Developing and Using Marketing Plans for Georgia Livestock and Grains

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Introduction

Georgia farmers are quite good at developing and using plans in the production aspect of their businesses. They have good pest control, fertilization, tillage and harvest programs in crop production and have good animal husbandry programs. Over time, they are able to modify production plans as growing conditions change.

Many Georgia farmers take a different approach to marketing. Marketing plans are often oversimplified or non-existent. When questioned about marketing plans, farmers often reply that they are too busy farming to think about marketing. In today's farm business environment, marketing is at least as important as production, if not more so. Production provides the tangible or physical fruits of the farmer's labor but marketing provides the money to pay the bills.

Over the past few years many top-notch producers have gone out of business. One contributing factor has been the inability to sell at profitable prices. Planned marketing will improve the odds of selling hard-earned production at prices that ensure the survival of the farm business.

Why Develop a Marketing Plan ?

There are many misconceptions about a marketing plan. Many farmers feel that future prices are so difficult to predict that planned marketing is a futile exercise. The inability to predict the future with certainty is why planned marketing is important.

Market planning is not a one-time task. It must be a continuous flow operation. The plan must be flexible because factors affecting farm output and market prices will change continuously over time.

A marketing plan is the management strategy for realizing the full potential profit from farming. A well-defined marketing plan is as useful to a farmer as a game plan is to the football coach. Successful coaches always have a workable strategy with specific objectives. Farmers must also have a game plan for the task of profitably marketing their products if they are to be successful in the long run. A plan allows a farmer to market his products, not just sell them. The plan must be based upon the objectives of the business.

Elements of a Marketing Plan

There are four main factors that go into developing a viable marketing plan. They are based on the following questions:

- The product decision or *What product(s) do I produce and sell?*
- The pricing decision or *What price do I need to sell my product for to meet my objectives?*
- The methods decision or *How do I establish a price for my product?*
- The merchandizing decision or *When, where and how do I make delivery of the product to the buyer?*

This publication examines answers to what most producers consider the toughest of these questions - how and when to establish prices.

Developing a pricing plan involves several steps:

- Assessing the business objectives.
- Determining pricing goals.
- Evaluating pricing opportunities.
- Evaluating pricing indicators.
- Decision-making and following through.
- Evaluating and reevaluating.

Assessing Business Objectives

The objective of many Georgia farmers is to manage a growing farm business. Most farmers also place a high priority on farming as a way of life; however, farmers must generate enough income to support the business that provides that way of life.

Farming consists of many enterprises and activities. The farmer must perform a wide variety of tasks and must have a wide variety of skills. One necessary skill is the ability to establish realistic objectives for the farm and set goals for the individual elements that make up the farm business. Deciding what is wanted from the business and its individual parts is an important, but often overlooked, task of the farmer. As the old saying goes, "If you don't know where you are going, you won't know if you have arrived."

Once objectives and goals for the business are established, the farmer can develop a strategy to reach them.

Personal Evaluation

The first step in assessing the objectives of the business is to evaluate your current situation. You should consider your personal feelings and attitudes about marketing and the financial needs of the business. Individual feelings and desires form the base for determining your objectives and goals. An evaluation of decision-making ability is also needed. Developing a marketing plan involves considerable decision making.

Because marketing is not an exact science, it is a difficult problem to deal with on a daily basis. No single plan will work every year or for every farmer. Market information can be ambiguous or contradictory. Success in marketing depends on the ability to make decisions in an uncertain environment.

A fundamental decision to be made is whether to operate like a speculator or a businessman. A speculator tries to make a quick dollar by selling at the market high. The businessman thinks of the survival and growth of the business over the long term. To be successful, Georgia farmers should be farm businessmen, not farm speculators.

Speculating is not bad if the speculator understands and is able to bear the consequences of his actions. A successful speculator must be in control of his emotions. There are times when a good businessman will speculate, but only when the odds of success are favorable. Speculation becomes a danger when it is not based upon rationally made decisions.

