WORKING CHUTE	1.0	EACH	1.00	1.000	457.00	22.85	15.57	0.0	1.54	40.06	9.14	0.0	9.14	2.00
9	LOADING CHUTE	1.0	EACH	1.00	1.000	325.00	16.25	11.14	0.0	1.09	28.49	6.50	0.0	6.50	1.00
66	POND,STOCK WATER	1.0	ACFT	2.00	1.000	1267.00	126.70	46.09	0.0	4.52	177.31	12.67	0.0	12.67	8.00
19	WELL, PUMP, TANK	200.0	FEET	1.00	0.003	3159.00	0.47	0.17	0.03	0.02	0.69	0.05	0.95	1.00	0.01
65	WATERER, UNHTD.	25.0	GAL.	1.00	1.000	160.00	32.00	5.49	0.0	0.54	38.02	6.40	0.0	6.40	4.00
20	WATER LINE, 1 IN	100.0	FEET	5.00	1.000	19.00	4.15	1.73	0.0	0.17	6.65	0.47	0.0	0.47	0.0
15	HAY SHED	10.0	TN.	6.00	1.000	883.00	264.90	96.36	15.89	9.45	386.60	105.96	0.0	105.96	6.00
12	FEED BUNK	12.0	FEET	6.00	1.000	138.00	82.80	28.39	0.0	2.78	113.98	16.56	0.0	16.56	24.00
14	MINERAL FEEDER	1.0	EACH	1.00	1.000	77.00	15.40	2.64	0.0	0.26	18.30	1.54	0.0	1.54	5.00
97	BEEF COW 1	900.0	LBS.	42.00	1.000	630.00	0.0	2698.92	0.0	0.0	2698.92	0.0	0.0	0.0	0.0
98	REPL. HEIFER 1	750.0	LBS.	8.00	1.000	494.00	0.0	403.92	0.0	0.0	403.92	0.0	0.0	0.0	0.0
99	REPL. CALF 1	450.0	LBS.	8.00	1.000	319.00	0.0	257.04	0.0	0.0	257.04	0.0	0.0	0.0	0.0
100	HERD BULL 1	1500.0	LBS.	2.00	1.000	949.00	141.19	168.86	0.0	0.0	309.61	0.0	0.0	0.0	0.0

Figure 2. Region 4: cow-yearling budget--herds of 200 head and over (GP-4) 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
LIVESTOCK	253298.94	727.87	253298.94	727.87
EQUIPMENT	56034.08	161.02	21885.20	62.89
*TRACTORS AND TRUCKS	31200.00	89.66	21028.80	60.43
*OTHER MACHINERY	52435.00	150.68	35341.19	101.56
TOTAL	384961.37	1106.21	323547.50	929.73

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
STEER CALVES	HD.	72.00	4.25	96.44	409.87	29510.64	
HEIFER CALVES	HD.	29.00	4.13	85.75	354.15	10270.28	
FEEDER STEERS	HD.	55.00	6.58	83.30	548.11	30146.27	
FEEDER HEIFERS	HD.	45.00	5.55	81.34	483.97	21778.78	
CULL COWS	HD.	63.00	9.73	48.25	470.45	29638.07	
TOTAL RECEIPTS						121343.94	348.69

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
PRIVATE RANGE	ACRE	2947.0	0.0	0.0	0.0
PAST. RENT/LEASE	ACRE	3446.3	3.25	11200.47	32.19
CROP RESIDUE	ACRE	313.0	0.0	0.0	0.0
HAY (PROD.)	TN.	466.0	26.34	12274.44	35.27
CORN SILAGE	TN.	29.0	13.95	404.55	1.16
PROTEIN SUPP.	CWT.	31.0	10.55	327.05	0.94
GRAIN (PROD.)	TN.	7.6	104.43	793.67	2.28
GRAIN (PURCH.)	TN.	1.6	101.28	162.05	0.47
SALT & MINERALS	CWT.	125.0	7.61	951.25	2.73
VET & MED	DOL.	1063.6	1.00	1063.60	3.06
TRUCKING	DOL.	579.2	1.00	579.20	1.66
MARKETING	DOL.	472.0	1.00	472.00	1.36
HIRED LABOR	HR.	640.0	3.69	2361.60	6.79
FAMILY LABOR	HR.	2144.0	3.69	7911.36	22.73
MACH FUEL & LUBE				3147.86	9.05
MACHINERY REPAIR				2846.28	8.18
EQUP FUEL & LUBE				296.21	0.85
EQUIP REPAIR				823.06	2.37
INTEREST ON OPER CAPITAL	DOL.	11403.65	0.11	1208.79	3.47
TOTAL VARIABLE COSTS				46823.40	134.55

4. INCOME ABOVE VARIABLE COSTS	74520.44	214.14
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	7217.22	20.74
EQUIPMENT	4288.08	12.32
LIVESTOCK	31837.17	91.49
LAND TAXES	5013.04	14.41
TOTAL OWNERSHIP COSTS	48355.51	138.95
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	49755.93	142.98
GEN FARM OVERHEAD	1779.00	5.11
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	6436.13	18.49
TOTAL OTHER COSTS	57971.06	166.58
7. TOTAL OF ABOVE COSTS	153149.94	440.09
8. RETURN TO RISK	-31806.00	-91.40

FOOTNOTE: WEANING RATE 76%, REPLACEMENT RATE 20%,
YEARLINGS AS % OF FEEDER SALES 50%,
COWS/BULL 19, SUPP FEEDS AS % OF TOTAL 30%,
PRIVATE RANGE AS % OF TOTAL FEED 69%,
CATTLE PRICES AS REPORTED AT OMAHA,
GRAIN PRICE IS SEASONAL AVG FOR OATS IN S.D.

04/01/77
KERRY GEE
10/15/80

ENTERPRISE CODE: 119000004
AREA CODE 4/46/0/0
FILE NO. 65
HEAD REPRESENTED 826.6 (000)
PRODUCTION UNIT DIVISOR 348.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 20

MACHINERY COMPLEMENT NO. 8
EQUIPMENT COMPLEMENT NO. 8
PARAMETER SET 46
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 21000
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

AREA-_8/AA/_0/_0 ENTERPRISE-119003004 FILE LOCATION-__A5 ANNUAL CAPITAL COEFF-10 EDITION-__0

REGION 4: COW - YEARLING,BUDGET — HERDS OF 200 HEAD AND OVER (CP-4) 1979

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 STEER CALVES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.0	0.0	96.44	4.25	1.	13.	2.	0.
2 HEIFER CALVES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0	0.0	85.75	4.13	1.	14.	2.	0.
3 FEEDER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.0	0.0	0.0	0.0	83.30	6.58	1.	8.	2.	0.
4 FEEDER HEIFERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	81.34	5.95	1.	9.	2.	0.
5 CULL COWS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	0.0	0.0	48.35	9.73	1.	17.	2.	0.
OPERATING INPUTS					RATE/UNIT								PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11 PRIVATE RANGE	0.0	0.0	0.0	0.0	0.0	0.0	2947.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	140.	3.	0.
12 PAST. RENT/LEASE	0.0	0.0	0.0	0.0	0.0	0.0	3446.3	0.0	0.0	0.0	0.0	0.0	3.25	1.00	7.	139.	3.	0.
15 CROP RESIDUE	0.0	0.0	0.0	0.0	0.0	0.0	313.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	167.	3.	0.
20 HAY (PROD.)	0.0	0.0	0.0	0.0	0.0	0.0	466.0	0.0	0.0	0.0	0.0	0.0	26.34	1.00	3.	177.	3.	0.
22 CORN SILAGE	0.0	0.0	0.0	0.0	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	13.95	1.00	3.	86.	3.	0.
23 PROTEIN SUPP.	0.0	0.0	0.0	0.0	0.0	0.0	31.0	0.0	0.0	0.0	0.0	0.0	10.55	1.00	16.	110.	3.	0.
24 GRAIN (PROD.)	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	0.0	104.43	1.00	3.	81.	3.	0.
25 GRAIN (PURCH.)	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	101.28	1.00	3.	80.	3.	0.
26 SALT & MINERALS	0.0	0.0	0.0	0.0	0.0	0.0	125.0	0.0	0.0	0.0	0.0	0.0	7.61	1.00	16.	103.	3.	0.
27 VET & MED	0.0	0.0	0.0	0.0	0.0	0.0	1063.6	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	288.	3.	0.
28 TRUCKING	0.0	0.0	0.0	0.0	0.0	0.0	579.2	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	345.	3.	0.
29 MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	472.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	399.	3.	0.
37 HIRED LABOR	0.0	0.0	0.0	0.0	0.0	0.0	640.0	0.0	0.0	0.0	0.0	0.0	3.69	1.00	8.	363.	3.	0.
38 FAMILY LABOR	0.0	0.0	0.0	0.0	0.0	0.0	2144.0	0.0	0.0	0.0	0.0	0.0	3.69	1.00	8.	365.	3.	0.
39 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	0.0	1779.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	459.	3.	0.
MACHINERY REQUIREMENTS					HOURS								MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
50 PICKUP 1/2 T.	0.0	0.0	0.0	0.0	0.0	0.0	146.0	0.0	0.0	0.0	0.0	0.0	0.0	7.00	0.	10.	4.	0.
51 TRUCK 1.5 T.	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	14.00	0.	14.	4.	0.
52 TRUCK 2.0 T.	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0	0.0	0.0	0.0	0.0	0.0	14.00	0.	15.	4.	0.
53 TRACTOR 25 HP	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	4.00	0.	1.	4.	0.
54 TRACTOR 75 HP	0.0	0.0	0.0	0.0	0.0	0.0	259.0	0.0	0.0	0.0	0.0	0.0	0.0	4.00	0.	3.	4.	0.
55 CAR	0.0	0.0	0.0	0.0	0.0	0.0	137.0	0.0	0.0	0.0	0.0	0.0	0.0	7.00	0.	26.	4.	0.
56 MANURE SPREADER	0.0	0.0	0.0	0.0	0.0	0.0	139.0	0.0	0.0	0.0	0.0	0.0	0.0	5.00	1.	76.	4.	0.
57 MANURE LOADER	0.0	0.0	0.0	0.0	0.0	0.0	139.0	0.0	0.0	0.0	0.0	0.0	0.0	5.00	3.	75.	4.	0.
58 HAY WAGON	0.0	0.0	0.0	0.0	0.0	0.0	311.0	0.0	0.0	0.0	0.0	0.0	0.0	4.00	1.	60.	4.	0.
59 HORSE TRAILER	0.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	0.0	0.0	0.0	0.0	7.00	10.	65.	4.	0.
60 CATTLE SPRAYER	0.0	0.0	0.0	0.0	0.0	0.0	39.0	0.0	0.0	0.0	0.0	0.0	0.0	9.00	3.	70.	4.	0.
61 STOCK TRAILER	0.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	0.0	0.0	0.0	0.0	14.00	10.	66.	4.	0.
EQUIPMENT REQUIREMENTS													NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
71 WINDMILL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	6.	5.	0.
72 WATER TANK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	8.	5.	0.
73 WATER PIPE 2"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	19.	5.	0.
74 WATER PIPE 1"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	21.	5.	0.
75 WATER PIPE 3/4"	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	20.	5.	0.
76 BARN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	1.	0.70	13.	5.	0.
77 FEED BUNKS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.000	1.	1.00	9.	5.	0.
82 WELL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.000	0.	0.20	4.	5.	0.
83 PUMP AND MOTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	6.	0.50	5.	5.	0.
84 WATER TROUGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.000	0.	1.00	29.	5.	0.
85 HOLDING CORRALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.000	0.	1.00	1.	5.	0.
86 FEEDING CORRALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.000	0.	1.00	2.	5.	0.
87 STOCK SHED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	1.	1.00	14.	5.	0.
88 SQUEEZE CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	12.	5.	0.
89 BARB WIRE FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.400	0.	1.00	3.	5.	0.
90 GRANARY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	0.60	30.	5.	0.
91 YARD LIGHT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	1.	0.70	22.	5.	0.
92 STOCK PENDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	11.	5.	0.
93 STOCK SCALES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	18.	5.	0.
94 FEED AUGER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	36.	5.	0.
95 ELECTRIC MOTOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	4.	1.00	35.	5.	0.
97 HORSE EQUIP.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.000	0.	0.60	38.	5.	0.
98 MISC. EQUIPMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.000	0.	1.00	17.	5.	0.
LIVESTOCK INVESTMENT																		
78 BEEF COWS													348.000	0.	1.00	93.	5.	0.
80 REPLACEMENT CALF													59.000	0.	1.00	95.	5.	0.
81 BULL													18.000	0.	1.00	96.	5.	0.
96 HORSE													7.000	0.	0.40	92.	5.	0.

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ANNUAL LABOR REQUIREMENTS													
FUEL REQUIREMENTS													
GASOLINE	1	GAL.	0.0	0.0	0.0	0.0	0.0	0.0	2176.5	0.0	0.0	0.0	0.0	0.0	2176.5
DIESEL	1	GAL.	0.0	0.0	0.0	0.0	0.0	0.0	1702.8	0.0	0.0	0.0	0.0	0.0	1702.8
ELECTRICITY	1	KWH	0.0	0.0	0.0	0.0	0.0	0.0	8228.0	0.0	0.0	0.0	0.0	0.0	8228.0

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPOR. CHARGED	LIST PRICE	DEPREC-IATION	INTER-EST	INSUR-ANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERAT-ING/YR	HOURS LABOR
6	WINDMILL	1.0	EACH	3.00	1.000	1520.00	205.20	54.81	0.0	8.94	308.95	45.60	0.0	45.60	0.0
8	WATER TANK	50.0	BU.	3.00	1.000	1306.00	261.20	74.05	0.0	6.99	342.24	26.12	0.0	26.12	0.0
19	WATER PIPE 2"	1.0	MILE	1.00	1.000	3391.00	152.60	70.50	0.0	6.65	229.75	16.95	0.0	16.95	0.0
21	WATER PIPE 1"	1.0	MILE	1.00	1.000	642.00	28.89	13.35	0.0	1.26	43.50	3.21	0.0	3.21	0.0
20	WATER PIPE 3/4"	1.0	MILE	1.00	1.000	897.00	40.36	18.65	0.0	1.76	60.77	4.48	0.0	4.48	0.0
13	BARN	100.0	SQ.	1.00	0.700	7085.00	148.78	103.11	16.37	9.73	277.99	49.59	3.60	53.19	0.0
9	FEED BUNKS	10.0	SQ.	8.00	1.000	220.00	176.00	62.72	0.0	5.92	244.63	17.60	0.0	17.60	0.0
93	BEEF COWS	1.0	HD.	348.00	1.000	584.00	0.0	21542.58	1727.47	0.0	23270.04	0.0	0.0	0.0	0.0
95	REPLACEMENT CALF	1.0	HD.	69.00	1.000	351.00	0.0	2567.21	205.86	0.0	2773.07	0.0	0.0	0.0	0.0
96	BULL	1.0	HD.	18.00	1.000	1296.00	3499.20	1730.94	138.80	0.0	5368.93	0.0	0.0	0.0	0.0
4	WELL	1.0	EACH	4.00	0.200	3290.00	78.96	54.72	0.0	5.16	138.84	17.55	0.0	17.55	0.0
5	PUMP AND MOTOR	1.0	EACH	1.00	0.500	344.00	10.32	3.58	0.0	0.34	14.23	3.44	36.00	39.44	0.0
29	WATER TROUGH	50.0	HD.	7.00	1.000	106.00	81.27	14.02	0.0	1.32	96.62	8.13	0.0	8.13	0.0
1	HOLDING CORRALS	50.0	HD.	7.00	1.000	344.00	120.40	45.51	0.0	4.29	170.21	24.08	0.0	24.08	0.0
2	FEEDING CORRALS	50.0	HD.	7.00	1.000	410.00	143.50	54.25	0.0	5.12	202.86	28.70	0.0	28.70	0.0
0	STOCK SHED	0.0		2.00	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	SQUEEZE CHUTE	1.0	EACH	2.00	1.000	518.00	46.62	40.61	0.0	3.83	91.06	5.18	0.0	5.18	0.0
3	BARB WIRE FENCE	1.0	MILE	17.40	1.000	950.00	495.90	343.67	0.0	32.42	871.99	385.70	0.0	385.70	0.0
30	GRANARY	500.0	BU.	2.00	0.600	1193.00	64.42	29.76	4.72	2.81	101.72	7.16	0.0	7.16	0.0
22	YARD LIGHT	1.0	EACH	2.00	0.700	101.00	8.48	2.94	0.0	0.28	11.70	0.94	210.24	211.18	0.0
11	STOCK PONDS	1.0	EACH	3.00	1.000	1318.00	197.70	74.73	0.0	7.05	279.48	19.77	0.0	19.77	0.0
18	STOCK SCALES	1.0	EACH	1.00	1.000	760.00	68.40	15.80	0.0	1.49	85.69	7.60	0.0	7.60	0.0
36	FEED AUGER	100.0	FEET	1.00	1.000	560.00	9.16	21.95	0.0	2.07	33.18	2.03	0.0	2.03	0.0
35	ELECTRIC MOTOR	5.0	H.P.	1.00	1.000	495.00	495.00	19.40	0.0	1.83	516.23	110.00	46.37	156.37	0.0
92	HORSE	1.0	HD.	7.00	0.600	600.00	252.00	160.27	12.85	0.0	425.12	0.0	0.0	0.0	0.0
38	HORSE EQUIP.	300.0	DOL.	7.00	0.600	393.00	22.60	64.70	0.0	6.10	93.60	2.53	0.0	2.53	0.0
17	MISC. EQUIPMENT	100.0	DOL.	4.00	1.000	131.00	52.40	18.67	0.0	1.76	72.83	36.68	0.0	36.68	0.0

Figure 3. Cow-calf-yearling enterprise, 150 cow herd, Pacific Coast area (W-1) 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
LIVESTOCK	100350.00	669.00	100350.00	669.00
EQUIPMENT	63184.00	421.23	23401.11	156.01
*TRACTORS AND TRUCKS	7600.00	50.67	5122.40	34.15
*OTHER MACHINERY	0.0	0.0	0.0	0.0
TOTAL	169773.00	1131.82	127512.50	850.08

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
STEER CALVES	CWT.	15.00	4.50	93.83	422.23	6333.52	
HEIFER CALVES	CWT.	23.00	4.79	77.25	370.03	8510.63	
FEEDER STEERS	CWT.	58.00	6.49	83.06	539.06	31265.42	
FEEDER HEIFERS	CWT.	24.00	7.08	67.06	474.78	11394.83	
CULL COWS	CWT.	22.00	9.80	46.40	454.72	10003.84	
TOTAL RECEIPTS						67508.19	450.05

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
BARLEY	TN.	93.0	93.91	8733.62	58.22
GRASS HAY	TN.	113.0	46.43	5246.59	34.98
PASTURE, TAME	ACRE	238.0	13.24	3151.12	21.01
IRRIGATED PAST	ACRE	122.0	30.14	3677.08	24.51
SALT & MINERALS	CWT.	28.8	4.70	135.36	0.90
VET & MED	DOL.	150.0	3.61	541.50	3.61
HAULING & MKTG.	DOL.	142.0	3.18	451.56	3.01
MACH FUEL & LUBE				2228.15	14.85
MACHINERY REPAIR				826.39	5.51
EQUIP REPAIR				317.75	2.12
EQUIPMENT LABOR	HRS.	19.10	3.53	67.42	0.45
LIVESTOCK LABOR	HRS.	1675.00	3.53	5912.75	39.42
INTEREST ON OPER CAPITAL	DOL.	10871.69	0.10	1141.53	7.61
TOTAL VARIABLE COSTS				32430.79	216.21

4. INCOME ABOVE VARIABLE COSTS	35077.40	233.85
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	1676.34	11.18
EQUIPMENT	3341.41	22.28
LIVESTOCK	11826.57	78.84
LAND TAXES	3218.03	21.45
TOTAL OWNERSHIP COSTS	20062.34	133.75
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	29514.48	196.76
GEN FARM OVERHEAD	1505.00	10.03
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	3554.61	23.70
TOTAL OTHER COSTS	34574.08	230.49
7. TOTAL OF ABOVE COSTS	87067.19	580.45
8. RETURN TO RISK	-19559.00	-130.39

FOOTNOTE: 50% OF HAY PRODUCED ON RANCH AND PRICED AT COP

10/18/78
GEE
10/15/80

ENTERPRISE CODE: 114641173
AREA CODE _1/41/_1/_0
FILE NO. 77
HEAD REPRESENTED 42.3 (000)
PRODUCTION UNIT DIVISOR 150.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 20
DATE PRINTED:

MACHINERY COMPLEMENT NO. 45
EQUIPMENT COMPLEMENT NO. 10
PARAMETER SET 41
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 20700
LAG-OTHER EQUIPMENT 4

AREA-_1/A1/_1/_0 ENTERPRISE-116A1113 FILE LOCATION-__II ANNUAL CAPITAL COMPP-_2 EDITION-__0

COW-CALF-YEARLING ENTERPRISE, 150 COW HERD, PACIFIC COAST AREA (W-1) 1979

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 STEER CALVES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	0.0	93.83	4.50	16.	13.	2.	0.
2 HEIFER CALVES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	0.0	77.25	4.79	16.	14.	2.	0.
3 FEEDER STEERS	0.0	0.0	0.0	58.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.06	6.49	16.	8.	2.	0.
4 FEEDER HEIFERS	0.0	0.0	0.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	67.06	7.08	16.	9.	2.	0.
5 CULL COWS	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.40	9.80	16.	17.	2.	0.
OPERATING INPUTS					RATE/UNIT								PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11 BARLEY	24.0	24.0	24.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	93.91	1.00	3.	71.	3.	0.
12 GRASS HAY	28.0	28.0	28.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	46.43	1.00	3.	172.	3.	0.
13 PASTURE, TAME	0.0	0.0	0.0	0.0	0.0	0.0	236.0	0.0	0.0	0.0	0.0	0.0	13.24	1.00	7.	153.	3.	0.
14 IRRIGATED PAST	0.0	0.0	0.0	0.0	0.0	0.0	122.0	0.0	0.0	0.0	0.0	0.0	30.14	1.00	7.	141.	3.	0.
15 SALT & MINERALS	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	4.70	1.00	16.	103.	3.	0.
16 VET & MED	0.0	25.0	0.0	25.0	0.0	25.0	0.0	25.0	0.0	25.0	0.0	25.0	3.61	1.00	19.	288.	3.	0.
17 HAULING & MKTG.	0.0	22.0	0.0	58.0	0.0	0.0	24.0	0.0	15.0	0.0	23.0	0.0	3.18	1.00	15.	348.	3.	0.
23 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	0.0	505.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	459.	3.	0.
MACHINERY REQUIREMENTS					HOURS								MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
50 4X4 PICKUP	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	0.0	7.00	2.	11.	4.	0.
EQUIPMENT REQUIREMENTS													NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
78 SHEEP FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	4.	5.	0.
79 4-BARB FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.000	0.	1.00	-2.	5.	0.
80 STOCK POND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	15.	5.	0.
81 STOCK WELL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	16.	5.	0.
82 WATER TANK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	17.	5.	0.
83 SHED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	1.	1.00	24.	5.	0.
84 BARN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	1.	1.00	20.	5.	0.
85 CORRAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	6.	5.	0.
86 MISC STOCK EQUIP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	8.	5.	0.
LIVESTOCK INVESTMENT																		
88 BEEF COW													134.000	0.	1.00	85.	5.	0.
89 HEIFER, YEARLING													16.000	0.	1.00	86.	5.	0.
92 HEIFER CALF													18.000	0.	1.00	90.	5.	0.
93 HERD BULL (COMM)													6.000	0.	1.00	57.	5.	0.
99 LIVESTOCK LABOR	150.00	150.00	150.00	125.00	75.00	75.00	75.00	75.00	75.00	75.00	325.00	325.00						

