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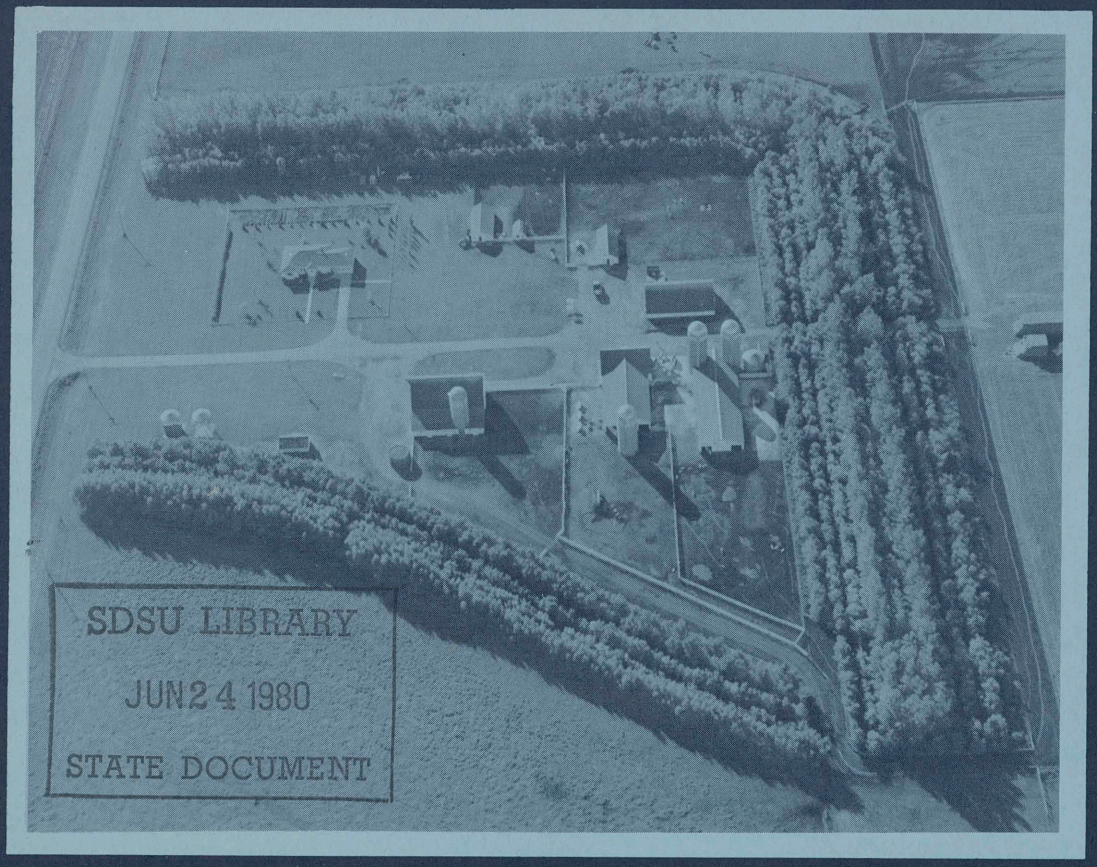

Management Guide for Planning a Farm or Ranch Business

tive Extension Service
kota State University
artment of Agriculture

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INTRODUCTION

REFERENCE TABLES

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Management Guide for Planning a Farm or Ranch Business

This farm business planning guide is designed to help you plan for more profitable use of land, capital, labor, and management. The estimates are based on slightly above average management. It is intended as a handy reference to guide individual farm planning, Extension and vocational agriculture farm management and planning programs, and to generally help promote more efficient agricultural production on South Dakota farms and ranches.

Budget information is provided for grain and forage crops. Livestock enterprise budgets are available in other publications. The data provided are based primarily on information from published and unpublished materials provided by Experiment Station and Extension personnel at South Dakota State University. Data not available from South Dakota were estimated from farm record summaries, costs of production studies, farm planning handbooks, and experiment station reports from other North Central states.

For more detailed information in specific enterprise areas contact your county Extension office. In addition, anyone using this manual who needs additional information is invited to check with farm management Extension specialists at South Dakota State University. They can provide supplementary material.