The following statements may help you determine whether you would rather be a speculator or a businessman in your marketing plan. The speculator sets the goal of selling at the high price of the year and focuses on planning for the short term. The businessman sets the goal of making a profit and focuses on long-term survival and growth of the business. The speculator is driven by how much money will be lost by not selling at the high price. The businessman calculates how high a price is needed to cover costs. The speculator views marketing as separate from the business of farming. The businessman integrates marketing into other farming decisions. The speculator often says, "When I sell, the market goes up; if I don't sell, the price goes down." The businessman often says, "I sold at a profitable level." The speculator makes decisions based upon fear and greed. The businessman makes decisions based upon realizing an acceptable return.

The marketing plan must be designed for the temperament of the individual. A businessman and a speculator will have different plans. You must have a plan you are comfortable using. In general, decisions based upon the financial interests of the business are easier to make than are speculative decisions based only on emotion.

Financial Considerations

If the overall objective of the farm business is to accumulate capital and foster growth, develop the pricing plan to accomplish that goal. The financial considerations are to sell at a price that will cover cash commitments and general fixed costs, and contribute to growth in net worth. A positive cash flow means that enough cash flows into the business to meet cash expenditures. Find the price needed to cover cash expenditures by dividing cash expenses for the commodity by the amount produced.

Price needed to cover cash expenditures = cash expenses divided by amount produced.

Price needed to cover cash expenses and general fixed costs = cash expenses + fixed cost divided by amount produced.

The selling price must also provide enough income to cover the general fixed costs of farming.

Fixed costs may be hard to identify for a specific commodity. They include insurance, taxes, depreciation, repairs and family living expenses. Failure to cover these costs will result in a reduction in net worth over time. The price needed to cover cash expenses and general fixed costs is found using the formula above.

The pricing plan must recognize the risk-bearing ability of the business. The farmer's net worth determines his ability to handle risk. Net worth is the portion of the business that is owned by the farmer. The portion of total assets not owned by the farmer is owed to someone else. The bigger the net worth, the greater is the ability to handle risk. Commodity selling prices must generate income greater than the cash costs plus the general fixed expenses to increase net worth and thus the ability to handle risks.

Determining Pricing Goals

Production Cost

Unless you have a reasonable estimate of how much money will be tied up in producing your product, there is no way of knowing what price will be needed to make it a profitable enterprise. Estimating production costs is essential to planned marketing. Individual enterprise budgets can assist in the estimation of most of the costs to be considered. Sample budgets are available through the local Cooperative Extension Service and are helpful when developing a budget for the individual farm.

Good record keeping is essential when developing budgets because records provide a picture of the past performance of each enterprise. You can modify records of previous performance to reflect current input costs and changes in production practices. Business managers develop selling price goals by using good cost estimates.

There are several ways to classify costs. This publication identifies three categories of costs for the farm business: The cost of family living, variable costs and fixed costs (cash and non-cash). The cost of family living is the starting point. Family living expenses are an important yet often overlooked cost of farming. A primary objective of any business is to generate income to live on and farming is no exception.

Variable or "out-of-pocket" costs are those cash costs directly attributable to each enterprise. These costs result in direct cash outlays during the production period. Most of these items are termed "variable costs" because they vary with output. Whether a cost is variable usually depends on the time period or decision under consideration. For instance, labor costs are typically clasified as variable costs in enterprise budgeting but are usually fixed as long as the farm operates, even if the particular enterprise does not.

The last category of cost that needs to be determined is fixed cost. Fixed cost should be broken into cash and noncash categories for market planning. Fixed costs are the other costs that cannot be easily assigned to individual enterprises. All of the firm's enterprises are expected to contribute toward fixed costs. These costs do not vary with the level of output, and are fixed regardless of whether anything is produced in any given year. Examples of fixed cash commitments are mortgage payments, insurance, taxes, and loan payments on general use equipment such as tractors or vehicles. Examples of fixed noncash cost are depreciation on general use equipment and buildings and opportunity cost interest on equity.