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	1	0.0	10003.84	0.0	31265.42	0.0	0.0	11394.83	0.0	6333.52	0.0	8510.63	0.0
OPERATING INPUT REQUIREMENTS (DOLLARS)													
BARLEY	1	2253.84	2253.84	2253.84	845.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1126.92
GRASS HAY	1	1300.04	1300.04	1300.04	696.45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	650.02
PASTURE, TAME	1	0.0	0.0	0.0	0.0	0.0	0.0	3151.12	0.0	0.0	0.0	0.0	0.0
IRRIGATED PAST	1	0.0	0.0	0.0	0.0	0.0	0.0	3677.08	0.0	0.0	0.0	0.0	0.0
SALT & MINERALS	1	11.28	11.28	11.28	11.28	11.28	11.28	11.28	11.28	11.28	11.28	11.28	11.28
VET & MED	1	0.0	90.25	0.0	90.25	0.0	90.25	0.0	90.25	0.0	90.25	0.0	90.25
HAULING & MKTG.	1	0.0	69.96	0.0	184.44	0.0	0.0	76.32	0.0	47.70	0.0	73.14	0.0
GEN FARM OH	1	0.0	0.0	0.0	0.0	0.0	0.0	1505.00	0.0	0.0	0.0	0.0	0.0
TOTAL LABOR COST	1	535.12	535.12	535.12	446.87	270.37	270.37	270.37	270.37	270.37	270.37	1152.87	1152.87
INT. ON OP. CAP.	1	230.02	198.69	153.35	67.08	9.85	5.71	0.0	62.86	53.41	51.42	106.28	202.88
MACH FUEL & LUBE	1	185.68	185.68	185.68	185.68	185.68	185.68	185.68	185.68	185.68	185.68	185.68	185.68
MACHINERY REPAIR	1	68.87	68.87	68.87	68.87	68.87	68.87	68.87	68.87	68.87	68.87	68.87	68.87
EQUIP REPAIRS	1	26.48	26.48	26.48	26.48	26.48	26.48	26.48	26.48	26.48	26.48	26.48	26.48
(TOTALS OF THE ABOVE ARE LISTED IN THE VARIABLE COST SECTION ON THE REVERSE SIDE.)													
TOTAL VAR. COST	1	4611.32	4740.20	4534.64	2622.58	572.52	658.63	8972.16	719.77	663.78	704.34	1624.59	3515.24

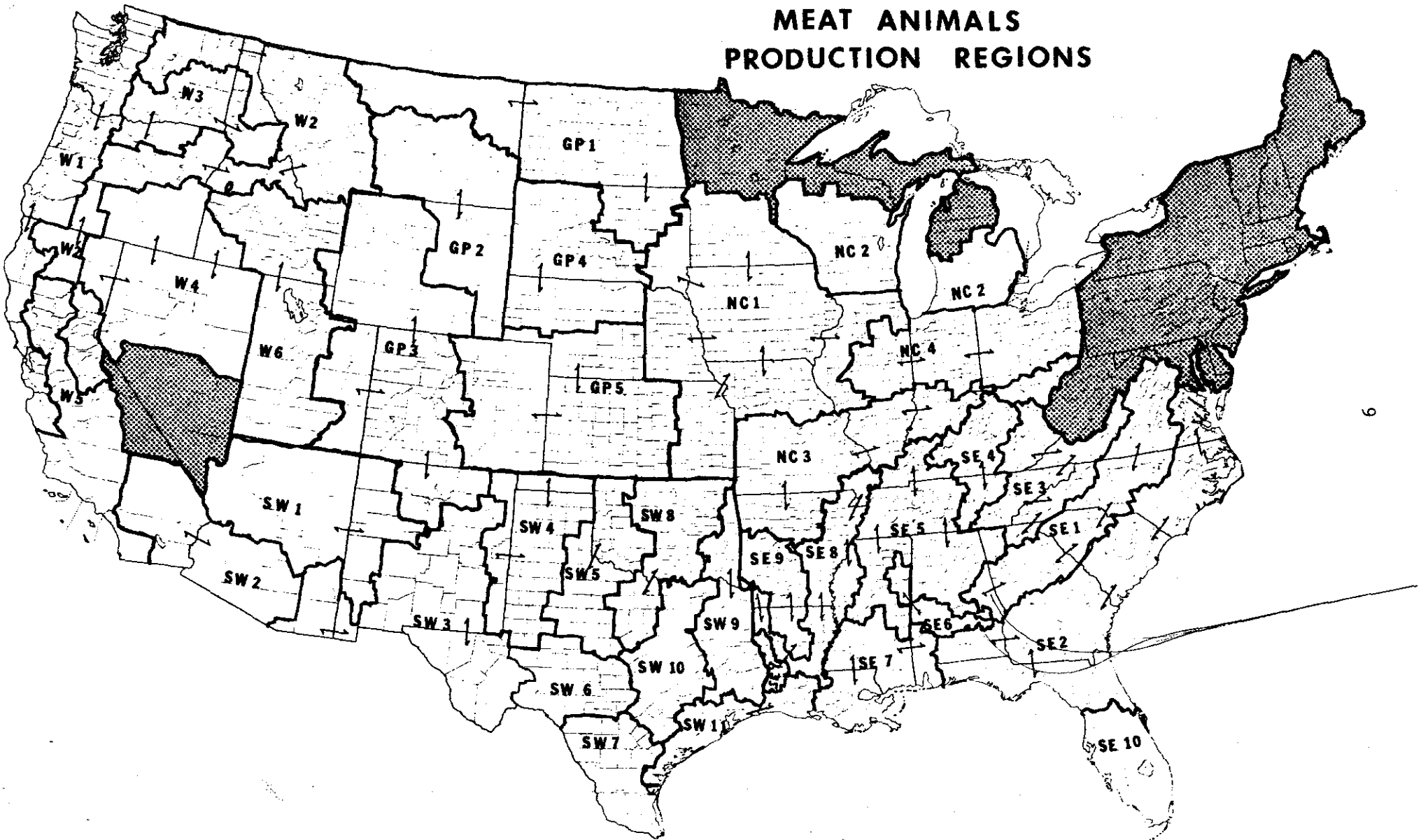
CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
EQUIPMENT LABOR	1	HR.	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	19.1
LIVESTOCK LABOR	1	HR.	150.0	150.0	150.0	125.0	75.0	75.0	75.0	75.0	75.0	75.0	325.0	325.0	1675.0
TOTAL LABOR	1	HR.	151.6	151.6	151.6	126.6	76.6	76.6	76.6	76.6	76.6	76.6	326.6	326.6	1694.1
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	234.0	234.0	234.0	234.0	234.0	234.0	234.0	234.0	234.0	234.0	234.0	234.0	2808.0
MACHINERY REQUIREMENTS															
4X4 PICKUP	1	HR.	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	936.0

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/ SIZE	PERFORM RATE HOUR/ ACRE	PURCHASE PRICE	DEPR./ HOUR	INTEREST/ HOUR	INS./ HOUR	TAXES/ HOUR	TOTAL OWNER SHIP/ HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
4X4 PICKUP	0.80	1.000	7600.	1.235	0.454	0.036	0.064	1.791	0.883	2.070	0.310	3.263

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPOR. CHARGED	LIST PRICE	DEPREC-IATION	INTER-EST	INSUR-ANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERAT-ING/YR	HOURS LABOR
4	SHEEP FENCE	1.0	MILE	1.00	1.000	2236.00	80.50	46.05	7.38	4.39	138.31	13.42	0.0	13.42	0.80
2	4-BARB FENCE	1.0	MILE	18.00	1.000	1716.00	694.98	636.13	101.93	60.58	1491.62	115.83	0.0	115.83	14.40
15	STOCK POND	1.0	EACH	2.00	1.000	1260.00	100.80	47.18	0.0	4.49	152.47	0.0	0.0	0.0	0.20
16	STOCK WELL	1.0	EACH	1.00	1.000	3172.00	114.19	65.33	10.47	6.22	196.21	50.75	0.0	50.75	0.40
17	WATER TANK	1.0	EACH	2.00	1.000	185.00	13.32	14.37	1.22	1.37	30.28	1.48	0.0	1.48	2.00
24	SHED	1600.0	SQFT	2.00	1.000	6048.00	272.16	249.11	39.92	23.73	584.91	60.48	0.0	60.48	0.40
20	BARN	1600.0	SQFT	1.00	1.000	7059.00	158.83	145.38	23.29	13.85	341.35	35.29	0.0	35.29	0.20
6	CORRAL	1.0	EACH	2.00	1.000	1231.00	88.63	50.70	8.12	4.83	152.29	24.62	0.0	24.62	0.60
8	MISC STOCK EQUIP	1.0	EACH	1.00	1.000	2281.00	142.56	52.45	7.86	8.80	251.97	15.87	0.0	15.87	0.10
85	BEEF COW	1.0	HD.	134.00	1.000	584.00	0.0	8216.87	594.75	0.0	8811.62	0.0	0.0	0.0	0.0
86	HEIFER, YEARLING	1.0	HD.	16.00	1.000	500.00	0.0	840.00	60.80	0.0	900.80	0.0	0.0	0.0	0.0
90	HEIFER CALF	1.0	HD.	18.00	1.000	351.00	0.0	663.39	48.02	0.0	711.41	0.0	0.0	0.0	0.0
57	HERD BULL (COMM)	1.0	HD.	6.00	1.000	1296.00	680.40	673.60	48.76	0.0	1402.75	0.0	0.0	0.0	0.0



Fgirue 4. 1978 feeder cattle (shaded areas were excluded from the survey).

Prepared by Bureau of the Census, U.S. Department of Commerce.

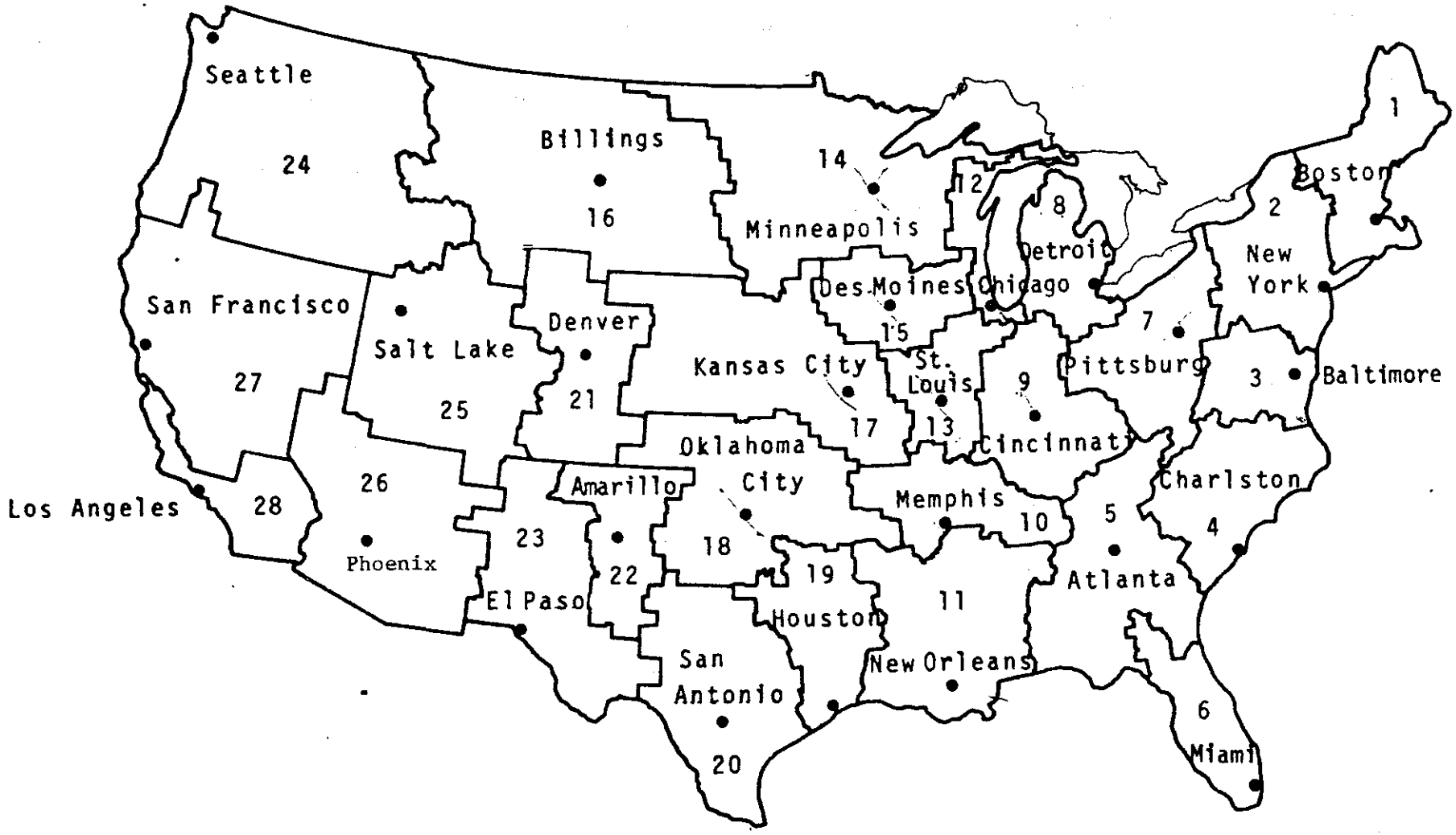


Figure 5. The 28 market regions with central cities indicated.

regionally identified by an area code. This area code allowed the identification of the FEDS region and then the Market Region into which it is represented.

The second step deleted duplicate budgets from each Market Region. If the budget herd size, operating inputs and machinery and equipment complements were similar then the budget with the larger head represented figure was chosen as an activity for that particular market region.

Once the individual budgets are matched up with our market regions and any duplicates discarded, calculation of the coefficients needed in the feeder cattle production activities is initiated.

Feed coefficients: The most important set of coefficients required are those that provide feed to the animals since this provides a critical link between the crop and livestock sectors. The feed coefficients are designed such that a least nutrient requirement can be met by any of the crops within the model.[1] The previous CARD models specified feed requirements in terms of predetermined rations. This procedure increased the site of the model while restricting the feed substitution possibilities.

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*Committee on Agriculture, Nutrition and Forestry, U.S. Senate. Costs of producing livestock in the United States - Final 1979, Preliminary 1980 and Projections for 1981. 1981.

[1]This is not strictly correct as some constraints on roughages are placed in the model so that these demands can be met.

Thus, feed requirements for the feeder cattle activities in this livestock sector are defined in terms of total crude protein, net energy, calcium, and phosphorus. These coefficients are derived from the National Research Council [1976]. In addition, the feed requirements reflect the requirement for the breeding herd as well as the feeder cattle demands.

In determining these feed requirements, a four step procedure is used. First, the per head protein, net energy, calcium, and phosphorus requirements for each livestock type (steer calves, heifer calves, steer yearlings, heifer yearling, cows, replacement heifers, and bulls) and activity are determined. Then total feed requirements are determined for that activity for each livestock type. The nutrients are then summed over the animal types so that total nutrient requirements for the activity is calculated. Finally, the total nutrients required for the activity are divided by the hundredweight of feeder animals produced by the activity. The final set of feed coefficients indicate the amount of protein, energy, calcium, and phosphorus required for producing a hundred pounds of feeder cattle.

Information used from the FEDS budgets to estimate the feed requirements include:

1. the calving date (assumed to be the modpoint of the calving period as presented by the FEDS budget);

2. the breeding date (assumed to be 280 days prior to calving);
3. the sales date (as presented);
4. the sales weight (as presented);
5. the culling date (as presented);
6. the culling weight (as presented);
7. the death rate (as presented);
8. the budget length (the number of days from calving date to last sales date, the minimum of which is one year);
9. the average calving weight (assumed to be 84 pounds for steers and 78 pounds for heifers) (Newman and Snapp, 1974);
10. the per day weight gain (determine d using the average calving and sales weight and date).

Whenever the above information was not explicitly provided in the FEDS budget, an alternate source of information, Structural Characteristics of Beef Cattle Raising in the United States (pp. 24-28, USDA, 1980), is used. This information in combination with the NRC bulletin is used to generate the information necessary for the first step outlined above.

Feeder cattle production coefficient

All feeder cattle production activities are, by definition, designed to produce feeder cattle (steer calves, heifer calves, steer yearlings, heifer yearlings). Thus all feeder cattle production activities are defined

in terms of a cwt of feeder cattle produced which means that all technical coefficients making up a feeder cattle production activity reflect demands or supplies per cwt of feeder cattle produced.

Cow-calf activities mainly produce steer calves and heifer calves as well as culled yearlings and the sum total of these feeder animals sums to 100 pounds. Cow-yearling activities mainly produce steer yearlings and heifer yearlings and the sum total of the feeder animals produced always sums to 100 lbs. Finally, cow-calf-yearling activities produce both steer and heifer calves and steer and heifer yearlings and the sum total of feeder calves and yearlings always totals 100 lbs.

Beef coefficients: One joint product of feeder cattle production activities is beef. A certain percentage of the breeding stock is continually being replaced in all activities. This replacement leads to a supply of nonfed beef. This supply coefficient is calculated for each budget by multiplying the number of cows and bulls culled by their average weight at culling and dividing this value by the cwt of feeder cattle produced for the particular budget upon which the activity is built.

Nitrogen coefficients: A second joint product of feeder cattle production is nitrogen. Each activity produces a certain quantity of nitrogen in the form of manures and other waste by-products. The quantity of nitrogen available for fertilizer from these wastes varies depending on the time

spent in each of the 5 different feeding systems as explained by Short and Dvoskin (1977).* MR nitrogen yields are available from Short and Droskin. These nitrogen values are calculated by MR in two steps:

(1) by determining the total nitrogen supplied by the total number of cows in the budget before culling, and

(2) by determining the total nitrogen supplied by the number of cows after accounting for culling and death losses from the date of culling until the end of the budget period.

Once again this total nitrogen supply is divided by the cwt of feeder cattle produced for the budget to determine the number of lbs. of nitrogen produced per cwt. of feeder cattle produced.

Water Coefficient

Water use is calculated for all activities located in irrigated market regions. The water coefficients are determined from data supplied by the Agricultural Resource Assessment System technical committee (1975)* and presented in English, Alt, and Heady (1982). MR water use coefficients are weighted to PA's by using the 1974 Agricultural Census weights. Finally, these PA coefficients are converted to acre feet per year. Thus, the water coefficient represents the number of acre-feet of water per year required to produce 100 lbs. of feeder animals.

* Utilizing Animal Waste as a Source of Nitrogen. Miscellaneous Report, 1977.

* Agricultural Resource Assessment System. Technical Committee. Unpublished working papers prepared for the National Water Assessment. U.S. Department of Agriculture Statistical Reporting Service. Washington, D.C. 1975 (mimeographed).

Cattle Feeding Activities

Categories of production activities

There are five basic cattle feeding activities identified for the livestock model. These activities include feeding steer calves, feeding heifer calves, feeding steer yearling, feeding heifer yearlings, and feeding both steer and heifer yearlings (Figures 7, 8, 9, 10 and 11), and produce a hundred weight of beef along with some nitrogen for agricultural use. The first four activities are constructed from farmer feedlog budgets with an assumed capacity limit of less than 1,000 head [Committee on Agriculture, Nutrition, and Forestry] and are defined as being located solely in the North Central region (Figure 12). The final activity type is constructed from commercial feedlot budgets that have a capacity of more than 1,000 head [Committee on Agriculture, Nutrition, and Forestry]. The commercial feedlots are located in the Central and Southern Plains, and the California-Arizona regions. Finally, the budgets used to construct the cattle feeding activities account for 95 percent of U.S. fed beef production.

Construction of the activities

The construction of these activities is very similar to that of the feeder cattle activities. As before, the first step in building these activities is to match up the FEDS cattle feeding budget regions with our market regions. Next duplicates are discarded using the same process as

Figure 7. Finish 35 steer calves without silage - North Central Region

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
EQUIPMENT	12955.09	35.20	5963.96	16.21
*TRACTORS AND TRUCKS	42220.33	114.73	28456.28	77.33
*OTHER MACHINERY	19493.00	52.97	13138.28	35.73
TOTAL	74668.06	202.90	47558.52	129.24

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER STEERS	CWT.	18.00	10.50	67.06	704.13	12674.34	
SLAUGHTER STEERS	CWT.	17.00	13.50	62.74	658.77	11199.09	
TOTAL RECEIPTS						23873.43	64.87

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FEEDER STEERS	CWT.	80.0	70.75	5660.00	15.38
FEEDER STEERS	CWT.	79.9	70.77	5654.52	15.37
CORN	BU.	2205.0	2.23	4917.14	13.36
ALFALFA	TN.	34.0	29.68	1009.12	2.74
SOYBEAN MEAL	CWT.	26.2	12.40	324.88	0.88
VET & MED	DOL.	180.0	1.00	180.00	0.49
SALT & MINERALS	CWT.	1.0	8.38	13.41	0.04
STRAW	TN.	19.0	15.06	362.14	0.98
LVSTK HAULING	DOL.	455.0	1.00	455.00	1.24
BUILDING SITE	ACRE	1.0	0.0	0.0	0.0
SALE CORN	DOL.	218.0	1.00	218.00	0.59
MANURE CREDIT	DOL.	562.0	-1.00	-562.00	-1.53
HAY LAND	ACRE	8.5	0.0	0.0	0.0
MACH. FUEL & LUBE				644.11	1.75
MACHINERY REPAIR				436.93	1.19
EQUIP. FUEL & LUBE				93.55	0.25
EQUIP REPAIR				265.51	0.72
LIVESTOCK LABOR	HRS.	492.00	3.48	1712.16	4.65
INTEREST ON OPER CAPITAL	DOL.	8319.41	0.11	949.95	2.31
TOTAL VARIABLE COSTS				22232.40	60.41

4. INCOME ABOVE VARIABLE COSTS	1641.03	4.46
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	1187.64	3.23
EQUIPMENT	1233.56	3.35
LAND TAXES	108.74	0.30
TOTAL OWNERSHIP COSTS	2529.94	6.87
6. OTHER COSTS		
LAND CHARGE (RENT PRICE)	1450.66	3.94
GEN FARM OVERHEAD	609.00	1.65
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	976.37	2.65
TOTAL OTHER COSTS	3036.22	8.25
7. TOTAL OF ABOVE COSTS	27798.55	75.54
8. RETURN TO RISK	-3925.13	-10.67

FOOTNOTES: PERIOD BEGINNING OCT. PREVIOUS YEAR. BUY AT (457 LB) G-C KANSAS CITY 09/12/80
SELL (1051 LB) CHOICE OMAHA. FEED PRICES 21 NC STATES AVERAGE FEDS
WEIGHED BY CATTLE FED. DEATH LOSS 1.5%. DAYS ON FEED 270. GAIN PER 09/19/90
DAY 2.2 POUNDS. FEEDLOT CAPACITY 50 HEAD LOT USE 7 CA. ALSO INCLUDES 0329, 0317,
0315, 0339, 0203, 0400.

ENTERPRISE CODE: (9124475)
AREA CODE: 2/12/0/2
FILE NO. 001
CAT SALES REPRESENTED: 4514.9 (1)
PRODUCTION UNIT DIVISOR: 368.
LAND CHARGE METHOD: 2
LBG-PERMANENT STRUCT 20

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 15
PARAMETER SET 19
EDITION NO. 0
NAME SET A
INTEREST CHANGE METHOD 10900
LBG-OTHER EQUIPMENT A

DATE PRINTED:

FINISH 35 STEER CALVES WITHOUT SILAGE - NORTH CENTRAL REGION 1979

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION						NUMBER OF UNITS												
1 SLAUGHTER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	67.06	10.50	16.	11.	2.	0.
2 SLAUGHTER STIERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	62.74	10.50	16.	11.	2.	0.

OPERATING INPUTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
						RATE/UNIT												
11 FEEDER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	70.75	1.00	16.	6.	3.	0.
12 FEEDER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.9	0.0	70.77	1.00	16.	6.	3.	0.
13 CORN	193.0	214.0	246.0	277.0	339.0	340.0	247.0	121.0	0.0	39.0	78.0	151.0	2.23	1.00	2.	72.	3.	0.
14 ALFALFA	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0	0.0	29.68	1.00	3.	179.	3.	0.
15 SOYBEAN MEAL	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	0.0	2.3	2.4	2.4	12.40	1.00	16.	120.	3.	0.
16 VET & MED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	180.0	0.0	1.00	1.00	15.	288.	3.	0.
17 SALT & MINERALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	8.38	1.00	16.	103.	3.	0.
18 STRAW	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	13.06	1.00	3.	168.	3.	0.
19 LVSTK HAULING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	284.0	0.0	0.0	171.0	0.0	1.00	1.00	15.	350.	3.	0.
20 BUILDING SITE	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	385.	3.	0.
21 SALE COMM	0.0	0.0	0.0	0.0	0.0	0.0	109.0	0.0	109.0	0.0	0.0	0.0	1.00	1.00	15.	395.	3.	0.
22 MANURE CREDIT	0.0	0.0	562.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	1.00	15.	54.	3.	0.
23 HAY LAND	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	1.00	7.	384.	3.	0.
24 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	605.00	1.00	15.	459.	3.	0.

MACHINERY REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
						HOURS												
50 GRINDER-MIXER	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	0.0	2.0	2.0	2.0	0.0	4.00	4.	67.	4.	0.
51 FRONT END LDR.	1.9	3.0	3.0	3.0	0.0	0.0	2.0	2.0	0.0	0.0	2.7	2.7	0.0	5.00	2.	35.	4.	0.
52 MANURE SPREADER	1.9	3.0	3.0	3.0	0.0	0.0	2.0	2.0	0.0	0.0	2.7	2.7	0.0	5.00	2.	40.	4.	0.
53 WAGON	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	0.0	7.7	7.7	7.7	0.0	4.00	1.	60.	4.	0.
54 PICKUP	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	0.0	7.00	0.	13.	4.	0.
55 WAGON	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	0.0	7.00	2.	60.	4.	0.