FARM BUSINESS PLANNING FOR BETTER FAMILY LIVING

Farm business planning concerns use of resources, that is, how to use land, capital, labor, and management to achieve the kind of living the farm family desires. In most cases, the family wants a higher income, but not necessarily the highest income possible. This is true because the desire for making money is closely tied to the desires for decreasing risk, decreasing the amount of time and effort needed per $100 of net income, and increasing the personal satisfaction of the individual family members. To some extent all of these desires or goals are reached by increasing income. However, a point is usually reached whereby some income must be sacrificed to satisfy nonprofit goals. A financially successful farm business pays for:

1. All cash operating expenses
2. Depreciation
3. Interest on investment
4. Operator and family labor (going wage rates)
5. Management

The budgeting procedures and data included in this planning guide are designed for farm business planning. Use them to compare various ways of organizing your farm business. Do not use them to determine income in any one year (for this you need current prices). It shows what may be the best long-time system of setting up the farm business. For short-time planning and short-time decisions, use an annual budget or annual operating plan. Keep and study farm records of your actual farm operation at all times. From them you will get information that is useful in both long- and short-time planning.

A farm plan that will result in more money for the farm family usually can be developed for every farm. Budgeting procedures provide you with a planning method by which you can easily and quickly compare different opportunities. With it you can look at different ways that you might use your land, capital, labor, and management to see what the probable income would be. Five specific things that budgeting procedures can do for you are:

1. Assist you to avoid costly mistakes of organization which can happen unless you consider your whole farm business. Make your mistakes on paper rather than in practice.
2. Help you take a closer look at your whole farm operation. Remember each farm is different, since each family has different resources and different needs.
3. Enable you to make plans that are adapted to your family and your farm and estimate what income to expect.
4. Help you decide if with your present resources it is possible to reach your family's goals, wants, and needs.
5. Help you decide what changes or adjustments in resources are needed and/or possible so as to be able to reach your family's goals, wants, and needs.

HIGH PROFIT FARM PLANS

Generally speaking with good cropland, you should first plan the land use and cropping programs for your farm. However, most farms do not have enough acres of cropland to earn the desired family income from crops alone. Therefore, these farm business operations should include livestock enterprises.

On the other hand, if the farm or ranch has tillable land with relatively low crop productivity, plan the livestock program first. Then fit the cropping system to the livestock program.

The Cropping System

High profit cropping systems use crops and combinations of crops that will produce the most returns per acre in value, in corn equivalent, and hay equivalent at lowest cost. Look for ways to cut the cost of production per bushel or ton of the crop produced. If lower costs per unit are to be achieved, recommended

agronomic practices as to tillage methods, timeliness, varieties, rates of seeding, disease control, insect control, weed control, soil testing, and fertilizer use must be followed. In addition, carefully consider investment in machinery and equipment. In some cases it may be more profitable to use custom operators or leasing plans. By using these alternatives you may be able to use your capital in a more productive aspect of the farm business. Partial budgets may be used to determine which alternative may be most profitable.

The Livestock System

Development of the most profitable livestock program for your farm is an individual problem that involves many factors, including available feed supplies, labor, managerial skill, and personal preferences. Keep in mind as you plan that:

1. Profitable livestock programs are built around the feed supply produced by sound land use and cropping systems. With the capital and labor available these livestock programs provide for:
   - A. Use of nonsalable pastures, crop aftermath, and by-product feeds.
   - B. Use of salable feeds.
   - C. Use of purchased feed.
2. Although higher returns from labor can usually be secured from crop production, livestock use labor that cannot be used for growing crops. With better distribution of the use of labor, a larger volume of business on a given acreage is possible.
3. Available markets or the lack of them will greatly influence the amount as well as the kind of livestock kept.
4. Livestock efficiency is one of the most important single factors influencing livestock net returns. Each livestock enterprise requires its own particular skills and practices. To be a good livestock producer you must know and keep up with those that apply to your livestock. Some bench marks for profitable livestock production are:
   - A. Pigs marketed per litter—7.5-9.5
   - B. Pounds of butterfat per cow—400-450
   - C. Percent beef calf crop weaned—90-95
   - D. Percent lamb crop raised—120-140
   - E. Daily gains
     - Fed steer calves—2.0-2.5
     - Fed heifer calves—1.8-2.2
     - Fed yearlings—2.3-3.0
     - Fed lambs—0.4-0.7
     - Pigs (birth to market)—1.4-1.6
   - F. Eggs per hen housed—210-250
   - G. Income per dollar's worth of feed fed (adjusted for type of livestock)
     - Average Good—$1.40-$1.90
     - Realistic goal—$1.60-$2.10
5. Invest in a costly automated system only if you can clearly see that it will pay for itself. New equipment should return from 20 to 25% of its purchase price each year to cover depreciation, interest, taxes, repairs, and other costs of owning the equipment.