Principal payments on loans and depreciation are two categories of fixed farm commitments which are often confused when determining the appropriate fixed cost. Depreciation is the reduction in the market value of an asset due to wear, obsolescence and age. Principal payments

on asset loans do not generally coincide with the depreciation of the asset. Consider depreciation cost when determining cost consistent with maintaining net worth. Consider principal payments when the yearly cash needs of the farm are the focus of planning. Since both the cash flow and the net worth of the farm are important to planning a pricing strategy, care should be taken in separating principal payments and depreciation. Depreciation schedules which reflect the yearly loss in market value, not the tax depreciation, need to be developed to calculate the farm's true fixed cost.

Price Goals Based Upon Business Objectives

Use the procedure in Table 1 to determine price goals based upon the cash income needed to meet the overall farm business objectives. The variable cash commitments of each enterprise, family living expenses, total fixed commitments of the farm, and growth objective in net worth determine the selling price goals. This simple method gives good workable selling price goals that meet the business objective. The first group of expenses to consider are those which the whole farm must incur. List family living expenses first to emphasize that they are a cost of farming. Like family living expenses, fixed cash commitments are difficult to assign to a specific enterprise. They include payments toward which the whole farm is expected to contribute. This section of the worksheet shows *fixed cash* commitments such as total loan payments (interest and principal), insurance and taxes.

Next, consider the kind of growth expected. Growth in net worth is used as a measure. Ideally, long-run net worth growth goals may be specified for the farm. However, the yearly net worth growth which the farm can expect must be considered in terms of the particular income year the producer faces. For instance, if the overall price and cost situation is favorable for the farm's enterprises, the long-term net worth goal may be increased. If the reverse occurs, little or no increase in net worth may be expected.

When determining the net worth goal, consider depreciation costs. If principal payments on loans exceed depreciation cost, an increase in net worth is already included in the fixed cash commitment category. If this is the case, reduce the net worth goal by the amount which principal payments exceed depreciation. If depreciation exceeds principal payments, the net worth goal must reflect the difference.

Next, allocate the whole farm's cash needs to the various enterprises. First, determine the variable cash commitment for each enterprise. Variable costs must be covered before there is anything to contribute to fixed costs or other income objectives. The specific cash outflows are those attributed to each enterprise.

Next determine what proportion of the farm's total fixed cash needs each enterprise is expected to carry. There is no formula to determine these proportions. One possible method is to assign the load by the proportion of the variable cost of an enterprise to the farm's total variable costs. For example, if the hog enterprise's variable costs were 15 percent of the total farm variable costs, expect the enterprise to carry 15 percent of the fixed commitments as well. Another method for crop farmers to assign the fixed commitments is based upon acreage. Each acre, regardless of the crop, would be expected to carry the same fixed commitment. Another method could be based upon the labor requirements of the enterprise. Another, perhaps preferable, method is to assign the fixed cash commitments in proportion to the management time spent on each enterprise. You can experiment to determine which technique works best.

Honest estimates of yields are needed to derive price goals. These estimates need to be reevaluated periodically. Historical yields are acceptable for use in the price goals worksheet as a

planning guide, but as the crops progress, update yields to reflect actual growing conditions. Farms usually operate with the sometimes competitive goals of farm growth and survivability. Survivability is the ability to obtain financing year after year. One way to measure the survivability of a farm and determine prices consistent with survivability is to determine how much (if any) of the farm's net worth could be lost this year without jeopardizing financing for the next year. A farm lender may be able to help determine the farm's survivable net worth loss. Table 2 shows how to calculate the crop and livestock prices which are needed to sustain the farm. The worksheet follows the same basic form as the price goal worksheet (Table 1). The price goals worksheet shows the necessary price for the expected output in order to meet the overall objectives of the business. If the market provides prices equal to or better than these price goals, the objectives of the business can be reached. The worksheet also shows the minimum price which each enterprise must cover to ensure its survival. Such prices are "critical" for the firm's existence and must be considered when planning a pricing strategy.

