

# KEYS TO SUCCESSFUL GRAIN MARKETING

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## Executive Summary

- Producer pricing performance is not as poor as advertised.
- On average, however, producers do under-perform the market—more so in corn than in soybeans.
- Producers tend to out-perform the market in “short crop” years.
- Performance has not worsened since 1996.
- Average producer marketing patterns change very little from year-to-year.
- Performance is determined by price pattern, not marketing pattern.
- May need to alter marketing pattern to improve performance by pricing more during pre-harvest periods and less during the summer after harvest.
- The starting point for developing a farm marketing track record is to compute a net price received that is comparable across crop years.
- Net price received should be a weighted-average across bushels priced and adjusted for storage costs and government program benefits.
- Benchmarks are needed to assess marketing performance relative to a standard.
- Market benchmarks measure the price offered by the market.
- Peer benchmarks measure the price received by other farmers.
- Professional benchmarks measure the price received by professional market advisory services.
- All benchmarks should be computed using the same basic assumptions applied to a farmer’s own marketing track record.
- Three types of new generation marketing contracts have been developed in recent years.
- Automated pricing contracts are the most common and are based on the average price offered over some pre-specified window.
- Managed hedging contracts market a pre-specified number of bushels based on the recommendation of a market advisory service.
- Combination contracts are automated pricing rule contracts that allow a farmer to share in the profits, if any, generated by a market advisory service.

· Suggested keys to successful marketing include:

- 1) Develop a realistic marketing objective
- 2) Construct a track record of marketing performance
- 3) Compute marketing benchmarks
- 4) Evaluate marketing performance
- 5) Identify persistent marketing mistakes
- 6) Determine portfolio of marketing strategies
- 7) Evaluate role of new generation contracts

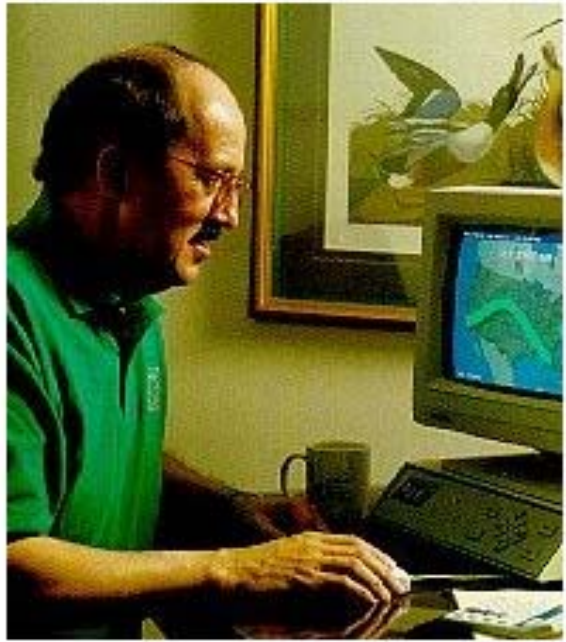
# Keys to Developing Successful Grain Marketing Programs

Scott Irwin and Darrel Good



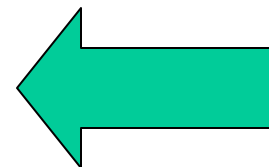
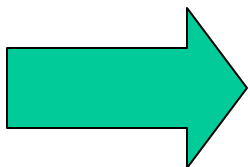
# Overview of Workshop

- Historical Overview on Grain Marketing Performance
- How to Benchmark Performance
- New Generation Contracts
- Keys to Success



### WHAT CAN DTN AgDaily DO FOR YOU?

Today, there are two ways for producers to increase their bottom-line profit: increase production efficiency or market more effectively. American farmers and ranchers are already producing at record levels... but USDA statistics indicate farmers sell two-thirds of their crop in the bottom one-third of the crop's annual price range.



# Farm Income Meeting Survey Results, December 2000

Question	True (%)	False (%)
On average, corn and soybean producers sell 2/3 of their crops in the bottom 1/3 of the price range	77	23

# Measuring the Grain Marketing Performance of Illinois Farmers

- Starting point: Measure average price received by farmers
- In theory, would like to have actual track records of a large sample of farmers
- Compute net prices that are comparable across years and farmers
  - Weighted-average price for all bushels produced
  - Account for cost of storing bushels after harvest
  - Account for government program benefits that depend on the pricing decisions of farmer
    - Loan deficiency payments (LDPs)
    - Marketing loan gains (MLGs)

# USDA Average Price Received as a Farmer Benchmark

- **Disadvantages**

- Only available as a statewide average
- Aggregates across the different grades and quality sold in the market
- Does not include futures and options trading profits/losses

- **Advantages**

- Does include forward cash sales (pre- and post-harvest)
- Incorporates actual marketing pattern of farmers



# USDA Average Price Received as a Farmer Benchmark

- An “indicator” of marketing performance by Illinois farmers
- **Proceed by:**
  - Applying commercial storage and interest opportunity costs
  - Add state average LDPs and MLGs