BUDGET FOR MORE PROFIT

Budgeting is a planning method that you can use to compare different income opportunities on your farm or ranch. In this planning you need to consider three kinds of budgets. They are enterprise, total business, and partial budgets.

Use steps 1, 2 and 3 in "Ten Steps" (EC 632) to develop your crop and other land use enterprise budgets. Use typical example livestock enterprise budgets to estimate your own costs.

When you have decided on enterprise budgets that apply to your unit you are ready to analyze your whole farm or ranch business. You can do this by completing all of the steps in "Ten Steps in Planning Your Farm or Ranch Business" (EC 632).

How does the profitability of your present plan compare with other plans for your farm or ranch business? Is there a more profitable plan that can be carried out? Possibly so—other likely alternatives can be tested by the use of partial budgets. A plan sheet such as the one shown here will enable you to quickly estimate the potential effect of a planned change before you include it in the plan for your whole farm or ranch business.

Partial Budget for Planned Changes

Enterprise Dropped .....

Enterprise Added .....

I. Returns from enterprise added

.....

.....

dollars

TOTAL RETURNS ADDED .....

II. Costs for enterprise dropped

.....

.....

TOTAL COSTS DROPPED .....

III. Costs for enterprise added

.....

.....

TOTAL COSTS ADDED .....

IV. Returns from enterprise dropped

.....

.....

TOTAL RETURNS DROPPED .....

V. Estimate of change in net income

A. Add returns added (I) to costs dropped (II) .....

B. Add costs added (III) to returns dropped (IV) .....

C. EXPECTED CHANGE IN NET INCOME (A minus B) .....

TABLE 1. PASTURE PRODUCTION RATES FOR NORMAL SOIL GROUPS

Average Annual Precipitation	Native Range or Pasture Condition			
	Excellent	Good	Fair	Poor
	- Animal Unit Months per acre* -			
30-34	1.2-2.0	.9 -1.6	.6-1.2	.3 -.6
25-29	1.0-1.8	.75-1.4	.5-1.1	.25-.5
20-24	.8-1.5	.6 -1.2	.4- .9	.2 -.4
15-19	.6-1.2	.45- .9	.3- .7	.15-.3
10-14	.4- .9	.3 - .6	.2- .5	.1 -.2
5- 9	.2- .6	.15- .4	.1- .3	.05-.1

*An AUM is the grazing needed for a 1,000 pound cow for 1 month.

USE THESE NOTES TO DETERMINE YOUR GRAZING RATE

The figures to the right in each column under each range or pasture condition are rates at which many pastures are being used. If our range and pasture lands are grazed at this higher rate they will shift to a lower condition over time. Also, livestock production will be lower than assumed in the budget tables.

The figures to the left in each column under each range or pasture condition are recommended agronomic rates of use. With this rate of use the pasture should improve in condition.

Take into account soil group and soil condition to estimate your grazing rate.

For sand, sandy, silty and clayey soil groups use the values given for the annual average precipitation level. --- For wet lands triple the values given and for subirrigated areas double the values given. --- For overflow and saline lowlands use values for the next higher precipitation level. --- For choppy sands use values one-half level lower. --- For dense clay, shallow soil, and panspots use values one-half to one level lower. --- For very shallow soils, shale, and badlands use values at least two levels lower.

TAME PASTURE: Animal unit months of grazing from land planted to grass or grass legume mixtures can be estimated if you can estimate the hay yield that you would expect from these acres. AUM'S of grazing per acre equal approximately 2 times the tons of hay that could be harvested.

Grazing capacity can also be estimated based on native pasture productivity. Use a factor of 2½ times the expected productivity of good to excellent native pasture for the area. For example if native pasture is expected to produce one AUM per acre, tame pasture should produce 2½ AUM'S of grazing.