EQUIPMENT REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	[illegible]
78 POLESHED DIRT	60.0	60.0	30.0	13.0	30.0	0.0	0.0	0.0	30.0	30.0	30.0	60.0	0.687	1.	1.00	2.	5.	0.
79 PAVED LOT 4 IN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.250	0.	1.00	8.	5.	0.
80 FEED BUNK POST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	0.	1.00	38.	5.	0.
81 WELL 200FT.+STN.	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	0.0	6.0	6.0	6.0	1.000	6.	0.32	28.	5.	0.
82 WATER T. HEATED	433.0	433.0	200.0	197.0	0.0	0.0	0.0	0.0	0.0	50.0	200.0	333.0	1.000	6.	1.00	22.	5.	0.
83 SHELTER ROUGH	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	1.000	6.	1.00	76.	5.	0.
84 FLIGHT ELEV.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	1.000	6.	1.00	77.	5.	0.
85 HAY FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	41.	5.	0.
86 PORT. LOAD CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	34.	5.	0.
87 CORRAL FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.500	0.	1.00	13.	5.	0.
88 ROCK DRIVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	9.	5.	0.
89 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.500	0.	1.00	99.	5.	0.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
99 LIVESTOCK LABOR	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	1	0.0	0.0	0.0	0.0	0.0	0.0	12674.34	11199.09	0.0	0.0	0.0	0.0
TOTAL VAR. COST	1	748.27	865.56	353.66	990.19	1036.55	1714.42	2399.77	913.49	387.59	6095.50	6567.89	718.45

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
					ANNUAL LABOR REQUIREMENTS										
LIVESTOCK LABOR	1	HR.	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	492.0
TOTAL LABOR	1	HR.	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	492.0
					FUEL REQUIREMENTS										
GASOLINE	1	GAL.	39.4	34.4	36.4	38.4	39.4	38.7	38.7	36.7	17.5	36.4	34.4	39.4	441.2
DIESEL	1	GAL.	27.9	33.6	33.6	33.6	19.2	19.2	33.1	28.8	10.6	19.2	32.2	32.2	323.0
ELECTRICITY	1	KWH	469.7	489.7	224.4	124.4	24.4	12.2	19.9	14.0	12.2	74.4	224.4	389.7	2033.6
					MACHINERY REQUIREMENTS										
TRACTOR (1)	1	HR.	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	0.0	7.7	7.7	7.7	85.0
TRACTOR (2)	1	HR.	8.3	10.4	10.4	10.4	4.4	4.4	8.4	8.4	4.4	4.4	9.8	9.8	93.2
TRACTOR (4)	1	HR.	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	0.0	2.0	2.0	2.0	23.0
PICKUP	1	HR.	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	84.0
GRINDER-MIXER	1	HR.	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	0.0	2.0	2.0	2.0	23.0
FRONT END LDR.	1	HR.	1.9	3.0	3.0	3.0	0.0	0.0	2.0	2.0	0.0	0.0	2.7	2.7	20.2
MANURE SPREADER	1	HR.	1.9	3.0	3.0	3.0	0.0	0.0	2.0	2.0	0.0	0.0	2.7	2.7	20.2
WAGON	1	HR.	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	0.0	7.7	7.7	7.7	85.0
WAGON	1	HR.	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	52.8

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/SIZE	PERFORM RATE HOURS/ACRE	PURCHASE PRICE	DEPREC./HOUR	INTEREST/HOUR	INS./HOUR	TAXES/HOUR	TOTAL OWNERSHIP/HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR (1)	40.30	1.000	7155.	1.061	0.752	0.163	0.107	2.503	0.695	1.999	0.300	2.984
TRACTOR (2)	53.70	1.000	11153.	1.265	0.856	0.179	0.128	2.382	0.815	1.752	0.263	2.830
TRACTOR (4)	75.70	1.000	21155.	2.411	1.676	0.141	0.239	4.466	1.528	3.154	0.473	5.155
PICKUP	3.75	1.000	7155.	1.318	0.627	0.153	0.095	2.094	1.563	1.837	0.276	3.676
GRINDER-MIXER	2.30	1.000	6993.	4.965	2.102	0.177	0.336	6.710	2.641	0.0	0.0	2.641
FRONT END LDR.	1.30	1.000	3707.	1.541	0.812	0.168	0.129	2.549	0.595	0.0	0.0	0.595
MANURE SPREADER	*****	1.000	2197.	3.727	1.965	0.165	0.311	6.168	0.546	0.0	0.0	0.546
WAGON	*****	1.000	1127.	0.943	0.657	0.155	0.110	1.765	0.478	0.0	0.0	0.478
WAGON	*****	1.000	1127.	0.943	0.657	0.155	0.110	1.765	0.478	0.0	0.0	0.478

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO. ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPOR. CHARGED	LIST PRICE	DEPREC-IATION	INTER-EST	INSUR-ANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERAT-ING/YR	HOURS LABOR
2 POLESHED DIRT	3310.1	SQFT	0.68	1.000	10042.10	342.79	129.58	20.57	12.22	505.16	137.12	6.76	143.87	0.0
8 PAVED LOT 4 IN	1303.9	SQFT	1.25	1.000	945.90	59.06	22.33	0.0	2.11	83.50	11.81	0.0	11.81	0.0
38 FEED BUNK POST	69.1	FEET	5.33	1.000	163.93	61.50	49.04	0.0	2.74	113.28	16.30	0.0	16.30	0.0
28 WELL 200FT.+STN.	1.0	EACH	1.00	0.120	455.03	4.55	3.25	0.0	0.31	8.11	1.82	5.76	7.58	0.0
22 WATER T. HEATED	80.0	GAL.	1.33	1.000	325.00	65.00	11.58	0.97	1.09	75.65	6.50	80.45	86.95	0.0
76 SHLTR ROUGH	10.0	FEET	1.00	1.000	553.00	55.30	19.71	1.00	1.00	78.52	22.12	0.40	22.52	0.0
77 FLIGHT ELEV.	20.0	FEET	1.00	1.000	553.30	55.30	19.71	1.66	1.86	78.52	22.12	0.19	22.31	0.0
41 HAY FEEDER	10.0	FEET	1.00	1.000	358.00	35.80	12.76	0.0	1.20	49.76	7.16	0.0	7.16	0.0
34 PORT. LOAD CHUTE	1.0	EACH	1.00	1.000	846.00	42.30	30.15	2.54	2.84	77.83	16.92	0.0	16.92	0.0
13 CORRAL FENCE	130.0	FEET	1.51	1.000	441.00	33.07	12.50	0.0	1.18	46.76	13.23	0.0	13.23	0.0
9 ROCK DRIVE	3310.1	SQFT	2.00	1.000	195.10	19.50	13.90	0.0	1.31	34.73	3.90	0.0	3.90	0.0
99 SMALL TOOLS	530.0	DOL.	0.53	1.000	651.00	65.10	11.60	0.98	1.09	78.77	6.51	0.0	6.51	0.0

Figure 8. Finish 140 heifer calves with grain and corn silage - North Central States

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
EQUIPMENT	52560.57	40.59	23910.31	18.46
*TRACTORS AND TRUCKS	48620.00	37.54	32769.88	25.30
*OTHER MACHINERY	26722.00	20.63	18010.62	13.91
TOTAL	127902.56	98.77	74690.81	57.68

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER HEIFER	CWT.	70.00	9.25	68.52	633.81	44366.68	
SLAUGHTER HEIFER	CWT.	70.00	9.25	65.94	609.94	42696.12	
TOTAL RECEIPTS						87062.75	67.23

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FEEDER HEIFERS	CWT.	302.1	60.87	18386.83	14.20
FEEDER HEIFERS	CWT.	302.0	60.54	18283.07	14.12
CORN	BU.	6300.0	2.23	14048.98	10.85
CORN SILAGE	TN.	245.0	15.52	3802.40	2.94
ALFALFA	TN.	19.0	29.68	534.24	0.41
SOYBEAN MEAL	CWT.	420.0	12.40	5207.99	4.02
VET & MED	DOL.	722.0	1.00	722.00	0.56
SALT & MINERALS	CWT.	6.3	8.38	52.79	0.04
STRAW	TN.	73.0	19.06	1391.38	1.07
LVSTK HAULING	DOL.	1645.0	1.00	1645.00	1.27
BUILDING SITE	ACRE	2.0	0.0	0.0	0.0
SALE COMM	DOL.	875.0	1.00	875.00	0.68
MANURE CREDIT	DOL.	1873.0	-1.00	-1873.00	-1.45
HAY LAND	ACRE	4.5	0.0	0.0	0.0
MACH FUEL & LUBE				1690.38	1.31
MACHINERY REPAIR				1453.33	1.12
EQUIP FUEL & LUBE				306.03	0.24
EQUIP REPAIR				1264.05	0.98
LIVESTOCK LABOR	HRS.	1224.00	3.48	4259.52	3.29
INTEREST ON OPER CAPITAL	DOL.	27019.46	0.11	2964.06	2.21
TOTAL VARIABLE COSTS				74315.81	57.85

4. INCOME ABOVE VARIABLE COSTS	12146.93	9.38
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	3488.15	2.69
EQUIPMENT	4964.15	3.83
LAND TAXES	72.15	0.06
TOTAL OWNERSHIP COSTS	8524.45	6.58
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	962.72	0.74
GEN FARM OVERHEAD	2147.00	1.66
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	3419.02	2.64
TOTAL OTHER COSTS	6528.74	5.04
7. TOTAL OF ABOVE COSTS	89368.94	69.47
8. RETURN TO RISK	-2906.19	-2.24

FOOTNOTE: PERIOD BEGINNING OCT. PREVIOUS YEAR. BUY AT 425 LB. G-C KANSAS CITY. SELL 925 LB. CHOICE OMAHA. FEED PRICES 12 NC STATES AVERAGE WEIGHTED BY CATTLE FED. DEATH LOSS 1.54. DAYS ON FEED 260 GAIN PER DAY 1.9 POUNDS. FEEDLOT CAPACITY 200 HEAD. LOT USE 70%. ALSO INCLUDES 0317. 0318A 0339. 0200. 0430.

09/19/80
FEDS
09/22/80

ENTERPRISE CODE: 1422.A6A1
AREA CODE _3/12/_2/_0
FILE NO. 569
CWT SALES REPRESENTED 2273.2 (1001)
PRODUCTION UNIT DIVISOR 1295.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 20

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 15
PARAMETER SET 19
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10900
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

LINE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT CODE	ITEM CODE	TYPE	CONT
PRODUCTION					NUMBER OF UNITS													
1 SLAUGHTER HEIFER	0.0	0.0	0.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	66.57	9.25	16.	17.	3.	0.
2 SLAUGHTER HEIFER	0.0	0.0	0.0	0.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	65.96	9.25	16.	12.	2.	0.

OPERATING INPUTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
					RATE/UNIT													
11 FEEDER HEIFERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	302.0	0.0	0.0	60.87	1.00	16.	9.	3.	0.
12 FEEDER HEIFERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	302.0	0.0	60.54	1.00	16.	9.	3.	0.
13 CORN	357.0	896.0	736.0	827.0	917.0	1007.0	740.0	0.0	0.0	345.0	256.0	467.0	2.23	1.00	2.	72.	3.	0.
14 CORN SILAGE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	245.0	0.0	0.0	15.52	1.00	3.	66.	3.	0.
15 ALFALFA	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	29.69	1.00	3.	179.	3.	0.
16 SOYBEAN MEAL	42.0	42.0	42.0	42.0	42.0	42.0	42.0	0.0	0.0	42.0	42.0	42.0	12.40	1.00	16.	128.	3.	0.
17 VET & MED	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	722.0	0.0	1.00	1.00	15.	208.	3.	0.
18 SALT & MINERALS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.38	1.00	16.	193.	3.	3.
19 STRAW	0.0	0.0	0.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0	0.0	0.0	19.06	1.09	3.	166.	3.	0.
20 CUSTOM HAULING	0.0	0.0	0.0	0.0	0.0	0.0	1000.0	0.0	0.0	0.0	645.0	0.0	1.00	1.00	15.	350.	3.	0.
21 BUILDING SITE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	1.00	7.	389.	3.	0.
22 SALE CORN	0.0	0.0	0.0	0.0	0.0	439.0	437.0	0.0	0.0	0.0	0.0	0.0	3.00	1.00	15.	395.	3.	0.
23 MANURE CREDIT	0.0	0.0	1973.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.80	1.00	15.	54.	3.	0.
24 HAY LAND	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	386.	3.	0.
25 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2147.00	1.00	15.	459.	3.	0.

MACHINERY REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
					HOURS													
50 GRINDER-MIXER	5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0	0.0	4.00	4.	67.	4.	0.
51 FRONT END LDR.	2.2	2.2	2.2	2.2	0.0	0.0	1.7	1.7	0.0	0.0	2.2	2.2	0.0	5.00	3.	36.	4.	0.
52 SCRAPER BLADE	2.2	2.2	2.2	2.2	0.0	0.0	1.7	1.7	0.0	0.0	2.2	2.2	0.0	5.00	2.	37.	4.	0.
53 MANURE SPREADER	4.5	4.5	4.5	4.5	0.0	0.0	3.4	3.4	0.0	0.0	4.5	4.5	0.0	5.00	3.	41.	4.	0.
54 SU FEED WAGON	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	0.0	0.0	8.0	7.0	0.0	4.00	3.	33.	4.	0.
55 PICKUP	16.0	16.0	15.0	16.0	16.0	16.0	15.0	18.0	16.0	16.0	15.0	16.0	0.0	7.00	8.	13.	4.	0.
56 WAGON	29.0	29.0	28.0	29.0	29.0	28.0	29.0	29.0	28.0	29.0	29.0	28.0	0.0	7.00	2.	60.	4.	0.

EQUIPMENT REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
78 POLESHED OINT	60.0	60.0	50.0	50.0	50.0	0.0	0.0	0.0	0.0	30.0	30.0	60.0	3.410	1.	1.00	2.	5.	0.
79 PAVED LOT & IN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.060	0.	1.00	8.	5.	0.
80 FEED BUNK PORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.000	0.	1.00	38.	5.	0.
81 TOWER SILO MED.	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.740	0.	1.00	61.	5.	0.
82 TOWER UNLDR MED	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0	1.000	4.	1.30	60.	5.	0.
83 ALLE SUPPLEMEN.	25.0	24.0	25.0	21.0	25.0	25.0	25.0	25.0	0.0	25.0	24.0	24.0	1.000	8.	0.07	20.	5.	0.
84 WATERER FLOAT	337.0	337.0	290.0	101.0	0.0	0.0	0.0	0.0	0.0	50.0	200.0	267.0	3.000	6.	1.00	23.	5.	0.
85 SWEEP AUGER	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	3.4	3.5	0.5	3.000	4.	1.30	76.	5.	0.
86 FLIGHT CLEV.	0.5	0.5	0.5	3.5	0.5	0.5	0.5	0.0	0.0	3.4	0.5	0.5	5.065	4.	1.00	77.	6.	0.
87 HOPPERED BIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.005	0.	1.00	69.	5.	0.
88 HOP BIN AUGER	3.2	0.0	0.2	3.2	3.2	0.2	0.2	3.2	0.0	0.2	0.2	0.2	2.000	4.	1.00	75.	5.	0.
89 FLIGHT CLEV.	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0	1.000	4.	1.00	77.	5.	0.
90 HAY FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.300	0.	1.30	41.	5.	0.
51 PERM LOAD CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	35.	5.	0.
52 WORKING CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	32.	5.	0.
53 OILER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	45.	5.	0.
94 CORRAL FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.900	0.	1.00	13.	5.	0.
95 POLE LIGHT	410.0	380.0	350.0	321.0	290.0	260.0	260.0	290.0	320.0	350.0	380.0	410.0	1.000	1.	1.70	18.	5.	0.
96 BUCK DRIVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.000	0.	1.00	9.	5.	0.
97 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	99.	5.	0.
98 FEED HOUSE	50.0	60.0	53.0	33.0	53.0	0.0	0.0	0.0	0.0	30.0	30.0	60.0	0.200	1.	1.00	6.	5.	0.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
59 LIVESTOCK LABOR	102.00	102.00	132.00	102.00	103.00	102.00	102.00	102.00	102.00	102.00	102.00	102.00

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	$	0.0	0.0	0.0	0.0	0.0	44366.63	42696.12	0.0	0.0	0.0	0.0	0.0
TOTAL VAR. COST	$	2620.31	3010.20	4323.66	5395.49	3540.78	6320.28	6535.09	879.38	752.02	24674.61	21791.33	3610.46

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
					ANNUAL LABOR REQUIREMENTS										
LIVESTOCK LABOR	1	HR.	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	1224.0
TOTAL LABOR	1	HR.	132.0	102.0	102.0	102.0	102.0	192.0	102.0	102.0	102.0	102.0	102.0	102.0	1424.0
					FUEL REQUIREMENTS										
GASOLINE	1	GAL.	43.3	40.0	37.5	40.0	40.0	40.0	37.5	40.0	40.0	40.0	37.5	40.0	472.5
DIESEL	1	GAL.	142.5	142.5	140.3	142.5	134.7	112.3	135.9	135.9	67.2	118.1	145.9	140.1	1537.8
ELECTRICITY	1	KWH	1112.1	1097.5	760.2	542.4	257.9	196.9	196.9	210.5	151.0	397.4	770.3	983.8	6452.9
					MACHINERY REQUIREMENTS										
TRACTOR (2)	1	HR.	31.2	31.2	30.2	31.2	29.0	28.0	30.7	30.7	28.0	29.0	31.2	30.2	360.4
TRACTOR (3)	1	HR.	13.7	13.7	13.7	13.7	7.5	7.0	12.1	12.1	0.0	0.0	14.7	13.7	129.4
TRACTOR (4)	1	HR.	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0	55.0
PICKUP	1	HR.	16.0	16.0	15.0	16.0	16.0	16.0	15.0	18.0	16.0	16.0	15.0	16.0	189.0
GRINDER-MIXER	1	HR.	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0	55.0
FRONT END LDR.	1	HR.	2.2	2.2	2.2	2.2	0.0	0.0	1.7	1.7	0.0	0.0	2.2	2.2	16.6
SCRAPER BLADE	1	HR.	2.2	2.2	2.2	2.2	0.0	0.0	1.7	1.7	0.0	0.0	2.2	2.2	16.6
MANURE SPREADER	1	HR.	4.5	4.5	4.5	4.5	0.0	0.0	3.4	3.4	0.0	0.0	4.5	4.5	33.8
SU FEED WAGON	1	HR.	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	0.0	0.0	8.0	7.0	75.0
WAGON	1	HR.	29.0	29.0	28.0	29.0	29.0	28.0	29.0	29.0	28.0	29.0	29.0	28.0	344.0

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/SIZE	LIFETIME HOURS/ACRES	PURCHASE PRICE	DEPR./HOUR	INTEREST/HOUR	INS./HOUR	TAXES/HOUR	TOTAL OWNERSHIP/HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR (2)	53.20	1.033	11153.	1.215	0.694	0.175	0.128	2.382	0.815	1.752	0.263	2.830
TRACTOR (3)	73.10	1.333	19155.	1.906	1.255	0.105	0.179	3.345	1.144	2.453	0.368	3.965
TRACTOR (4)	93.59	1.300	21133.	2.415	1.676	0.191	0.239	4.466	1.528	3.154	0.473	5.155
PICKUP	3.75	1.315	7135.	1.314	0.624	0.053	0.095	2.094	1.563	1.857	0.276	3.676
GRINDER-MIXER	5.29	1.033	6713.	4.995	2.102	0.177	0.356	6.719	2.641	0.0	0.0	2.641
FRONT END LDR.	4.10	3.033	7512.	1.869	0.985	0.103	0.156	3.591	0.721	0.0	0.0	0.721
SCRAPER BLADE	0.25	1.033	357.	0.142	0.081	0.007	0.012	0.241	1.599	0.0	0.0	1.599
MANURE SPREADER	*****	1.333	1247.	2.855	1.100	0.114	0.222	4.394	1.170	0.0	0.0	1.170
SU FEED WAGON	4.00	1.033	7134.	2.069	1.935	0.127	0.239	4.749	3.086	0.0	0.0	3.086
WAGON	*****	1.033	1327.	0.943	0.637	0.095	0.113	1.789	0.478	0.0	0.0	0.478

ANNUAL COST SUMMARY PER EQUIPMENT AND LIVESTOCK

LINE NO. ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PRIMOR. CHARGED	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERAT-ING/YR	HOURS LABOR
2 POLESHED OINT	3319.0	SQFT	1.41	1.205	10082.00	812.42	344.91	54.75	32.54	1344.61	366.97	16.49	381.45	0.0
8 PAVED LOT & IN	1317.3	SQFT	5.31	1.343	915.50	238.75	89.31	0.0	6.43	335.90	67.25	0.0	67.25	0.0
38 FEED BUNK PORT	19.5	FEET	21.61	1.000	1625.96	326.43	138.17	0.0	10.96	455.15	65.20	0.0	65.20	0.0
61 TOWER SILO MED.	470.3	TON	0.74	1.000	15972.00	442.96	107.45	26.50	15.80	652.74	84.59	0.0	84.59	0.0
66 TOWER UNLOD MED	40.3	FEET	1.31	1.030	4025.00	442.30	137.61	13.27	14.87	628.05	351.84	11.26	365.10	0.0
20 ALLE SUPPLEMEN.	1.1	EACH	1.31	3.373	4554.00	15.94	11.36	0.0	1.07	28.37	6.58	22.94	29.31	0.0
23 WATERER FLOAT	2.0	TON	3.33	1.030	395.00	50.50	29.85	3.75	1.97	85.07	23.40	180.19	161.59	0.0
76 SWEEP AUGER	40.3	FEET	1.01	1.333	553.70	55.30	19.71	1.66	1.86	78.52	22.12	0.95	23.07	0.0
77 FLIGHT CLEV.	40.3	FEET	1.01	1.010	553.50	55.30	19.71	1.66	1.86	78.52	22.12	0.45	22.57	0.0
69 HOPPER BIN	6.8	TON	2.01	1.000	747.50	78.70	29.75	4.72	2.81	115.98	31.48	0.0	31.48	0.0
75 HOP BIN AUGER	10.9	FEET	2.97	1.310	293.00	50.80	20.48	1.76	1.97	81.21	46.88	0.23	47.11	0.0
77 FLIGHT CLEV.	25.3	FEET	1.02	1.010	553.03	55.30	19.71	1.66	1.86	78.52	22.12	3.22	25.34	0.0
41 HAY FEEDER	60.6	FEET	4.31	1.330	352.00	145.20	51.03	0.7	4.91	135.04	28.64	0.0	28.64	0.0
35 PERM LOAD CHUTE	1.0	EACH	1.07	1.000	1395.00	69.95	49.85	4.20	4.70	128.70	27.90	0.0	27.90	0.0
32 WORKING CHUTE	1.1	EACH	1.37	1.000	553.90	55.30	19.71	1.66	1.86	78.52	22.12	0.0	22.12	0.0
45 OILER	1.1	EACH	2.33	1.030	358.70	145.20	25.51	0.0	2.41	173.12	14.32	0.0	14.32	0.0
13 CORRAL FENCE	129.9	FEET	2.93	1.000	443.00	63.94	24.17	0.0	2.28	90.40	25.58	0.0	25.58	0.0
18 POLE LIGHT	1.0	EACH	1.01	1.030	255.00	12.60	4.76	0.0	0.45	17.81	5.04	87.28	92.32	0.0
9 BUCK DRIVE	1313.3	SQFT	4.13	1.939	175.30	39.00	27.60	0.0	2.62	69.42	7.60	0.0	7.60	0.0
99 SMALL TOOLS	533.9	DOL.	1.33	1.030	653.30	133.20	23.28	1.95	2.19	157.54	13.02	0.0	13.02	0.0
6 FEED HOUSE	1318.7	SQFT	0.21	1.030	6333.00	63.01	23.82	3.76	2.25	93.66	25.20	3.04	28.24	0.0

Figure 9. Finish 35 yearling steers without silage - North Central States 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
EQUIPMENT	7742.73	20.11	4302.23	10.40
*TRACTORS AND TRUCKS	32665.00	84.84	22316.21	57.18
*OTHER MACHINERY	19453.00	50.63	13138.28	34.13
TOTAL	59900.73	155.59	39156.71	101.71

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER STEERS	CWT.	9.00	11.00	75.00	825.00	7425.00	
SLAUGHTER STEERS	CWT.	9.00	11.00	73.99	813.89	7325.31	
SLAUGHTER STEERS	CWT.	9.00	11.00	65.81	723.91	6515.19	
SLAUGHTER STEERS	CWT.	8.00	11.00	67.00	737.00	5896.00	
TOTAL RECEIPTS						27161.20	70.55

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FEEDER STEERS	CWT.	57.9	93.11	5391.07	14.00
FEEDER STEERS	CWT.	57.0	89.44	5098.08	13.24
FEEDER STEERS	CWT.	57.9	66.15	3830.08	9.95
FEEDER STEERS	CWT.	57.0	66.05	3764.85	9.78
CORN	BU.	1856.0	2.23	4138.87	10.75
ALFALFA	TN.	19.4	29.68	575.79	1.50
SOYBEAN MEAL	CWT.	31.5	12.40	390.60	1.01
VET & MED	DOL.	138.0	1.00	138.00	0.36
SALT & MINERALS	CWT.	1.0	8.38	8.38	0.02
STRAW	TN.	12.0	19.06	228.72	0.59
LVSTK HAULING	DOL.	542.0	1.00	542.00	1.41
BUILDING SITE	ACRE	1.0	0.0	0.0	0.0
SALE COMM	DOL.	224.0	1.00	224.00	0.58
MANURE CREDIT	DOL.	420.0	-1.00	-420.00	-1.09
HAY LAND	ACRE	4.8	0.0	0.0	0.0
MACH FUEL & LUBE				528.30	1.36
MACHINERY REPAIR				367.92	0.96
EQUIP FUEL & LUBE				88.62	0.23
EQUIP REPAIR				173.07	0.45
LIVESTOCK LABOR	HRS.	372.00	3.48	1294.56	3.36
INTEREST ON OPER CAPITAL	DOL.	6589.21	0.11	698.46	1.81
TOTAL VARIABLE COSTS				27355.36	70.27

4. INCOME ABOVE VARIABLE COSTS	105.84	0.27
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	999.22	2.60
EQUIPMENT	832.28	2.16
LAND TAXES	66.05	0.17
TOTAL OWNERSHIP COSTS	1897.56	4.93
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	881.36	2.29
GEN FARM OVERHEAD	501.00	1.30
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	791.26	2.06
TOTAL OTHER COSTS	2173.63	5.65
7. TOTAL OF ABOVE COSTS	31126.54	80.85
8. RETURN TO RISK	-3865.34	-10.30

FOOTNOTE: PERIOD BEGINNING OCT. PREVIOUS YEAR. BUY AT 650 LB. G-C KANSAS CITY. 09/12/80
SELL 1100 LB. CHOICE OMAHA. FEED PRICES 12 NC STATES AVERAGE FEDS
WEIGHTED BY CATTLE FED. DEATH LOSS 1.0%. DAYS ON FEED 180. GAIN PER 09/19/80
DAY 2.5 POUNDS. FEEDLOT CAPACITY 25 HEAD. LOT USE 70%. ALSO INCLUDES
0323, 0317, 0318, 0203, 0400.

