

# Farming Without a Safety Net

**George Flaskerud**  
Crops Economist/Marketing Specialist

---

*Fortunately, the government farm price support program is coming to an end at a time when wheat and feed grain prices are at record highs.*

**NDSU**  
**Extension Service**

North Dakota State University  
Fargo, North Dakota 58105

JUNE 1996

## ▼ Landmark Time Period

Most crop producers will be operating their farms for the first time without the price support of a government farm program. They will also be making planting decisions based primarily on economic factors instead of government farm program provisions. Fortunately, the government farm price support program is coming to an end at a time when wheat and feed grain prices are at record highs.

Prices are currently high relative to historical levels, but so are costs of production. While prices are exceeding 1974 highs, production costs have far surpassed 1974 levels. Greater production efficiencies may have offset part of the increased production costs, but many farmers are probably not making the higher real net income that they made 20 years ago. Also, prices are high because of tight stocks brought about in part by the poor crops produced by the majority of farmers in recent years. For these farmers, favorable prices have given limited benefits.

Several years of favorable prices are needed, but will they happen? Prices will depend on what happens to world wide production and total use. How long it will take for stocks to increase again to more normal levels is a question that has received considerable attention, but no consensus has evolved. Weather, the crucial factor, is still a random occurrence.

High prices will likely attract additional resources into production, both in the U.S. and the rest of the world. Few resources will be shifted from the production of one commodity into another because the stocks of most commodities are low. Examples of additional resources include bringing Conservation Reserve Program land into production, use of more fertilizer and chemicals at the global level, allocation of more funds into research and development, and improved mechanization, including the availability of parts in many countries. Adding production resources on a massive scale takes time; however, a reasonable expectation would be that the higher the prices, the shorter the time period required to add resources.

A significant rebuilding of stocks in 1996-97 does not appear likely for wheat. The condition rating of the winter wheat crop in April 1996 was the lowest observed during the last 10 years, and the planting of spring wheat was getting a slow start. Feed grain stocks may be replenished more quickly.

Crop prices for the next several years will likely be highly variable but will probably drift lower, on average. Conversely, input prices will likely continue to increase. Land rents and values may strengthen for a period of time but they should eventually weaken as transition payments are depleted and as crop prices diminish.

# Opportunities

Current income-enhancing opportunities need to be captured and wisely used. The current government farm program transition payment is an opportunity, as are strong market prices. These uncommon sources of funds offer use-of-funds opportunities that are highlighted in Table 1.

**Table 1. Opportunities**

Debt reduction  
Price and yield risk management  
Build a liquid monetary reserve  
Machinery acquisition  
Land acquisition  
Diversifying into livestock  
Investing in a processing cooperative

“  
*As a general rule,  
the higher the rate of return  
expected on an investment,  
the greater the risk of an  
investment.*  
”

## Debt Reduction

Many, perhaps most, farmers in North Dakota will use a substantial portion of the transition payments to reduce debt. Farmers who have enjoyed several prosperous years may have increased debt through replacement of worn machinery and/or expansion. Financial statements for a number of other farmers may be dismal because of excess moisture, scab and midge. In some cases, transition payments are needed just to get operating funds. Getting debt under control will very likely be a primary objective for many producers.

## Price and Yield Risk Management

Producers should consider using a portion of the transition payments to reduce price risk. Volatile prices often present good marketing opportunities. However, capturing a marketing opportunity may require use of a marketing tool that requires capital to implement. Contracts, futures hedges and options are discussed later in this publication.

A portion of the transition payments should also be used to reduce yield risk. Crop insurance can complement marketing strategies, especially the use of contracts and futures hedges. With multiple peril crop insurance and/or hail insurance, the risk of forward selling is reduced because a level of income is assured which means that a higher percentage of the crop can be more safely priced prior to harvest. In addition, severe financial losses can be avoided with crop insurance, making possible a smaller line of credit and/or smaller monetary reserves.

## Build a Liquid Monetary Reserve

A pool of liquid investments that may be used to finance the farm operation during periods of adversity should be established. Investments can be in individual securities or in a group of securities through a mutual fund. Analyzing investments is time consuming. For those investors who lack the time or the interest, mutual funds may be the best investment approach.

Investments vary in risk, in effect, in the possibility that the actual return on an investment could be less than the return expected. As a general rule, the higher the rate of return expected on an investment, the greater the risk of an investment.

Common fixed rate investments are savings accounts and certificates of deposits. Because these investments can be risk-free, the rate of return on them is usually low.

