

# Buying/Selling Minnesota Farm Land

- o **Land Value Trends And Future Prospects**
  
- o **A Land Buyer's Checklist**
  - **Good Long-Term Investment? At This Time?**
  - **Checked Various Legal Aspects?**
  - **Desired Provisions In Contract For Deed?**
  
- o **A Land Seller's Checklist**
  - **Key Questions For A Seller**
  - **Some Tax Considerations**

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by

Kenneth H. Thomas  
Extension Economist in Farm Management  
Mervin L. Freeman & Lorin L. Westman  
Area Extension Agent in Farm Management

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# Part I

## Minnesota Farm Land Value Trends And Future Prospects

### I Minnesota Farm Land Values - An Historical Perspective

#### A. Major Patterns Of Minnesota Land Values<sup>1</sup>

1. 1910-1920 - Land values up 250% -- \$41 to \$104
2. 1920-1934 - Values dropped 62% -- back to \$40
3. 1934-1972 - Increased every year except 3 -- to \$248
4. 1972-1981 - A 4 fold increase to \$1,310
5. 1981-1987 - Dropped 63% to \$480
6. 1987-1989 - A 21% increase to \$581

#### B. Recent Land Value Patterns By Districts - 1972-1989

1. Though land values have always varied markedly by Districts in the State (Table 1 and Figure 1), they exhibited similar percentage increases during the 1972-1981 period and, with the exception of the Northeast, similar decreases during the 1981-1987 period.

**Table 1. Estimated Average Value Per Acre of Minnesota Farm Land by District, 1972-1989<sup>1</sup>**

<u>Year</u>	<u>South- East</u>	<u>South- West</u>	<u>West Central</u>	<u>North- West</u>	<u>East Central</u>	<u>North- East</u>	<u>State Average</u>
1972	\$370	\$379	\$208	\$117	\$163	\$76	\$248
1981	\$1709	\$2083	\$1135	\$813	\$679	\$460	\$1310
% change ('72-'81)	+367%	+450%	+446%	+595%	+316%	+505%	+428%
1987	\$558	\$671	\$472	\$375	\$259	\$293	\$480
% change ('81-'87)	-67%	-68%	-58%	-54%	-62%	-36%	-63%
1989	\$719	\$902	\$544	\$421	\$273	\$246	\$581
% change ('87-'89)	+29%	+34%	+15%	+12%	+5%	-16%	+21%

<sup>1</sup> Source: The Minnesota Rural Real Estate Market in 1989, Economic Report ER 90-5, July 1990.

2. However, during the recent 1987-1989 recovery period, the pattern has been more mixed. In the Southeast and Southwest districts, land values have increased about a third. In the West Central and Northwest districts land values have increased about 15%. In the East Central area values were up only slightly, while in the Northeast continued to decline from their peak year, 1982.
3. The above data are on a July to July basis. A USDA study indicated that Minnesota land values showed an 11% increase on a February 1, 1989 to January 1, 1990 basis. A quarterly survey of Professional Farm Appraisers recorded a 7.3% increase from July 1989 to July 1990 for the North Central Region of the U.S. This all suggests that Minnesota land values will likely show an additional 8 - 10% increase from July 1989 to July 1990.
4. Figure 2 contains a contour map of Minnesota Farm Land prices in 1987. In adjusting these lines to current values, keep in mind the variation in land value increases by districts shown in Table 1.



5. Reasons for selling land - 1989
  - a. 20% Financial difficulty (60% in 1987)
  - b. 55% Death, retirement, reduce size (32% in 1987)
6. Who is buying farm land and how? - 1989
  - a. Who is buying?
    - Expansion buyer - 73% of sales
    - Balance split equally between sole tract and investor buyers
    - 76% of land bought by buyers residing within 10 miles of sales parcel
  - b. How is land being financed?
    - 40% Cash sales (21% of sales in 1981)
    - 40% Contract for deed (61% of sales in 1981)
    - 20% Mortgage