ENTERPRISE CODE: 1417o4850
AREA CODE: [illegible]
FILE NO. 561
CWT SALES REPRESENTED 7629.7 (0300)
PRODUCTION UNIT DIVISOR 385.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 20

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 15
PARAMETER SET 19
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10600
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

FINISH 36 YEARLING STEERS WITHOUT SILAGE - NORTH CENTRAL STATES 1979

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 SLAUGHTER STEERS	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.00	11.00	16.	11.	2.	0.
2 SLAUGHTER STEERS	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.99	11.00	15.	11.	2.	0.
3 SLAUGHTER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	65.81	11.00	16.	11.	2.	0.
4 SLAUGHTER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	67.00	11.00	16.	11.	2.	0.

OPERATING INPUTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
					RATE/UNIT													
11 FEEDER STEERS	0.0	0.0	0.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.11	1.00	16.	8.	3.	0.
12 FEEDER STEERS	0.0	0.0	0.0	0.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.44	1.00	16.	8.	3.	0.
13 FEEDER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0	0.0	0.0	68.15	1.00	15.	8.	3.	0.
14 FEEDER STEERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0	0.0	66.05	1.00	16.	8.	3.	0.
15 CORN	167.0	186.0	204.0	93.0	130.0	148.0	167.0	186.0	204.0	93.0	130.0	148.0	2.23	1.00	2.	72.	3.	0.
16 ALFALFA	0.0	0.0	0.0	0.0	0.0	0.0	19.4	0.0	0.0	0.0	0.0	0.0	29.68	1.00	3.	179.	3.	0.
17 SOYBEAN MEAL	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.7	12.49	1.00	16.	126.	3.	0.
18 VET & MED	0.0	0.0	0.0	0.0	69.0	0.0	0.0	0.0	0.0	0.0	69.0	0.0	1.00	1.00	15.	286.	3.	0.
19 SALT & MINERALS	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	8.38	1.00	16.	103.	3.	0.
20 STRAW	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	19.06	1.00	3.	168.	3.	0.
21 LVSTK HAULING	0.0	0.0	0.0	0.0	270.0	0.0	0.0	0.0	0.0	0.0	272.0	0.0	1.00	1.00	15.	350.	3.	0.
22 BUILDING SITE	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	1.00	7.	385.	3.	0.
23 SALE COMM	0.0	0.0	0.0	56.0	56.0	0.0	0.0	0.0	0.0	56.0	56.0	0.0	1.00	1.00	15.	395.	3.	0.
24 MANURE CREDIT	0.0	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	1.00	15.	54.	3.	0.
25 HAY LAND	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	386.	3.	0.
26 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	501.00	1.00	15.	459.	3.	0.

MACHINERY REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
					HOURS													
50 GRINDER-MIXER	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.7	1.5	1.7	1.6	1.7	0.0	4.00	4.	67.	4.	0.
51 FRONT END LDR.	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	0.0	5.00	2.	35.	4.	0.
52 MANURE SPREADER	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	0.0	5.00	2.	40.	4.	0.
53 WAGON	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	0.0	4.00	4.	63.	4.	0.
54 PICKUP	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0.0	7.00	5.	13.	4.	0.
55 WAGON	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	0.0	7.00	2.	60.	4.	0.

EQUIPMENT REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
78 POLESHED DIRT	60.0	60.0	30.0	30.0	30.0	0.0	0.0	0.0	0.0	30.0	30.0	60.0	0.330	1.	1.00	2.	5.	0.
79 FEED BUNK PORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.900	0.	1.00	38.	5.	0.
80 WELL 200FT,4IN.	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	1.000	6.	0.04	26.	5.	0.
81 WATER T. HEATED	433.0	433.0	200.0	100.0	0.0	0.0	0.0	0.0	0.0	50.0	200.0	333.0	1.000	6.	1.00	22.	5.	0.
82 SWEEP AUGER	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	1.000	4.	1.00	76.	5.	0.
83 FLIGHT ELEV.	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	1.000	4.	1.00	77.	5.	0.
84 HAY FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	41.	5.	0.
85 PORT. LOAD CHUTE	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	34.	5.	0.
86 CORRAL FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.100	0.	1.00	13.	5.	0.
87 ROCK DRIVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.900	0.	1.00	9.	5.	0.
88 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.500	0.	1.00	95.	5.	0.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
59 LIVESTOCK LABOR	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	1	0.0	0.0	0.0	7425.00	7325.01	0.0	0.0	0.0	0.0	6515.19	5896.00	0.0
TOTAL VAR. COST	1	675.08	729.65	335.82	5550.33	6065.53	1314.11	1464.65	704.55	737.24	4383.29	4750.98	637.11

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
LIVESTOCK LABOR	1	HR.	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	372.0
TOTAL LABOR	1	HR.	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	372.0
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	141.0
DIESEL	1	GAL.	36.5	44.1	43.9	44.1	36.5	36.9	40.5	40.8	36.5	36.9	41.8	42.2	486.7
ELECTRICITY	1	KWH	452.5	453.4	214.4	115.7	15.7	9.8	9.8	10.3	10.3	65.7	215.7	552.6	1928.6
MACHINERY REQUIREMENTS															
TRACTOR 121	1	HR.	4.4	7.4	7.4	7.4	4.4	4.4	6.0	6.0	4.4	4.4	6.6	6.6	69.4
TRACTOR 141	1	HR.	6.0	6.1	6.0	6.1	6.1	6.1	6.9	6.1	6.9	6.1	6.0	6.1	72.6
PICKUP	1	HR.	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	56.4
GRINDER-MIXER	1	HR.	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.7	19.8
FRONT END LDR.	1	HR.	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	8.3
MANURE SPREADER	1	HR.	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	8.3
WAGON	1	HR.	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	52.8
WAGON	1	HR.	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	52.8

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/SIZE	PERFORM RATE HOURS/ACRE	PURCHASE PRICE	DEPREC./HOUR	INTEREST/HOUR	INS./HOUR	TAXES/HOUR	TOTAL OWNERSHIP/HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR 121	43.35	1.021	11153.	1.265	0.894	0.175	0.128	2.542	0.815	1.752	0.263	2.830
TRACTOR 141	93.10	1.033	21103.	2.411	1.676	0.141	0.239	4.465	1.528	3.154	0.473	5.155
PICKUP	0.75	1.999	7195.	1.318	0.629	0.153	0.095	2.094	1.563	1.837	0.276	3.676
GRINDER-MIXER	2.10	1.023	4473.	4.095	2.102	0.377	0.336	6.710	2.641	0.0	0.0	2.641
FRONT END LDR.	1.00	1.031	1437.	1.541	0.812	0.168	0.129	2.549	0.595	0.0	0.0	0.595
MANURE SPREADER	*****	1.030	2137.	3.747	1.965	0.365	0.311	6.168	0.546	0.0	0.0	0.546
WAGON	*****	1.000	1527.	0.945	0.657	0.155	0.110	1.765	0.470	0.0	0.0	0.470
WAGON	*****	1.030	1527.	0.943	0.657	0.155	0.110	1.765	0.478	0.0	0.0	0.478

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPORT. CHARGED	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERATING/YR	HOURS LABOR
2	POLESHED DIRT	3910.0	SQFT	0.33	1.000	13982.00	166.35	62.88	9.94	5.93	245.15	66.54	3.01	69.55	0.0
38	FEED BUNK PORT	47.0	FEET	3.90	1.000	1672.00	48.90	17.43	0.0	1.64	67.97	9.78	0.0	9.78	0.0
26	WELL 200FT,4IN.	1.0	EACH	1.00	0.040	8554.00	4.55	3.25	0.0	0.31	8.11	1.82	4.74	6.56	0.0
22	WATER T. HEATED	10.0	GALS.	1.00	1.000	345.00	55.00	11.58	0.97	1.09	78.65	6.50	80.45	86.95	0.0
76	SWEEP AUGER	16.0	FEET	1.00	1.000	553.00	55.30	19.71	1.66	1.86	78.52	22.12	0.29	22.41	0.0
77	FLIGHT ELEV.	43.0	FEET	1.00	1.000	553.00	55.30	19.71	1.68	1.86	78.52	22.12	0.14	22.26	0.0
41	HAY FEEDER	10.0	FEET	1.00	1.000	358.00	35.80	12.76	0.0	1.20	49.76	7.16	0.0	7.16	0.0
34	PORT. LOAD CHUTE	1.0	EACH	1.00	1.000	844.00	42.30	30.15	2.54	2.04	77.03	16.92	0.0	16.92	0.0
13	CORRAL FENCE	120.0	FEET	1.10	1.100	481.00	24.25	9.17	0.0	0.86	34.29	9.70	0.0	9.70	0.0
9	ROCK DRIVE	6335.0	SQFT	2.90	1.000	395.00	19.50	13.90	0.0	1.31	34.71	3.90	0.0	3.90	0.0
95	SMALL TOOLS	500.0	DOL.	0.50	1.000	651.00	65.10	11.60	0.98	1.09	78.77	6.51	0.0	6.51	0.0

Figure 10. Finish 35 yearling heifers without silage - North Central States

1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
EQUIPMENT	7641.91	22.95	3966.27	11.91
*TRACTORS AND TRUCKS	32665.00	98.09	22016.21	66.11
*OTHER MACHINERY	19453.00	58.54	13158.28	39.45
TOTAL	59799.91	179.58	39120.76	117.48

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER HEIFER	CWT.	9.00	9.50	71.04	674.88	6073.92	
SLAUGHTER HEIFER	CWT.	9.00	9.50	74.99	712.41	6411.64	
SLAUGHTER HEIFER	CWT.	9.00	9.50	63.85	606.57	5459.17	
SLAUGHTER HEIFER	CWT.	8.00	9.50	67.84	644.48	5155.84	
TOTAL RECEIPTS						23100.57	69.37

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FEEDER HEIFERS	CWT.	53.1	74.94	3979.31	11.95
FEEDER HEIFERS	CWT.	53.0	88.61	4696.33	14.10
FEEDER HEIFERS	CWT.	53.0	56.81	3010.93	9.04
FEEDER HEIFERS	CWT.	53.0	56.29	2983.37	8.96
CORN	BU.	1502.0	2.23	3349.46	10.06
ALFALFA	TN.	14.6	29.68	433.33	1.30
SOYBEAN MEAL	CWT.	28.0	12.40	347.20	1.04
VET & MED	DOL.	138.0	1.00	138.00	0.41
SALT & MINERALS	CWT.	1.0	8.38	8.38	0.03
STRAW	TN.	11.0	19.06	209.66	0.63
LVSTK HAULING	DOL.	483.0	1.00	483.00	1.45
BUILDING SITE	ACRE	1.0	0.0	0.0	0.0
SALE COMM	DOL.	224.0	1.00	224.00	0.67
MANURE CREDIT	DOL.	326.0	-1.00	-326.00	-0.98
HAY LAND	ACRE	3.7	0.0	0.0	0.0
MACH FUEL & LUBE				474.43	1.42
MACHINERY REPAIR				338.24	1.02
EQUIP FUEL & LUBE				90.48	0.27
EQUIP REPAIR				171.06	0.51
LIVESTOCK LABOR	HRS.	288.00	3.48	1002.24	3.01
INTEREST ON OPER CAPITAL	DOL.	4502.37	0.11	477.25	1.43
TOTAL VARIABLE COSTS				22188.63	66.33

4. INCOME ABOVE VARIABLE COSTS	1011.93	3.04
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	916.11	2.75
EQUIPMENT	824.85	2.48
LAND TAXES	52.84	0.16
TOTAL OWNERSHIP COSTS	1793.80	5.39
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	705.09	2.12
GEN FARM OVERHEAD	413.00	1.24
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	670.09	2.01
TOTAL OTHER COSTS	1788.17	5.37
7. TOTAL OF ABOVE COSTS	25670.61	77.09
8. RETURN TO RISK	-2570.04	-7.72

FOOTNOTE: PERIOD BEGINNING OCT. PREVIOUS YEAR. BUY AT 600 LB. G-C KANSAS CITY. SELL 950 LB. CHOICE OMAHA. FEED PRICES 12 NC STATES AVERAGE WEIGHTED BY CATTLE FED. DEATH LOSS 1.0%. DAYS ON FEED 160. GAIN PER DAY 2.2 POUNDS. FEEDLOT CAPACITY 25 HEAD. LOT USE 70%. ALSO INCLUDES 0325, 0317, 0318, 0339, 0200, 0400.

09/12/80 FEDS
09/15/80

ENTERPRISE CODE: 142664550
AREA CODE 3/127_2/_3
FILE NO. 566
CWT SALES REPRESENTED 3247.3 (100)
PRODUCTION UNIT DIVISOR 333.
LAND CHARGE METHOD 2
LAG-PERMANENT, STRUCT 20

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 15
PARAMETER SET 19
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10500
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

[illegible] YEARLING HEIFERS WITHOUT SILAGE - NORTH CENTRAL STATES 1979

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 SLAUGHTER HEIFER	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.04	9.50	16.	12.	2.	0.
2 SLAUGHTER HEIFER	0.0	0.0	0.0	[illegible]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.99	9.50	16.	12.	2.	0.
3 SLAUGHTER HEIFER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	63.65	9.50	16.	12.	2.	0.
4 SLAUGHTER HEIFER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	67.84	9.50	16.	12.	2.	0.

OPERATING INPUTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
					RATE/UNIT													
11 FEEDER HEIFERS	0.0	0.0	55.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.94	1.00	16.	9.	3.	0.
12 FEEDER HEIFERS	0.0	0.0	0.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.61	1.00	16.	9.	3.	0.
13 FEEDER HEIFERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	0.0	0.0	56.81	1.00	16.	9.	3.	0.
14 FEEDER HEIFERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.0	0.0	56.29	1.00	16.	9.	3.	0.
15 CORN	155.0	153.0	166.0	75.0	105.0	120.0	135.0	150.0	166.0	75.0	105.0	120.0	2.25	1.00	2.	72.	3.	0.
16 ALFALFA	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0	0.0	29.68	1.00	3.	179.	3.	0.
17 SOYBEAN MEAL	2.3	2.3	2.4	2.3	2.2	2.4	2.3	2.3	2.4	2.3	2.3	2.4	12.40	1.00	16.	126.	3.	0.
18 VET & MED	0.0	0.0	0.0	69.0	0.0	0.0	0.0	0.0	0.0	0.0	69.0	0.0	1.00	1.00	15.	288.	3.	0.
19 SALT & MINERALS	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	8.38	1.00	16.	103.	3.	0.
20 STRAW	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	19.06	1.00	3.	168.	3.	0.
21 LVSTK HAULING	0.0	0.0	0.0	241.0	0.0	0.0	0.0	0.0	0.0	242.0	0.0	0.0	1.00	1.00	15.	350.	3.	0.
22 BUILDING SITE	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	385.	3.	0.
23 SALE COMM	0.0	0.0	56.0	53.0	0.0	0.0	0.0	56.0	56.0	0.0	0.0	0.0	1.00	1.00	15.	395.	3.	0.
24 MANURE CREDIT.	0.0	0.0	326.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	1.00	15.	54.	3.	0.
25 HAY LAND	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	386.	3.	0.
26 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	413.00	1.00	15.	459.	3.	0.

MACHINERY REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
					HOURS													
50 GRINDER-MIXER	1.5	1.4	1.5	1.4	1.2	1.4	1.3	1.4	1.5	1.4	1.3	1.4	0.0	4.00	4.	67.	4.	0.
51 FRONT END LDR.	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	0.0	5.00	2.	35.	4.	0.
52 MANURE SPREADER	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	0.0	5.00	2.	40.	4.	0.
53 WAGON	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.6	3.6	0.0	4.00	4.	63.	4.	0.
54 PICKUP	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0.0	7.00	0.	13.	4.	0.
55 WAGON	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	0.0	7.00	2.	60.	4.	0.

EQUIPMENT REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	AREA
78 POLESHED UNIT	60.0	60.0	30.0	30.0	30.0	0.0	0.0	0.0	0.0	30.0	30.0	60.0	0.320	1.	1.00	2.	5.	0.
79 FEED BUNK PORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	38.	5.	0.
80 WELL EQUIPMENT	4.7	4.0	4.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	1.000	6.	0.02	28.	5.	0.
81 WATER T. HEATED	433.0	433.0	290.0	133.0	0.0	0.0	0.0	0.0	0.0	50.0	200.0	333.0	1.009	6.	1.50	22.	5.	0.
82 SWEEP AUGER	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	1.303	4.	1.00	76.	5.	0.
83 FLIGHT ELEV.	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	1.000	4.	1.00	77.	5.	0.
84 HAY FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	41.	5.	0.
85 PORT. LOAD CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	34.	5.	0.
86 CORRAL FENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.100	0.	1.00	13.	5.	0.
87 ROCK DRIVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	9.	5.	0.
88 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.500	0.	1.00	99.	5.	0.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
99 LIVESTOCK LABOR	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	1	0.0	0.0	5371.92	6411.64	0.0	0.0	0.0	5459.17	5155.84	0.0	0.0	0.0
TOTAL VAR. COST	1	559.56	595.91	4333.51	5474.55	463.56	511.78	1170.42	625.89	656.38	3858.86	3552.61	522.01

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
LIVESTOCK LABOR	1	HR.	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	288.0
TOTAL LABOR	1	HR.	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	288.0
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	141.0
DIESEL	1	GAL.	31.7	39.4	38.9	39.4	31.7	32.2	35.6	36.0	31.7	32.2	37.8	37.4	423.2
ELECTRICITY	1	KWH	452.5	453.0	233.7	115.5	15.5	9.8	9.8	10.3	9.8	65.5	215.9	352.5	1923.4
MACHINERY REQUIREMENTS															
TRACTOR (2)	1	HR.	4.4	7.4	7.4	7.4	4.4	4.4	6.0	6.0	4.4	4.4	6.6	6.6	69.4
TRACTOR (4)	1	HR.	4.9	5.0	4.9	5.0	4.9	5.0	4.9	5.0	4.9	5.0	4.9	5.0	59.4
PICKUP	1	HR.	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	56.4
GRINDER-MIXER	1	HR.	1.5	1.4	1.2	1.4	1.3	1.4	1.3	1.4	1.5	1.4	1.3	1.4	16.2
FRONT END LDR.	1	HR.	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	8.3
MANURE SPREADER	1	HR.	0.0	1.5	1.5	1.5	0.0	0.0	0.8	0.8	0.0	0.0	1.1	1.1	8.3
WAGON	1	HR.	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	43.2
WAGON	1	HR.	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	52.8

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/SIZE	MINIMUM RATE HOURS/ACRE	PURCHASE PRICE	DEPRE./HOUR	INTEREST/HOUR	INS./HOUR	TAXES/HOUR	TOTAL OWNERSHIP/HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR (2)	50.00	1.000	11153.	1.265	0.894	0.075	0.124	2.382	0.815	1.752	0.263	2.830
TRACTOR (4)	90.00	1.000	21153.	2.411	1.676	0.141	0.239	4.466	1.528	3.154	0.473	5.155
PICKUP	0.75	1.000	7315.	1.534	0.679	0.053	0.095	2.094	1.563	1.837	0.276	3.676
GRINDER-MIXER	3.00	1.000	6490.	4.095	2.102	0.177	0.336	6.710	2.641	0.0	0.0	2.641
FRONT END LDR.	1.50	1.000	1437.	1.543	0.812	0.066	0.129	2.549	0.595	0.0	0.0	0.595
MANURE SPREADER	*****	1.000	2537.	5.727	1.965	0.165	0.311	8.168	0.546	0.0	0.0	0.546
WAGON	*****	1.000	1627.	0.943	0.657	0.055	0.110	1.765	0.478	0.0	0.0	0.478
WAGON	*****	1.000	1627.	0.943	0.657	0.055	0.110	1.765	0.478	0.0	0.0	0.478

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PERCENT CHARGED	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERATING	HOURS LABOR
2	POLESHED DIST	5320.0	SQFT	0.32	1.000	10983.00	161.31	63.96	9.08	5.75	237.72	64.52	2.91	67.44	0.0
38	FEED BUNK PORT	10.0	FEET	3.00	1.000	165.00	48.90	17.43	0.0	1.64	67.97	9.78	0.0	9.78	0.0
28	WELL EQUIPMENT	1.0	EACH	1.00	0.020	4554.00	4.55	3.25	0.0	0.31	8.11	1.82	4.74	6.56	0.0
22	WATER T. HEATED	100.0	GAL.	1.01	1.500	929.10	65.03	11.58	0.97	1.09	78.65	6.50	89.45	95.95	0.0
76	SWEEP AUGER	10.0	FEET	1.00	1.000	552.00	55.30	19.72	1.66	1.86	78.52	22.12	0.25	22.37	0.0
77	FLIGHT ELEV.	20.0	FEET	1.00	1.000	552.00	55.30	19.72	1.66	1.86	78.52	22.12	0.12	22.24	0.0
41	HAY FEEDER	10.0	FEET	1.00	1.000	358.00	35.80	12.76	0.0	1.20	49.76	7.16	0.0	7.16	0.0
34	PORT. LOAD CHUTE	1.0	EACH	1.00	1.000	646.00	42.30	30.15	2.54	2.64	77.83	16.92	0.0	16.92	0.0
13	CORRAL FENCE	1100.0	FEET	1.10	1.000	441.00	24.25	9.17	0.0	0.86	34.28	9.70	0.0	9.70	0.0
9	ROCK DRIVE	1000.0	SQFT	2.00	1.000	195.00	19.50	13.90	0.0	1.31	34.71	3.90	0.0	3.90	0.0
99	SMALL TOOLS	500.0	DOL.	0.50	1.000	651.00	65.10	11.60	0.98	1.09	78.77	6.51	0.0	6.51	0.0

Figure 11. California-Arizona feedlots 16000 head and over 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	PER UNIT	AVERAGE ACQUISITION TOTAL	PER UNIT
EQUIPMENT	746[illegible].00	2.48	13[illegible]49.00	3.75
*TRACTORS AND TRUCKS	10[illegible].00	0.39	721[illegible]1.25	0.20
*OTHER MACHINERY	37[illegible].00	0.[illegible]	22[illegible]12.94	0.62
TOTAL	81[illegible].00	2.86	16[illegible]73.00	4.57