Table 1. Price Goals Worksheet for Crops and Livestock

1. Family Living Expenses	_____
2. Total Fixed Cash Commitments	_____
3. Net Worth Growth Objective	_____
4. Depreciation *minus* Principal Payments	_____
5. Whole Farm Fixed Cash Needs (add lines 1, 2, 3 and 4)	_____

Crop Enterprises

6. Variable Cash Commitment

7. Percent of Fixed Needs, this Enterprise

8. Fixed Cash Needs from Crop (line 7 x line 5)

9. Total Cash Needs from Crop (add lines 6 and 9)

10. Acres in the Crop

11. Expected Yield/Acre

12. Expected Production (line 10 x line11)

13. **Crop Price Goal** (line 9 divided by line 12)

Livestock Enterprises

14. Variable Cash Commitment

15. Percent of Fixed Needs, this Enterprise

16. Fixed Cash Needs (line 15 x line 5)

17. Total Cash Needs (add lines 14 and 16)

18. Number of Head for Sale

19. Expected Selling Weight (cwt)

20. Expected Production (line 18 x line 19)

21. **Livestock Price Goal** (line 17 divided by line 20)

Table 2. Critical Price Worksheet for Crops and Livestock

1. Family Living Expenses	_____
2. Total Fixed Cash Commitments	_____
3. Sustainable Net Worth Loss	_____
4. Depreciation *minus* Principal Payments	_____
5. Whole Farm Fixed Cash Needs (add lines 1, 2, 3 and 4 and subtract line 3)	_____

Crop Enterprises

6. Variable Cash Commitment

7. Percent of Fixed Needs, this Enterprise

8. Fixed Cash Needs from Crop (line 7 x line 5)

9. Critical Cash Needs from Crop (add lines 6 and 9)

10. Acres in the Crop

11. Expected Yield/Acre

12. Expected Production (line 10 x line 11)

13. Crop's Crit. Price Level (line 9 divided by line 12)

Livestock Enterprises

14. Variable Cash Commitment

15. Percent of Fixed Needs, this Enterprise

16. Fixed Cash Needs (line 15 x line 5)

17. Critical Cash Needs (add lines 14 and 16)

18. Number of Head for Sale

19. Expected Selling Weight (cwt)

20. Expected Production (line 18 x line 19)

21. **Live Crit. Price Level** (line 17 divided by line 20)

Evaluating Pricing Opportunities

A pricing strategy is a plan for achieving an objective price level. Pricing strategies combine a pricing method with a pricing indicator. Once the price goals and critical price levels are determined, compare current pricing opportunities to these levels.

Georgia producers have three pricing methods available to them; take the **cash market price, forward price** through either the futures markets or forward cash contracts, or set **floor or minimum prices** through the option markets or through minimum price contracts. The specific mechanics of each of these markets are explained in detail in other publication available in county Extension offices. Each of the pricing methods have unique risk and return characteristics which must be considered before making a pricing decision. As a first step, compare current pricing opportunities to pricing goals and critical price levels to determine whether to price at the current levels or wait.

A single expected price from each of the alternatives can not tell you the whole story, however. You must recognize the risk in projecting an alternative's price. One way to determine risk is to ask not only what the most likely price is for each alternative, but also what the optimistic, pessimistic, best and worst prices may be. The optimistic, pessimistic, best and worst prices are referred to as risk rating levels. The optimistic price is the price level that might be exceeded about 1/6 (17 percent) of the time given current market expectations, and the pessimistic price is the level that prices might fall below about 1/6 (17 percent) of the time. Prices might exceed or fall below best and worst prices respectively only about 1/50 (2 percent) of the time.

Risk Rating Cash Prices

The actual cash price that will prevail when crops or livestock are sold is difficult to forecast. Advisory services, Extension, and one's own forecast can be used to project prices. A section on the fundamental factors affecting prices appears on page .