TABLE 2. FORAGE CONVERSION RATES FOR HAY EQUIVALENT

Forage	Alfalfa Hay Equivalent Factor
Alfalfa hay	1.00
Grass hay	.90
Oat hay	.90
Corn silage (30% DM)	.30
Sorghum silage (30% DM)	.27
Oat silage (30% DM)	.29
Alfalfa haylage (65% DM)	.63
Alfalfa silage (55% DM)	.54
Alfalfa silage (25% DM)	.28
Alfalfa grass silage (40% DM)	.30
Mixed grass silage (30% DM)	.27

Other feed value relationships:*

1 T. corn silage = 1 AUM

1/3 T. grass hay = 1 AUM

1 T. alfalfa equivalent = 3.5 AUM's

3 T. corn silage = 1 T. grass hay + 4 bu. corn

3 T. corn silage + 200 lbs. supp. = 1 T. alfalfa hay + 8 bu. corn

1 T. grass hay = 3 T. oat silage + 2 bu. corn

1 T. alfalfa hay = 3 T. oat silage + 300 lb. supp.

1 T. alfalfa grass silage = 1 T. corn silage + 100 lbs. supp.

1 T. corn silage = 4 bu. corn + .15 T. grass hay

1 bu. corn = 1.1 bu. sorghum = 1.25 bu. barley = 2 bu. oats = .9 bu. wheat

*Where supplement is indicated soybean oilmeal, 44% was assumed.

Depending upon the farm situation and the fall season small grain stubble and corn stalk fields may provide up to 1 AUM of grazing with the most usual rate of use being less than .5 AUM per acre.

Approximately 1 ton silage is produced for each 5 bushels of corn yield or for each 7 bushels of oat yield.

TABLE 3. COMPUTING ANIMAL UNITS

Kind of Animal	Number per Animal Unit	Conversion Factor*
Beef cow and calf	1	1.00
Dairy cow	1	1.00
Weaned calves (400-600)	2	.50
Heifers (550-700)	1.7	.65
Deferred steers (600-750)	1.5	.70
Bulls	.8	1.25
Horses	.8	1.25
Colts	2	.50
Ewes and lambs	5	.20
Ewes	7	.14
Lambs raised	15	.07
Feeder lambs	20	.05
Brood sows	2.5	.40
Hogs raised to 200 lbs.	5	.20
Feeder pigs	7	.15
Hens or ducks	100	.01
Pullets raised	250	.004

*1,000 pounds of body weight is commonly considered as an animal unit. If you prefer to estimate your own animal units add beginning and ending weights and divide this total by (2 times 1,000).

TABLE 4. CORN EQUIVALENT FEED VALUE OF GRAINS*

Grain	Dairy Cows		Feeding Beef Cattle		Feeding Hogs		Feeding Lambs		Average Values
	bu	lb	bu	lb	bu	lb	bu	lb	bu
Corn	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sorghum	1.00	1.00	.87	.87	.92	.92	.95	.95	.95
Barley	.86	1.00	.77	.90	.82	.95	.75	.87	.80
Wheat	1.07	1.00	1.12	1.05	1.10	1.03	.91	.85	1.10
Oats	.51	.90	.49	.85	.49	.85	.46	.80	.50

*The figures shown in this table are approximate rates that may be expected when the various feeds are used in appropriate amounts and in well balanced rations. Consult literature on livestock feeding for more complete information.

TABLE 5. ESTIMATED CROP MACHINERY
INVESTMENT AND MACHINE OWNERSHIP COSTS PER TILLABLE CROP ACRE

Area and Tillable Acres		Investment		Machine Ownership Costs	
		New	Average	Depreciation	Interest
		-dollars per acre-			
North Central					
Small	(under 600)	150.00	90.00	13.50	9.00
Medium	(600-1,000)	125.00	75.00	11.25	7.50
Large	(over 1,000)	120.00	70.00	10.80	7.00
North East					
Small	(under 500)	155.00	95.00	13.95	9.50
Medium	(500-900)	140.00	85.00	12.60	8.50
Large	(over 900)	135.00	80.00	12.15	8.00
South East					
Small	(under 200)	195.00	120.00	17.55	12.00
Medium	(200-400)	175.00	105.00	15.75	10.50
Large	(over 400)	155.00	95.00	13.95	9.50
East South Central					
Small	(under 300)	175.00	110.00	15.75	11.00
Medium	(300-500)	150.00	90.00	13.50	9.00
Large	(over 500)	135.00	80.00	12.15	8.00
West South Central					
Small	(under 600)	165.00	100.00	14.85	10.00
Medium	(600-1,100)	135.00	80.00	12.15	8.00
Large	(over 1,100)	120.00	70.00	10.80	7.00
Western Range					
Average for area		125.00	75.00	11.25	7.50

If you do not have your own inventory value for crop machinery use the average per acre investment that you feel is closest to your situation.

YOUR FARM ESTIMATE

_____tillable acres x $_____per acre = $_____estimated machinery inventory

Depreciation calculated based on ten year life with 10 percent salvage value.

Interest charge calculated at 10 percent of average investment.