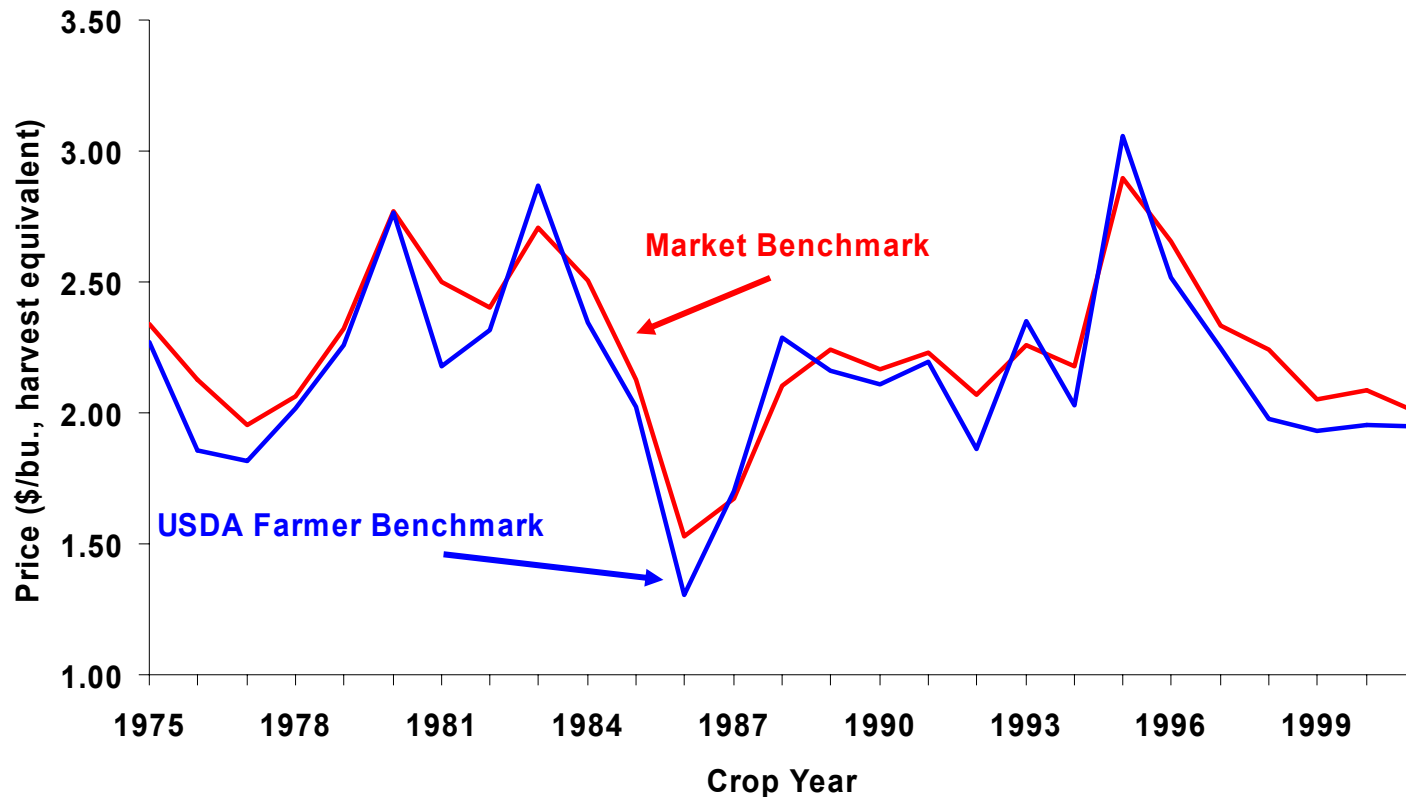
# Market Benchmarks: Comparing Performance to the Market

- **Basic concept: Measure average price offered by the market**
- Provides a performance “standard” or “yardstick”
- As closely as possible, apply the same assumptions to market and farmer benchmarks