There are investments which are considered to be low risk by financial community standards but which offer a higher rate of return than fixed return savings. The shorter the maturity on these investments the lower the risk. Some low risk investments offering higher returns than fixed rate savings include treasury bills and notes and high quality AAA corporate or municipal bonds.

Common stock offers the potential for a higher rate of return but puts your principal at risk of loss. Risk can be reduced by spreading your investment among several companies and by selecting companies from different industries.

# ...More Opportunities

## **Machinery Acquisition**

Machinery very likely needs to be replaced on many farms. Presumably, this need would rank below the need to manage debt and price and yield risk and the need to build a liquid monetary reserve. Producers should closely examine alternative ways to acquire machinery. Buy, rent, lease and custom alternatives are discussed later in the publication.

Consider farm and family goals when making machinery and other investments. Do you plan to retire soon? Is a family member going to join the operation? Do you plan to expand, decrease or maintain the size of the farm operation? Answers to these questions will help you decide on the best way to secure a piece of equipment and determine its size, and to make decisions on other investments.

## **Land Acquisition**

Land is another resource that can be acquired without buying. The buy or rent decision can be particularly difficult if the land next to you is for sale. Keep in mind that land is a very illiquid asset. Land can command a premium value during good times, but its value can be severely discounted during adverse times. In effect, land can have high liquidation costs. Land may be a good economic investment in the long-run, but may pose a cash flow problem if a substantial portion of it is purchased with debt capital. Worst case scenarios for cash flow over time should be closely evaluated when buying land.

The acquisition of land that is not adjacent to the current operation can be an advantage. It may be cheaper, weather impacts can be reduced and more efficient use can be made of machinery and labor if different soil types are farmed.

## **Diversifying Into Livestock**

Diversification has long been recognized as a good risk management technique. A livestock operation can provide cash flow when crop prices are low and vice versa.

Your aptitude for raising livestock and the availability of suitable resources for livestock production need to be closely examined before adding or expanding a livestock enterprise. The purchase of livestock and livestock facilities should be evaluated as a fundamental, long-term enterprise alternative.

## **Investing in a Processing Co-op**

Producers may choose to invest in a processing co-op. Because it usually takes a period of time for a new venture to become profitable, this type of investment should not be counted on for quick returns.

# Making Decisions in a Risk Environment

What to produce, how to produce, when to sell and how to use funds are decisions that must be evaluated in an environment that is now more risky without the government price support program. However, steps can be taken to reduce the chances of an unfavorable outcome. Also, steps can be taken to reduce the adverse consequences of an unfavorable event should it occur. You may not want to eliminate risk, but you certainly want to manage it. Eliminating risk tends to eliminate profit. For detailed information on risk, see NCR Extension Publication No. 406, "Managing Risk in Agriculture," which was the source for a significant portion of the material presented in this section.

## Risk Attitude

Your attitude toward risk will influence how you make decisions about opportunities (Table 2). Some producers will choose to avoid risk, especially if they are older. An older producer simply does not have the time left to make up for adverse events.

**Table 2. Risk Attitudes**

*Avoiders*  
*Calculators*  
*Adventurers*  
*Daredevils*

Most producers tend to be calculators; that is, they carefully analyze situations before making a decision. Some producers are adventurers; they enjoy risks but still keep them at reasonable levels.

Daredevils or plungers may make it big, but they commonly fail. They may be the producers who specialize in production of risky crops, hold crop inventories for the top price, and give little consideration to buying insurance.

## Risk Bearing Ability

Your risk-bearing ability will also affect how you make decisions. Three financial factors affect your risk bearing ability: solvency, liquidity and cash flow requirements (Table 3). The level of these factors will determine your risk vulnerability.

Solvency is the relationship between total assets, liabilities and owner equity.

**Table 3. Risk Bearing Ability Factors**

*Solvency*  
*Liquidity*  
*Cash flow requirements*

A low debt to asset ratio would indicate good solvency.

Liquidity is the ability to satisfy financial obligations when they come due without disrupting the farm business. Liquid assets can be converted to cash quickly with little or no discount.

Savings accounts, grain in the bin and market livestock are highly liquid assets because they can be converted to cash quickly and with little cost. In contrast, land is considered an illiquid asset because liquidating a tract of land on short notice can mean a substantial discount in sales price.

Cash flow requirements are the obligations for cash costs, taxes, loan repayment and family living expenses. The higher these obligations as a percentage of total cash in-flow or expected gross, the less able is a farmer to assume risk. Cost control is essential to profitability and a favorable cash flow condition.

**sol•ven•cy**

the relationship between total assets,  
liabilities and owner equity

# Responses to Risk

Responses to risk involve a cost. Some costs are explicit, like crop insurance or the option premium. Some costs are implicit, like the revenue given up when price increases occur after cash forward contracting.