TABLE 6. ESTIMATED TOTAL FAMILY LIVING COSTS
RELATED TO NUMBER OF PERSONS AND INCOME

Family Income	Number of persons in the household			
	2	4	6	8
7,500	6,510	7,370	8,290	9,040
9,500	7,180	8,050	8,750	9,500
11,500	7,900	9,010	9,970	10,780
13,500	8,650	9,750	10,710	11,530
15,500	9,420	10,540	11,490	12,320
17,500	10,260	11,360	12,330	13,140
19,500	11,250	12,380	13,340	14,210
21,500	11,680	12,830	13,840	14,750
23,500	12,090	13,280	14,330	15,290
25,500	12,500	13,730	14,840	15,830
27,500	12,910	14,180	15,330	16,370
29,500	13,320	14,630	15,820	16,910
31,500	13,830	15,080	16,310	17,450
33,500	14,150	15,530	16,810	17,990
35,500	14,560	16,020	17,300	18,520
37,500	14,970	16,440	17,810	19,060
39,500	15,380	16,890	18,290	19,610

Note: Total estimated expenditures above do not include taxes, savings major remodeling, legal fees, or funeral expenses.

If you do not have your own records, use this table to estimate your living expenses for line 28, Step 10, in "Ten Steps in Planning Your Farm or Ranch Business". To use the table consider the income shown on line 13, Step 10, of your plan as family income. Look across the row headed with the amount of income that is closest to your income shown on line 13, Step 10. If you are an average spender the dollars shown on this line in the column with the number in your household will be a close estimate of what you actually spend for family living.

TABLE 7. ESTIMATED MAN HOURS PER ACRE AND ALLOCATED VARIABLE POWER AND IMPLEMENT COSTS PER ACRE, PRE-HARVEST OPERATIONS

Operation	Machine Size	Man Hours	Repairs & Service	Fuel, Oil Grease
Plow	4-16's	.52	$1.91	$1.34
Plow	5-14's	.47	1.96	1.38
Plow	5-16's	.41	1.81	1.37
Plow	6-16's	.35	1.70	1.28
Plow	7-16's	.30	2.00	1.32
Plow	8-18's	.23	1.92	1.36
Disk (Tandem)	12 feet	.22	.21	(G) .59
Disk (Tandem)	15 feet	.17	.34	.55
Disk (Tandem)	18 feet	.14	.32	.52
Disk (Tandem)	21 feet	.12	.33	.54
Chisel Plow	12 feet	.25	.46	.84
Chisel Plow	16 feet	.19	.39	.77
Chisel Plow	20 feet	.13	.33	.70
Chisel Plow	24 feet	.12	.42	.68
Field Cultivator	12 feet	.28	.35	(G) .95
Field Cultivator	16 feet	.18	.37	.64
Field Cultivator	21 feet	.16	.38	.52
Spiketooth Harrow	30 feet	.09	.12	.23
Spiketooth Harrow	20 feet	.14	.09	.38
Plow/pony press	4-16's	.60	2.37	1.60
Plow/pony press	6-16's	.39	2.42	1.55
Plow/pony press	8-18's	.29	2.66	1.58
Rotary Hoe	8 row	.12	.24	.38
Chop stalks	4 row	.21	.46	(G) .65
Surflex	16 feet	.20	.37	.60
Surflex	2-16 feet	.11	.35	.55

(G) Gasoline

TABLE 7 (Cont'd)

Operation	Machine Size	Man Hours	Repairs & Service	Fuel, Oil Grease
Noble Blade	5 feet	.55	1.96	1.38
Noble Blade	10 feet	.32	1.92	1.36
Rod Weeder	12 feet	.22	.05	.36
Rod Weeder	24 feet	.09	.02	.22
Plant Row Crops	4 row	.15	.39	.36
Plant Row Crops, Apply Fert., Insecticide & Herbicide	4 row	.17	.53	(G) .66
Plant Row Crops, Apply Fert., Insecticide & Herbicide	6 row	.11	.48	.26
Plant Row Crops, Apply Fert., Insecticide & Herbicide	8 row	.08	.59	.25
Till Plant Row Crops, Apply Fert., Insecticide & Herbicide	4 row	.28	1.06	.95
Till Plant Row Crops, Apply Fert., Insecticide & Herbicide	6 row	.20	.85	.72
Lister Planter	4 bottom	.26	.93	.88
Drill Small Grain	14 feet	.23	1.31	.58
Drill Small Grain	28 feet	.15	.98	.38
Field Cultivate,drill Harrow Small Grain	14 feet	.24	1.60	1.50
Field Cultivate,drill Harrow Small Grain	21 feet	.18	1.61	1.10
Endgate Seeder	---	.09	.08	.23
Cultivate Row Crops	4 row	.27	.29	(G) .77
Cultivate Row Crops	6 row	.17	.31	.45
Cultivate Row Crops	8 row	.13	.29	.47
Lister Cultivator	4 row	.24	.52	.61
Spray, Corn or S.G.	8 row	.16	.14	(G) .32