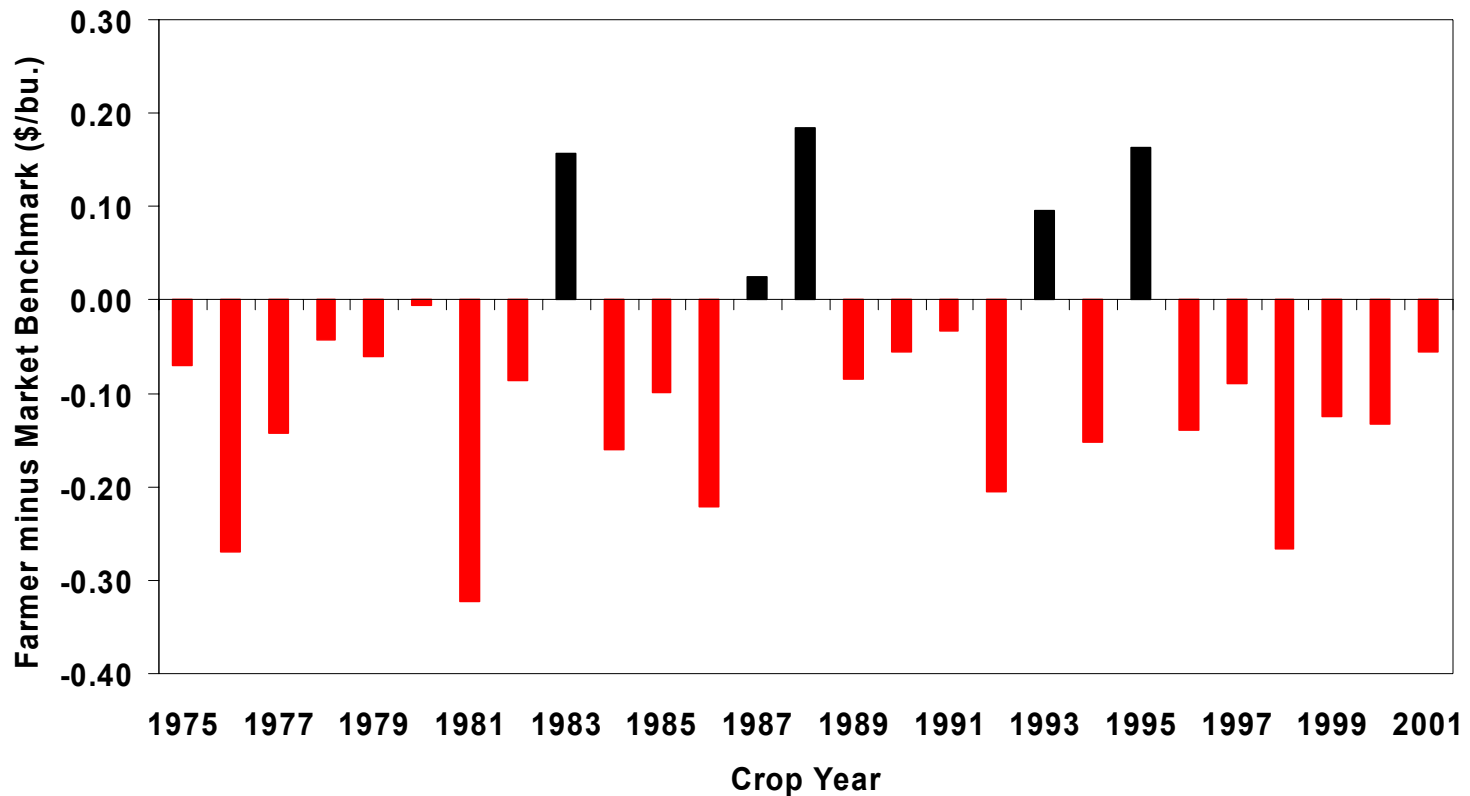
# 24-Month Average Price as a Market Benchmark

- 24-month marketing window
  - One year pre-harvest
  - One year post-harvest
- Cash forward prices for central Illinois averaged during pre-harvest period
- Spot cash prices for central Illinois averaged during post-harvest period
- LDP/MLGs taken as grain is delivered
- Computed using the same commercial storage assumptions as applied to farmer benchmark

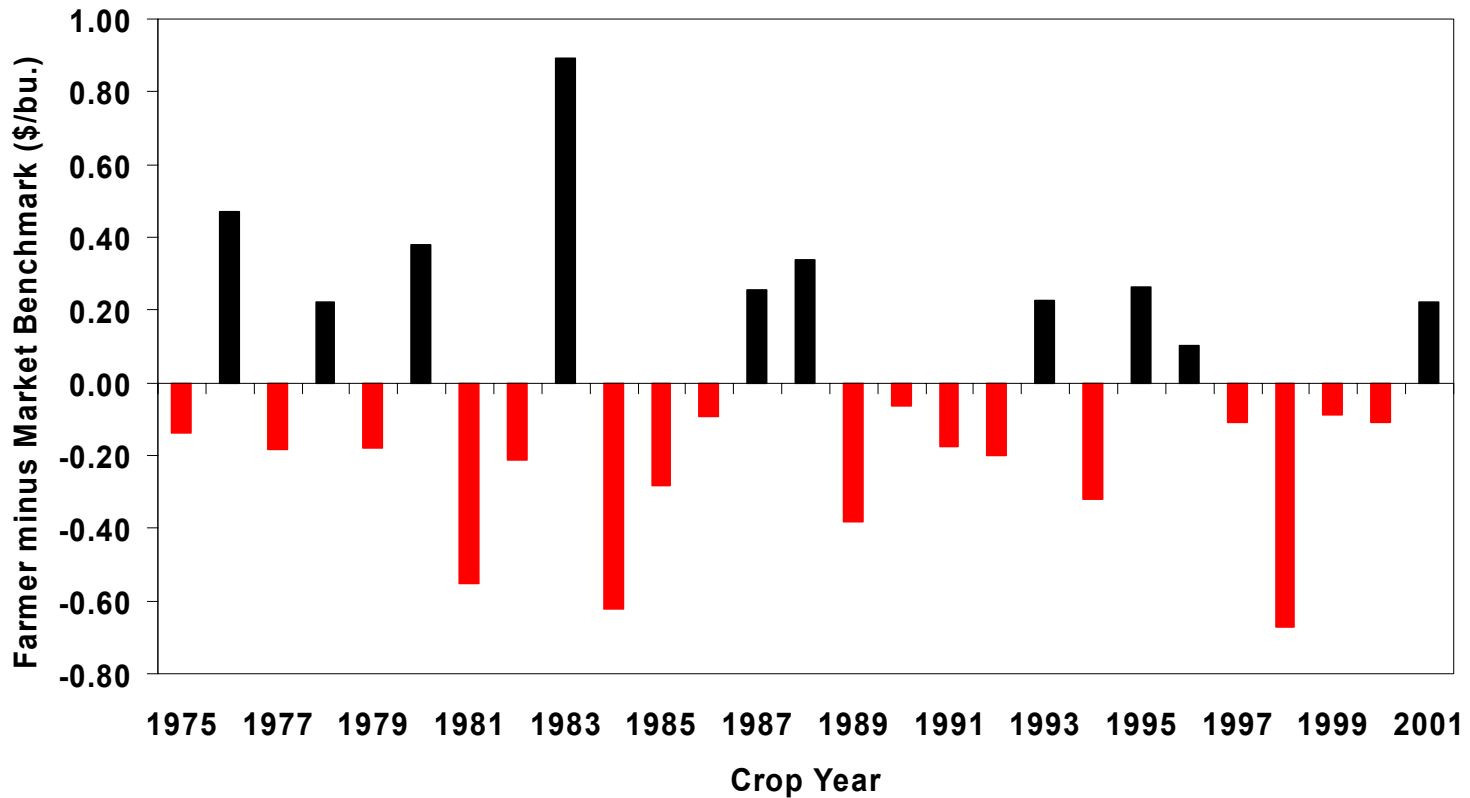
# Farmer and Market Benchmark Prices for Corn, Central Illinois, 1975-2001