## II Future Prospects For Minnesota Farm Land Values

### A. Factors Affecting Land Values

1. Physical Factors
  - a. Topography - affects land use, machine size
  - b. Soils - affect yield level and yield variations and impact of new technology
  - c. Buildings and improvements - type and condition of buildings and type of farming in an area affect value.
2. Locational/Aesthetic Factors
  - a. Climate - rainfall and growing season affect crops grown and yields
  - b. Location relative to markets, population centers, urban influences affect prices and costs and demand for land
  - c. Visual appeal of house, out buildings, scenic view, etc. can affect value
3. Economic and Psychological Factors
  - a. Expected Farm Earnings
    - Physical and locational factors affect earnings from one farm to the next, one area of state to the other
    - Government Program Qualification (i.e. corn base, CRP) and requirements (tillage and rotation) affect earnings
    - Earnings of given piece of land varies over time because of improvements in technology and management; because of changes in prices of products produced and costs of production
    - The higher and more stable the earnings the higher land values will be
    - Excess profits from livestock operations some times get bid into land values.
  - b. Inflation Rates
    - Earnings "dividend" = permits you to pay off fixed debt with cheaper dollars
    - Growth "dividend" = during inflationary times, land values tend to increase faster than rate of inflation. But you can't buy groceries or pay debt with growth dividend until property is sold
    - Higher the inflation rate the higher land values will likely go
  - c. Interest Rates
    - "Real" interest rate = market rate - inflation (normally 4 - 5%)
    - During the late '70's had negative real interest rate as inflation was higher than market interest rate. This led to a lot of borrowing and a farm financial crisis for many
    - Present real rate is higher than normal because of high risk premiums of lenders
    - The higher the real rate of interest the lower land values will be.
  - d. Market Psychology
    - Land price trends tend to translate into expectations
    - When market moves up, price is expected to continue up (as during late '70's)

- When market falls, price is expected to continue down (as it did during mid-'80's)
- The magnitude of the recent recovery in values reflects this over-reaction on the downside.

B. Likely Future Course Of Land Values - The Short Run

1. Minnesota land values have been on the increase the past three years - probably up some 30% from July 1987 to July 1990. Part of this sharp increase reflects the over-reaction of the market on the downside, the inordinate number of cash buyers, and recent improvements in crop conditions and yields.
2. A recent USDA survey of Professional Farm Appraisers reflected an expected slowdown in land values in the N.C. Region over the July 1990 to July 1991 period. The survey reported an expected increase of 4.7% compared to the previous year's 7.3% increase. Recent world happenings and their impact on farm costs will likely bring only modest increases in the Minnesota farm land market over the next year.

C. Likely Future Course Of Land Values - The Longer-Term

1. The long-term course of land values depends largely on what happens to farm earnings, interest rates and inflation.
  - a. Table 2 illustrates the marked effect these factors have had on land values as well as likely future impacts.

**Table 2. Combined Effect of Selected Economic Factors on Land Values, South Central Minnesota - An Illustration**

	<u>1972</u>	<u>1981</u>	<u>The Future</u>	
			<u>Low Inflation</u>	<u>Moderate Inflation</u>
Market interest rate	9%	12%	11%	12%
Less annual increase in earnings				
. from technology	2	3	2	2
. from inflation	<u>1</u>	<u>6</u>	<u>3</u>	<u>6</u>
Equals capitalization rate	6%	3%	6%	4%
Expected earnings (current \$)	\$40	\$100	\$80	\$100
Divided by cap rate	0.06	0.03	0.06	0.04
Resultant land value	\$665	\$3,330	\$1,330	\$2,500

- b. In the long run, farm earnings will likely improve but also be more variable. Technology gains would suggest a modest increase in land values over time, though concerns with the environment and food and worker safety may limit it's use and impact. Uncertainties relative to export markets and government programs would suggest fluctuations in prices and earnings, thus the need to use conservative estimates of farm earnings when making projections.
  - c. Interest rates will likely continue to fluctuate as will inflation.
  - d. Thus, it is expected that land values will tend to increase over time, though there may be periods of stability and even modest decline. Of course, if we return to a period of double-digit inflation, all bets are off. But, hopefully, we have learned something from the recent run-up and crash in land values.
2. Differences in values between high and low quality land will likely widen over time. Technology and the current emphasis on the environment and conservation will be important causal factors.