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER STEERS	HD.	32[illegible].00	10.30	55.85	714.30	23[illegible]48.0	
SLAUGHTER HEIFERS	HD.	7[illegible].00	9.27	62.60	5[illegible].57	13[illegible]25.0	
MANURE BALES	TN.	13[illegible]5.00	1.20	1.[illegible]4	1.[illegible]4	327[illegible]5.8	
TOTAL RECEIPTS						2547[illegible]76.0	65.15

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FEEDER STEERS	CWT.	19[illegible]14[illegible].9	77.[illegible]	153[illegible]61[illegible]4.0	41.76
FEEDER HEIFERS	CWT.	2[illegible]952.[illegible]	53.[illegible]4	1333245.0	2.63
CORN	TN.	33990.0	99.[illegible]	3373873.0	2.16
BEET PULP	TN.	1619.0	128.66	208352.8	0.57
HOMINY FEED	TN.	[illegible]040.0	115.[illegible]	6[illegible]76[illegible]0.0	1.89
BEET MOLASSES	TN.	28[illegible]5.[illegible]	52.26	207[illegible]2.6	0.55
COTTONSEED HULLS	TN.	4795.0	55.36	265451.19	0.72
ALFALFA	TN.	5[illegible]0.0	63.77	789[illegible]25.2	1.06
41-46% PRO. FEED	TN.	[illegible]0.0	154.35	[illegible]01310.0	1.63
SALT & MINERALS	TN.	52[illegible].0	86.[illegible]	45[illegible]6.8	0.12
VET SERVICE	DOL.	63477.0	1.00	63477.0 O	0.17
VET SUPPLIES	DOL.	198410.1	1.00	198410.0 O	0.54
GROWTH STIMULANT	DOL.	44851.[illegible]	1.00	44[illegible]1.5 O	0.12
ANIMAL FAT	TN.	[illegible]31.0	2[illegible]4.00	36[illegible]4.0	1.00
TRUCKING	DOL.	164510.7	1.00	164510.6 T	0.45
UTILITIES	DOL.	166250.[illegible]	1.00	166250.7 O	0.45
LEGAL FEES	DOL.	59479.4	1.00	59[illegible]6.4 O	0.16
MISC EXPENSE	DOL.	4[illegible]7.7	1.00	4[illegible]7.6 O	0.13
YARD CREW	HR.	31[illegible]6.0	3.98	123908.75 L	0.34
MECHANIC	HR.	3935.0	4.62	18178.70 L	0.05
ACCOUNTANTS	HR.	6624.0	5.13	339[illegible]1.12 L	0.09
MANAGERS	HR.	7652.0	7.49	65[illegible]0.3 L	0.18
CONSULTANT	HR.	527.0	12.80	6745.60 L	0.02
TRUCK DRIVERS	HR.	2623.0	10.24	268[illegible]9.53 L	0.07
MARKETING	DOL.	53236.4	1.00	53236.44 T	0.14
MACH. FUEL & LUBE				110207.3 M	0.30
MACHINERY REPAIR				79444.91 M	0.22
EQUIP REPAIR				21[illegible]2.14 M	0.06
INTEREST ON OPER CAPITAL	DOL.	**********	0.11	570[illegible]4.63 O	1.55
TOTAL VARIABLE COSTS				247[illegible]12.0	67.11

4. INCOME ABOVE VARIABLE COSTS					
				752064.0	2.04

5. OWNERSHIP COSTS (DEPRECIATION, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	175132.81 M	0.42
EQUIPMENT	194304.58 M	0.53
LAND TAXES	6312.23 O	0.02
TOTAL OWNERSHIP COSTS	475749.56	1.02
6. OTHER COSTS		
LAND CHARGE (LAND RENT)	40517.6	0.11
GEN. FARM OVERHEAD	0.0	0.0
MANAGEMENT CHARGE (0.0 - OF TC-LAND-PURCH. LVSKD)	0.0	0.0
TOTAL OTHER COSTS	40517.6	0.11
7. TOTAL OF ABOVE COSTS	25142768.00	61.24
8. RETURN TO RISK	735908.00	0.91

FOOTNOTE: DEATHLOSS 1.79%: STEERS 161 DAYS: 2.71 LB. GAIN/DAY: 06/01/78
FEED CONV. 7.97: HEIFERS 116 DAYS: 2.51 LB. GAIN/DAY: GEE
FEED CONV. 8.33: FEEDLOT CAPACITY USED 51%: 10/29/80
STEERS 91% OF MARKETINGS:
TURNOVER RATE 2.30: RATION COST $92.11/TON: FEEDLOT CAPACITY 30,506

ENTERPRISE CODE: 14030 TC
AREA CODE 27/14/07/0
FILE NO. 587
CATTLES REPRESENTED 1458.0 (000)
PRODUCTION UNIT DIVISOR 368438.
LAND CHARGE METHOD 2
LAS-PERMANENT STRUCT 2

MACHINERY COMPLEMENT NO. 6
EQUIPMENT COMPLEMENT NO. 8
PARAMETER SET 5
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10520
LAS-OTHER EQUIPMENT 5

DATE PRINTED:

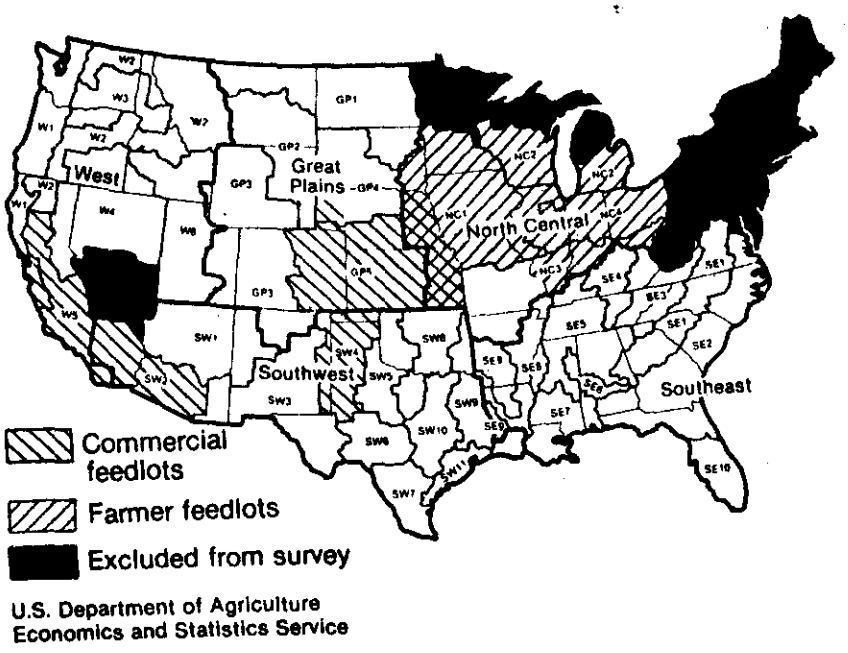

Figure 12. Production regions for cattle feedlots.

Source: USDA, ESS, Costs of Producing Livestock In The United States - Final 1979, Preliminary 1980, And Projections For 1981.

in the feeder cattle production activities. Once this is completed the range of budgets in any market region ranged from 0 to 16 with the total number of budgets for all market region equaling 138 [Appendix A].

Feed Coefficients

The feed coefficients were calculated in a similar manner to that of the feeder cattle production activities. The most important difference is the lack of breeding stock in the cattle feeding budgets. This fact made the calculation of protein, net energy, calcium and phosphorous requirements per cwt. of beef produced a much easier task since in most cases only one animal type needed to be fed whereas for the feeder cattle production activities up to 7 different animal types required feed.

Feeder cattle requirement coefficients: Cattle feeding activities require feeder cattle produced by feeder cattle production and dairy activities. To calculate the feeder cattle requirement coefficients we divide the weight of an individual feeder at the start of feeding by the weight in cwt. of the finished, ready for market, animal. Thus this coefficient reflects the number of pounds of feeder animal required to produce 100 lbs. of beef. Then, using the National Research Council date, the crude protein net energy, calcium, and phosphorus demands are determined.

Nitrogen coefficients: Nitrogen calculations are made in a similar manner to that of feeder cattle production activities. The source of nitrogen data was Short and Dvoskin [1977]. The nitrogen supplied per activity reflects the pounds of nitrogen produced per 100 pounds of beef produced.

Water Coefficient

Water use was also calculated in a manner similar to that of feeder cattle production activities. Only those activities in irrigated market region required water use coefficients. Once the market region water use was calculated a set of agricultural census weights were used to weight market region water consumption to PA's. These water coefficients reflect the acre-feet per year of water required to produce 100 pounds of beef. The feeder cattle production activities and the cattle feeding activities combine to form the beef sector of the livestock submodel.

Dairy Activities

The FEDS budget data used in the preparation of these activities was obtained from a survey of dairy producers completed in 1981 regarding the 1979 production year. Dairy budgets are available for 25 major dairy producing states (Figure 13 and 13a). The six New England states are

Figure 13. 1979 dairy (revised) Wisconsin

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
LIVESTOCK	87265.12	9.14	87265.12	9.14
EQUIPMENT	133292.97	13.97	46021.73	4.82
*TRACTORS AND TRUCKS	54645.00	5.73	36830.73	3.86
*OTHER MACHINERY	85500.00	8.96	57627.00	6.04
TOTAL	355093.06	37.21	222134.50	23.27

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
MILK	CWT.	8154.56	1.00	11.75	11.75	95816.06	
HULL CALVES	CWT.	33.88	0.75	113.00	84.75	2871.33	
CULL COWS	CWT.	16.12	12.00	50.50	610.80	9846.09	
COWS SOLD-DAIRY	HD.	3.54	1.00	1020.00	1020.00	3610.80	
TOTAL RECEIPTS						112144.19	11.75

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FAMILY LABOR	HR.	3695.3	2.96	10939.57	1.15
HIRED LABOR	HR.	1691.2	2.96	5005.93	0.52
GRAIN	CWT.	2968.2	4.52	13416.26	1.41
DAIRY SUPPLEMENT	CWT.	298.5	7.70	2298.60	0.24
CORN SILAGE	TN.	233.0	19.20	4491.26	0.47
HAY	TN.	177.5	44.30	7862.36	0.82
HAYLAGE	TN.	274.0	24.10	6604.36	0.69
PAST+MISC FORAGE	ACRE	34.0	28.40	965.60	0.10
MILK HAULING	CWT.	8154.6	0.14	1141.64	0.12
MARKETING	CWT.	8154.6	0.04	326.18	0.03
BREEDING FEES	HD.	68.0	9.54	648.72	0.07
VET & MED	HD.	68.0	24.49	1665.22	0.17
DAIRY SUPPLIES	HD.	68.0	17.83	1212.44	0.13
DHIA FEES	HD.	68.0	4.88	331.54	0.03
LVSTK HAULING	HD.	68.0	3.33	225.84	0.02
MACH FUEL & LUBE				1612.37	0.17
MACHINERY REPAIR				1302.58	0.14
EQUP FUEL & LUBE				364.55	0.04
EQUIP REPAIR				1064.75	0.11
INTEREST ON OPER CAPITAL	DOL.	7685.50	0.11	814.67	0.09
TOTAL VARIABLE COSTS				62295.16	6.53

4. INCOME ABOVE VARIABLE COSTS	49848.02	5.22
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	3363.40	0.35
EQUIPMENT	10131.06	1.06
LIVESTOCK	12154.51	1.27
LAND TAXES	20.48	0.00
TOTAL OWNERSHIP COSTS	25669.45	2.69
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	145.26	0.02
GEN FARM OVERHEAD	745.64	0.08
MANAGEMENT CHARGE (7.00% OF ALL COSTS)	6220.16	0.65
TOTAL OTHER COSTS	7111.35	0.75
7. TOTAL OF ABOVE COSTS	95079.62	9.96
8. RETURN TO RISK	17064.56	1.79

FOOTNOTE: TECHNICAL DATA BASED ON 1979 SURVEY 10/15/80

10/08/81

ENTERPRISE CODE: 200510033
AREA CODE 2/55/0/0
FILE NO. 3203
HEAD REPRESENTED 1813.0 (000)
PRODUCTION UNIT DIVISOR 9544.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 24

MACHINERY COMPLEMENT NO. 5
EQUIPMENT COMPLEMENT NO. 17
PARAMETER SET 55
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10300
LAG-OTHER EQUIPMENT 7

DATE PRINTED:

LINE MACHINERY REQUIREMENTS	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 MEN REQD	14 ENRGY CAT.	15 POWER UNIT	16 MACH CODE	17 TYPE	18 CONT
	HOURS																	
22 DUMP TRUCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	5.00	0.	11.	4.	0.
23 FRONT END LOADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	136.0	0.0	5.00	1.	30.	4.	0.
24 SKID STEER LOADER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	106.0	0.0	5.00	0.	22.	4.	0.
25 SCRAPER BLADE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	0.0	5.00	1.	31.	4.	0.
26 SOLID MANURE SPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	256.0	0.0	5.00	2.	32.	4.	0.
27 LIQ MANURE SPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.3	0.0	5.00	3.	33.	4.	0.
28 LIQ MANURE PUMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	5.00	3.	34.	4.	0.
29 LIQ MANURE AGIT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	5.00	2.	35.	4.	0.
30 LIQ MAN IRR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	5.00	2.	36.	4.	0.
31 HORIZ SILO UNLD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	4.00	2.	37.	4.	0.
32 BUNK WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.9	0.0	4.00	0.	38.	4.	0.
33 MIXER WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.9	0.0	4.00	1.	39.	4.	0.
34 SELF UNLD WAGON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	4.00	1.	40.	4.	0.
35 PORT MIX-GRIND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	0.0	4.00	2.	41.	4.	0.
36 LARGE BALE TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	4.00	2.	42.	4.	0.

EQUIPMENT REQUIREMENTS	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	NUMBER UNITS	ENRGY CAT.	RECP COST	EQUIP CODE	TYPE	XXXX
40 POWERED FEEDCART	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	154.0	1.000	4.	0.03	40.	5.	0.
41 GUTTER CLEANER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	160.0	1.000	5.	0.55	41.	5.	0.
42 AUTO ALLEY SCRAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	635.0	1.000	5.	0.04	42.	5.	0.
43 MANURE STACKER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.0	1.000	5.	0.04	43.	5.	0.
45 PISTON PUMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	260.0	1.000	5.	0.09	45.	5.	0.
47 VERT SIB UNLOADR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169.0	1.000	4.	1.88	47.	5.	0.
48 AUTO BANK FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	239.0	1.000	4.	0.57	48.	5.	0.
49 CONVEYOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	219.0	1.000	4.	0.64	49.	5.	0.
50 PORTABLE AUGER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	102.0	1.000	4.	0.07	50.	5.	0.
51 STATIONARY AUGER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0	1.000	4.	0.23	51.	5.	0.
52 STA. MIX-GRIND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.0	1.000	4.	0.01	52.	5.	0.
53 ROLLER MILL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	148.0	1.000	4.	0.12	53.	5.	0.
54 HAMMER MILL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	133.0	1.000	4.	0.08	54.	5.	0.
55 FLOW FEED SCALE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0	1.000	4.	0.01	55.	5.	0.
56 SQUARE BALE SHDR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	730.0	1.000	4.	0.02	56.	5.	0.
57 CAL FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	2920.0	1.000	4.	0.01	57.	5.	0.
58 WATER HEATER E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	9.	0.91	58.	5.	0.
59 WATER HEATER G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	8.	0.21	59.	5.	0.
61 BULK TANK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	752.5	1.000	11.	1.05	21.	5.	0.

ANNUAL LABOR REQUIREMENTS

FUEL REQUIREMENTS

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
GASOLINE	1	GAL.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1679.1	1679.1
DIESEL	1	GAL.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	241.6	241.6
ELECTRICITY	1	KWH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8013.6	8013.6

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/ SIZE	PERFORM RATE HOUR/ ACRE	PURCHASE PRICE	DEPR./ HOUR	INTEREST/ HOUR	INS./ HOUR	TAXES/ HOUR	TOTAL OWNER SHIP/ HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACT 2WD 40 HP	40.00	1.000	5930.	1.410	1.334	0.112	0.221	3.076	0.705	1.988	0.258	2.985
TRACT 2WD 55 HP	55.00	1.000	12445.	1.596	1.235	0.104	0.186	3.121	0.879	2.730	0.413	4.319
TRACT 2WD 70 HP	70.00	1.000	12170.	1.563	1.469	0.123	0.218	3.773	1.160	2.452	0.368	3.980
DUMP TRUCK	2.00	1.000	16200.	6.558	3.723	0.313	0.587	11.621	2.659	2.920	0.438	6.017
SKID STEER LOADR	1.00	1.000	13830.	2.076	1.104	0.093	0.174	3.447	1.838	0.0	0.0	1.838
FRONT END LOADER	1.00	1.000	2200.	0.311	0.167	0.014	0.026	0.518	0.093	0.0	0.0	0.093
SCRAPER BLADE	1.00	1.000	500.	0.226	0.079	0.007	0.011	0.324	0.098	0.0	0.0	0.098
SOLID MANURE SPR	1.00	1.000	2630.	1.236	0.658	0.055	0.104	2.053	0.938	0.0	0.0	0.938
LIQ MANURE SPR	1.00	1.000	5000.	1.864	0.991	0.083	0.156	3.095	1.487	0.0	0.0	1.487
LIQ MANURE PUMP	1.00	1.000	3240.	1.102	0.571	0.048	0.091	1.812	1.405	0.0	0.0	1.405
LIQ MANURE AGIT	1.00	1.000	4000.	1.170	0.606	0.051	0.097	1.924	1.420	0.0	0.0	1.420
LIQ MAN IRR	1.00	1.000	26000.	3.607	2.689	0.226	0.375	6.897	21.650	0.0	0.0	21.650
HORIZ SILO UNLD	1.00	1.000	5960.	2.957	1.067	0.090	0.151	4.265	2.250	0.0	0.0	2.250
BUNK WAGON	1.00	1.000	1200.	0.126	0.065	0.005	0.010	0.207	0.149	0.0	0.0	0.149
MIXER WAGON	1.00	1.000	7650.	0.977	0.373	0.031	0.052	1.433	1.705	0.0	0.0	1.705
SELF UNLD WAGON	1.00	1.000	4500.	1.446	0.769	0.065	0.121	2.402	2.006	0.0	0.0	2.006
PORT MIX-GRIND	1.00	1.000	6570.	3.353	1.736	0.146	0.277	5.512	4.093	0.0	0.0	4.093
LARGE BALE TRANS	1.00	1.000	700.	0.202	0.103	0.009	0.017	0.331	0.046	0.0	0.0	0.046

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPOR. CHARGED	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERATING/YR	HOURS LABOR
40	POWERED FEEDCART	1.0	EACH	1.00	0.027	3200.00	11.73	2.36	0.30	0.22	14.62	0.65	25.85	26.51	0.0
41	GUTTER CLEANER	250.0	FEET	1.00	0.594	4450.00	226.73	59.34	12.75	9.63	308.45	28.20	26.85	55.23	0.0
42	AUTO ALLEY SCRAP	200.0	FEET	1.00	0.037	6653.00	20.29	5.56	0.76	0.56	27.58	2.56	62.75	65.32	0.0
43	MANURE STACKER	40.0	FEET	1.00	0.036	2670.00	7.68	2.26	0.29	0.21	10.44	0.96	11.16	12.12	0.0
45	PISTON PUMP	1.0	EACH	1.00	0.094	7120.00	53.56	15.74	2.01	1.49	72.80	3.35	128.57	131.92	0.0
47	VERT SIB UNLOADR	20.0	FEET	1.00	1.890	3470.00	698.96	161.07	20.55	15.20	895.78	46.60	66.87	113.47	0.0
48	AUTO BANK FEEDER	70.0	FEET	1.00	0.569	2560.00	133.83	39.34	5.02	3.71	181.90	8.76	23.63	32.00	0.0
49	CONVEYOR	70.0	FEET	1.00	0.637	2143.00	156.16	32.12	4.10	3.03	195.40	9.74	21.65	31.39	0.0
50	PORTABLE AUGER	20.0	FEET	1.00	0.068	500.00	2.04	0.68	0.11	0.08	2.11	0.11	4.54	5.06	0.0
51	STATIONARY AUGER	40.0	FEET	1.00	0.227	700.00	9.53	4.11	0.52	0.39	14.56	0.52	22.15	22.68	0.0
52	STA. MIX-GRIND	110.0	BU.	1.00	0.010	7210.00	4.33	1.87	0.24	0.18	5.60	0.24	120.85	131.09	0.0
53	ROLLER MILL	1.0	EACH	1.00	0.116	1400.00	5.68	4.96	0.63	0.47	11.75	0.41	40.56	41.39	0.0
54	HAMMER MILL	1.0	EACH	1.00	0.063	1400.00	3.09	2.70	0.34	0.25	6.38	0.22	36.83	37.05	0.0
55	FLOW FEED SCALE	1.0	EACH	1.00	0.008	2000.00	0.72	0.41	0.05	0.04	1.23	0.04	17.65	17.73	0.0
56	SQUARE BALE SHDR	1.0	EACH	1.00	0.016	650.00	0.94	0.27	0.03	0.03	1.26	0.10	204.51	204.61	0.0
57	CAL FEEDER	1.0	EACH	1.00	0.036	2170.00	1.17	0.34	0.04	0.03	1.58	0.07	80.86	80.93	0.0
58	WATER HEATER E	100.0	GAL.	1.00	0.910	260.00	26.62	6.12	0.78	0.58	34.10	1.48	0.0	1.48	0.0
59	WATER HEATER G	100.0	GAL.	1.00	0.210	260.00	6.14	1.41	0.18	0.13	7.87	0.34	0.0	0.34	0.0
21	BULK TANK	910.0	GAL.	1.00	1.050	10400.00	436.80	250.75	38.76	24.23	750.57	54.60	126.45	181.09	0.0
63	PAIL UNITS	1.0	EACH	3.00	0.350	1035.00	57.96	22.76	3.91	2.11	86.34	7.24	0.0	7.24	0.0
64	PIPELINE FIXED	1.0	EACH	1.00	0.560	6300.00	190.58	73.52	12.00	4.96	281.86	23.82	0.0	23.82	0.0
65	PIPELINE VARIABL	1.0	EACH	8.00	0.560	250.00	39.84	15.83	0.0	1.30	56.57	4.48	0.0	4.48	0.0
66	PARLOR FIXED	1.0	EACH	1.00	0.090	6000.00	40.80	14.80	2.48	1.34	58.82	9.60	0.0	9.60	0.0
67	PARLOR PER STALL	1.0	EACH	11.43	0.070	1500.00	87.21	30.35	0.0	2.86	120.42	5.13	0.0	5.13	0.0
68	PARLOR PER UNIT	1.0	EACH	8.20	0.030	240.00	14.22	4.55	0.0	0.47	19.63	0.84	0.0	0.84	0.0
72	AUTO TAKEOFFS	1.0	EACH	8.20	0.030	1000.00	22.14	4.64	0.0	0.44	27.22	1.23	0.0	1.23	0.0
1	SLURRY TANK	1.0	EACH	1.00	0.010	46000.00	18.00	7.54	1.22	0.71	27.58	1.00	0.0	1.00	0.0
2	LAGOON	********	SQFT	1.00	0.070	2400.00	8.40	2.88	0.0	0.27	11.55	0.42	0.0	0.42	0.0
4	PIT OUTSIDE BARN	1.0	EACH	1.00	0.059	6010.00	18.00	6.17	0.0	0.58	24.76	0.50	0.0	0.50	0.0
6	EMBANKMENT	1.0	EACH	1.00	0.020	2000.00	2.00	0.69	0.0	0.06	2.75	0.10	0.0	0.10	0.0
7	GRAIN BIN	1200.0	BU.	1.00	0.240	1500.00	16.20	6.75	1.15	0.64	24.82	1.80	0.0	1.80	0.0
8	HAY SHED	1599.0	SQFT	1.00	0.170	4800.00	32.64	16.79	2.54	1.58	53.95	4.08	0.0	4.08	0.0
9	BUNKER SILO	1.0	EACH	1.00	0.030	6000.00	7.20	3.70	0.65	0.35	11.90	0.0	0.0	0.0	0.0
10	SILO (24X60)	1.0	EACH	2.00	0.940	13000.00	977.60	502.89	87.58	47.44	1615.91	122.20	0.0	122.20	0.0
81	STALL BARN F	1.0	EACH	1.00	0.940	10500.00	461.07	193.26	33.81	19.23	706.37	102.46	0.0	102.46	0.0
82	STALL BARN V	1.0	EACH	37.00	0.940	549.00	1547.88	648.80	113.51	61.21	2371.40	343.97	0.0	343.97	0.0
83	FREESTALL BRN F	1.0	EACH	1.00	0.180	6617.00	55.22	23.14	4.05	2.19	84.59	12.27	0.0	12.27	0.0
84	FREE STALL BARNV	1.0	EACH	104.00	0.190	503.00	423.73	177.61	31.07	16.76	649.16	94.16	0.0	94.16	0.0
85	LOAFING BARN F	1.0	EACH	1.00	0.700	6817.00	214.74	90.01	15.75	8.49	328.98	47.72	0.0	47.72	0.0
86	LOAFING BARN V	1.0	EACH	52.00	0.700	292.00	642.10	269.13	47.09	25.39	983.71	142.69	0.0	142.69	0.0
91	DAIRY COW	1.0	HD.	46.00	1.700	600.00	0.0	4973.52	398.82	0.0	5372.33	0.0	0.0	0.0	0.0
92	PUR DAIRY COW	1.0	HD.	22.00	1.700	600.00	2805.00	1783.58	143.05	0.0	4732.03	0.0	0.0	0.0	0.0
93	HEIFER >500	1.0	HD.	25.90	1.270	400.00	0.0	1394.66	111.84	0.0	1506.50	0.0	0.0	0.0	0.0
95	HEIFER < 500	1.0	HD.	15.45	1.020	200.00	0.0	420.59	33.73	0.0	454.31	0.0	0.0	0.0	0.0
97	BULL > 500	1.0	HD.	0.43	1.530	550.00	0.0	34.67	2.80	1.0	37.66	0.0	0.0	0.0	0.0

grouped into one region thus we have a total of 20 dairy budgets. Information on livestock inventories and births, deaths and sales is obtained for each budget (Frick, 1981) (Table 1 and 2) in addition to the information available on each budget.