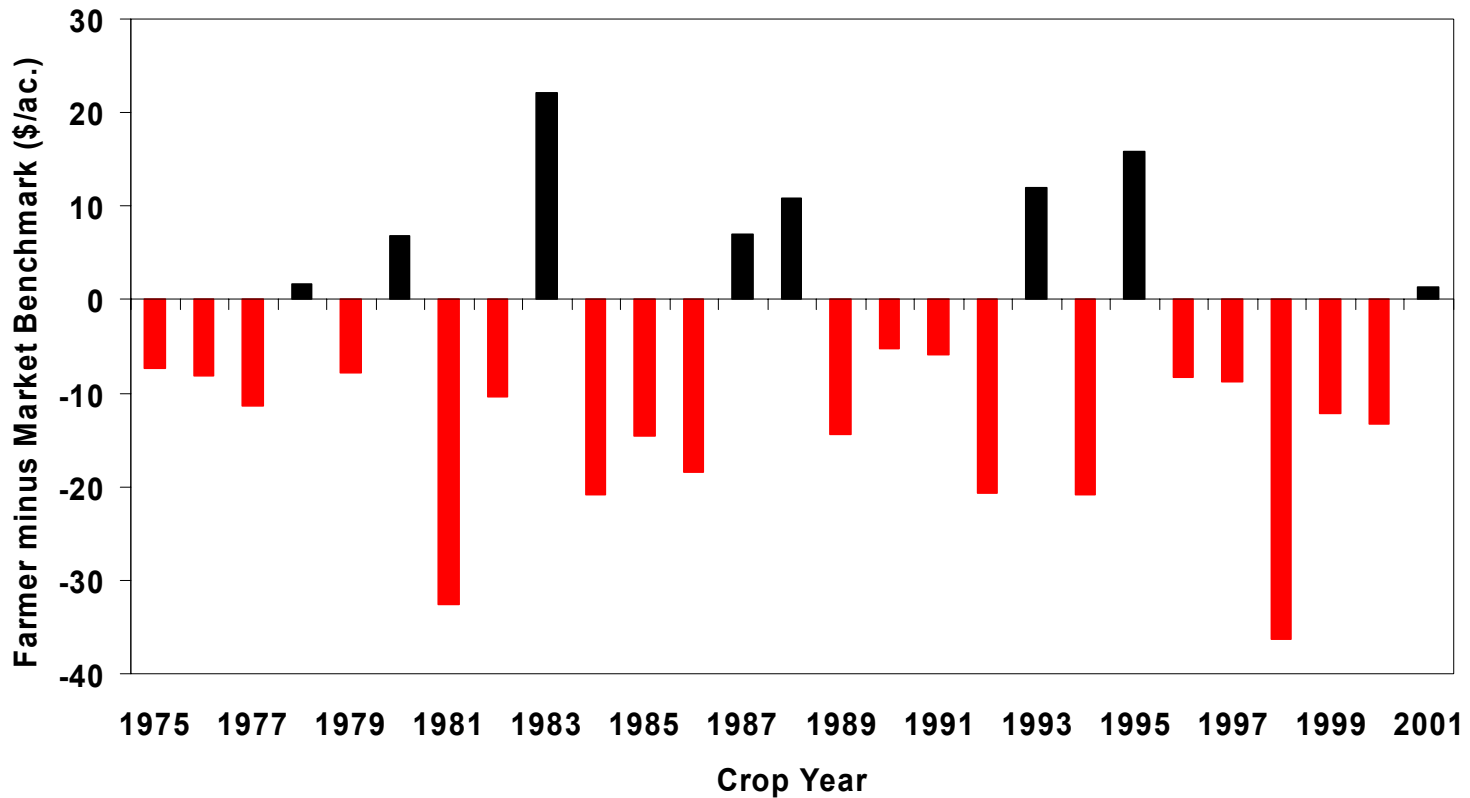
# Difference Between Farmer and Market Benchmark Prices for Corn, Central Illinois, 1975-2001