**Table 3. Form for Comparing Market Value of Subject Property With Sale Properties**

Sale no.	Example	1	2	3	4
Purchaser .....	<u>Freeman</u>	_____	_____	_____	_____
Date .....	<u>7/90</u>	_____	_____	_____	_____
Size .....	<u>160</u>	_____	_____	_____	_____
Sale price .....	<u>\$1,000</u>	<u>\$</u> _____	_____	_____	_____
<b>Adjustments per acre*</b>					
Time (year of sale) .....	<u>\$ 0</u>	<u>\$</u> _____	_____	_____	_____
Size of farm .....	<u>0</u>	_____	_____	_____	_____
Productivity .....	<u>+100</u>	_____	_____	_____	_____
Buildings & imp. ....	<u>-30</u>	_____	_____	_____	_____
Location, other .....	<u>+60</u>	_____	_____	_____	_____
Finance terms .....	<u>+25</u>	_____	_____	_____	_____
Total net adjustments .....	<u>\$ +155</u>	<u>\$</u> _____	_____	_____	_____
<b>Indicated value of subject farm</b>					
Sale price (above) .....	<u>\$1,000</u>	<u>\$</u> _____	_____	_____	_____
Net adjustment .....	<u>+155</u>	_____	_____	_____	_____
Indicated value of subject farm	<u>\$1,155</u>	<u>\$</u> _____	_____	_____	_____

\* Use a plus sign if the subject farm has an advantage over sale property and a minus sign if it has a disadvantage.

3. Conclusion: Is the asking price reasonable?
  - a. How does the asking price compare with your projected value of the property at line 9 of the cash rent approach (page 6) or line 18 of the detailed approach (page 12)? Is the asking price higher or lower than your projected value? \_\_\_\_\_?
  - b. How does the asking price compare to the value of the property determined through the use of comparable sales (eg. Table 3 above)? Using this so-called market approach, is the asking price higher or lower than its apparent market value? \_\_\_\_\_?
  - c. Conclusion: Is the asking price reasonable? Yes    No   . If not, what would be a reasonable bid price? \_\_\_\_\_?

**B. What Might Such A Purchase Do To Your Financial Position?**

If the farm appears to be priced right as a longer-term investment, the next question is, what might it do to the financial soundness of your business? You should explore three aspects of this question.

**1. Liquidity Aspect - Can You Meet Debt Repayment Demands?**

- a. Quick and dirty approach (Worksheet II, page 15)  
Using Worksheet II, page 15 first determine whether you can meet expected repayment demands with the income you have projected, the downpayment you have available and the cash flow subsidy you can draw upon from other sources on a continuing basis. If there is a cash flow deficit, then determine under what financing terms the debt could be serviced.
- b. A more detailed cash flow analysis.  
The above analysis is a very short-cut look at your debt servicing situation. A total farm, cash flow approach over, say, a 3 - 5 year period would be more accurate and revealing. This is particularly true if a considerable subsidy from other sources is used in the above analysis.



Also, if you are considering borrowing funds to cover part of the down payment, then you need to know what this will do to your overall cash flow situation. It should also be noted that the above analysis does not take into account income tax affects of the purchase.

c. **Conclusion: Can you meet debt repayment demands?**

If it is a close call, you should also check your cash flow projections under good, not-so-good and worst case scenarios. An often overlooked budget item is the cost of "fixing up the place" once you buy it.