(G) Gasoline

TABLE 8. ESTIMATED MAN HOURS PER ACRE AND ALLOCATED VARIABLE POWER AND IMPLEMENT COSTS PER ACRE, HARVEST OPERATIONS

Operation	Machine Size	Man Hours	Repairs & Service	Fuel, Oil Grease
Swath Small Grain	12 feet (PTO)	.25	$1.03 (G)	$ .71
Swath Small Grain	12 feet (SP)	.22	1.00	.49
Swath Small Grain	14 feet (SP)	.15	.70	.35
Combine Grain & Beans	13' PTO & M	.38	1.21	1.13
Combine Grain & Beans	16' SP	.28	.73	1.37
Combine Grain & Beans	20' SP	.25	.86	1.35
Combine Grain & Beans	24' SP	.20	.97	1.34
Haul & Store S.G. & Beans	- -	.39	.28	1.22
Corn Picker-Sheller	2 row	.79	1.61	2.74
Haul & Store Corn	- -	.60	.31	1.14
Chop Silage (8T)	2 row	.63	4.17	1.84
Haul & Store Silage	(3 tractors)	1.70	1.42	3.70
Mow Hay	7 feet	.35	.91	.71
Mow Hay	9 feet	.27	.77	.54
Rake Hay	7 feet	.28	.59	.62
Rake Hay	9 feet	.25	.48	.48
Windrow Hay	14 feet (SP)	.17	.83	.41
Windrow Hay	12 feet (PTO)	.30	1.23	.78
Mow, Condition, Windrow	Flail 10'	.44	1.50	1.69
Bale Hay (1.5 T/A)	4.5 T/hr.	.40	4.37+	1.50
Large Bale (1.5 T/A)	6.0 T/hr.	.30	3.50++	.95
Stack Hay (1.5 T/A)	Front Loader	.35	.86	1.23
Stack Wagon (1.5 T/A)	3 ton	.28	3.40	.83
Stack Wagon (1.5 T/A)	6 ton	.24	4.49	.82
Haul, store bales (per T)	2 men	1.40	.29	.86
Chop Haylage	- -	.51	4.08	1.91
Haul & Store Haylage	(3 tractors)	1.40	1.15	3.95
Corn Combine	2 row (PTO)	.45	2.21	1.66
Corn Combine	4 row (SP)	.31	1.33	1.37
Corn Combine	6 row (SP)	.21	.99	1.34

+ Includes cost of twine ($1.35) for 1 Ton of hay.

++ Includes cost of twine ($0.75) for 1 Ton of hay.

TABLE 9. ESTIMATED ANNUAL LABOR REQUIREMENTS IN HOURS PER ACRE, GRAIN AND FORAGE CROPS*

Enterprise	Mechanization and Efficiency Level				Yours
	Low	Average	High	Typical	
	-hours per care-				
Corn	3.5	2.6	2.0	2.3	
Wheat after small grain	2.1	1.7	1.2	1.4	
Wheat after row crops	2.7	2.2	1.7	2.0	
Wheat on fallow	1.8	1.5	0.9	1.2	
Barley	2.1	1.7	1.2	1.4	
Rye	2.2	1.7	1.2	1.5	
Oats	2.2	1.7	1.2	1.5	
Flax	2.0	1.6	1.2	1.4	
Soybeans	3.1	2.2	1.8	2.1	
Sunflowers	2.5	2.0	1.3	1.6	
Grain Sorghum	2.3	1.8	1.2	1.5	
Alfalfa or grass*	0.6	0.5	0.3	0.4	
Annual Hay (Pre-harvest)	1.2	0.9	0.7	0.8	
Summer Fallow	1.0	0.8	0.6	0.7	
Baled hay+					
1 cutting	3.4	2.8	2.3	2.6	
2 cuttings	5.7	4.5	3.9	4.4	
3 cuttings	7.7	6.2	5.7	6.0	
Stacked hay					
1 cutting	1.5	1.3	0.8	1.0	
2 cuttings	2.8	2.1	1.6	1.8	
3 cuttings	3.7	3.1	2.2	2.6	
Stack Wagon, swath, move					
1 cutting	1.1	0.9	0.7	0.8	
2 cuttings	1.9	1.5	1.3	1.4	
3 cuttings	2.6	2.1	1.8	2.0	
Silage					
Alfalfa**	3.6	2.7	2.1	2.3	
Corn	5.3	4.2	3.7	4.0	
Oats	4.4	3.5	3.0	3.3	