# Difference Between Farmer and Market Benchmark Prices for Soybeans, Central Illinois, 1975-2001



# Difference Between Farmer and Market Benchmark Prices for 50/50 Revenue, Central Illinois, 1975-2001



# Classification of Crop Years

- All crop years (27 years)
  - 1975-2001
- Normal crop years (21 years, or 78%)
  - 1976-1979, 1981-1982, 1984-1987, 1989-1992, 1994, 1996-2001
- Short crop years (6 years, or 22%)
  - 1975, 1980, 1983, 1988, 1993, 1995
- Post-FAIR Act
  - 1996-2001



## Average Difference Between Farmer and Market Benchmark Prices for Central Illinois, 1975-2001

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	Corn	Soybeans	50/50 Revenue
All Crop Years	\$ -0.08/bu.	\$ -0.04/bu.	\$ -7/ac.
Normal Crop Years	\$ -0.13/bu.	\$ -0.14/bu.	\$ -12/ac.
Short Crop Years	\$ +0.09/bu.	\$ +0.33/bu.	\$ +10/ac.
Post-FAIR	\$ -0.13/bu.	\$ -0.11/bu.	\$ -13/ac.

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## Average Difference Between Farmer and Market Benchmark Prices for Central Illinois, 1975-2001, w/out LDP/MLGs

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	Corn	Soybeans	50/50 Revenue
All Crop Years	\$ -0.09/bu.	\$ -0.05/bu.	\$ -8/ac.
Normal Crop Years	\$ -0.14/bu.	\$ -0.16/bu.	\$ -14/ac.
Short Crop Years	\$ +0.09/bu.	\$ +0.33/bu.	\$ +10/ac.
Post-FAIR	\$ -0.16/bu.	\$ -0.18/bu.	\$ -17/ac.

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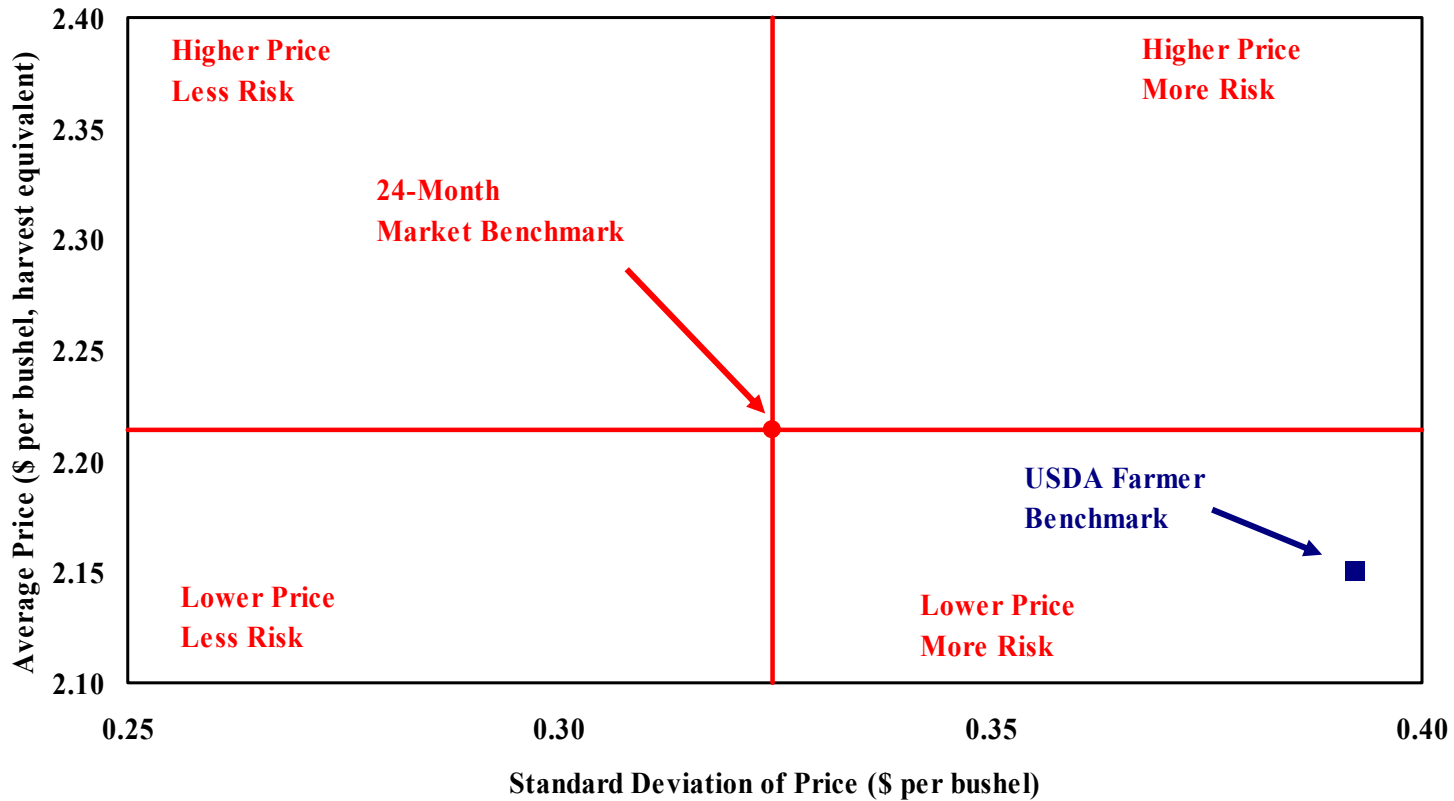
## Average Difference Between Farmer and Market Benchmark Production Value for State of Illinois, 1975-2001