A risk management strategy should make use of all applicable responses to risk. For example, a strategy that employs diversification, options and multiple peril crop insurance will likely reduce risk more effectively than will emphasis on any one response to risk.

Risk should be balanced. If a producer increases risk in one aspect of the business, the producer should take an offsetting action to maintain total risk at a predetermined level. For example, a producer who is planning to plant the whole farm to wheat because of strong prices should consider an offsetting action like contracting or options. If the producer is uncomfortable with contracting or options, perhaps less wheat should be planted than originally planned.

Producers must learn how to respond to risk. Responses to three major sources of risk are: production, marketing and financial.

Seasonal price patterns for most of the crops produced in North Dakota are presented in NDSU Extension Bulletin No. 61.

**NDSU**  
Extension Service

## Production Responses

A number of production responses to risk are listed in Table 4. In the short-run, that is, in the situation where the production season is about to begin, the number of appropriate responses are limited. At the very least, consider growing several varieties of a crop and using several different herbicides. Better yet, grow several crops. Also, prepare for diseases and insects. If they cannot be avoided, know how to minimize their adverse consequences should they occur.

Whole farm returns may not be as high from diversification as with specialization, but year-to-year income variability can be reduced if enterprise returns do not vary exactly together. For example, the yields of cereal crops may be good when yields may be down for row crops, or livestock returns may be high when crop returns are low.

In some cases, returns may be as good or better with diversification than with specialization. Diversification can lead to greater timeliness of operations and/or the ability to farm more acres with the same complement of machinery. Wheat, barley and sunflowers or soybeans, for example, would be a rotation with different planting and/or harvesting times.

Farmers who do not diversify apparently feel that the profit potential with specialization more than offsets the reduced income variability of diversification. Also, those who specialize may have the attitude and financial ability to handle greater risk.

Enterprises and production practices should be selected by producers consistent with their aptitudes, education, experience and resources. A properly trained

### Table 4. Production Responses



*Diversifying enterprises*  
*Choosing low risk activities*  
*Choose less risky production practices*  
*Dispersing production geographically*  
*Maintaining flexibility*

producer may consider specialty crops to be a risk manageable activity. Growing several varieties of a crop and using different herbicides are low cost ways of managing risk.

Production can be dispersed geographically, which can reduce hail losses and other weather impacts. Also, the efficiency of labor and machinery can be increased if different soil types are farmed.

Consideration should also be given to selecting machinery and designing facilities for multiple uses. The air planter, for example, can be used effectively to plant many crops.

## Marketing Responses

A number of marketing responses to risk are presented in Table 5. Marketing responses are important and applicable in both the short-run and long-run.

Sales can be spread out during the year in various ways to manage price risk. Monthly sales should enable the producer to achieve about the seasonal average price.

Another way of spreading sales is to sell during those times of the year

### Table 5. Marketing Responses



*Spreading sales*  
*Contracting*  
*Hedging*  
*Options trading*

when prices are normally at their highs. Seasonal price patterns for most of the crops produced in North Dakota are presented in NDSU Extension Bulletin No. 61.

A refinement of spreading sales is to scale-up sales during those times of the year when price peaks are common. Picking a top is impossible. Selling on the backside or downside of the market is emotionally very difficult.

The cash forward contract and other marketing tools are discussed in NCR Extension Publication No. 217, Fact Sheet No. 18, entitled "Use of Crop Futures and Options by the Nontrader." Elevator contracts can reduce price risk in much the same manner as hedges in the futures and options markets. A difference is that delivery is required in a contract. Also, the basis is fixed in most contracts. Basis is the relationship between a futures price and the local cash price.

Hedging in the futures market or the hedge-to-arrive contract is a way to set the price, which removes most price risk. Basis change is still a risk. While a set futures price removes risk, it also prevents gain should the futures price increase.

Options in the futures market is becoming more popular with producers. It offers the ultimate in flexibility – a floor price and no delivery obligation. However, a premium is charged for options which must be weighed against the downside price risk avoided. A huge advantage of options is that potential losses are limited to the cost of the option. You know up front how much money is at risk, and there are no margin requirements as in a futures hedge. A counterpart to options is the minimum price contract.

The use of a combination of marketing tools can be very effective. For example, a contract might be used to establish price protection on the first 20-35 percent of anticipated production, in effect, on that portion of a crop which will very likely be realized. Options might be used to establish price protection on that portion of anticipated production which is less certain, since options do not have a delivery obligation as do contracts.