2. **Solvency Aspect: What's Likely to Happen to Your Balance Sheet?**

- a. Check your balance sheet and financial ratios to see what would happen when you integrate the new farm/parcel into your financial situation. Most frequent snags include the drying up of short-term working capital and a rise in long-term leverage position.
- b. The acid test: With your contract or mortgage liability integrated into your balance sheet, next reduce your land asset value by, say 15%. If your debt/asset ratios still look favorable, that indicates you can stand some adverse happenings in the land market. But if you should happen to be 70 percent in debt, a 15% drop in asset values would cut your already modest equity in half. If this is your situation (or worse) you should think twice about purchasing the farm/parcel.

3. **Moderating Associated Risks**

Some things you can do to moderate the risks associated with this new purchase and accompanying debt include:

- a. Check out the deal with your short-term lender. Make sure you have adequate funds to operate the land once you've got it.
- b. Consider crop insurance on major crops.
- c. Be ready to take a more defensive hedging strategy by forward pricing grain, etc.
- d. Find sellers/lenders who will go with fixed-rate financing and/or a nonrecourse contract.
- e. Consider adding life, major medical and disability insurance to protect you and your family.

C. How Does Investment In More Farm Land Fit Your Personal/Financial Situation At This Time?

1. Some background on alternative investments

- a. Investments can be divided into four major groups, ranging from conservative to more aggressive: (1) Money Market Funds, (2) Income Investments (bonds, deferred annuities), (3) Growth and Income (stocks and bonds) and (4) Growth Investments (stocks).
- b. The typical relationship is that higher average returns are achieved only by accepting more risk (Table 4). However, historically, farm real estate has displayed higher rates of return with less risk than most investments. (The government support programs have played a role in this.)

Table 4. Average Rates of Return and Risk For Various Investments; Correlation With Farm Real Estate, 1947-1984<sup>1</sup>

Asset	Average Return	Average <sup>2</sup> Risk	Correlation <sup>3</sup> With Farm RE
----- percent per year -----			
Treasury Bonds	3.56	8.58	-0.34
Long-Term Corporate Debt	3.90	9.75	-0.30
Residential Real Estate	7.73	3.80	0.47
Farm Real Estate	10.63	7.90	--
Corporate Stock	12.49	17.17	-0.04
Consumer Price Index	4.58	3.87	0.36

c. "Don't carry all your eggs in one basket." But . . . .

Though this sage advice still holds, two questions remain (1) how many baskets? and (2) how many eggs per basket? The correlations noted in Table 4 above, suggest that treasury bonds and corporate debt returns tend to move in the opposite direction to farm real estate, while stocks are neutral and residential real estate returns tend to move similarly to farm real estate.

2. Your situation and this pending purchase

Your particular investment strategy should depend on four things: (1) your risk profile, (2) your time frame, (3) your present investment portfolio and (4) your recent financial track record.

a. Your risk profile

That is, are you conservative, moderate or aggressive? More pointedly, what is your (and your family's) attitude toward added risk and debt; your ability to withstand adversity? If you decide to go ahead with the purchase, make sure your spouse is also committed to it, so it doesn't end up as "I told you so" deal.

<sup>1</sup> Source: Sherrick, Foster and Irwin, "Farmland An Investment Alternative", Ohio's Challenge, Summer 1990, Vol. 3, Issue 2, Tables 1 and 2.

<sup>2</sup> Average Risk = The average yearly percentage variability in returns from that type of investment.

<sup>3</sup> Correlation With Farm R.E. = A number between 0 and +1 indicates that the assets' returns tend to move in the same direction; a 0 to -1 indicates that the assets' returns move in opposite directions.

- b. **Your time frame**  
Are you close to retirement or many years away? Two basic guidelines:
    - (1) The longer you have to retirement, the more aggressive you may want to be in investing for long-term growth. You have time to ride out the ups and downs of the market,
    - (2) The closer you are to retirement, the more conservative and income-oriented you likely should be. If you lose money, you will have less principal for future use and less time to get it back.
  - c. **Your present investment portfolio**
    - (1) Are you adding more land to an already heavily land-dominated balance sheet?
    - (2) It is likely that government policy toward agriculture will be less gratuitous than in the past. Also, since much of our agriculture is dependent on world markets, it is likely that farm prices will be more volatile over time. This suggests that a more diversified investment portfolio will fare better in the 1990's.
  - d. **Your past financial performance or track record.** Have your earnings been increasing, decreasing, variable, stable, etc. in recent years?
3. **Conclusion:** Does the purchase of this farm/parcel fit your present personal/financial situation?

