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Steps in Planning a Farm or Ranch Business

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STEPS IN PLANNING A FARM OR RANCH BUSINESS

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FAMILY FARM ANALYSIS and
RESOURCE MANAGEMENT SYSTEMS

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Planning Step 1. Land Use Planning Information

I. Land Use Information

Columns 1, 2, and 3: Acres of each land use on the farm now or planned acres of each.

Column 4: Three to five year average yield per acre for each land use in terms of bushels, hundred weight, tons or animal unit months (AUM's). See table 1 in the Management Guide for yield of native pasture. Tillable pasture will yield approximately two times the AUM's as the tons of hay that could be harvested from that acre.

Columns 5, 6 and 7: Estimated average per acre invested or needed to get the yields in column 4.

II. Usual pasture condition based on the kind of grasses that are in the pasture (Excellent, Good, Fair, or Poor) _____.

III. Average annual precipitation _____ inches.

IV. Double check to be sure that you have accounted for all of your acres, owned and rented.

Land use	Acres of each crop	Rented Acres	Owned Acres	Yield, bu, cwt, T.	Fertilizer cost	Weedicide cost	Insecticide cost
Wheat							
Oats							
Barley							
Rye							
Flax							
Corn (grain)							
Corn (silage)							
Soybeans							
Sorghum (grain)							
Sorghum (silage)							
Sunflowers							
Millet							
Fallow							
Alfalfa Hay							
Grass Hay							
Tillable Pasture							
TOTAL CROPLAND				xxx	xxx	xxx	xxx
Native Pasture							
Native Hay							
Farmstead				xxx	xxx	xxx	xxx
Other							
TOTAL ACRES				xxx	xxx	xxx	xxx

1 2 3 4 5 6 7

Planning Step 2. Estimate Direct Costs per Acre for Growing and Harvesting Grain Crops

Item	Corn	Grain Sorghum	Soybeans	Winter Wheat	Spring Wheat						Summer fallow
1. Value of seed											XX
2. Fertilizer											XX
3. Herbicides											
4. Insecticides											
5. Crop insurance											XX
6. Fuel, oil, grease											
7. Repairs and service											
8. Custom hire											
9. Direct costs											
10. Cost of fallow											XX
11. Adjusted direct cash costs											XX
12. Interest on above costs											XX
13. Labor hours per acre											
14. Yield expected											XX

Step 2 Instructions

1. Value of seed - your estimate of average cost of seed for each crop.
2. Fertilizer - usual cost of fertilizer as you use it to obtain yield shown on line 14.
3. Herbicides - use either cost shown in step 1 or typical amount.
4. Insecticides - use either cost shown in step 1 or typical amount.
5. Crop insurance - premium that you pay per acre.
6. Fuel, oil, grease - from typical crop budgets or use your own figures.
7. Repairs and service - from typical crop budgets or use your own figures.

8. Custom hire - custom hire rate minus fuel, oil, grease, repairs and service if already charged in typical budget figures used in lines 6 and 7. See tables 7 and 8 in the management guide for amount to subtract.
9. Direct costs - add lines 1 to 8
10. Cost of fallow - enter fallow costs from line 9 for crops planted on fallow.
11. Adjusted direct cash costs - add line 10 to line 9.
12. Interest on above costs - use 8% to 10% of line 11 to represent a 12% to 15% annual rate for use of capital.
13. Labor hours per acre - your own estimate or use table 9 in the management guide.
14. Yield expected - from planning step 1 or use new estimate if you have reason to believe it will be different.

Planning Step 3. Estimate Direct Costs per Acre for Growing and Harvesting Forage Crops

Item	Alfalfa or tame grass	Annual hay crops	Sorghum or corn silage	Oat haylage	Alfalfa haylage	Baled hay cuttings			Stacked hay cuttings		
						1	2	3	1	2	3
1. Value of seed					XX	XX	XX	XX	XX	XX	XX
2. Fertilizer											
3. Herbicides											
4. Insecticides											
5. Crop insurance											
6. Fuel, oil, grease											
7. Repairs and service											
8. Custom hire											
9. Direct costs											
10. Annual growing charge	XX	XX	XX	XX							
11. Adjusted direct cash costs											
12. Interest on above costs											
13. Labor hours per acre											
14. Yield expected											
					Kind of hay						

Step 3 Instructions

1. Value of seed - your estimate of average cost of seed for each crop.
2. Fertilizer - usual cost of fertilizer as you use to obtain yield shown on line 14.
3. Herbicides - use either cost shown in step 1 or typical amount.
4. Insecticides - use either cost shown in step 1 or typical amount.
5. Crop insurance - premium that you pay per acre.
6. Fuel, oil, grease - from typical crop budgets or use your own figures.
7. Repairs and service - from typical crop budgets or use your own figures.