Categories of Production Activities

One basic dairy activity was identified from the 20 FEDS budgets. This activity produces milk, beef steer calves, heifer yearlings and nitrogen and requires feed and water. The dairy activity is defined as producing a cwt. of milk thus all coefficients are calculated in terms of 100 pounds of milk produced.

Construction of the Activities

Construction of dairy activities is similar to construction of activities in the beef sector. Initially, the FEDS dairy budget region is matched with our market region and then a check is made for duplicates. Because of the relatively small number of budgets no duplicates are identified. The number of budgets in any one market region ranged from 0 to 7 with the total number of budgets for all market regions equaling 57 [Appendix B].

Feed Coefficients

Feed coefficients in terms of requirements for protein net energy, calcium and phosphorus are again calculated for the entire number of

Table 1. Livestock Inventory

State	Milk Cows on Operation	Purchased Milk Cows	Raised Milk Cows	Heifers > 500 lbs.	Heifers > 500 lbs.	Dairy Bulls > 500
California	561	131	430	193	145	7
Georgia	203	60	143	71	60	3
Illinois	65	15	50	26	25	1
Indiana	62	18	44	25	25	1
Iowa	69	16	53	26	23	1
Kentucky	77	29	48	27	21	2
Michigan	88	14	74	43	34	2
Minnesota	55	11	44	24	20	1
Missouri	73	17	56	26	24	1
N.E.	106	29	77	37	28	1
New York	81	21	60	31	23	1
N. Carolina	135	29	106	57	47	2
Ohio	64	15	49	26	19	1
Pennsylvania	72	10	62	28	24	1
S. Dakota	70	19	51	33	25	1
Tennessee	86	24	62	26	25	1
Texas	212	113	99	55	39	4
Virginia	120	28	92	53	42	1
Washington	222	77	145	77	58	3
Wisconsin	73	23	50	26	20	1

Table 2. Livestock births, deaths, and sales

State	Calves			Cows			Av. Herd
	Born 1979	Died 1979	Sold 1979	Died 1979	Sold Dairy	Sold Beef	Av. Herd Size
California	497	64	234	16	3	123	533
Georgia	187	24	84	9	3	38	187
Illinois	64	10	23	2	2	14	61
Indiana	64	8	26	2	1	12	60
Iowa	70	10	30	2	2	14	67
Kentucky	76	9	39	3	2	13	70
Michigan	90	12	33	3	3	20	85
Minnesota	58	8	21	2	1	12	53
Missouri	71	8	35	2	2	12	69
N.E.	103	8	60	2	3	18	98
New York	83	9	47	2	4	15	78
N. Carolina	129	16	59	6	2	23	128
Ohio	65	9	26	2	1	14	60
Pennsylvania	71	8	32	2	2	13	70
S. Dakota	71	9	25	2	1	14	62
Tennessee	84	11	37	3	1	15	77
Texas	194	22	103	9	2	37	196
Virginia	117	13	45	5	4	23	115
Washington	215	25	106	8	1	53	210
Wisconsin	70	8	34	3	3	16	68

animals represented in each budget (National Research Council, 1978). These totals are divided by the cwt. of milk produced by each budget giving us the amount of protein, net energy, calcium and phosphorus required of all animals in a dairy enterprise per cwt. of milk produced. The animals requiring feed are cows, replacement heifers, heifer calves and bulls. Steer calves were assumed sold at an early age as feeders and thus were not included in the feed calculations. A 3.5% fat content was assumed as the average fat content for all milk produced.

Beef coefficients: Beef is a joint-product of milk production. Less productive cows and bulls are culled for beef. The number of cows and bulls culled is included in each budget along with their average weight at culling. Thus, the total quantity of beef produced by a budget is calculated and the activity coefficient is calculated by dividing the total beef produced by the cwt. of milk produced by the budget.

Feeder animals: Steer calves produced by dairy activities are assumed to be sold as feeder animals. Thus steer calves are a second joint product of milk production and the steer calve supply coefficient is calculated per cwt. of milk produced.

Nitrogen coefficients: Nitrogen supplies are the third joint product we account for in our dairy activities. The nitrogen coefficients are calculated in the same manner as in the beef sector. Nitrogen supplies are

accounted for by all animals in the enterprise. The total nitrogen supply value is divided by the cwt. of milk produced by the budget to derive a nitrogen activity coefficient.

Water

Water coefficients are determined in a similar manner as in the beef sector. Market region water coefficients were then weighted to PA's using agricultural census weights.

Hog Activities

FEDS budgets are again used in the calculation of the pork sector activities. The basic data used in the preparation of these budgets is obtained from a national survey of hog producers. Again, these budgets reflect average management, practice and performance as reported by farmers. The survey taken to collect budget information covered three large regions, North Central, Southeast and Southwest (Figure 14).

Categories of Production Activities

Three basic hog activities are identified from the FEDS hog budgets -- Farrow-to-finish; Feeder pig production; and Feeder pig finishing (Figures 15, 16, and 17).

A farrow-to-finish activity is defined to produce 100 pounds of pork thus all of its coefficients are defined in terms of a cwt. of pork produced. Farrow-to-finish activities are constructed from budgets

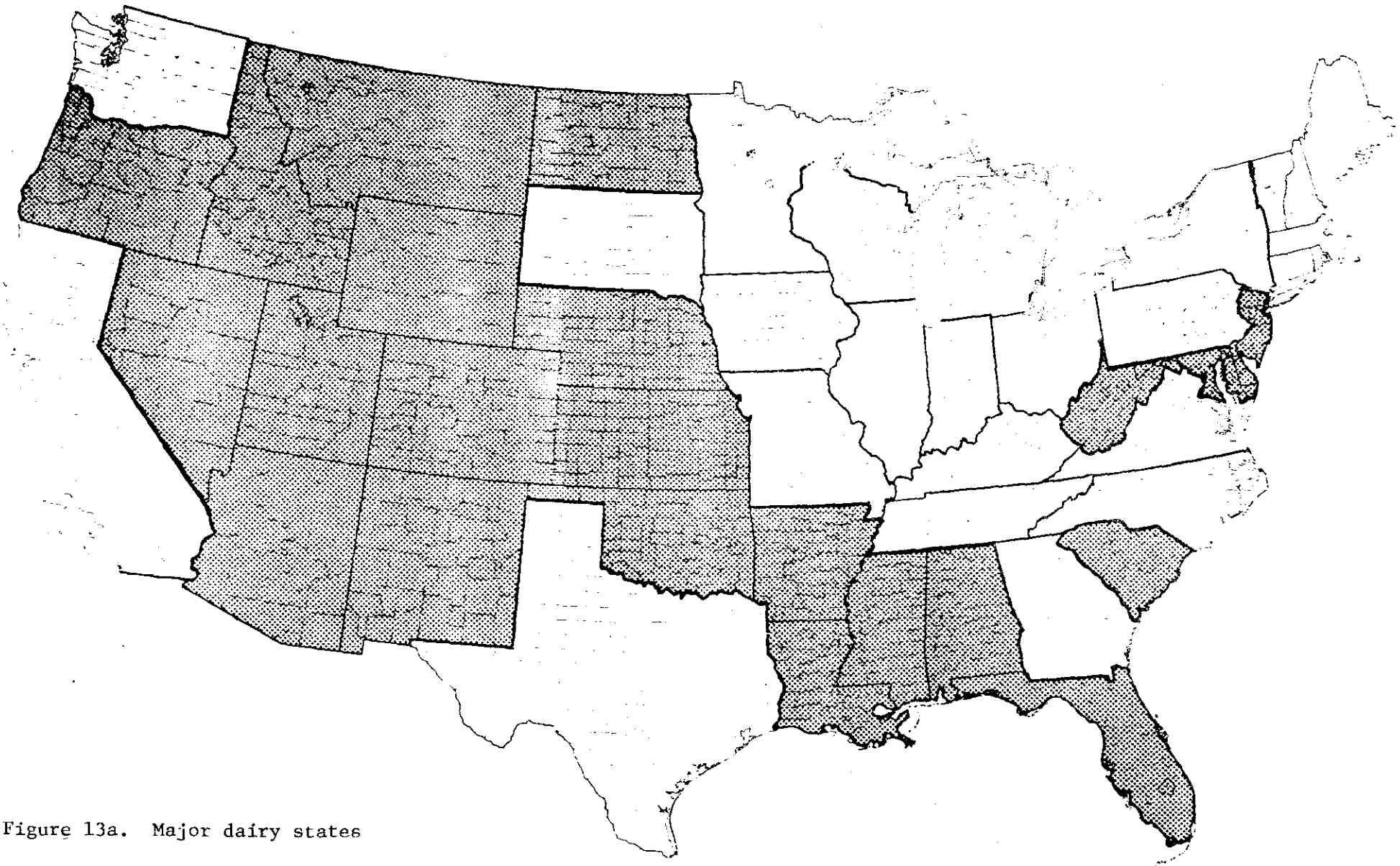

Figure 13a. Major dairy states

Prepared by Bureau of the Census, U.S. Department of Commerce

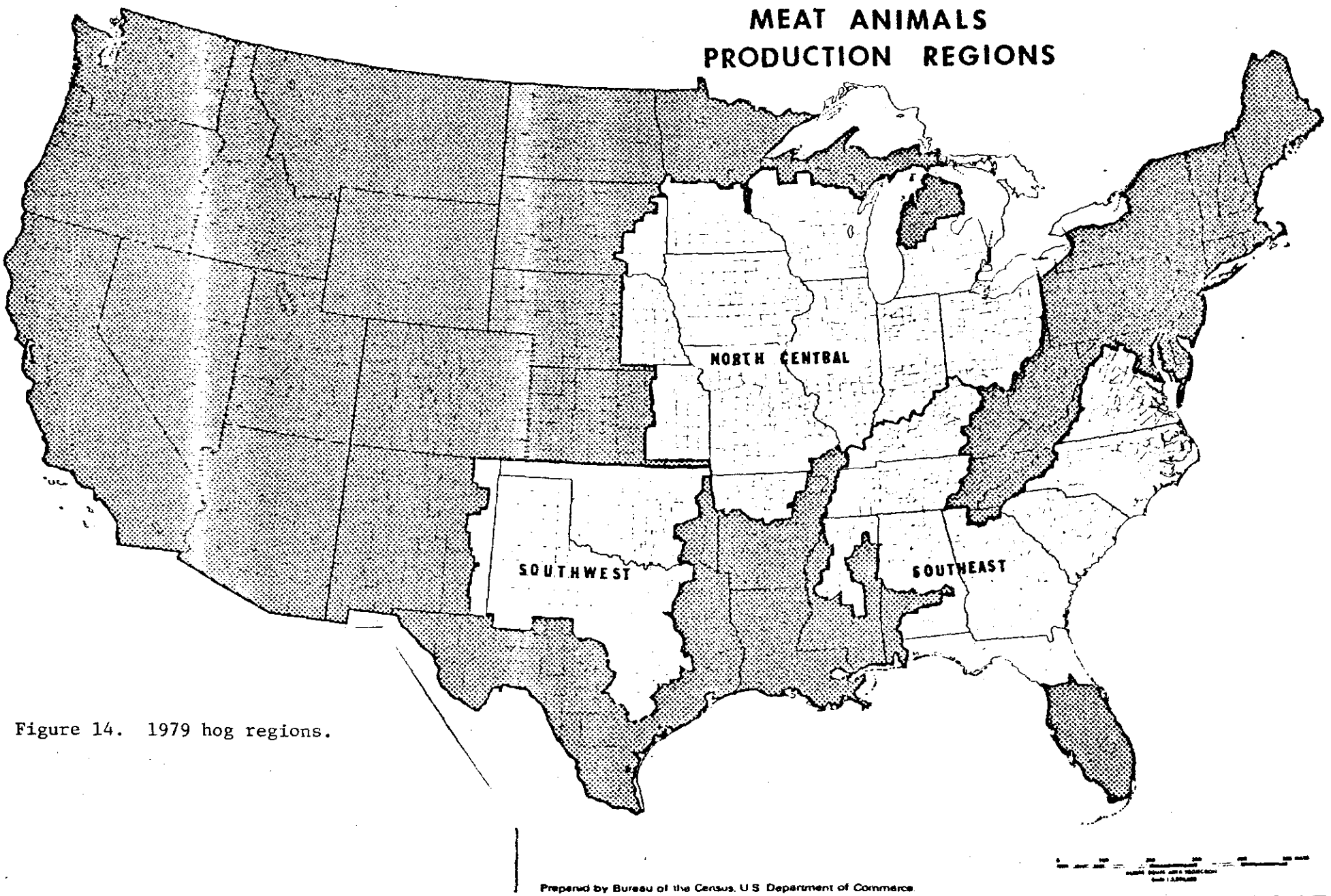

Figure 14. 1979 hog regions.

Figure 15. Hog production, farrow-to-finish 300 head, South Central Lake States. 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
LIVESTOCK	7770.00	11.05	7770.00	11.05
EQUIPMENT	41378.04	57.44	18022.65	25.64
*TRACTORS AND TRUCKS	43940.00	62.50	29615.56	42.13
*OTHER MACHINERY	13777.00	19.60	9285.70	13.21
TOTAL	105625.69	150.25	64454.65	91.69

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER HOGS	CWT.	129.00	2.28	35.75	81.51	10514.79	
SLAUGHTER HOGS	CWT.	14.00	2.28	39.05	89.03	1246.48	
CULL SOWS	CWT.	7.00	3.61	42.98	155.16	1086.10	
SLAUGHTER HOGS	CWT.	129.00	2.28	44.25	100.89	13014.80	
SLAUGHTER HOGS	CWT.	14.00	2.28	41.01	93.50	1309.04	
CULL SOWS	CWT.	7.00	3.61	29.52	106.57	745.97	
TOTAL RECEIPTS						27917.17	39.71

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
CORN	BU.	4510.0	2.30	10372.98	14.76
36-40% PRO. FEED	CWT.	586.0	14.92	8743.11	12.44
VET & MED	DOL.	478.0	1.00	478.00	0.68
MISC EXPENSE	DOL.	365.0	1.00	365.00	0.52
STRAW	TN.	12.6	19.06	240.16	0.34
PASTURE	ACRE	4.0	0.0	0.0	0.0
HAULING	DOL.	89.0	1.00	89.00	0.13
BUILDING SITE	ACRE	1.0	0.0	0.0	0.0
MACH FUEL & LUBE				763.59	1.09
MACHINERY REPAIR				622.59	0.89
EQUP FUEL & LUBE				615.86	0.88
EQUIP REPAIR				995.91	1.42
LIVESTOCK LABOR	HRS.	1314.00	2.94	3863.16	5.50
INTEREST ON OPER CAPITAL	DOL.	6787.34	0.11	719.46	1.02
TOTAL VARIABLE COSTS				27868.79	39.64

4. INCOME ABOVE VARIABLE COSTS	48.38	0.07
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	1813.77	2.58
EQUIPMENT	4201.02	5.98
LIVESTOCK	1340.77	1.91
LAND TAXES	53.24	0.08
TOTAL OWNERSHIP COSTS	7408.79	10.54
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	371.70	0.53
GEN FARM OVERHEAD	1600.00	2.28
MANAGEMENT CHARGE (7.03% OF TC-LAND-PURCH. LVSK)	2577.70	3.67
TOTAL OTHER COSTS	4549.40	6.47
7. TOTAL OF ABOVE COSTS	39326.98	56.65
8. RETURN TO RISK	-11909.82	-16.94

FOOTNOTE: FARROW MAY AND NOVEMBER, 47 LITTERS TOTAL 09/16/80
CENTRAL HOUSE WITH SOLID FLOOR, MEAN 6.7 PIGS VAN ARSDALL
FINISH IN DRY LOT WITH COMPLETE FEED PROCESSED ON FARM WITH 09/18/80
COMMERCIAL SUPPLEMENT AND TRACTOR GRINDER-MIXER
SELL 6.1 MARKET HOGS AT 228 LBS AND .3 CULL SOWS AT 361 LBS
FACH LITTER, (ILLINOIS DIRECT AREA)
PERFORMANCE AND PRACTICES AVERAGE FOR REGION, LAND CHARGED AT
MARKET VALUE, ALSO INCLUDES 02550300, 02260200, 02260300

ENTERPRISE CODE: 40306243
AREA CODE 3/55/4/2
FILE NO. 491
CWT SALES REPRESENTED 1941.0 (100)
PRODUCTION UNIT DIVISOR 703.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 15

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 16
PARAMETER SET 55
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10600
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	129.0	0.0	35.75	2.28	16.	43.	2.	0.
2 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	39.05	2.28	16.	43.	2.	0.
3 CULL SOWS	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.98	3.61	16.	46.	2.	0.
4 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	129.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.25	2.28	16.	43.	2.	0.
5 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	41.01	2.28	16.	43.	2.	0.
6 CULL SOWS	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	29.52	3.61	16.	46.	2.	0.

OPERATING INPUTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
					RATE/UNIT													
11 CORN	376.0	376.0	376.0	376.0	376.0	375.0	376.0	376.0	376.0	376.0	376.0	375.0	2.36	1.00	2.	72.	3.	0.
12 30-40% PRO. FEED	49.0	49.0	49.0	49.0	49.0	48.0	49.0	49.0	49.0	49.0	49.0	48.0	14.92	1.00	16.	119.	3.	0.
13 VET & MED	0.0	0.0	239.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	239.0	0.0	1.00	1.00	15.	288.	3.	0.
14 MISC EXPENSE	0.0	0.0	183.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	182.0	0.0	1.00	1.00	15.	400.	3.	0.
15 STRAW	0.0	0.0	0.0	0.0	0.0	0.0	12.6	0.0	0.0	0.0	0.0	0.0	19.06	1.00	3.	168.	3.	0.
16 PASTURE	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	1.00	7.	151.	3.	0.
17 HAULING	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.0	0.0	1.00	1.00	15.	347.	3.	0.
18 BUILDING SITE	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	385.	3.	0.
19 GEN FARM OH	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.00	1.00	15.	459.	3.	0.

MACHINERY REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
					HOURS													
50 GRINDER-MIXER	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	0.0	4.00	4.	67.	4.	0.
51 AUGER WAGON	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	4.00	2.	73.	4.	0.
52 SCRAPER BLADE	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	5.00	2.	37.	4.	0.
53 FRONT END LDR.	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	5.00	2.	35.	4.	0.
54 MANURE SPREADER	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0	5.00	2.	40.	4.	0.
55 TRUCK 1.0 T.	8.0	7.0	8.0	7.0	8.0	7.0	8.0	7.0	8.0	7.0	8.0	7.0	0.0	7.00	0.	12.	4.	0.
56 3 PT. CARRIER	12.1	12.1	12.1	11.1	12.1	12.1	12.1	11.1	12.1	12.1	12.1	11.1	0.0	7.00	2.	63.	4.	0.

EQUIPMENT REQUIREMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
65 HOLDING CRATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	84.	5.	0.
66 FNCE.ELECT.UNIT	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	1.000	9.	1.00	22.	5.	0.
67 ROCK DRIVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	92.	5.	3.
68 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.500	3.	1.00	91.	5.	0.
69 HOPPERED BIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	51.	5.	0.
70 HOP. BIN AUGER	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	1.000	4.	1.00	40.	5.	0.
72 SPRAYER (1)MSI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	5.	1.00	86.	5.	0.
73 FENCE 5 BOARD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.070	0.	1.00	19.	5.	0.
74 FENCE WIRE PMT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.430	0.	0.50	20.	5.	0.
78 FAN. MISC. SOLID	120.0	0.0	0.0	0.0	90.0	30.0	30.0	0.0	0.0	0.0	60.0	120.0	1.020	1.	1.00	6.	5.	0.
80 POLESHED PAVED	40.0	40.0	33.0	33.0	30.0	0.0	0.0	0.0	30.0	30.0	33.0	40.0	0.860	1.	1.00	11.	5.	0.
81 FIELD QUONSET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	4.	5.	0.
82 VENT.SYS.-FAN.MSO.	360.0	0.0	0.0	0.0	720.0	720.0	720.0	0.0	0.0	0.0	360.0	360.0	1.020	3.	1.00	59.	5.	0.
83 HEAT LAMP	47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	43.0	12.000	2.	1.00	66.	5.	0.
84 SPACE HTR. GAS	399.0	0.0	0.0	0.0	91.0	5.0	0.0	0.0	0.0	0.0	235.0	359.0	1.020	2.	1.00	67.	5.	0.
85 FAN W/MOTOR	396.0	0.0	0.0	0.0	91.0	5.0	0.0	0.0	0.0	0.0	235.0	359.0	1.020	2.	1.00	64.	5.	0.
86 PAVED LOT 4 IN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.950	0.	1.00	17.	5.	0.
87 WELL 200FT. 6IN.	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	1.000	4.	0.02	30.	5.	0.
89 WTR. TNK. HEAT.	333.0	333.0	167.0	167.0	167.0	0.0	0.0	0.0	83.0	83.0	83.0	333.0	1.000	6.	1.00	25.	5.	0.
90 WATERER FLOAT	267.0	267.0	133.0	133.0	133.0	0.0	0.0	0.0	83.0	83.0	83.0	267.0	2.000	6.	1.00	26.	5.	0.
91 HOPPERED BIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	51.	5.	0.
92 HOP. BIN AUGER	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	1.000	4.	1.00	40.	5.	0.
93 HOP. BIN AUGER	1.5	1.6	1.6	1.5	1.6	1.6	1.6	1.5	1.6	1.6	1.6	1.5	1.000	4.	1.00	40.	5.	0.
94 SWEEP AUGER	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.000	4.	1.00	72.	5.	0.
95 CREEP FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	0.	1.00	32.	5.	0.
96 SELF FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.000	0.	1.00	33.	5.	0.
97 SELF FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.000	0.	1.00	34.	5.	0.
98 PORT LOAD CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	82.	5.	0.
LIVESTOCK INVESTMENT																		
75 REPL. GILT													14.000	0.	1.00	94.	5.	0.
76 MATURE SOW													16.000	0.	1.00	98.	5.	0.
77 AVERAGE BOAR													2.000	0.	1.00	99.	5.	0.
99 LIVESTOCK LABOR	131.00	66.10	66.00	131.00	197.00	131.00	67.00	66.00	66.00	131.00	131.00	131.00						

MONTHLY SUMMARY

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
LIVESTOCK LABOR	1	HR.	131.0	66.0	66.0	131.0	197.0	131.0	67.0	66.0	66.0	131.0	131.0	131.0	1314.0
TOTAL LABOR	1	HR.	131.0	66.0	66.0	131.0	197.0	131.0	67.0	66.0	66.0	131.0	131.0	131.0	1314.0
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	20.0	17.1	20.0	17.5	20.0	17.5	20.0	17.5	20.0	17.5	20.0	17.5	225.0
L.P. GAS	1	GAL.	109.4	0.0	0.0	0.0	21.8	2.1	0.0	0.0	0.0	0.0	160.7	153.6	448.1
DIESEL	1	GAL.	57.6	57.6	57.6	55.2	57.6	57.6	57.6	55.2	57.6	57.6	57.6	55.2	684.0
ELECTRICITY	1	KWH	1714.2	612.6	424.3	410.6	1350.1	876.6	873.6	81.3	760.3	252.7	948.4	1600.0	9633.8