The futures market price for the contract closest to when the product is sold can be used as an outlook price for many of Georgia's crops and livestock products. Research shows futures prices to be as accurate as several advisory services that use very sophisticated forecast tools.

When using the futures price to determine an expected outlook cash price, adjust the futures price by the historical difference between the futures market price and the local cash market price for the place and for the quality of product to be delivered. For instance, a soybean producer in April observes a $7.00 November soybean futures quote. He might conclude that the market is forecasting that his beans can be sold locally for $6.70 in November if his local market is usually $.30/bu. lower than the futures market during harvest time. The difference between local prices and futures market prices is referred to as basis. Historical basis summaries are available for various Georgia commodities and locations through the county Extension office.

The accuracy of futures prices as a price forecast is summarized in Table 3. The risk factor in Table 3 can be interpreted as the percentage that must be added to or subtracted from the

localized futures price to calculate an optimistic to pessimistic price range.

The risk factor has averaged about 18 percent for soybeans from 1974 to 1984. The producer who calculated an expected price of $6.70/bu. as above should recognize that the optimistic to pessimistic price range is 18 percent of $6.70 or (1.20 above to $1.20 below the expected price respectively). The producer who expects a $6.70 soybean price based on the futures market has a one in six chance of prices as high as or higher than $7.90/bu.(6.70 +1.20) and a one in six chance of prices as low as or lower than $5.50/bu. (6.70-1.20) based on the historical accuracy of futures market forecasting. Determine best and worst forecasts by adding and subtracting twice the risk factor. In this case the best price would be $9.10/bu.($6.70 + $2.40) and the worst price would be $4.30/bu. ($6.70-$2.40).

Alter futures price forecasts to reflect any information available. For instance, if the national soybean loan rate were $5.00/bu., increase the $4.30 worst outcome to show that bean prices aren't likely to fall far below the loan rate.

The risk factors may seem to indicate futures prices are not useful for predicting later actual cash prices. Remember, research shows the futures price to be as good as or better than most other outlook information. The wide range of actual outcomes reflects the problems and risks associated with forecasting prices. This reflects the risk of making production decisions well before the actual product price is known.

Risk Rating Forward Prices

If the futures market is used to hedge directly or indirectly through a cash contract, the price risk is reduced on the amount of product delivered. Hedging directly through the futures market reduces the entire price risk to that associated with forecasting basis. This is called **basis risk.** Historical basis studies show basis variability and can be used to judge the basis risk. Forward cash contracting eliminates all price risk since the basis and price level are fixed.

The risk associated with forward pricing through a hedge can be risk rated as can pricing in the cash market. For example, the producer who has localized a futures price of $7.00/bu. to $6.70 by adjusting for the basis knows that his expected forward price is $6.70. However, historical studies may show that there is a one in six chance of a basis as good as or better than $-.15/bu. as well as a one in six chance of a basis as poor as or poorer than $-.45/bu. even though the basis expected is $-.30/bu. The expected price through hedging is $6.70/bu. with an optimistic price of $6.85/bu. and a pessimistic price of $6.55/bu. You can determine worst and best outcomes by doubling the basis variability and subtracting and adding it to the expected basis.

Forward pricing reduces the risk of prices below the expected price but also limits the gains from prices above the expected price.

Risk Rating Floor Prices

The third pricing method available to Georgia producers is floor pricing or minimum pricing directly through the options market or indirectly through minimum price contracts. Option market alternatives have the same upside price potential as the cash market less the cost of the option or contract. However, the option lowers the expected price by the amount of the premium. The pessimistic outcome when using an option is directly associated with the pessimistic basis outcomes.