8. Custom hire - custom hire rate minus fuel, oil, grease, repairs and service if already charged in typical budget figures used in lines 6 and 7. See tables 7 and 8 in the management guide for amount to subtract.
9. Direct costs-add lines 1 to 8
10. Annual growing charge for alfalfa hay - direct costs for alfalfa divided by years alfalfa is maintained before plowing up again.
11. Adjusted direct cash costs - add line 10 to line 9.
12. Interest on above costs - use 8% to 10% of line 11 to represent a 12% to 15% annual rate for use of capital.
13. Labor hours per acre - your own estimate or use table 9 in the management guide.
14. Yield expected - from planning step 1 or use new estimate if you have reason to believe it will be different.

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Planning Step 4. Prepare Land Use and Cropping System

Crop	Acres	Yield per acre	Total product (1x2)	Operator's share of product	Price per unit	Value of operator's share (4 x 5)	Direct cash costs		Corn equivalent		Income over direct costs (6 minus 8)
							per acre	amount (1 x 7)	factor	bushels (4 x 9)	
Column No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Corn		bu									
2. Sorghum		bu									
3. Soybeans		bu									
4. Wheat		bu							xxx	xxx	
5.		bu									
6.		bu									
7.		cwt									
8.											
9.											
10. Corn silage		ton							xxx	xxx	
11.											
12. Alfalfa hay		ton							xxx	xxx	
13.											
14. Tillable pasture		AUM							xxx	xxx	
15. Aftermath grazing*		AUM							xxx	xxx	
16. TOTAL CROPLAND		xxx	xxx	xxx	xxx		xxx		xxx	xxx	
17.									xxx	xxx	
18. Native hay		ton							xxx	xxx	
19. Native pasture		AUM							xxx	xxx	
20. Farmsteads, roads, waste		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
21. TOTALS		xxx	xxx	xxx	xxx		xxx		xxx		

*Do not add aftermath grazing acres in total cropland acres.

Guide for Planning Step 4.

- Column 1—Enter the number of acres under each crop and land use. Total acres on Line 21 should equal the total acres in your farm unit (Step 1, page 2, column 1)
- Column 2—Yield per acre should represent the average yield for 3 to 5 years for your farm or area. Table 1 in the Management Guide may be used to estimate AUM's (Animal Unit Months) of grazing produced.
- Column 3—Multiply acres in Column 1 by yield per acre in Column 2.
- Column 4—If you are an owner operator the figures in Column 4 will be the same as Column 3. If you rent land, Column 4 will be your part of the crop or Column 3 times your

- share ($\frac{1}{2}$, $\frac{2}{3}$, or $\frac{3}{4}$ as the case may be).
- Column 5—Use prices suggested in current guide tables. If another price series is used the costs and returns for the livestock budgets will also have to be changed.
- Column 6—Operator's share of the product (Column 4) times price per unit (Column 5).
- Column 7—Total cash costs per acre should be taken from Line 14, Step 2, page 3, and Line 14, Step 3, page 4. When you are paying cash rent on a per acre basis add this to total cash costs and use this figure for per acre cash costs.
- Column 8—Acres (Column 1) times per acre total cash costs (Column 7).

- Column 9—To convert grain crops to corn equivalent bushels you need an estimate of the percentage that each crop is of corn in feeding value. Table 4 in the Management Guide has these factors for different classes of livestock. Average factors that you can use are: Corn 1.00, Barley .80, Oats .50, Wheat 1.10, and Sorghum .95.
- Column 10—Operator's share (Column 4) times corn equivalent factor (Column 9).
- Column 11—Value of operator's share (Column 6) minus total cash costs (Column 8).