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/SIZE	PERFORM RATE HOURS/ACRE	PURCHASE PRICE	DEPR./HOUR	INTEREST/HOUR	INS./HOUR	TAXES/HOUR	TOTAL OWNERSHIP/HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR (2)	50.00	1.000	11560.	1.285	0.694	0.075	0.128	2.182	0.815	1.752	0.263	2.830
TRACTOR (4)	70.00	1.000	21005.	2.431	1.676	0.141	0.239	4.486	1.528	3.154	0.473	5.155
TRUCK 1.0 T.	0.00	1.000	11275.	3.269	2.140	0.180	0.380	5.997	2.192	1.825	0.274	4.291
GRINDER-MIXER	0.00	1.000	4490.	4.095	2.102	0.177	0.336	6.710	2.641	0.0	0.0	2.641
AUGER WAGON	0.00	1.000	3724.	1.171	0.552	0.046	0.084	1.853	1.261	0.0	0.0	1.261
SCRAPER BLADE	0.00	1.000	367.	0.142	0.081	0.007	0.012	0.241	1.599	0.0	0.0	1.599
FRONT END LDR.	0.00	1.000	1397.	1.541	0.812	0.068	0.129	2.549	0.595	0.0	0.0	0.595
MANURE SPREADER	*****	1.000	2107.	3.727	1.965	0.165	0.311	6.168	0.546	0.0	0.0	0.546
3 PT. CARRIER	0.00	1.000	492.	0.286	0.190	0.016	0.032	0.526	0.085	0.0	0.0	0.085

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPOR. CHARGED	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERATING/YR	HOURS LABOR
84	HOLDING CRATE	1.0	NO.	1.00	1.000	196.00	19.60	6.98	0.59	0.66	27.83	7.84	0.0	7.84	0.0
22	FNCE.ELECT.UNIT	1.0	EACH	1.00	1.000	428.00	85.60	15.25	0.0	1.44	102.29	8.56	3.61	12.17	0.0
92	ROCK DRIVE	1330.0	SQFT	3.00	1.000	196.00	29.40	20.95	0.0	1.98	52.33	5.88	0.0	5.88	0.0
91	SMALL TOOLS	250.0	DOL.	1.50	1.000	252.00	78.60	14.00	1.10	1.32	95.10	7.86	0.0	7.86	0.0
51	HOPPERED BIN	3.0	TNS.	1.00	1.000	662.00	33.10	12.38	1.99	1.17	48.64	13.24	0.0	13.24	0.0
40	HOP. BIN AUGER	10.0	FEET	1.00	1.000	297.00	29.70	10.58	0.89	1.00	42.17	23.76	0.16	23.92	0.0
86	SPRAYER (1)MSI	1.0	EACH	1.00	1.000	560.00	66.60	23.52	1.98	2.22	93.72	44.80	0.66	45.46	0.0
19	FENCE 5 BOARD	1320.0	FEET	5.07	1.000	340.00	46.38	18.02	0.0	1.70	67.88	19.27	0.0	19.27	0.0
20	FENCE WIRE PMT	1.0	MILE	1.41	0.500	2520.00	27.99	10.13	0.0	0.96	38.18	10.94	0.0	10.94	0.0
94	REPL. GILT	1390.0	LBS.	14.00	1.000	202.00	0.0	394.74	31.05	0.0	426.40	0.0	0.0	0.0	0.0
98	MATURE SOW	4000.0	LBS.	16.00	1.000	213.00	0.0	361.25	26.97	0.0	395.22	0.0	0.0	0.0	0.0
99	AVERAGE BOAR	250.0	LBS.	2.00	1.000	319.00	478.50	42.27	3.39	0.0	524.16	0.0	0.0	0.0	0.0
6	FAN. MISC. SOLID	20.0	NO.	1.02	1.000	15863.00	707.01	264.51	42.42	24.95	1038.89	262.80	35.79	298.59	0.0
11	POLESHED PAVED	3320.0	SQFT	0.86	1.000	14362.00	487.71	182.46	29.26	17.21	716.64	195.08	7.99	203.07	0.0
4	FIELD QUONSET	1200.0	SQFT	3.00	1.000	297.00	89.10	31.75	2.87	3.00	126.52	35.64	0.0	35.64	0.0
59	VENT.SYS.FAN.MSO.	24.0	NO.	1.02	1.000	916.00	93.43	33.29	2.80	3.14	132.67	37.37	160.15	197.53	0.0
66	HEAT LAMP	0.3	KW	12.00	1.000	26.00	62.40	11.12	3.94	1.05	75.50	62.40	15.22	77.62	0.0
67	SPACE HTR. GAS	42000.0	BTU	1.02	1.000	585.00	60.00	21.41	1.80	2.02	85.31	24.03	201.65	225.68	0.0
64	FAN W/MOTOR	18.0	INCH	1.02	1.000	257.00	0.00	0.00	0.00	0.00	0.00	0.00	28.49	28.49	0.0
17	PAVED LOT 4 IN.	1000.0	SQFT	1.95	1.000	947.00	92.33	34.54	0.0	3.26	130.13	18.47	0.0	18.47	0.0
30	WELL 200FT. 6IN.	1.0	EACH	1.00	1.000	4590.00	4.59	3.27	0.0	0.31	8.17	1.84	5.51	7.34	0.0
25	WTR. TNK. HEAT.	150.0	GALS.	1.00	1.000	327.00	65.40	11.65	0.98	1.10	79.13	6.54	75.21	81.75	0.0
26	WATERER FLOAT	2.0	NO.	2.00	1.000	196.00	39.20	13.97	1.18	1.32	55.66	15.68	99.69	115.37	0.0
51	HOPPERED BIN	3.0	TNS.	1.00	1.000	662.00	33.10	12.38	1.99	1.17	48.64	13.24	0.0	13.24	0.0
40	HOP. BIN AUGER	10.0	FEET	1.00	1.000	297.00	29.70	10.56	0.89	1.00	42.17	23.76	0.23	23.99	0.0
40	HOP. BIN AUGER	10.0	FEET	1.00	1.000	297.00	29.70	10.58	0.89	1.00	42.17	23.76	0.92	24.68	0.0
72	SWEEP AUGER	10.0	FEET	1.00	1.000	560.00	56.00	19.96	1.68	1.88	79.52	22.40	0.59	22.99	0.0
32	CREEP FEEDER	3.0	EACH	5.00	1.000	297.00	297.00	52.92	4.45	4.99	359.36	29.70	0.0	29.70	0.0
33	SELF FEEDER	5.0	BU.	4.00	1.000	143.00	114.40	20.38	1.72	1.92	138.42	11.44	0.0	11.44	0.0
34	SELF FEEDER	60.0	BU.	5.00	1.000	327.00	327.00	58.26	4.90	5.50	395.66	32.70	0.0	32.70	0.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.44	2.86	78.29	17.02	0.0	17.02	0.0

Figure 16. Feeder pig production, 300 head, Southeast

1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
LIVESTOCK	6547.00	33.07	6547.00	33.07
EQUIPMENT	24621.46	124.35	12866.28	64.98
*TRACTORS AND TRUCKS	22635.00	114.32	15255.99	77.05
*OTHER MACHINERY	4416.00	22.30	2976.38	15.03
TOTAL	57980.21	292.83	37406.39	188.92

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
PIGS	CWT.	146.00	0.55	82.00	45.10	6584.60	
CULL SOWS	CWT.	5.00	4.22	39.48	166.61	833.03	
PIGS	CWT.	145.00	0.55	45.20	24.86	3604.70	
CULL SOWS	CWT.	4.00	4.22	28.19	118.96	475.85	
TOTAL RECEIPTS						11498.16	58.07

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
CORN	BU.	1651.0	2.78	4589.77	23.18
36-40% PRO. FEED	CWT.	236.0	13.89	3278.04	16.56
VET & MED	DOL.	252.0	1.00	252.00	1.27
HAULING	DOL.	8.0	1.00	8.00	0.04
STRAW	TN.	4.2	19.06	80.05	0.40
GRINDING & MIXNG	DOL.	606.0	1.00	606.00	3.06
MISC EXPENSE	DOL.	279.0	1.00	279.00	1.41
PASTURE	ACRE	6.0	21.28	127.68	0.64
BUILDING SITE	ACRE	1.0	0.0	0.0	0.0
MACH FUEL & LUBE				503.26	2.54
MACHINERY REPAIR				451.21	2.28
EQUP FUEL & LUBE				264.79	1.34
EQUIP REPAIR				693.02	3.50
LIVESTOCK LABOR	HRS.	1038.00	3.12	3238.56	16.36
INTEREST ON OPER CAPITAL	DOL.	3592.84	0.10	366.47	1.85
TOTAL VARIABLE COSTS				14737.83	74.43

4. INCOME ABOVE VARIABLE COSTS	-3239.67	-16.36
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	1317.92	6.66
EQUIPMENT	2930.05	14.80
LIVESTOCK	1184.97	5.98
LAND TAXES	18.64	0.09
TOTAL OWNERSHIP COSTS	5451.57	27.53
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	403.86	2.04
GEN FARM OVERHEAD	867.00	4.38
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	1472.64	7.44
TOTAL OTHER COSTS	2743.50	13.86
7. TOTAL OF ABOVE COSTS	22932.91	115.82
8. RETURN TO RISK	-11434.74	-57.75

FOOTNOTE: FARROW IN FEB & AUG, 43 LITTERS, SOLID FLOOR CENTRAL FARROWING HOUSE, MEAN 7.4 PIGS PER LITTER, SELL 6.8 PIGS AT N.C. PRICE AND .2 SOWS PER LITTER AT 4.22 LBS (AVERAGE INDIANA AND GA-FLA-ALA DIRECT), FEED CUSTOM PROCESSED, AVERAGE MANAGEMENT AND PRACTICES FOR REGION, LAND VALUED AT MARKET, ALSO INCLUDES 05-2101, 2102, 2103, 5102, 5103, 5104, 3701, 3702, 3704, 3705; 06-4501, 4502, 1304, 1305, 1201, 1203, 0102, 0104, 0105, 0106; 07-2902, 2903, 2904, 2905; 05-4701, 4702, 4703, 4704.

09/16/80
VAN ARSDALL
09/19/80

ENTERPRISE CODE: 410353023
AREA CODE _5/3Z/_3/_0
FILE NO. 554
CWT SALES REPRESENTED 246.6 (100)
PRODUCTION UNIT DIVISOR 198.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 9

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 16
PARAMETER SET 37
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10600
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 PIGS	0.0	0.0	0.0	145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.00	0.55	16.	41.	2.	0.
2 CULL SOWS	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.40	4.22	16.	46.	2.	0.
3 PIGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	145.0	0.0	0.0	45.20	0.55	16.	41.	2.	0.
4 CULL SOWS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	28.19	4.22	16.	46.	2.	0.
OPERATING INPUTS					RATE/UNIT								PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11 CORN	136.0	138.0	137.0	138.0	137.0	138.0	137.0	138.0	137.0	138.0	137.0	138.0	2.78	1.00	2.	72.	3.	0.
12 36-40% PRO. FEED	20.0	20.0	19.0	19.0	20.0	20.0	20.0	19.0	19.0	20.0	20.0	20.0	13.89	1.00	16.	119.	3.	0.
14 VET & MED	0.0	0.0	0.0	126.0	0.0	0.0	0.0	0.0	0.0	126.0	0.0	0.0	1.00	1.00	15.	286.	3.	0.
15 HAULING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00	15.	347.	3.	0.
16 STRAW	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	19.06	1.00	3.	164.	3.	0.
17 GRINDING & MIXING	0.0	0.0	0.0	303.0	0.0	0.0	0.0	0.0	0.0	303.0	0.0	0.0	1.00	1.00	15.	353.	3.	0.
18 MISC EXPENSE	0.0	0.0	0.0	145.0	0.0	0.0	0.0	0.0	0.0	139.0	0.0	0.0	1.00	1.00	15.	400.	3.	0.
19 PASTURE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.28	1.00	7.	151.	3.	0.
20 BUILDING SITE	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	385.	3.	0.
21 GEN FARM OH	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	867.00	1.00	15.	459.	3.	0.
MACHINERY REQUIREMENTS					HOURS								MEN REQD	ENRGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
51 WAGON	7.0	7.0	7.0	0.0	7.0	7.0	7.0	6.0	7.0	7.0	7.0	6.0	0.0	4.00	2.	60.	4.	0.
52 3 PT. CARRIER	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	4.00	2.	63.	4.	0.
53 TRUCK 1.0 T.	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	0.0	7.00	0.	12.	4.	0.
54 MANURE SPREADER	2.0	2.0	0.5	0.0	0.0	0.0	2.0	2.0	0.5	0.0	0.0	0.0	0.0	9.00	2.	40.	4.	0.
EQUIPMENT REQUIREMENTS													NUMBER UNITS	ENRGY CAT.	PROP COST	EQUIP CODE	TYPE	AXXX
73 SPRAYER 500PSI	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.000	5.	1.00	88.	5.	0.
74 SCALES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	85.	5.	0.
78 FNCE. WIRE TEMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.310	0.	0.50	21.	5.	0.
79 PORTABLE SHADE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.968	0.	1.00	3.	5.	0.
80 FIELD QUONSET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	4.	5.	0.
81 WTR. TNK. HEAT.	167.0	167.0	167.0	83.0	0.0	0.0	0.0	0.0	0.0	0.0	125.0	167.0	2.000	0.	1.00	25.	5.	0.
82 WATERER FLOAT	167.0	167.0	167.0	83.0	0.0	0.0	0.0	0.0	0.0	0.0	125.0	167.0	1.000	0.	1.00	26.	5.	0.
84 BELL BOFT. AIR.	3.0	0.0	3.0	4.0	2.0	2.0	4.0	3.0	3.0	3.0	1.0	1.0	1.000	0.	0.01	29.	5.	0.
85 FAN. HSE. SOLID	120.0	110.0	15.0	0.0	0.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0	0.940	1.	1.00	0.	5.	0.
87 HEAT LAMP	92.5	75.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.000	2.	1.00	66.	5.	0.
88 VENT.SYS.FAR.HS.	360.0	360.0	60.0	0.0	0.0	0.0	720.0	720.0	50.0	0.0	0.0	0.0	0.940	3.	1.00	59.	5.	0.
89 CREEP FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.000	0.	1.00	32.	5.	0.
90 TROUGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.000	0.	1.00	36.	5.	0.
91 FEED CART	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	57.	5.	0.
92 HOPPERED BIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	51.	5.	0.
93 HOP. BIN AUGER	0.5	0.5	0.3	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	2.000	4.	1.00	40.	3.	0.
94 AUGER OR. UNIT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	42.	5.	0.
95 PORT LOAD CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	82.	5.	0.
96 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	91.	5.	0.
LIVESTOCK INVESTMENT																		
75 MATURE SOW													19.000	0.	1.00	96.	5.	0.
76 REPL. GILT													7.000	0.	1.00	94.	5.	0.
77 AVERAGE BOAR													2.000	0.	1.00	99.	5.	0.

MONTHLY SUMMARY

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
LIVESTOCK LABOR	1	HR.	52.0	155.0	104.0	104.0	52.0	52.0	52.0	155.0	104.0	104.0	52.0	52.0	1038.0
TOTAL LABOR	1	HR.	52.0	155.0	104.0	104.0	52.0	52.0	52.0	155.0	104.0	104.0	52.0	52.0	1038.0
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	360.0
DIESEL	1	GAL.	24.0	24.0	20.4	21.6	19.2	19.2	24.0	26.4	20.4	19.2	19.2	21.6	255.2
ELECTRICITY	1	KWH	1411.4	1319.3	555.0	238.5	4.1	4.1	794.6	798.6	68.3	4.1	353.2	470.8	6017.9
MACHINERY REQUIREMENTS															
TRACTOR (2)	1	HR.	10.0	10.0	8.5	9.0	8.0	8.0	10.0	11.0	6.5	8.0	8.0	9.0	106.0
TRUCK 1.0 T.	1	HR.	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	144.0
WAGON	1	HR.	7.0	7.0	7.0	6.0	7.0	7.0	7.0	6.0	7.0	7.0	7.0	6.0	87.0
3 PT. CARRIER	1	HR.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0
MANURE SPREADER	1	HR.	2.0	2.0	0.5	0.0	0.0	0.0	2.0	2.0	0.5	0.0	0.0	0.0	9.0

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/ SIZE	PERFORM RATE HOUR/ ACRE	PURCHASE PRICE	DEPR./ HOUR	INTEREST/ HOUR	INS./ HOUR	TAXES/ HOUR	TOTAL OWNERSHIP/ HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR (2)	50.00	1.000	11160.	1.285	0.460	0.075	0.126	2.348	0.815	1.752	0.263	2.830
TRUCK 1.0 T.	1.00	1.000	1275.	3.269	2.067	0.100	0.380	5.916	2.192	1.725	0.259	4.176
WAGON	*****	1.000	1627.	0.943	0.632	0.155	0.110	1.740	0.478	0.0	0.0	0.478
3 PT. CARRIER	0.00	1.000	492.	0.228	0.183	0.116	0.032	0.519	0.085	0.0	0.0	0.085
MANURE SPREADER	*****	1.000	2197.	3.727	1.491	0.165	0.311	6.094	0.546	0.0	0.0	0.546

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	PROPORT. CHARGED	LIST PRICE	DEPREC-IATION	INTER-EST	INSUR-ANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERAT. ENG/YR	HOURS LABOR
86	SPRAYER 500PSI	1.0	EACH	1.00	1.000	500.00	88.00	22.83	1.98	2.22	92.83	44.80	0.56	45.36	0.0
85	SCALES	1100.0	LBS.	1.00	1.000	750.00	87.80	25.92	2.27	2.54	88.53	7.55	0.0	7.55	0.0
9E	MATURE SOW	430.0	LBS.	19.00	1.000	2120.00	0.0	412.79	80.47	0.0	453.26	0.0	0.0	0.0	0.0
9H	REPL. GILT	150.0	LBS.	7.00	1.000	256.00	0.0	189.92	18.62	0.0	208.54	0.0	0.0	0.0	0.0
9V	AVERAGE BOAR	250.0	LBS.	2.00	1.000	319.00	478.50	40.67	3.99	0.0	523.16	0.0	0.0	0.0	0.0
21	FNCE. WIRE TEMP	1.0	MILE	3.31	1.000	157.00	48.73	8.36	0.0	0.82	57.91	4.87	0.0	4.87	0.0
3	PORTABLE SHADE	120.0	SQFT	1.00	1.000	101.00	19.19	8.58	0.58	0.65	28.99	7.88	0.0	7.88	0.0
4	FIELD QUONSET	120.0	SQFT	2.00	1.000	297.00	59.40	20.37	1.78	2.00	83.56	23.76	0.0	23.76	0.0
25	WTR. TNK. HEAT.	50.0	GALS	2.00	1.000	327.00	130.80	22.43	1.96	2.20	157.39	15.08	77.09	92.17	0.0
26	WATERER FLOAT	2.0	NO.	1.00	1.000	196.00	19.60	6.72	0.59	0.66	27.57	7.84	30.84	38.68	0.0
29	BELL BOFT. AIR.	1.0	EACH	1.00	0.010	190.00	1.90	0.67	0.0	0.07	1.72	0.39	2.67	3.06	0.0
6	FAN. HSE. SOLID	40.0	NO.	0.94	1.000	1380.00	651.56	278.10	38.09	27.07	993.82	260.82	10.49	271.11	0.0
66	HEAT LAMP	0.3	KW	20.00	1.000	26.00	130.00	17.85	1.56	1.75	125.14	104.00	36.96	140.96	0.0
59	VENT.SYS.FAN.HS.	20.0	NO.	0.94	1.000	916.00	86.10	29.53	2.58	2.89	121.11	34.44	105.81	140.25	0.0
32	CREEP FEEDER	1.0	EACH	10.00	1.000	297.00	594.00	101.84	8.91	9.98	714.74	59.40	0.0	59.40	0.0
36	TROUGH	5.0	FEET	6.00	1.000	28.00	31.20	5.35	0.47	0.52	37.56	3.12	0.0	3.12	0.0
37	FEED CART	250.0	LBS.	1.00	1.000	143.00	7.15	4.90	0.43	0.48	12.96	1.43	0.0	1.43	0.0
53	HOPPERED BIN	3.0	TYP.	2.00	1.000	862.00	68.24	28.05	3.97	2.75	100.97	28.48	0.0	28.48	0.0
40	HOP. BIN AUGER	10.0	FEET	2.00	1.000	297.00	59.40	20.37	1.78	2.00	83.55	47.52	0.38	47.90	0.0
4.	AUGER OR. UNIT	1.0	H.P.	2.00	1.000	297.00	59.40	20.37	1.78	2.00	83.55	23.76	0.0	23.76	0.0
82	PORT LOAD CHUTE	20.0	FEET	1.00	1.000	851.00	42.55	29.18	2.55	2.86	77.14	17.02	0.0	17.02	0.0
91	SMALL TOOLS	2130.0	DOLL.	1.00	1.000	2820.00	52.40	8.88	0.79	0.88	63.05	5.24	0.0	5.24	0.0

Figure 17. Feeder pigs finishing, 1600 head, Northwestern corn belt 1979

1. INVESTMENT SUMMARY	CURRENT REPLACEMENT TOTAL	CURRENT REPLACEMENT PER UNIT	AVERAGE ACQUISITION TOTAL	AVERAGE ACQUISITION PER UNIT
EQUIPMENT	61898.37	16.68	28706.96	7.73
*TRACTORS AND TRUCKS	22635.00	6.10	15255.99	4.11
*OTHER MACHINERY	10589.00	2.85	7136.98	1.92
TOTAL	95122.31	25.63	51099.93	13.77

(*FULL INVESTMENT COST - ITEMS MAY SERVE MULTIPLE ENTERPRISES)

2. PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	VALUE/ PRODUCTION UNIT
SLAUGHTER HOGS	CWT.	400.00	2.32	49.28	114.33	45731.82	
SLAUGHTER HOGS	CWT.	400.00	2.32	40.04	92.89	37157.11	
SLAUGHTER HOGS	CWT.	400.00	2.32	38.30	88.86	35542.39	
SLAUGHTER HOGS	CWT.	400.00	2.32	38.40	89.09	35635.18	
TOTAL RECEIPTS						154066.37	41.50

3. VARIABLE COSTS	UNITS	NUMBER OF UNITS	PRICE	VALUE	COST/ PRODUCTION UNIT
FEEDER PIGS	CWT.	211.5	115.00	24322.50	6.55
FEEDER PIGS	CWT.	211.6	98.00	20736.80	5.59
FEEDER PIGS	CWT.	211.5	98.50	20832.75	5.61
FEEDER PIGS	CWT.	211.6	60.00	12696.00	3.42
CORN	BU.	19826.0	2.21	43815.44	11.80
36-40% PRO. FEED	CWT.	2539.0	14.01	35571.37	9.58
VET & MED	DOL.	1412.0	1.00	1412.00	0.38
STRAW	TN.	60.8	19.06	1158.85	0.31
MISC EXPENSE	DOL.	1037.0	1.00	1037.00	0.28
HAULING	DOL.	664.0	1.00	664.00	0.18
BUILDING SITE	ACRE	2.0	0.0	0.0	0.0
MACH FUEL & LUBE				1269.48	0.34
MACHINERY REPAIR				1414.95	0.38
EQUP FUEL & LUBE				945.65	0.25
EQUIP REPAIR				1225.48	0.33
LIVESTOCK LABOR	HRS.	1920.00	3.48	6681.60	1.80
INTEREST ON OPER CAPITAL	DOL.	28963.90	0.11	3070.17	0.83
TOTAL VARIABLE COSTS				176853.62	47.64

4. INCOME ABOVE VARIABLE COSTS	-22787.26	-6.14
5. OWNERSHIP COSTS (REPLACEMENT, TAXES, INTEREST, AND INSURANCE)		
MACHINERY	3943.55	1.06
EQUIPMENT	5759.59	1.55
LAND TAXES	20.32	0.01
TOTAL OWNERSHIP COSTS	9723.46	2.62
6. OTHER COSTS		
LAND CHARGE (LAND PRICE)	271.19	0.07
GEN FARM OVERHEAD	5749.00	1.55
MANAGEMENT CHARGE (7.00% OF TC-LAND-PURCH. LVSK)	7960.23	2.14
TOTAL OTHER COSTS	13980.42	3.77
7. TOTAL OF ABOVE COSTS	200557.44	54.03
8. RETURN TO RISK	-46491.06	-12.52

FOOTNOTE: DRYLOT, 51 TO 232 LBS., FOUR LOTS PURCHASED YEAR-ROUND, BEGINNING 09/16/80 NOV. PREVIOUS YEAR. COMPLETE FEED PROCESSED ON FARM WITH COMMERCIAL VAN ARSDALL SUPPLEMENT. AVERAGE MANAGEMENT AND PRACTICES FOR REGION. IOWA 09/23/80 AND SO. MINN. DIRECT AREA PRICES. ALSO INCLUDES 02270300, 03190100, 03190300, 03190400, 03290100, 03290200, 03170200, 04310500, 04460400, 04200400. BUILDINGS, MACHINERY AND EQUIPMENT CHARGED AT REPLACEMENT COSTS.