## **II Have You Checked Various Legally-Related Issues?**

Like the whole farming business enterprise, buying farm land requires careful attention to numerous legally-related issues. This is particularly true if you buy it for cash or on contract. The commercial lender will likely check into most of these items for you.

### **A. Environmentally Related Issues**

The following represents a list of some of the environmentally related issues to be explored before you decide to buy the property. Check with your attorney regarding possible additional things to watch out for and how best to protect yourself from a possible oversight.

1. Is the present water supply contaminated?
2. Check for abandoned wells and determine who will pay to bring them into compliance.
3. Check for underground fuel tanks and their condition.
4. Check for old dump sites that may be contaminated.
5. In some areas, sink holes and the location of livestock units near residential areas can be problems.
6. Check out conservation plans for the farm. Has the seller been in compliance? What effect do these plans have on the farming system you intend for the property?
7. If Conservation Reserve (CRP) land is involved, has the ASCS been notified of the sale? Failure to do so may void the CRP Contract.

### **B. Title And Other Legal Aspects**

1. **Title related aspects**
  - a. Are there any problems of getting clear title to the property?
  - b. Are there any outstanding security agreements involving the land and seller still in effect?
  - c. If you buy the property, should the property be held in sole ownership, joint tenancy or tenants in common? Check this carefully with your attorney and accountant.
2. **Other legal aspects**
  - a. Check for any existing or potential leases or easements affecting the property.
  - b. Are there any zoning ordinances in effect that would affect the use of the property, the selling off of lots, etc.
  - c. Are there any mineral or water rights involved?

### **III Does Your Contract For Deed Contain Several Key Provisions?**

Your potential purchase can be financed via cash, a commercial real estate lender, or by the seller using a contract for deed. If you finance through a commercial lender, you should have your attorney review the terms of the mortgage agreement before signing. Since about two-thirds of our Minnesota's non-cash sales are sold under contract, we will focus here on key provisions of the contract.

#### **A. Provisions Of Standard Contract**

Like any contract, the land sales contract must contain several specific provisions to be a legal contract. These include:

1. Seller agrees to (1) convey the property to the buyer by a specified form of conveyance, usually a warranty deed, and to (2) furnish an abstract evidencing good title in the seller at the time the contract for deed is executed.
2. The buyer agrees (1) to pay a purchase price for the property as specified; (2) to pay real estate taxes and assessments and to maintain insurance on the premises and; (3) that all buildings and improvements then on or added to the land may not be removed but will remain on the property until the contract is fully performed or there are written agreements to the contrary.
3. The agreement must also include the annual payments (principal and interest) due each period.

#### **B. Special Provisions You May Wish To Include**

In addition to these required provisions, the following are some special provisions you may wish to try to negotiate into your contract for deed:

1. Allocation of the purchase price for tax purposes.
2. Delay of payment in case of economic or natural disaster.
3. Prepayment of contract.
4. Disposition of existing mortgages of seller.
5. Assignment of contract.
6. Permission for sale of building site, etc. and/or adding facilities.
7. When default will be deemed to have occurred and steps required for termination.
8. Partial transfer of title to property after given amounts of equity have been attained by the buyer.

#### **C. Special Note:**

1. Keep sales of personal property and real estate in separate contracts. Check tax aspects of personal property sales.
2. If there is a large amount of real estate involved, you may want to consider separate contracts on various parcels to avoid default on the whole deal.

# Part III

## Seller's Checklist/Other Considerations

### I Key Questions For A Seller Of Farm Land

#### A. Is This The Time To Sell?

1. What will likely happen to land values?
2. Investment credit recapture on improvements before 1986?
3. Expected trend in income from other sources?
4. Expected return from reinvested income?
5. Possible change in capital gains tax law?
6. Sell now or pass through your estate? - Basis issue.
7. Consider a nontaxable exchange of property.
8. How will Social Security benefits change?