Rental Arrangements

Crop	Landlord's Share of Crops and Production Expenses						Harvest Expense
	Rental Terms		Seed Cost	Fertilizer	Other Chemicals Used		
	Cash	Share			Weeds	Insects	

Planning Step 5. Plan the Livestock Enterprises

Livestock enterprise	Prod unit	Number of units	Grazing AUM's		Hay equiv.		Corn equiv.		Gross income		Direct costs		Income over direct costs (9 minus 11)
			Per unit	Total (1x2)	Per unit	Total (1x4)	Per unit	Total (1x6)	Per unit	Total (1x8)	Per unit	Total (1x10)	
Column numbers	xxx	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Beef cow herd, feeder calf sold	Budget No. _____ 1 cow		AUM	AUM	ton	ton	bu	bu	\$	\$	\$	\$	\$
2.	_____												
3. Beef calves, wintering and summer grazing	_____ 1 head												
4.	_____												
5. Steer calves, full fed drylot, _____ lbs. gain	_____ 1 head												
6.	_____												
7. Yearling feeder steer drylot, _____ lbs. gain	_____ 1 head												
8.	_____												
9. Dairy cow, _____ lbs. milk	_____ 1 cow												
10.	_____												
11. Hogs, _____ litter system	_____ 1 sow												
12. Feeder pigs	_____ 10 pigs												
13.	_____												
14. Sheep flock, _____	_____ 1 ewe												
15. Feeder lambs	_____ 100 head												
16.	_____												
17. Laying flock, farm	_____ 100 hens												
18.	_____												
19.	_____												
20. TOTALS	_____ xxx	xxx	xxx		xxx		xxx		xxx		xxx		

Guide for Planning Step 5

Livestock Enterprise Column—For all livestock enterprises record the number of the budget used. On Lines 5 and 7 indicate pounds of gain during the feeding period. On Line 9 indicate pounds of milk to be produced. On Line 11 indicate the kind of litter system. On Line 14 indicate market or feeder lambs.

Column 1—Indicate the number of production units of each livestock enterprise produced. Production unit is defined here as cow and calf, one head of beef stocker or feeder animals, one sow, 10 feeder pigs, ewe and lamb, 100 feeder lambs, 100 hens (farm flock) or 1,000 hens (commercial flock). In the case of breeding animals the budgets

usually include feed costs and other costs for specified replacements plus bull, ram or boar costs.

Column 2—Grazing AUM's (animal unit months) required per production unit from livestock enterprise budgets.

Column 3—Number of production units (Column 1) times grazing AUM's per production unit (Column 2).

Column 4—Hay equivalent required per production unit from livestock enterprise budgets.

Column 5—Number of production units (Column 1) times hay equivalent per production unit (Column 4).

Column 6—Corn equivalent required per production unit from livestock enterprise budgets.

Column 7—Number of production units (Column 1) times corn equivalent per unit (Column 6).

Column 8—Gross income per production unit from livestock enterprise budgets.

Column 9—Number of production units (Column 1) times gross income per unit (Column 8).

Column 10—Direct cost per production unit is total operating costs from livestock budgets.

Column 11—Number of production units (Column 1) times direct costs per unit (Column 10).

Column 12—Income over direct costs for each enterprise is equal to total gross income for each enterprise (Column 9) minus total direct costs for each enterprise (Column 11).

Livestock on Farm Now

Enterprise	Number

Summary of Feed Grain Requirements and Production

A. Corn Equivalent Produced (Line 21, Step 4, Col. 10)
B. Corn Equivalent Needed (Line 20, Step 5, Col. 7)
C. Corn Equivalent Sold (A minus B, if A is greater)
D. Corn Equivalent Bought (B minus A, if B is greater)

Planning Step 6. Calculate Labor Requirements, Forage Supplies and Requirements, and Capital Requirements for Livestock

Enterprise	Number of units	Labor (hours)		Tons of forage	Forage supplies and requirements		Pasture AUM's (Step 4, Col. 4)
		Per unit	Total (1x2)		Factor (Table 2)	Hay equiv. (4x5)	
Column no.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crops and forage	xxx	(Guide Table 9)	xxx	(Step 4, Col. 4)	(Guide Table 2)	xxx	(Step 4, Col. 4)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14. TOTALS (Lines 1 to 13)	xxx	xxx		xxx	xxx		

Average Operating Capital

Livestock Enterprises	Budget No.	xxx	(Guide Tb. 10)	xxx	Per Unit (See Budgets)	Total (1x4)	From Step 5 Column 5	From Step 5 Column 3
16.	Budget No.							
17.	Budget No.							
18.	Budget No.							
19.	Budget No.							
20.	Budget No.							
21. TOTALS (Lines 16 to 20)		xxx	xxx		xxx			

22. Hay equivalent excess or deficit (Line 14 minus Line 21, Column 6)

NOTE: Hay tons and pasture can be substituted at the rate of 1 ton to 3 AUM's. See Table 2 in Guide.

xxx

23. Pasture animal unit grazing excess or deficit (Line 14 minus Line 21, Column 7)

Guide for Planning Step 6

Enterprise Column and Column 1—Enter in these two columns the enterprises and the number of acres or number of production units planned for your farm in Step 4, page 7, and Step 5, page 9.