If the producer considering the $7.00 November futures price could purchase a minimum price contract to sell beans for no less than $6.50 in November by paying $.20/bu., his expected and pessimistic price would be $6.50/bu. through the purchase of the contract. The producer can sell his beans at anything above the $6.50 minimum at harvest so his optimistic price is still the

optimistic cash price less the $.20 premium paid. If the optimistic cash price was $7.90/bu., the optimistic price of using the minimum price contract is $7.90/bu.-.20 or $7.70/bu. By using the minimum price contract, the producer expects to get $6.50/bu. for his beans but has a one in six chance of receiving $7.70 or more for his beans.

Option pricing has some of the characteristics of the other pricing alternatives. It has the upside price potential of the cash market (less the premium) while retaining some of the downside price protection of the forward price. Option pricing is never the best alternative when judged after the fact because of the premium payment. If prices go up, the premium could have been saved and a higher price received. If prices go down, the forward price will bring the highest net price. Since pricing decisions are not made after the fact, option pricing may play a vital role in pricing strategies as a kind of hybrid of the other alternatives.

Table 3/1. Risk Factors for Estimating the Accuracy of Futures Prices as a Forecast of Latter Actual Cash Prices for Selected Commodities, 1974-1985

Commodity & Futures Contract	
Feeder Cattle/April	
Feeder Cattle/September	
Slaughter Hogs/April	
Slaughter Hogs/July	
Slaughter Hogs/December	
Soybeans/July	
Soybeans/November	
Corn/May	
Corn/September	
Cotton/December	

1/Ikerd, et.al., *Decisions for Profits Using Enterprise Budgets.* Cooperative Extension Service, Department of Agricultural Economics. Appendix B.

Developing Pricing Strategies Using Pricing Indicators

Price Goals

Pricing strategies specify a pricing indicator and a pricing method. Pricing indicators are measures or signals of the desirability of a given price level. To determine an appropriate strategy for a product, the producer considers the probability of achieving the price goals as well as the probablity of falling below the critical price as explained in the previous section. The producer decides if current pricing opportunities provide an acceptable chance of achieving the price goals and of limiting the risk of falling below the critical price level.

If the current pricing opportunity, whether through a hedge or an option type method, provides a price better than the price goal, a large portion of the expected production should be priced.

If the current opportunity **does not** meet the price goal, the producer decides if later pricing opportunities are likely to provide better or worse prices. The producer should ask: "What is the probability of prices changing before the product needs to be sold?" and "How much are prices likely to move?" Experience shows that prices change continually, often by large amounts.

Table 4 shows the probability of prices rising for various commodities during various time periods. For example, there is a 71 percent probability of harvest delivery soybean prices rising five percent sometime during the period from May to November. In other words, if November soybean futures prices in early May were $6.00, there is a 71 percent chance of prices rising to at least $6.30 before November.

As an example of the use of price goals, critical prices and the information on price movements, consider a soybean producer who has a price goal of $6.50/bu. and is currently looking at a cash contract price of $6.20/bu. Table 4 indicates there is a 71 percent chance of at least a five percent rise in futures (and cash contract prices) over a six-month period, so the soybean producer has a 71 percent change of obtaining a contract at $6.50/bu. or better at sometime during the next six months.

If the producer's critical price was $5.80, he would note there is a 29 percent chance that prices **will not** rise by five percent sometime over the next six months. Table 5 displays what happened on average when prices failed to rise by the specified amount during the six-month period. When prices failed to rise by at least five percent, soybean prices have declined an average of 14 percent. This would result in a price of $5.33, a level below the critical price of $5.80.

The producer must decide if the chance of achieving his price goal is worth the chance of falling below his critical level. If it is, he will wait for prices to reach his $6.50 level and forward price in some manner. If the chance of falling below the critical level is too great, he may seek additional information about likely future prices. Two types of information the producer should consider are fundamental and technical.

Table 4/*2*. Historical Probabilities of Commodity Prices Rising by Various Percentages Sometime During Stated Producton Periods, 1974-1988.