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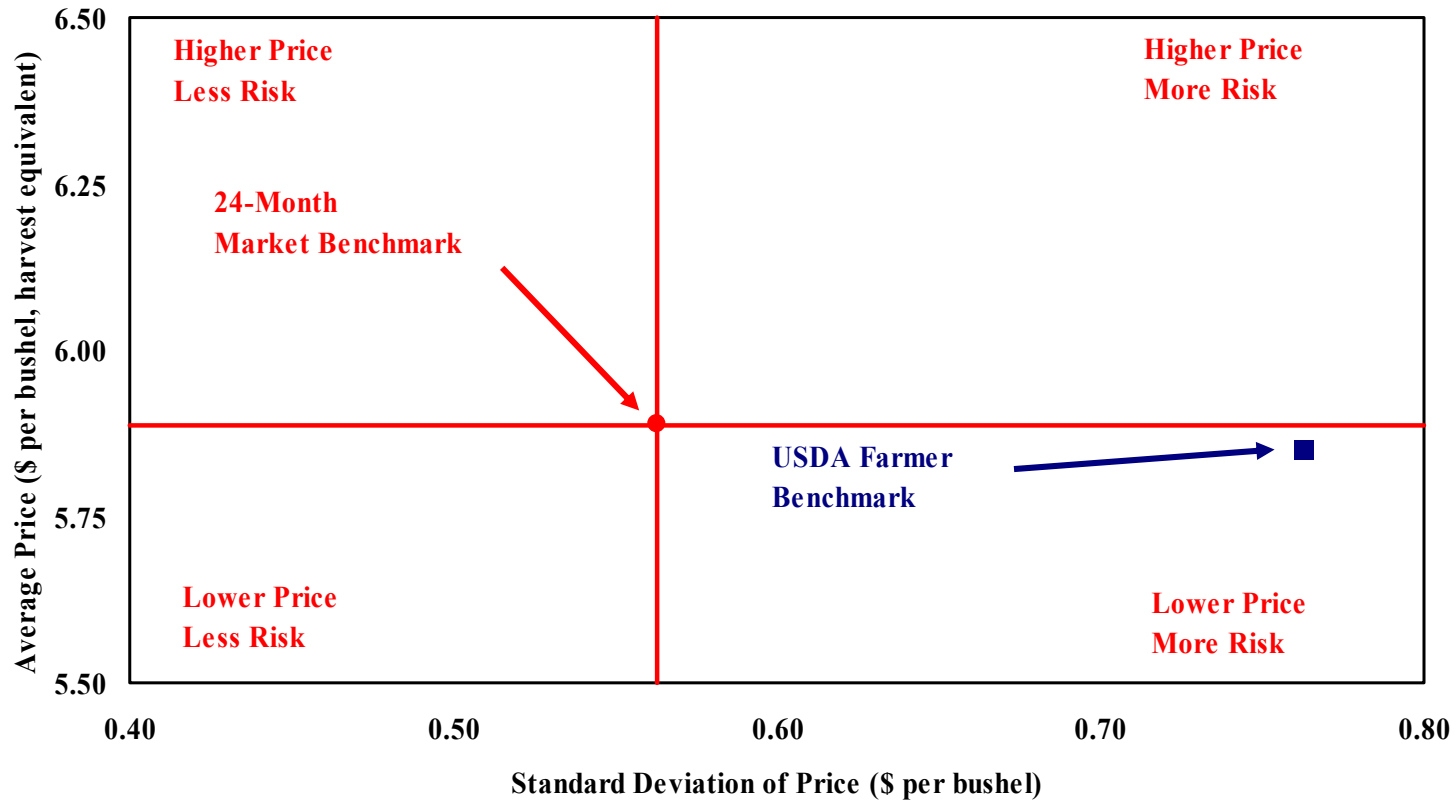
	Corn	Soybeans	Combined
All Crop Years	\$ -129 mil.	\$ -22 mil.	\$ -151 mil.
Normal Crop Years	\$ -187 mil.	\$ -56 mil.	\$ -243 mil.
Short Crop Years	\$ +74 mil.	\$ +97 mil.	\$ +170 mil.
Post-FAIR	\$ -204 mil.	\$ -50 mil.	\$ -254 mil.