## Financial Responses

A number of financial responses are presented in Table 6. Financial responses to risk generally affect solvency and/or liquidity of the farm operation. Several of the responses are applicable in the short-run as well as the long-run.

Insurance is purchased to protect against a loss. Risks which have a low probability of occurrence and have very adverse consequences are prime candidates for insurance. Multiple peril crop insurance and hail insurance are carried by a high percentage of North Dakota producers. How much of this insurance should be carried depends to a large extent on individual financial conditions. Most farmers carry liability, major medical, disability and fire insurance even if they are financially secure.

Many farmers have reserves to provide liquidity. A line of credit is an excellent reserve, one that needs to be worked on for the long-run. Other reserves include bank accounts, mutual funds, stocks and bonds.

Farmers typically manage their investments so that capital expenditures are made during the better years and postponed during adversity. Family expenditures for durable goods are often managed in a similar manner.

## Table 6. Financial Responses



*Insuring against losses*  
*Maintaining reserves*  
*Pacing of investments*  
*Acquiring assets*  
*Limiting credit and leverage*  
*Working off farm*

Start-up costs need to be carefully evaluated if an enterprise is being initiated or substantially expanded. A risk cushion of about 20 percent of planned total expenses may be appropriate.

Assets can be acquired through purchase, lease or rent. The manner in which they are acquired is an important way of managing risk. Many farmers lease the drill tractor or a second combine. Crop share leases are also used by many farmers to reduce risks by sharing them with the landlord.

Growing into an enterprise may be an excellent way of gaining experience while improving liquidity and solvency. Used facilities and/or machinery can be employed. Some operations like spraying, combining or swathing can be hired. Using these alternatives may result in reduced profits, but the reduction should be regarded as the cost of managing risk.

Credit limits is another financial response to risk. Limits can be self-imposed by the farmer or imposed by the lender.

Off-farm employment is the latest in diversification. Employment takes many forms. It can be full time or part time. It can be an extension of farm activities such as custom work, grain hauling or seed sales. Working off the farm is usually meant to supplement the family living draw from the business.

# Summary

The 1996 farm program is a landmark.

Most crop producers will be operating their farms for the first time largely independent of the government.

The farm program transition payments and strong prices are opportunities that need to be captured and wisely used. Possible uses include debt reduction, buying put options on some of the crop, purchasing crop insurance, building liquid monetary reserves, machinery acquisition, land acquisition, livestock diversification and investing in a processing co-op.

Decisions about these alternatives will be made in an increasingly risky environment. Attitudes and risk bearing ability will strongly influence decisions.

Producers must learn how to manage risk by responding properly to production, marketing and financial risks.

A good risk management strategy will make use of all applicable responses to risk.

## Other Sources of Information

1. Flaskerud, George. *Basis For Selected North Dakota Crops*. Publication No. EC-1011. Fargo: North Dakota State University, Extension Service, March 1991.
2. Flaskerud, George, and Johnson, Demcey. *Seasonal Price Patterns for Crops*, Publication No. EB-61. Fargo: North Dakota State University, Extension Service, August 1993.
3. Flaskerud, George and Shane, Richard. *Use of Crop Futures and Options by the Nontrader*. North Central Regional Publication No. 217, Fact Sheet No. 18. Fargo: North Dakota State University, Extension Service, June 1994.
4. Lang, Larry L. and Gillespie, Thomas H. *Strategy for Personal Finance*. New York: McGraw-Hill, Inc., 1981.
5. Pankow, Debra. *Saving and Investing Today...For Tomorrow*. Publication No. HE-258. Fargo: North Dakota State University, Extension Service, May 1995.
6. Pankow, Debra. *What to Look For in a Financial Professional*. Publication No. HE-451 (Revised). Fargo: North Dakota State University, Extension Service, October 1995.
7. Patrick, George F. *Managing Risk in Agriculture*. North Central Regional Publication No. 406. Fargo: North Dakota State University, Extension Service, May 1992.

This publication may be copied for noncommercial, educational purposes in its entirety with no changes. Requests to use any portion of the document (including text, graphics or photos) should be sent to [permission@ndsuent.nodak.edu](mailto:permission@ndsuent.nodak.edu). Include exactly what is requested for use and how it will be used.

**For more information on this and other topics, see: [www.ag.ndsu.edu](http://www.ag.ndsu.edu)**



County Commissions, North Dakota State University and U.S. Department of Agriculture cooperating. Duane Hauck, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. We offer our programs and facilities to all persons regardless of race, color, national origin, religion, gender, disability, age, veteran's status or sexual orientation; and are an equal opportunity institution. This publication will be made available in alternative formats for people with disabilities upon request, (701) 231-7881.

3M-6-96