* Labor requirements for planting only. Labor for making hay or silage is estimated below.
** One cutting assumed. For two cuttings multiply hours by 1.8.
\+ For big bale, windrow, haul and store use 50% of hours above.

TABLE 10. LIVESTOCK LABOR REQUIREMENTS, HOURS PER UNIT

A. Dairy Cows

Cows	Stanchioned	Gutter Cleaner and Pipeline	Free Stall* Walk Thru	Free Stall* Herringbone
(number)		-hours per cow-		
Under 25	90	85	75	70
25 - 49	75	70	60	55
50 - 74	65	60	50	45
75 - 100	55	50	40	35
Over 100	50	45	35	30

* For loose housing systems add 5 hours to free stall systems.

B. Beef Cows (To weaning time)

Farm Conditions Calf Sold		Ranch Conditions Calf Sold	
(number)	(hours per head)	(number)	(hours per head)
Under 25	12	Under 100	7 (Add one hour per cow for A.I.)
25-50	10	100-200	6
50-75	9	200-300	5
Over 75	7	Over 300	4

C. Other Cattle

Wintering		Summer Pasture	
(number)	(hours per head)	(number)	(hours per head)
Under 75	3	Under 75	1.0
75-150	2	75-150	0.8
Over 150	1.5	Over 150	0.6

D. Brood Sows

Litters per year per sow	Sell Market Hogs 1	Sell Market Hogs 2	Sell Feeder Pigs 1	Sell Feeder Pigs 2
(number of sows)	(hours per sow)		(hours per sow)	
Under 10	25	40	22	34
10-20	21	35	18	30
20-30	18	30	16	26
30-40	16	26	14	23
40-60	14	23	12	20
Over 60	13	20	11	16

E. Ewes and Lambs Sell Mixed Marked and Feeder Lambs

(number)	(hours per ewe)
Under 50	4.0
50-100	3.5
100-300	3.0
300-500	2.5
500-750	2.0
Over 750	1.5

TABLE 10. (Cont'd)

F. Livestock Feeding Enterprises (hours per month)

Beef (1)		Lambs (100)		Pigs (10)	
(number)	(hours/mo.)	(number)	(hours/mo.)	(number)	(hours/mo.)
40 - 80	.8	Under 100	30	Under 100	2.5
80 - 120	.6	100 - 300	20	100 - 200	2.0
120 - 200	.4	300 - 500	10	200 - 300	1.5
200 - 300	.3	500 - 800	5	300 - 400	1.0
Over 300	.2	Over 800	4	Over 400	.5

G. Laying Hens

Farm Flock*		Commercial Flock	
(number)	(hours per 100)	(number)	(hours per 1,000)
Under 100	240	Under 2500	800
100 - 200	210	2500 - 5000	550
200 - 300	180	5000 - 7500	400
Over 300	150	Over 7500+	300

*Includes labor to raise 120 sexed chicks per 100 hens.

+Labor required for 10,000 bird flock may be less than 200 hours per 1000 hens when fully mechanized.

H. Raising Dairy Calves

Springing Heifers		Yearling Feeders	
(number)	(hours per head)	(number)	(hours per head)
Under 15	25	Under 15	8
15 - 30	20	15 - 30	6
Over 30	18	Over 30	5

TABLE 11. ESTIMATED GENERAL OVERHEAD LABOR

Acres Operated	Primary Source of Cash Income			
	Beef Cows or Ewes	Row crops or Small Grain	Livestock Feeding	Dairy or Swine
	- hours per year -			
Under 640	350	400	500	450
640 - 960	450	500	700	650
960 - 1,440	550	600	900	750
1,440 - 2,080	600	650	1,050	850
2,080 - 2,880	650	700	1,150	950
2,880 - 3,840	700	750	1,250	1,050
3,840 - 5,440	750	800	1,350	1,150
5,440 - 7,360	800	850	1,450	1,250
Over 7,360	900	950	1,600	1,400