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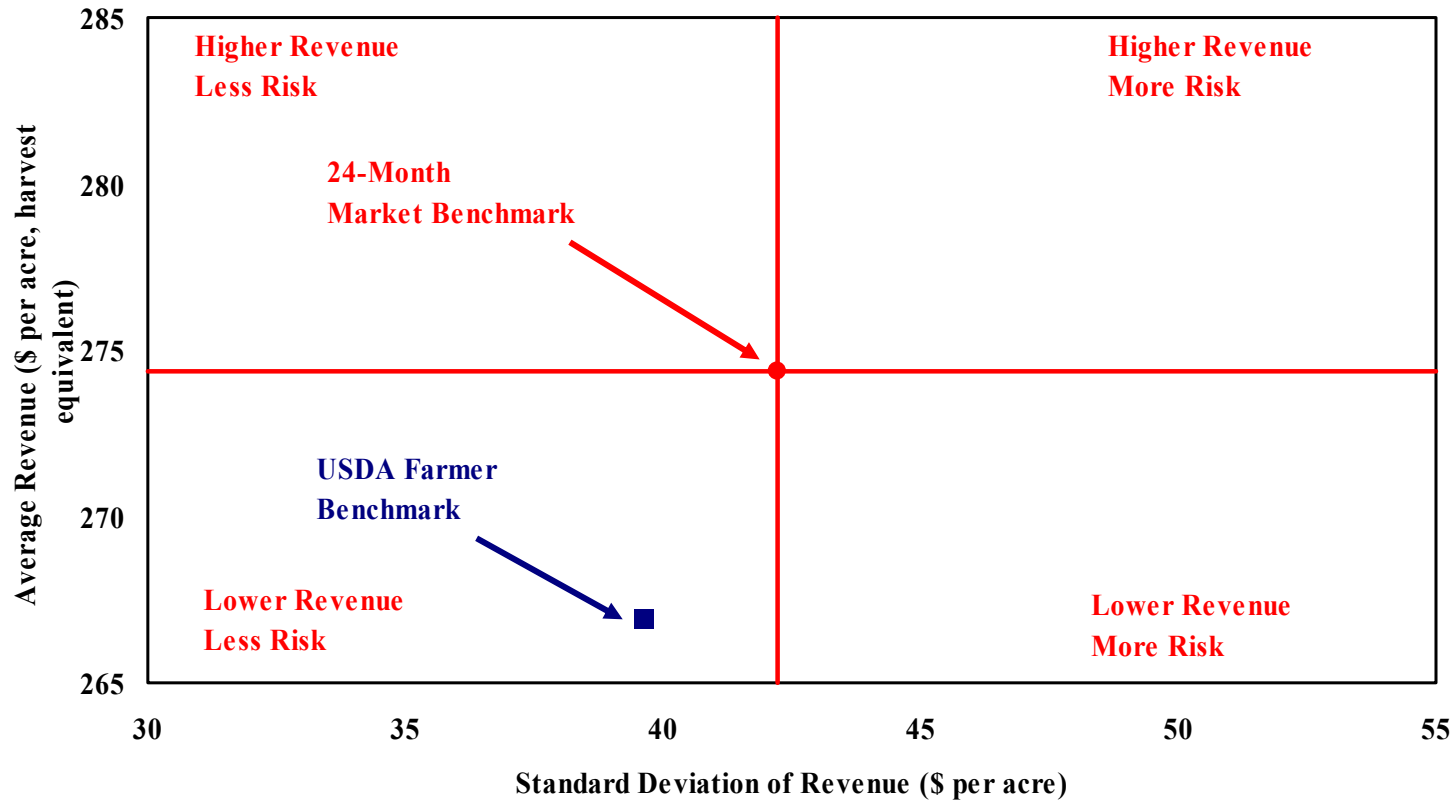
# Farmer and Market Benchmark Return-Risk Tradeoff for Corn, Central Illinois, 1975-2001



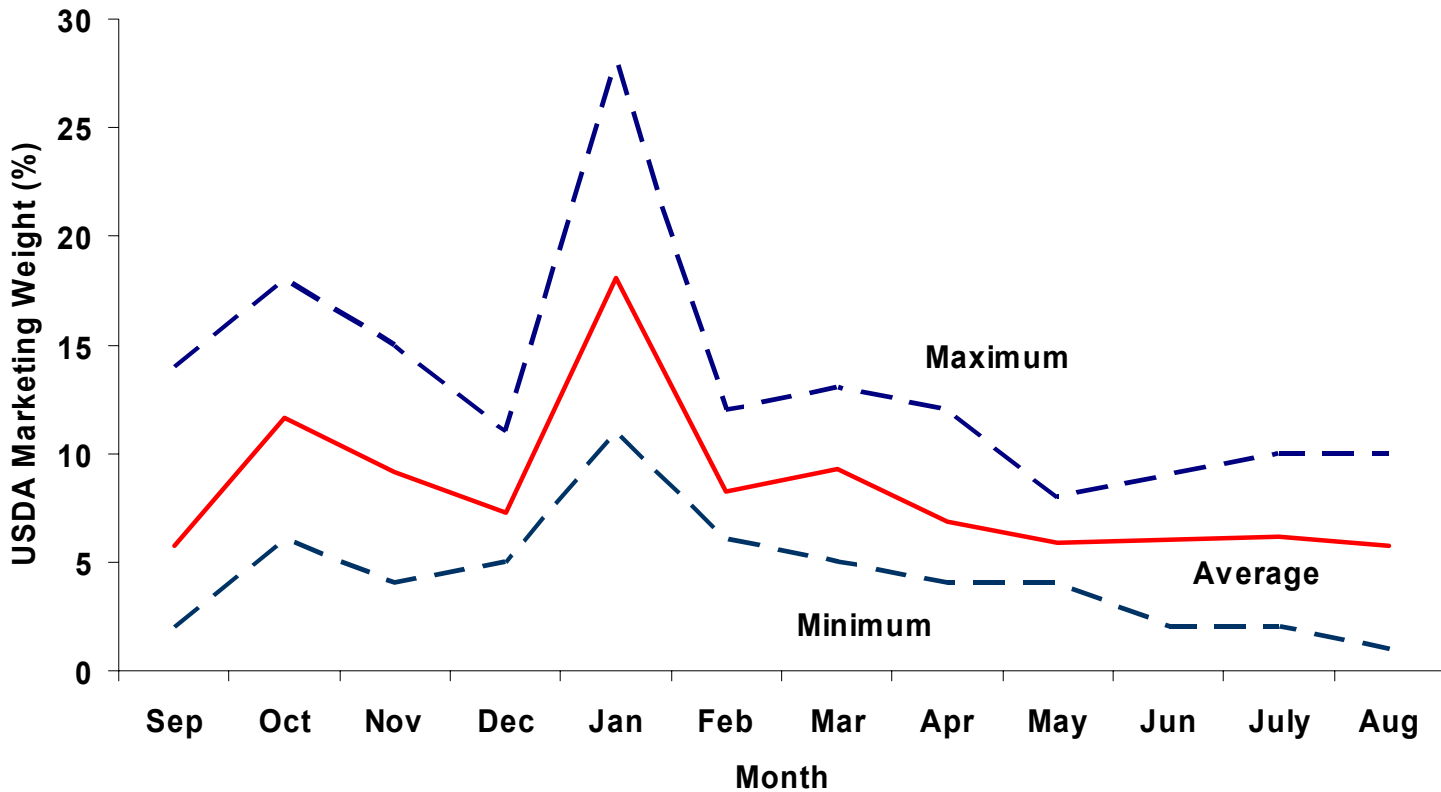
# Farmer and Market Benchmark Return-Risk Tradeoff for Soybeans, Central Illinois, 1975-2001