ENTERPRISE CODE: 44037 0245
AREA CODE _3/12/_2/_4
FILE NO. 535
CWT SALES REPRESENTED 3834.6 (000)
PRODUCTION UNIT DIVISOR 3712.
LAND CHARGE METHOD 2
LAG-PERMANENT STRUCT 9

MACHINERY COMPLEMENT NO. 12
EQUIPMENT COMPLEMENT NO. 16
PARAMETER SET 19
EDITION NO. 0
NAME SET 2
INTEREST CHARGE METHOD 10400
LAG-OTHER EQUIPMENT 4

DATE PRINTED:

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION						NUMBER OF UNITS												
1 SLAUGHTER HOGS	0.0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.28	2.32	16.	43.	2.	0.
2 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	46.04	2.32	16.	43.	2.	0.
3 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0	0.0	0.0	0.0	38.30	2.32	16.	43.	2.	0.
4 SLAUGHTER HOGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0	38.40	2.32	16.	43.	2.	0.
OPERATING INPUTS						RATE/UNIT							PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11 FEEDER PIGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	211.5	0.0	115.00	1.00	16.	49.	3.	0.
12 FEEDER PIGS	0.0	211.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.00	1.00	16.	49.	3.	0.
13 FEEDER PIGS	0.0	0.0	0.0	0.0	211.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.50	1.00	16.	49.	3.	0.
14 FEEDER PIGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	211.6	0.0	0.0	0.0	0.0	84.00	1.00	16.	49.	3.	0.
16 CORN	1652.0	1652.0	1652.0	1652.0	1652.0	1653.0	1652.0	1652.0	1652.0	1652.0	1652.0	1653.0	2.21	1.00	2.	72.	3.	0.
17 36-40% PRO. FEED	212.0	211.0	212.0	211.0	212.0	211.0	212.0	211.0	212.0	211.0	212.0	212.0	14.01	1.00	16.	119.	3.	0.
18 VET & MED	0.0	353.0	0.0	0.0	353.0	0.0	0.0	353.0	0.0	0.0	353.0	0.0	1.00	1.00	15.	288.	3.	0.
19 STRAW	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	15.00	1.00	3.	168.	3.	0.
20 MISC EXPENSE	0.0	260.0	0.0	0.0	259.0	0.0	0.0	259.0	0.0	0.0	259.0	0.0	1.00	1.00	15.	408.	3.	0.
21 HAULING	0.0	0.0	166.0	0.0	0.0	166.0	0.0	0.0	166.0	0.0	0.0	166.0	1.00	1.00	15.	347.	3.	0.
22 BUILDING SITE	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	7.	385.	3.	0.
23 GEN FARM OH	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	749.00	1.00	15.	459.	3.	0.
MACHINERY REQUIREMENTS						HOURS							MEN REQD	ENERGY CAT.	POWER UNIT	MACH CODE	TYPE	CONT
50 GRINDER-MIXER	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	0.0	4.00	2.	67.	4.	0.
51 FRONT END LDR.	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.0	5.00	2.	38.	4.	0.
53 MANURE SPREADER	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.0	5.00	2.	41.	4.	0.
54 TRUCK 1.0 T.	36.0	36.0	37.0	36.0	36.0	37.0	36.0	36.0	37.0	36.0	36.0	37.0	0.0	7.00	0.	12.	4.	0.
EQUIPMENT REQUIREMENTS													NUMBER UNITS	ENERGY CAT.	PROP COST	EQUIP CODE	TYPE	XXXX
78 POLESHED PAVED	60.0	60.0	30.0	30.0	30.0	0.0	0.0	0.0	30.0	30.0	30.0	60.0	2.990	1.	1.00	11.	5.	0.
79 PAVED LOT 4 IN.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.200	0.	1.00	17.	5.	0.
80 WELL 20FT. 4IN.	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	1.000	6.	0.00	30.	5.	0.
82 WATERER FLOAT	267.0	267.0	133.0	133.0	133.0	0.0	0.0	0.0	83.0	83.0	83.0	267.0	15.000	6.	1.00	28.	5.	0.
83 SELF FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.000	0.	1.00	33.	5.	0.
84 SELF FEEDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.000	0.	1.00	34.	5.	0.
85 HOPPERED BIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	92.	5.	0.
86 HOP. BIN AUGER	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.000	4.	1.00	48.	5.	0.
87 SWEEP AUGER	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.000	4.	1.00	72.	5.	0.
88 HOP. BIN AUGER	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	1.000	4.	1.00	40.	5.	0.
89 PERM. LD. CHUTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	83.	5.	0.
90 SCALES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	89.	5.	0.
91 HOLDING CRATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.	1.00	84.	5.	0.
92 SMALL TOOLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.000	0.	1.00	91.	5.	0.
93 ROCK DRIVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.	1.00	92.	5.	0.
94 POLE LIGHT	410.0	380.0	350.0	320.0	290.0	260.0	260.0	290.0	320.0	350.0	380.0	410.0	1.000	1.	1.00	18.	5.	0.
95 FENCE 5 BOARD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.700	0.	1.00	19.	5.	0.

MONTHLY SUMMARY

CATEGORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL RECEIPTS	1	0.0	0.0	45731.82	0.0	0.0	37357.11	0.0	0.0	35942.39	0.0	0.0	35635.18
OPERATING INPUT REQUIREMENTS (DOLLARS)													
FEEDER PIGS	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24322.50	0.0
FEEDER PIGS	1	0.0	20736.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEEDER PIGS	1	0.0	0.0	0.0	0.0	20832.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEEDER PIGS	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12696.00	0.0	0.0	0.0	0.0
CORN	1	3650.92	3650.92	3650.92	3650.92	3650.92	3653.13	3650.92	3650.92	3650.92	3650.92	3650.92	3653.13
36-40% PRO. FEED	1	2970.12	2956.11	2970.12	2956.11	2970.12	2956.11	2970.12	2956.11	2970.12	2956.11	2970.12	2970.12
VET & MED	1	0.0	353.00	0.0	0.0	353.00	0.0	0.0	353.00	0.0	0.0	353.00	0.0
STRAW	1	0.0	0.0	0.0	0.0	0.0	0.0	1120.45	0.0	0.0	0.0	0.0	0.0
MISC EXPENSE	1	0.0	260.00	0.0	0.0	259.00	0.0	0.0	259.00	0.0	0.0	259.00	0.0
HAULING	1	0.0	0.0	166.00	0.0	0.0	166.00	0.0	0.0	166.00	0.0	0.0	166.00
BUILDING SITE	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GEN FARM OH	1	5749.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL LABOR COST	1	556.80	556.80	556.80	556.80	556.80	556.80	556.80	556.80	556.80	556.80	556.80	556.80
INT. ON OP. CAP.	1	255.85	255.85	255.85	255.85	255.85	255.85	255.85	255.85	255.85	255.85	255.85	255.85
MACH FUEL & LUBE	1	135.09	105.09	137.20	105.09	105.09	107.20	105.09	105.09	107.20	105.09	105.09	107.20
MACHINERY REPAIR	1	117.18	117.18	119.37	117.18	117.18	119.37	117.18	117.18	119.37	117.18	117.18	119.37
EQUP FUEL & LUBE	1	163.64	182.99	95.69	85.24	84.59	8.05	8.05	8.78	97.44	58.29	58.96	163.64
EQUP REPAIRS	1	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12
(TOTALS OF THE ABOVE ARE LISTED IN THE VARIABLE COST SECTION ON THE REVERSE SIDE.)													
TOTAL VAR. COST	1	13679.72	29236.83	3364.26	7829.29	29287.39	7924.61	6924.95	21060.75	7986.00	7802.34	32751.50	8094.21

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ANNUAL LABOR REQUIREMENTS															
LIVESTOCK LABOR	1	HR.	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	1920.0
TOTAL LABOR	1	HR.	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	1920.0
FUEL REQUIREMENTS															
GASOLINE	1	GAL.	90.0	90.0	92.5	90.0	90.0	92.5	90.0	90.0	92.5	90.0	90.0	92.5	1090.0
DIESEL	1	GAL.	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	414.7
ELECTRICITY	1	KWH	3557.4	3543.2	1807.2	1853.1	1838.9	174.9	174.9	189.1	1253.1	1267.2	1281.4	3557.4	20857.4
MACHINERY REQUIREMENTS															
TRACTOR (2)	1	HR.	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	172.8
TRUCK 1.0 T.	1	HR.	36.0	36.0	37.0	36.0	36.0	37.0	36.0	36.0	37.0	36.0	36.0	37.0	436.0
GRINDER-MIXER	1	HR.	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	91.2
FRONT END LDR.	1	HR.	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	40.8
MANURE SPREADER	1	HR.	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	40.8

MACHINERY FIXED AND VARIABLE COSTS PER HOUR

MACHINE	HP/ SIZE	PERFORM RATE HOUR/ ACRE	PURCHASE PRICE	DEPRC/ HOUR	INTEREST/ HOUR	INS./ HOUR	TAXES/ HOUR	TOTAL OWNER SHIP/ HOUR	REPAIR COST PER HOUR	FUEL COST PER HOUR	LUBRICANT COST PER HOUR	OPERATING COST PER HOUR
TRACTOR (2)	50.00	1.000	11563.	1.285	0.894	0.175	0.128	2.382	0.815	1.752	0.283	2.850
TRUCK 1.0 T.	1.00	1.000	11275.	3.289	2.148	0.180	0.380	5.997	2.192	1.037	0.276	4.305
GRINDER-MIXER	3.00	1.000	4993.	4.055	2.172	0.177	0.336	6.710	2.641	0.0	0.0	2.641
FRONT END LDR.	2.00	1.000	2312.	1.866	0.945	0.083	0.156	3.091	0.721	0.0	0.0	0.721
MANURE SPREADER	*****	1.000	3297.	2.635	1.400	0.118	0.222	4.394	1.178	0.0	0.0	1.178

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	TOTAL NO. OF ITEMS	NO. OF PROD. CHANGED	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	TOTAL OWNERSHIP PER YEAR	REPAIRS	FUEL AND LUBE	TOTAL OPERATING/YR	HOURS LABOR
11	POLESHED PAVED	3330.0	SQFT	2.94	1.000	1130.00	1695.83	746.70	101.74	70.44	2614.51	678.25	29.71	707.96	0.0
17	PAVED LOT 4 IN.	1000.0	SQFT	11.20	1.000	947.00	550.32	233.54	0.0	22.03	785.89	106.06	0.0	106.06	0.0
30	WELL 20FT. 4IN.	1.0	EACH	1.00	1.000	4590.00	13.77	9.81	0.0	0.93	24.51	5.91	23.31	29.22	0.0
32	WATERER FLOAT	2.0	NO.	15.00	1.000	196.00	294.00	104.77	8.82	9.80	417.47	117.60	799.85	917.45	0.0
33	SELF FEEDER	5.0	NO.	6.00	1.000	143.00	171.60	30.57	2.57	2.86	207.03	17.16	0.0	17.16	0.0
34	SELF FEEDER	10.0	NO.	9.00	1.000	327.00	588.60	104.67	8.83	9.80	712.20	58.86	0.0	58.86	0.0
52	HOPPERED BIN	6.0	TN.	1.00	1.000	787.00	39.35	17.33	2.36	1.63	60.67	15.74	0.0	15.74	0.0
40	HOP. BIN AUGER	10.0	FEET	1.00	1.000	297.00	29.70	10.58	0.89	1.00	42.17	23.76	0.81	24.57	0.0
72	SWEEP AUGER	10.0	FEET	1.00	1.000	560.00	56.00	19.96	1.68	1.88	79.52	22.40	2.59	24.99	0.0
80	HOP. BIN AUGER	10.0	FEET	1.00	1.000	297.00	29.70	10.58	0.89	1.00	42.17	23.76	3.10	26.86	0.0
53	PERM. LD. CHUTE	20.0	FEET	1.00	1.000	1413.00	70.65	50.28	4.23	4.74	129.81	28.22	0.0	28.22	0.0
65	SCALES	1330.0	LBS.	1.00	1.000	755.00	37.80	26.94	2.27	2.54	69.55	7.56	0.0	7.56	0.0
84	HOLDING CRATE	1.0	NO.	1.00	1.000	196.00	19.60	6.98	0.59	0.66	27.83	7.84	0.0	7.84	0.0
91	SMALL TOOLS	200.0	DOLL.	2.00	1.000	262.00	104.80	18.67	1.57	1.76	126.81	10.48	0.0	10.48	0.0
92	ROCK DRIVE	1330.0	SQFT	3.00	1.000	196.00	29.40	20.95	0.0	1.98	52.33	5.88	0.0	5.88	0.0
18	POLE LIGHT	1.0	EACH	1.00	1.000	254.00	12.70	9.59	0.0	0.93	18.82	2.54	87.28	89.82	0.0
19	FENCE 5 BOARD	100.0	FEET	24.71	1.000	196.00	294.65	183.33	0.0	9.79	347.73	93.86	0.0	93.86	0.0

ranging in size from 40 to 5000 head.

Feeder pig production activities are defined to produce 100 pounds of feeder pigs. Therefore all of its coefficients are defined in terms of a cwt. of feeder pigs produced. In addition feeder pig production activities produce pork as a joint product. These activities are built from budgets ranging in size from 140 to 1600 head.

Finally, feeder pig finishing activities are defined, as are farrow-to-finish activities, to produce 100 pounds of pork. All coefficients are defined in terms of a cwt. of pork produced. Unlike farrow-to-finish activities there is no breeding stock to account for in coefficient calculation. The size range for these activities is from 140 to 5000 head.

Construction of the activities: Hog activities are constructed in a manner similar to activities in the Beef and Dairy sectors. Our market regions are matched to the FEDS hog budget regions. Budgets of similar size, operating inputs and machinery and equipment complements were considered duplicates and the budget with the larger number of head represented was retained as an activity.

The number of budgets in any one market region rang from 0 to 27 with the total number of budgets for all market regions equalling 294.

Feed coefficients: The feed coefficients calculated for all hog activities were protein, metabolizable energy, calcium, phosphorus and lysine (National Research Council, 1979). Net energy requirements were unobtainable for hog feeding thus the reason for metabolizable energy lysine was also included as a requirement because of the critical importance of indispensable (essential) amino acids in swine diets and because lysine is normally the first limiting amino acid in swine diets. Feed requirements are also calculated for the breeding herds in the case of farrow-to-finish and feeder pig production activities while in the case of feeder pig finishing activities only the feeder pig is assumed fed. Feed requirements for all animals involved in an activity are summed and divided by the cwt. of pork produced by the budget in the case of farrow-to-finish and feeder pig finishing activities and by the cwt. of feeder pigs produced in the case of feeder pig production activities.

Pork coefficients: In farrow-to-finish activities pork is produced by barrows, gilts and culled breeding stock. These activities are defined to produce exactly 100 pounds of pork. Feeder pig production activities also produce pork but as a joint product in the production of feeder pigs. Culled breeding stock is the source of pork. Finally, feeder pig finishing activities produce pork by feeding out barrow and gilt feeder pigs. These activities are also defined to produce exactly 100 pounds of pork.

Feeder pigs: Feeder pig production activities are defined to produce 100 pounds of feeder pigs while feeder pig finishing activities are designed to convest these feeder pigs into pork. The feeder pig requirement coefficient is defined in terms of a cwt. of pork produced.

Nitrogen coefficients: Nitrogen is the second joint product that we account for in our hog activities (Short and Dvoskin, 1977).* These coefficients are calculated in a manner similar to the beef and dairy sectors. The nitrogen coefficient is a function of the pork produced by a particular activity.

Water coefficients: Water coefficients are calculated in a similar manner to beef and dairy activities (Agricultural Resource Assessment System, 1975). These market region coefficients are weighted to PA's using agricultural census weights. Water requirements are calculated as a function of the pork produced by a particular activity.

These hog activities and their associated coefficients form the pork sector of the livestock submodel.

Livestock Sector Interactions

Now that individual coefficients for each activity of each livestock

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* Short-Dvoskin, Ibid.

** Agricultural Resource Assessment System. Ibid.

category have been explained the next step is to explain how each of these coefficients and activities interact with one another and with the crop production sector. Figure 18 graphically displays these interactions.

Interactions among livestock activities

Interaction among the livestock activities include:

1) feeder cattle production activities produce feeder cattle which are in turn demanded by feeder cattle finishing activities;
2) dairy activities in addition to producing milk also produce feeder cattle (steer calves) demanded by feeder cattle finishing activities;
3) feeder pig production activities produce feeder pigs demanded by feeder pig finishing activities; and
4) all livestock activities compete for water.

Interactions with crop sector

There are four basic interactions between the crop and livestock sections as listed below.

1) Each crop activity supplies different amounts of protein, net energy, metabolizable energy, calcium, phosphorus and lysine to each livestock category. Thus the three livestock categories compete among themselves for crop production.

	ROT1	ROT2	ROT3	ROT4	ROT5	ROT6	ROT7	DAIRY1	PORKFF	PORKFPP	PORKFPF	BEEFCC	BEEFCCY	BEEFED	BRLTRANS	CRNTRANS	CSLTRANS	HLHTRANS	NLHTRANS	OTSTRANS	PSTTRANS	SRGTRANS	SSLTRANS	SBNTRANS	WHTTRANS	BRLTRANS	CRNTRANS	OTSTRANS	SRGTRANS	SBNTRANS	WHTTRANS	BRLTRANS	CRNTRANS	CSLTRANS	HLHTRANS	NLHTRANS	OTSTRANS	PSTTRANS	SRGTRANS	SSLTRANS	SBNTRANS	WHTTRANS		
OBJ	C	C	C	C	C	C	C	C	C	C	C	C	C	C																													>	0
FRT Dairy								-6.52							2.5	2.3	25.4	120	79	1.8	39	2.6	22	12.5	3.5																		>	0
NE Dairy								-72							37	46	505	958	1087	22	557	41	324	45	49																		>	0
CA Dairy								-226							.01	.007	.9	10	1.9	.01	1.2	.007	.8	.09	.01																		>	0
P Dairy								-160							.07	.07	.6	1.6	1.4	.06	.8	.07	.5	.02	.11																		>	0
ROUGH Dairy															8.1	9.5	-567	-1395	-1395	5.4	-454	9.4	-470	10.1	10.1																		<	0
Prt Dairy									-33	-43	-15															2.1	2.0	1.5	2	10.7	3.3												>	0
ME Pork									-762	-939	-359															56	75	34	73	75	76												>	0
CA Pork									-1432	-2071	-595															.01	.005	.008	.07	.07	.01												>	0
P Pork									-1143	-1611	-481															.07	.06	.04	.06	.16	.09												>	0
LY Pork									-1421	-1805	-674															.07	.05	.05	.05	.71	.10												>	0
FRT Beef												-139	-111	-14																		2	2.3	29	126	78	1.6	36	2.6	19.5	12.4	3.5	>	0
NE Beef												-1670	-1337	-188																		67	86	925	1217	1248	37	599	69	477	78	87	>	0
CA Beef												-4533	-3577	-384																		.02	.005	.98	10	3	.01	1.0	.0	.7	.09	.02	>	0
P Beef												-4104	-3257	-334																		.09	.08	.73	1.6	1.7	.05	1.06	.0	.5	.2	.14	>	0
ROUGH Beef																																8.5	10	-560	-1376	-1376	5.7	-448	9.9	-464	10.7	10.7	<	0
GRL		.20													-1											-1						-1											>	Demand
CRN	70				100											-1											-1						-1										>	Demand
CSL		1.5															-1																	-1									>	Demand
HLH	.5					1.5												-1																	-1								>	Demand
NLH			1.0																-1																	-1							>	Demand
OTS				80		50														-1								-1									-1						>	Demand
PST		.5																			-1																	-1					>	Demand
SRG			65				80															-1							-1										-1				<	Supply
SSL				.5																			-1																	-1			>	Demand
SBN	20				30																			-1						-1												-1	>	Demand
WHT						30																			-1						-1												-1	>	Demand
MILK							100																																					>	Demand
PORK								100	49	100																																	>	Demand
BEEF											49	40	100																														>	Demand
Steer Calves							2.1				45	16	-40																														>	0
Heifer Calves							.3				27	20	-19																														>	0
Steer Yearlings											24	50																															>	0
Heifer Yearlings											4	14																															>	0
Feeder Pigs									100	-25																																	>	0
Nitrogen	40	70	40	55	80	65	90	-.57	-2.5	-1.0	-2.5	-2.3	-1.8	-1.1																													<	0
Water 73	.01	.03	.00	.001	.00	.07	.01	.0001	.000	.000	.000	.003	.002	.001																													<	Supply
Water 75	.02	.02	.01	.001	.00	.08	.02	.0001	.000	.000	.000	.002	.022	.001																													<	Supply
Water 76	.03	.02	.02	.04	.05	.00	.03	.0000	.0001	.0001	.0001	.002	.002	.001																													<	Supply
Water 81	.00	.01	.03	.02	.06	.01	.00	.0001	.0001	.0001	.0001	.001	.001	.000																													<	Supply
CSLMIN-Dairy									-.003								1																										>	0
SSLMIN-Dairy																																											>	0
CSLMIN-Beef														-.007																				1									>	0
SSLMIN-Beef																																											>	0

Figure 18. A schematic of Market Region 20's livestock sector.

2) Each crop activity demands nitrogen which is supplied in differing amounts by each livestock activity.
3) Roughage crop activities supply dry matter of which minimum amounts are demanded by the beef and dairy livestock categories.
4) Crops compete with livestock for water.

Objective Function Coefficients

As previously indicated, the coefficients for the livestock sector determine nutrient requirements, nitrogen supplies, and water use per hundred pounds of output. The objective function, then, must include all other costs of production. From the representative budgets, each cost item is assigned and aggregated to one of five categories -- labor, machinery and equipment, other, transportation and marketing, and ownership. Since ownership costs are included in the first four categories, the objective function is the sum of each of the first four. Table 3 lists the cost items that are aggregated into the five major categories. It should be noted, however, that each of the items listed do not appear in every budget.

For example, livestock ownership costs are not included in the objective function of feeder pig finishing and cattle feeding activities. Of course the categories we choose and the particular costs we aggregated them into can be easily altered to fit any research problem. Each objective function value reflects the cost of producing a cwt. of

Table 3. List of cost items incorporated into each major category

Major Category	Cost item
Labor	
	Hired labor
	Family labor
	Equipment labor
	Livestock Labor
	Yard crew
	Managers
	Accountants
	Consultants
	Mechanic
	Truck drivers
Machinery and Equipment	
	Machinery fuel and lub
	Machinery repair
	Equipment fuel and lube
	Equipment repair
	Ownership cost-machinery
	Ownership cost-equipment
	Machine hire
Other	
	Vet and medical
	Interest on operating capital
	Ownership cost-livestock
	Ownership cost-land taxes
	Miscellaneous
	Grinding and mixing
	Antibiotics
	Vet service
	Vet supplies
	Growth stimulant
	Utilities
	Legal fees
Transportation and Marketing	
	Trucking
	Marketing
	Hauling and marketing
	Livestock hauling
	Sales commission
	Hauling
Ownership	
	Machinery
	Equipment
	Livestock
	Land taxes

livestock output including, where applicable, the costs of maintaining breeding and replacement stock.

Appendix A. Budgets Per Market Region

MR	Feeder Cattle Production	Feeder Cattle Feeding	Dairy	Pork	Total
1	0	0	2	0	2
2	0	0	2	0	2
3	6	0	1	6	13
4	6	0	2	13	21
5	5	0	4	18	27
6	7	0	1	13	21
8	3	11	3	14	31
9	9	11	4	18	42
10	9	11	3	27	50
11	11	0	0	10	21
12	5	11	4	20	40
13	4	11	3	23	41
14	7	11	4	17	39
15	4	11	4	17	36
16	11	0	1	0	12
17	6	14	2	21	43
18	12	16	2	21	51
19	9	2	1	5	17
20	11	2	1	15	29
21	4	3	0	0	7
22	5	2	1	5	13
23	7	2	1	15	25
24	10	0	1	0	11
25	6	3	0	0	9
26	8	2	0	5	15
27	10	2	2	0	14
28	7	2	1	0	10
TOTAL	182	138	57	294	671

Appendix A. Budgets Per Market Region

MR	Feeder Cattle Production	Feeder Cattle Feeding	Dairy	Pork	Total
1	0	0	2	0	2
2	0	0	2	0	2
3	6	0	1	6	13
4	6	0	2	13	21
5	5	0	4	18	27
6	7	0	1	13	21
8	3	11	3	14	31
9	9	11	4	18	42
10	9	11	3	27	50
11	11	0	0	10	21
12	5	11	4	20	40
13	4	11	3	23	41
14	7	11	4	17	39
15	4	11	4	17	36
16	11	0	1	0	12
17	6	14	2	21	43
18	12	16	2	21	51
19	9	2	1	5	17
20	11	2	1	15	29
21	4	3	0	0	7
22	5	2	1	5	13
23	7	2	1	15	25
24	10	0	1	0	11
25	6	3	0	0	9
26	8	2	0	5	15
27	10	2	2	0	14
28	7	2	1	0	10
TOTAL	182	138	57	294	671