Column 2—Use actual labor per crop acre from your records or use Table 9 in the Management Guide to estimate labor per acre. For livestock labor, circle the hours that apply to your farm in Table 10 and use this figure for labor per production unit in your plan.

Column 3—Number of production units (Column 1) times labor per unit (Column 2).

Column 4—Copy tons of forage produced from Column 4, Step 4, for each forage crop.

Column 5—Hay equivalent factors needed to convert other forages to alfalfa hay equivalent are estimated in Table 2 in the Management Guide.

Column 6—Tons of forage (Column 4) times grass hay equivalent factor (Column 5) gives the supply of harvested forage in terms of tons of hay. Transfer hay equivalent requirements for your livestock from Column 5, Step 5.

Column 7—Copy AUM's of grazing available from Column 4, Step 4. Transfer AUM requirements for livestock from Column 3, Step 5.

Capital Dollars for Livestock

Column 4—Use the operating capital requirements specified in reference budgets for livestock to estimate per unit capital dollars.

Column 5—Number of production units (Column 1) times capital dollars per unit (Column 4).

Calculate Forage Balance

Line 22, Column 6—Compute excess or deficit in forage supplies to indicate the need for purchase or sale of hay and to suggest changes needed in land use.

Line 23, Column 7—Compute excess or deficit AUM's of grazing to use as a basis for planning changes in your farm plan. The value of unused AUM's is deducted from income in Step 9, Item 23, because the crop plan was credited with income for all AUM's produced.

Planning Step 7. Calculate Business and Personal Net Worth

FARM CAPITAL

1. Value of bare land owned (purchase price or present conservative market value) _____
2. Value of buildings and improvements owned (your estimate or use insure value; do not include farm dwelling) _____
3. TOTAL capital investment in real estate (Line 1 plus Line 2) _____
4. Operating capital requirements for crops (Step 4, Line 21, Column 8) _____
5. Operating capital requirements for livestock (Step 6, Line 21, Column 5) _____
6. Value of crop machinery and equipment (from your depreciation schedule or use Table 5 in the Management Guide) _____
7. Value of livestock equipment (from your depreciation schedule or use livestock budget summary table) _____
8. Value of irrigation system _____
9. TOTAL enterprise capital (add Line 4 through 8) _____
10. TOTAL farm capital (Line 3 plus Line 9) _____
11. Real estate mortgage (actual from your records) _____
12. Irrigation development loan _____
13. Enterprise capital borrowed (intermediate term and other farm business debts) _____
14. TOTAL farm liability (Add lines 11, 12, and 13) _____

15. Operator's EQUITY in farm or ranch business (Line 10 minus Line 14) _____
16. Personal assets
 - A. Cash—checking and savings account _____
 - B. Life insurance—(cash value) _____
 - C. Stocks and bonds (present value) _____
 - D. Farm dwelling (present value) _____
 - E. Household goods (present value) _____
 - F. Automobile (personal share) _____
 - G. Notes and accounts due you _____
 - H. Other _____
17. TOTAL personal assets (add lines 16A through 16H) _____
18. Personal liabilities (other than Lines 11 to 13)
 - A. Loans on life insurance _____
 - B. Personal notes _____
 - C. Income tax—due _____
 - D. Taxes —past due _____
 - E. Other _____
19. TOTAL personal liabilities (add Lines 18A through 18E) _____
20. PERSONAL NET WORTH (Line 17 minus Line 19) _____
21. TOTAL NET WORTH (Line 15 plus Line 20) _____

Planning Step 8. Summarize Costs and Returns for Your Plan

INCOME OVER DIRECT CASH COSTS

1. Crop income over direct costs (Step 4, Line 21, Column 11) _____
2. Livestock income over direct costs (Step 5, Line 20, Column 12) _____
3. Landlord's share of direct costs (Part of costs landlord pays shown as expenses in Step 4, Column 8 and Step 5, Column 11) _____
4. Other farm related income (custom work for others minus cash operating costs for example) _____
5. Value of excess grazing AUM's (Step 6, excess AUM's Line 23 _____ x \$ _____ AUM) _____
6. TOTAL farm income over direct costs (Add lines 1 through 4 and subtract line 5) _____