TABLE 12. ESTIMATED ANNUAL OVERHEAD EXPENSE*

Acres Operated	Primary Source of Cash Income			
	Beef Cows or Ewes	Row crops or Small Grain	Livestock Feeding	Dairy or Swine
Under 640	1,610	2,460	2,830	3,450
640-960	1,850	2,710	3,450	4,190
960-1,440	2,460	3,210	4,060	4,930
1,440-2,080	2,940	3,570	4,440	5,550
2,080-2,880	3,450	3,820	4,930	6,160
2,880-3,840	4,180	4,310	5,670	6,910
3,840-5,440	3,830	4,960	6,320	7,550
5,440-7,360	5,480	5,590	6,930	8,160
Over 7,360	6,160	6,320	7,550	8,780

*Overhead expense includes costs of operating the farm or ranch business not specifically attributed to crop or livestock enterprises, such as farm share of auto and telephone, legal fees, repairs and insurance on storage and service buildings, record books, farm magazines, and other miscellaneous costs.

TABLE 13. ANNUAL PAYMENT PER $1,000 BORROWED, BY YEARS TO REPAY AND BY INTEREST RATE

Number of Years To Repay Loan	Interest Rates				
	6%	8%	10%	11%	12%
1	$1,060.00	$1,080.00	$1,100.00	$1,110.00	$1,120.00
2	545.45	560.80	576.20	583.95	591.70
3	374.10	388.05	402.10	409.20	416.35
4	288.60	301.95	315.50	322.35	329.25
5	237.40	250.50	263.80	270.60	277.40
6	203.40	216.30	229.60	236.40	243.25
7	179.15	192.10	205.40	212.20	219.10
8	161.05	174.05	187.45	194.35	201.30
9	147.05	160.10	173.65	180.60	187.70
10	135.87	149.05	162.75	169.80	177.00
15	103.00	116.85	131.50	139.10	146.85
20	87.20	101.85	117.50	125.60	133.90
25	78.25	93.70	110.20	118.75	127.50
30	72.65	88.85	106.10	115.05	124.15
35	69.00	85.80	103.70	112.95	122.30
40	66.50	83.90	102.25	111.70	121.30

		Example
A. Cash available for new investment (line 31, Step 10, Ten Steps Plan, EC 632)	_____	$ 3,183
B. Year to Repay Loan	_____	30
C. Interest Rate	_____	10
D. Annual Payment per $1,000 (From Table 13, above)	_____	$ 106.10
E. Loan Capacity (A divided by D x 1000)	_____	$30,000

TABLE 14: INCOME TAX AND SELF EMPLOYEMENT SOCIAL SECURITY TAX

A. Estimated Expected Income Tax

1.	Income on Line 36, Step 9; plus line 2, Step 10	
2.	½ capital gain income from sale of breeding stock	
3.	Typical additional 20% first year depreciation claimed	
4.	Total Income adjustments (line 2 plus line 3)	
5.	Adjusted Taxable Gross Income (line 1 minus line 4)	
6.	Number of dependents	
7.	Exemptions (number of dependents X $1,000)	
8.	Taxable Income (line 5 minus line 7)	
9.	Calculate tax based on current rates (Base dollars plus % of excess)	
10.	Typical investment credit claimed for an average year	
11.	Estimated Income Tax Due (line 9 minus line 10)	

B. Self Employment Social Security Tax

1.	Income Subject to Social Security Tax (line 5 above)	
2.	1979 maximum payment is $1,854.90 on an income of $22,900	$1,854.90
3.	If income subject to social security is less than $22,900 multiply the amount on line B1 by 0.081	
4.	Social Security Tax Due (lower of line 2 or 3)	

1979 TAX RATES--IRS SCHEDULE Y

Over	But not Over	Tax Basis	Excess Over
$ 3,400	$ 5,500	$ 0 + 14%	$ 3,400
5,500	7,600	294 + 16%	5,500
7,600	11,900	630 + 18%	7,600
11,900	16,000	1,404 + 21%	11,900
16,000	20,200	2,265 + 24%	16,000
20,200	24,600	3,273 + 28%	20,200
24,600	29,900	4,505 + 32%	24,600
29,900	35,200	6,201 + 37%	29,900
35,200	45,800	8,162 + 43%	35,200
45,800	60,000	12,720 + 49%	45,800
60,000	85,600	19,678 + 54%	60,000
85,600	119,400	33,502 + 59%	85,600
109,400	162,400	47,546 + 64%	109,400
162,400	215,400	81,466 + 68%	162,400
215,400		117,504 + 70%	215,400