	---------- **Percentage Increase** ----------
	5%
Commodity/Contract & Time Period	
Soybeans/November (May to November)	
Corn/September (March to September)	
Cotton/December (June to November)	
Feeder Cattle/April (September to April)	

Feeder Cattle/September (May to September)

Hogs/April (November to April)

Hogs/July (January to July)

Hogs/December (June to December)

Shideed, Kamil, John Ikerd, & John C. McKissick. *Objective Based Marketing Strategies for Crops.* Research Report No. 531. Georgia Agricultural Experiment Station, University of Georgia. March, 1987. Updated by McKissick and Shumaker, 1988.

Table 5. Historical Average Percentage Price Change when Prices Failed to Reach Specified Percentage Increases Sometime During Stated Production Periods, 1974-1988.

	5%
Commodity/Contract & Time Period	Average Perc
Soybeans/November (May to November)	-14%
Corn/September (March to September)	-21%
Cotton/December (June to December)	-14%
Feeder Cattle/April (September to April)	-11%
Feed Cattle/September (May to September)	-7%
Hogs/April (November to April)	-11%
Hogs/July (January to July)	-8%
Hogs/December (June to December)	-12%

Fundamental Analysis

In fundamental analysis, predicting future prices depends upon forecasting the supply of and demand for a commodity. Knowledge of the factors affecting supply and demand and their relative impacts helps in price forecasting. Supply and demand factors are used to develop a model of how they interact to influence prices.

In the grain markets, the primary factors determining the supply side of the price equation include the carryover stocks from the previous market year and current year production. Also consider production and its prospects in other countries. Analysts often must rely upon estimates of these components because an exact count of stocks and production is not really practical. Planted acreage and estimated yields determine production levels and are affected by government programs, weather, insect and disease pressure and technology. Crop supplies are analyzed based on the crop year instead of the calendar year. The crop year for wheat begins June 1 and the crop year for corn and soybeans begins September 1.

The factors affecting grain markets demand are the domestic demand and export demand.

Domestic uses for grains include livestock feed, human food, future crop seed and industrial usage. Feed use is of primary importance for corn and sorghum although industrial use is also important. Human food use is the largest domestic component of wheat use, with livestock feeding a distant second. The soybean demand is determined by soybean oil demand and soybean meal demand.

The export demand for grain includes demand for the whole grain and its processed forms. Important processed grain products include soybean oil and meal and flour. Export demand depends on factors including world grain production, the relative value of the dollar, international relations and the policies of trading nations. International trade is variable from year to year, making predictions very difficult.

Other factors to consider include price differentials due to geography, seasonal price tendencies and quality differences. Generally, the producer's prices will be higher the closer production is to the next handler or user due to transportation costs. Typically, grain prices are lowest at harvest and increase through the market year before peaking prior to the next year's harvest. These seasonal price trends are magnified in areas where demand is greater than supply and storage capacity is low.

Livestock supply and demand fundamentals are much like those for grains; however, almost all pork and beef is consumed within a short time so there is little carry over. Demand determines the price at which the supply is sold. Livestock demand factors include competing meat supplies and consumer incomes. The expansion or contraction by producers in response to past profits or losses determine supply. The livestock supply can also be affected by slaughter weights and herd liquidation or buildup.

By using fundamental analysis, the producer may modify the probabilities of the various price movements of Table 4. For instance, a 15 percent increase in soybean prices has about a 36 percent chance of happening, based on Table 4. If the fundamentals suggest a tighter supply/demand balance as measured by the percentage of carry over to usage, the chance of a price rise can be increased.

A producer planning a cash pricing strategy may risk rate the outcomes based on the fundamental outlook. If prices are likely to increase the optimistic and expected prices may be raised by more than the futures market would suggest. If price declines are more likely, pessimistic price outcomes may be reduced further.

Use caution when considering fundamental analysis and sources of fundamental outlook. As mentioned earlier, studies indicate that the futures market prices are about as good as many forecasts which rely on market fundamentals. The risk factors of Table 3 should be considered an appropriate guide to the risk of prices lower or higher than any outlook price derived by the producer or an outside service.