#### B. Sell For Cash Or On Contract?

1. Cash sale? No longer have income averaging with income taxes.
2. Contract sale - spread gain over several years.
3. Higher price with contract?
4. Contract: risk of default or restructuring?
5. How profitable are other investments?
6. Do you need more liquidity/income than contract provides?
7. Watch contract sale to family member - may get added back into your estate.
8. Sell home for cash (\$125,000 exclusion) and farm buildings and land on contract.
9. Taxability of Social Security benefits if income too high.

### II Other Tax Considerations/Situations - The Seller

#### A. Selling Property At A Loss May Not Lead To A Tax Deduction

Example: Bought at \$3,000, sell at \$1,200

1. Generally, no deduction if sale to related party.
2. Operating farmer - full loss in year of sale.
3. Passive situation (landlord) - \$3,000 annual allowable loss.

#### B. Repossession Triggers Tax For Seller

1. Two ways to figure: tax on which ever is lower
  - Principal payments received - gains reported; recognize untaxable portion in year of sale
  - Total gain from original sale - gain reported.

#### C. Reducing Contract Price

1. Buyer reduces his basis by amount of debt forgiven.
2. Seller reduces gain and gross profit % based on land's current value rather than original contract price.
3. Bad news: if related parties = gain based on original sale price - unless buyer is in distress.

# WORKSHEET 1: HOW MUCH IS THIS FARM/PARCEL WORTH TO YOU?

## Projected Gross Income/Acre

CROP ---> \_\_\_\_\_

1.	Expected Yield .....	_____	_____	_____	_____
2.	Expected Price (Cash or Loan) .....	\$ _____	\$ _____	\$ _____	\$ _____
3.	Crop Income (1 x 2) .....	_____	_____	_____	_____
4.	Other Income (Gov't Pay, Straw etc.) .....	_____	_____	_____	_____
5.	Projected Income/Acre (3 + 4) .....	\$ _____	\$ _____	\$ _____	\$ _____

## Projected Direct Expenses/Acre

	Seed .....	\$ _____	\$ _____	\$ _____	\$ _____
	Fertilizer .....	_____	_____	_____	_____
	Chemicals .....	_____	_____	_____	_____
	Custom Hire .....	_____	_____	_____	_____
	Crop Insurance .....	_____	_____	_____	_____
	Custom Hire .....	_____	_____	_____	_____
	Fuel, Oil .....	_____	_____	_____	_____
	Drying, Utilities .....	_____	_____	_____	_____
	Repairs .....	_____	_____	_____	_____
	Seasonal Labor .....	_____	_____	_____	_____
	Operating Interest .....	_____	_____	_____	_____
6.	Projected Direct Expenses/Acre .....	\$ _____	\$ _____	\$ _____	\$ _____

## Projected Total Return Over Direct Expenses

7.	Projected Return Over Direct Expenses (5 - 6) .....	_____	_____	_____	_____
8.	Acres of Each Crop .....	_____	_____	_____	_____
9.	Projected Total Return Each Crop (7 x 8) .....	_____	_____	_____	_____
10.	Total Return Over Direct Expenses (Total Line 9) .....	\$ _____	\$ _____	\$ _____	\$ _____

## Projected Overhead Charges To Above Acres

	Operator Labor and Management .....	\$ _____		
	Machine Depreciation/Replacement .....	_____		
	Real Estate Taxes \$____, Insurance \$____, Maintenance \$____ .....	_____		
	Other Overhead .....	_____		
11.	Projected Total Overhead Charges .....	\$ _____		