CALCULATE INCOME OVER ALL CASH COSTS

7. Machine service and custom work hired _____
8. Farm building repairs _____
9. Livestock equipment repairs _____
10. Real estate taxes _____
11. Farm insurance other than crop _____
12. Cash rent paid to others _____
13. Hired labor _____
14. Fuel for crop drying and livestock _____
15. Utilities _____
16. Commercial storage and crop marketing _____
17. Farm overhead _____
18. Special irrigation cash costs _____
19. Others _____
20. Interest paid to others _____
21. TOTAL RELATED CASH COSTS (Add lines 7 through 20) _____
22. CASH INCOME OVER ALL CASH COSTS (Line 6 minus line 21) _____

DEDUCT ANNUAL DEPRECIATION FROM CASH INCOME

23. Depreciation on buildings and improvements (from current depreciation schedule or use 6% of line 2, Step 7) _____
24. Depreciation on crop machinery and equipment (from current depreciation schedule or use 15% of Line 6, Step 7) _____
25. Depreciation on livestock equipment (from current depreciation schedule or use 18% of Line 7, Step 7) _____
26. Depreciation on irrigation system (from current depreciation schedule or use 15% of Line 8, Step 7) _____
27. TOTAL DEPRECIATION (Add Lines 23 to 26) _____
28. INCOME FOR FAMILY LABOR, OPERATOR'S EQUITY, AND MANAGEMENT RETURN (Line 22 minus Line 27) _____
29. OTHER FAMILY INCOME
 - A. Operator _____
 - B. Spouse _____
 - C. Other _____
30. TOTAL OFF FARM INCOME (add 50A to 50C) _____
31. TOTAL FUNDS AVAILABLE (Line 28 plus Line 30) _____
32. IRS Payments
 - A. Federal income tax _____
 - B. Social security tax _____
 - TOTAL PAID (A plus B) _____
33. Cash remaining for family living, debt retirement, new investment and savings (Line 31 minus Line 32) _____
34. Principal Payments (include A, B, C, & D)
 - A. Real estate mortgage _____
 - B. Machinery and equipment _____
 - C. Breeding stock notes _____
 - D. Irrigation development _____
35. Cash remaining for family living, savings, and new investment (Line 33 minus Line 34) _____
36. Cash normally used annually for family living or an estimate of current amount needed during period of this farm plan. _____
37. Cash available for savings and new investment (Line 35 minus line 36) _____

COMPUTER INPUT FORM

(page 1 of 2)

(type) EDIT SODAP _____ (press return key)

_____ (any 8 character name you choose)

(type) INPUT

			Name of farmer
			County
			No. of alternatives
			Primary source of cash income code
Alt. No. 1	Alt. No. 2	Alt. No. 3	ITEM (8 spaces maximum for each Alt.)
_____	_____	_____	Value of bare land
_____	_____	_____	Value of buildings and improvements
_____	_____	_____	Operating capital requirements for crops
_____	_____	_____	Operating capital requirements for livestock
_____	_____	_____	Value of crop machinery and equipment
_____	_____	_____	Value of livestock equipment
_____	_____	_____	Farm non-real estate liabilities
_____	_____	_____	Farm real estate mortgage
_____	_____	_____	Personal assets (including farm dwelling)
_____	_____	_____	Personal liabilities
_____	_____	_____	Total depreciation
_____	_____	_____	Depreciation for tax purposes
_____	_____	_____	Related operating expense
_____	_____	_____	Interest on related operating expense
_____	_____	_____	Interest on R.E. and non R.E. debt
_____	_____	_____	Government payments and other farm income
_____	_____	_____	Capital gains income (full amount)
_____	_____	_____	Net nonfarm income
_____	_____	_____	Value of family labor and management
_____	_____	_____	Family living expense
_____	_____	_____	Number of families involved
_____	_____	_____	Total number tax exemptions (all families)
_____	_____	_____	Annual real estate princ. paymet. (exist & new)
_____	_____	_____	Desired amount of debt to be paid off (\$)
_____	_____	_____	Desired years to pay off desired amount of debt
_____	_____	_____	Interest rate on the debt (%)

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