Technical Analysis

In technical analysis, prices are studied rather than the fundamental factors that determine prices. Technical analysis is based on the assumption that by studying current prices and past price movements, it is possible to determine future price movement. Past and present prices determine where future prices will be.

Many observers think technical analysis lacks a sound theoretical legitimacy. Technical analysis should be viewed as an art as well as a science. As traders use technical analysis more often they have an impact upon price movements in the short term, making technical analysis a self-fulfilling prophesy. Because of this, there is a greater need for producers to understand

technical analysis and its implications for decision making.

Some farmers use technical analysis tools to develop long-term strategies, but most farmers use them to detect short-term trends. Most technical analysis tools do not provide specific price forecasts, but do provide information on the likely future direction of the market under analysis. Technical tools may be helpful to determine when to price and when to enter and exit hedge positions.

Technical tools used today include bar charting, point and figure charting, relative strength indexing, and moving averages. Information on using these technical tools is beyond the scope of this publication; however, the following shows the results of a study using moving averages to determine when to hedge feeder cattle from November to May, 1972 to 1986.

Percentage increase	5%
Percentage of Years Achieved	40%
Percentage of Years Increase Not Achieved	60%
Percentage Increase or Decrease	-3.99%

The overall average increase from 1972 to 1986 was 7.9%. A comparison of this information (McKissick, John C. *An Economic Analysis of Alternative Pricing Strategies for Feeder Cattle.* Unpublished dissertation. Auburn University, Dec. 1987.) with Table 4 reveals that the moving average technical system has not increased the probability of any particular price increase over the initial pricing opportunity. On the other hand, in years in which the indicated increase was not reached, the actual price outcome using moving averages was higher than simply waiting for the percentage price increase to occur.

The widespread use of technical analysis and the objective information it provides suggests many producers should learn about the procedures. Commercial charting firms, brokerage houses and consulting firms are sources of technical information.

Making the Decision and Following Through with the Plan

Making the pricing decision is the hardest part of planning a strategy. The procedure described is designed to lead to a well-informed pricing decision consistent with the goals of the farm. The decision-making procedure can be summarized as in Figure 3. Each evaluation leads to a result and an action. The actions offered as examples reflect the possible results listed and are worthy of consideration but are not meant to be exhaustive or prescriptive. The broken lines indicate the process is a continuous flow. When a partial pricing or wait to price action is taken, the process is repeated as prices change and new fundamental information is obtained.

Most successful pricing plans do not rely on one strategy, but are combinations of strategies. Each plan should include a "backup" or contingency plan in case prices do not reach specified levels. For instance, a producer may determine there is a reasonable chance of a price rising to his price goal sometime during the production process. While waiting for the rise, he may use a moving average pricing strategy or purchase put options to reduce the chance of price declines below his critical level.

Once a decision is made, the producer should execute it. In sports, the most important part of any activity is the follow through. The same can be said for business plans and decisions. Don't

procrastinate, make a good decision and carry it out. It is likely the outcome will be as planned.

Figure 3. Pricing Decision-Making Summary

Evaluation	Results
Current Pricing Opportunities	Can achieve p
	Cannot achiev
Evaluate fundamental outlook and probabilities of price increases to price goal.	Probability of
	Probability of

Evaluation

When the action is completed it is time to evaluate the results of the plan. Did the plan meet the objectives? Were the objectives relevant? Was the decision based on current knowledge? Has any new knowledge surfaced since the decision that could have changed the decision? What did I learn from this experience? What should I have done differently?

These questions should be asked each year to improve marketing plans.

Author's Note: Readers who do not have a firm understanding of the commodity futures and options markets will benefit from reading Georgia Extension Bulletin 900, "Pricing Georgia Farm Products Through The Futures Market," October, 1984 and Georgia Extension Bulletin 921, "Commodity Options - Price Insurance for the Farmer," September, 1985. These publications provide helpful background information concerning terminology and concepts used in this publication. Yearly Basis Tables for various markets and commodities are available through a miscellaneous publication series.

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