## Projected Residual Return/Estimated Value

12.	Projected Total Residual Return to Cropland (10 - 11) .....	\$ _____	
13.	Capitalization Rate (e.g. 5% = 0.05) .....	0.0	
14.	Capitalized Value of Cropland (12 + 13) .....	\$ _____	
15.	Sensitivity Analysis: Capitalized Value if:		
	Higher Residual Return \$____ + Lower Cap Rate 0.0_____ .....	\$ _____	
	Lower Residual Return \$____ + Higher Cap Rate 0.0_____ .....	\$ _____	
16.	Estimated Capitalized Value of Cropland .....	\$ _____	
17.	Adjustments for: Location, Buildings, House .....	_____	
	: Pasture, Woodland, _____ .....	_____	
18.	Estimated Total Value of Farm/Parcel (16 + 17) .....	\$ _____	
	Per Acre (18 + 8) .....	\$ _____	

## WORKSHEET II - CAN YOU MEET DEBT REPAYMENT DEMANDS?

### Estimate Annual Net Cash Earnings From Farm/Parcel

- A. Residual returns to crop land (Worksheet I) ..... \$ \_\_\_\_\_  
 B. Rent from buildings, pasture, etc. .... \$ \_\_\_\_\_  
 C. Total expected net cash earnings (A + B) ..... \$ \_\_\_\_\_

### Calculate The Amount Of Debt That Can Be Serviced

- D. Debt repayment factor - (see table below) ..... \_\_\_\_\_ (Factor)  
 (expected loan terms: \_\_\_\_\_ years, \_\_\_\_\_ interest rate)  
 E. Total debt that can be serviced (C x D) ..... \$ \_\_\_\_\_

### Determine Whether Repayment Demands Can Be Met

- F. Current asking price for farm/parcel ..... \$ \_\_\_\_\_  
 G. Down payment needed (F - E) ..... \$ \_\_\_\_\_  
 H. Down payment available (exclusive of borrowings) ..... \$ \_\_\_\_\_  
 I. Short fall in down payment (G - H) ..... \$ \_\_\_\_\_  
 J. Annual Cash Flow Deficit (I + D) ..... \$ \_\_\_\_\_  
 K. Subsidy: cash available from other sources  
 (other enterprises, off-farm income) ..... \$ \_\_\_\_\_  
 L. Cash flow surplus or (deficit) (K - J) ..... \$ \_\_\_\_\_

### If Line L Is Negative, Under What Conditions Could Debt Payments Be Met?

- M. Reduction in asking price needed to meet debt payments (L x D) ..... \$ \_\_\_\_\_  
 Or change in finance terms needed:  
 N. Total debt to be serviced (F - H) ..... \$ \_\_\_\_\_  
 O. Annual cash flow available (C + K) ..... \$ \_\_\_\_\_  
 P. Resultant Debt repayment factor (N + O) ..... \_\_\_\_\_ (Factor)  
 Q. Determine finance terms needed: years to repay ..... \_\_\_\_\_ years  
 (see table below) interest rate ..... \_\_\_\_\_ %

Debt Repayment Factors For Lines D and Q  
 (amount of debt \$1 per year will cover - constant annual payments)

Repayment Period In Years	<u>Interest Rate</u>					
	<u>6%</u>	<u>7%</u>	<u>8%</u>	<u>9%</u>	<u>10%</u>	<u>12%</u>
10	\$ 7.4	\$ 7.0	\$ 6.7	\$ 6.4	\$ 6.1	\$ 5.7
15	9.7	9.1	8.6	8.1	7.6	6.8
20	11.5	10.6	9.8	9.1	8.5	7.5
25	12.8	11.7	10.7	9.8	9.1	7.8
30	13.8	12.4	11.3	10.3	9.4	8.1
40	15.0	13.3	11.9	10.8	9.8	8.2
forever (interest only)	16.7	14.3	12.5	11.1	10.0	8.3

### Instructions For Worksheet I, Page 12

1. First, estimate the gross income expected from crops. List crops to be grown and expected yields. For farm operator-buyers, yields should reflect your long-term expectations with your level of management. Investor-buyers should assume typical or average yields. Prices should represent a conservative estimate of your long-term expectations. Calculate the expected crop income at line 3. To this amount, add any other income.
2. Direct expenses should represent the amount and cost of inputs needed to produce projected yields. Total the direct expenses for each crop (line 6).
3. Determine the projected total return over direct expenses (line 10) by first subtracting line 6 from line 5 and then multiplying this projected return/acre (line 7) by the acres of each crop (line 8). Then add together amounts at line 9 for each crop and insert the total at line 10.
4. Overhead charges should reflect a long-term situation. An adequate allowance for machinery replacement and for labor and management for operating these acres should be included. Also, a charge should be made for taxes, maintenance, insurance and other overhead costs relating to this acreage. Subtract these projected costs (line 11) from line 10 to arrive at a projected total residual return to cropland (line 12).
5. Select a capitalization rate that reflects your desired rate of return (line 13). Remember that returns to land tend to be lower than rates on savings accounts since an additional "growth dividend" is expected due to inflation and technology effects. A "cap rate" of 4-6% is typical in low risk areas and where competition for land is high. It ranges from 6-8% in higher risk areas and where competition is less.
6. Divide the projected total residual return (line 12) by the cap rate (line 13) to determine the capitalized value of this cropland (line 14). Since you are attempting to project earnings on a long term basis, there is always a considerable margin for error. At line 15, determine the projected value of cropland, using first a projection of higher residual earnings per crop acre (compared with line 12) and possibly a lower cap rate (compared with line 13). Then make a similar projection using a more pessimistic outlook, that is, lowered residual earnings and a higher cap rate.
7. The final step is designed to aid you in determining the estimated total value of the farm/parcel. First, decide on the capitalized value of the cropland (line 16), using the projected values at lines 14 and 15 as a guide. Next, make adjustments for location, buildings, etc -their value to the farm or parcel (line 17). Add lines 16 and 17 to determine the estimated value of the farm or parcel to you (line 18). Calculate the per cropland acre value by dividing line 18 by the crop acres reported at line 8.

### Instructions For Worksheet II, Page 14

1. First estimate the annual net cash flows from this parcel by making necessary adjustments to the amount at line 12, Worksheet I. To this, add any rent of buildings, pasture land, etc. that will be available.
2. Next, calculate the amount of debt that can be serviced with the cash available. To do this select the debt repayment factor from the table at the bottom of the worksheet that reflects the likely repayment period and interest rate terms of a loan on this property. Multiply the net cash available (line C) by the debt repayment factor (line D) to arrive at the total debt that can be serviced (line E).
3. Compare the total debt that can be serviced (line E) with the current asking price for the farm or parcel (line F). If the asking price is lower than the debt that can be serviced, it appears you have a workable situation. Often, however, the asking price is higher than the debt that can be serviced. This amount, line G, represents the down payment that is needed. Compare this amount with the down payment amount you have available (line H). Do not include amounts borrowed for a down payment, but include amounts available from sale of a house, farmstead, etc.
4. If there is a down payment short fall at line I, next determine the annual cash flow deficit this short fall represents (line J) by dividing line I by line D. Then estimate the annual cash flow subsidy that might be available from off-farm income and/or other parts of the business (line K). Compare lines J and K to see if the debt can be serviced with this subsidy (line L).
5. If there is still a cash flow deficit at line L, then you should check to see under what conditions this would be a workable cash flow situation. The first alternative would be to determine how large a reduction in the asking price would be needed to make this a workable financing situation. To do this, multiply the cash flow deficit (line L) by the debt repayment factor (line D).
6. The other approach would be to determine under what financing terms you would be able to pay the asking price. To do this, subtract the down payment cash available (line H) from the asking price (line F) to determine the debt to be serviced. Next, determine the cash available by adding together line C and line K. Then divide the cash available (line O) into the debt to be serviced (line N) to arrive at a debt servicing factor (line P). Then go to the debt repayment factor table at the bottom of the worksheet and match your calculated debt servicing factor with those in the table. This will indicate the financing terms - repayment period in years and interest rate - that would make for a workable debt servicing situation (line Q).



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