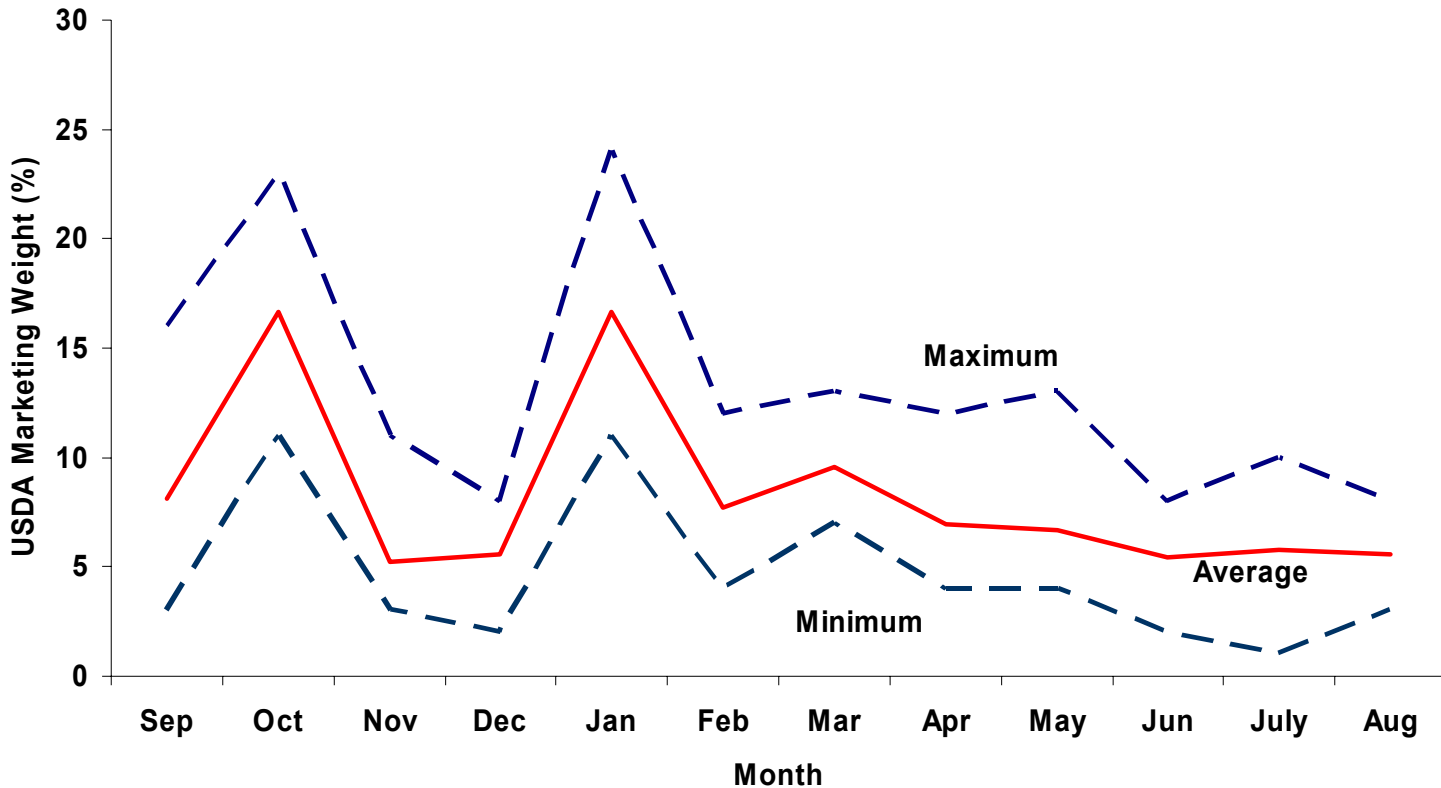
# Farmer and Market Benchmark Return-Risk Tradeoff for 50/50 Revenue, Central Illinois, 1975-2001



# Corn Marketing Pattern of Illinois Farmers, 1975-2001

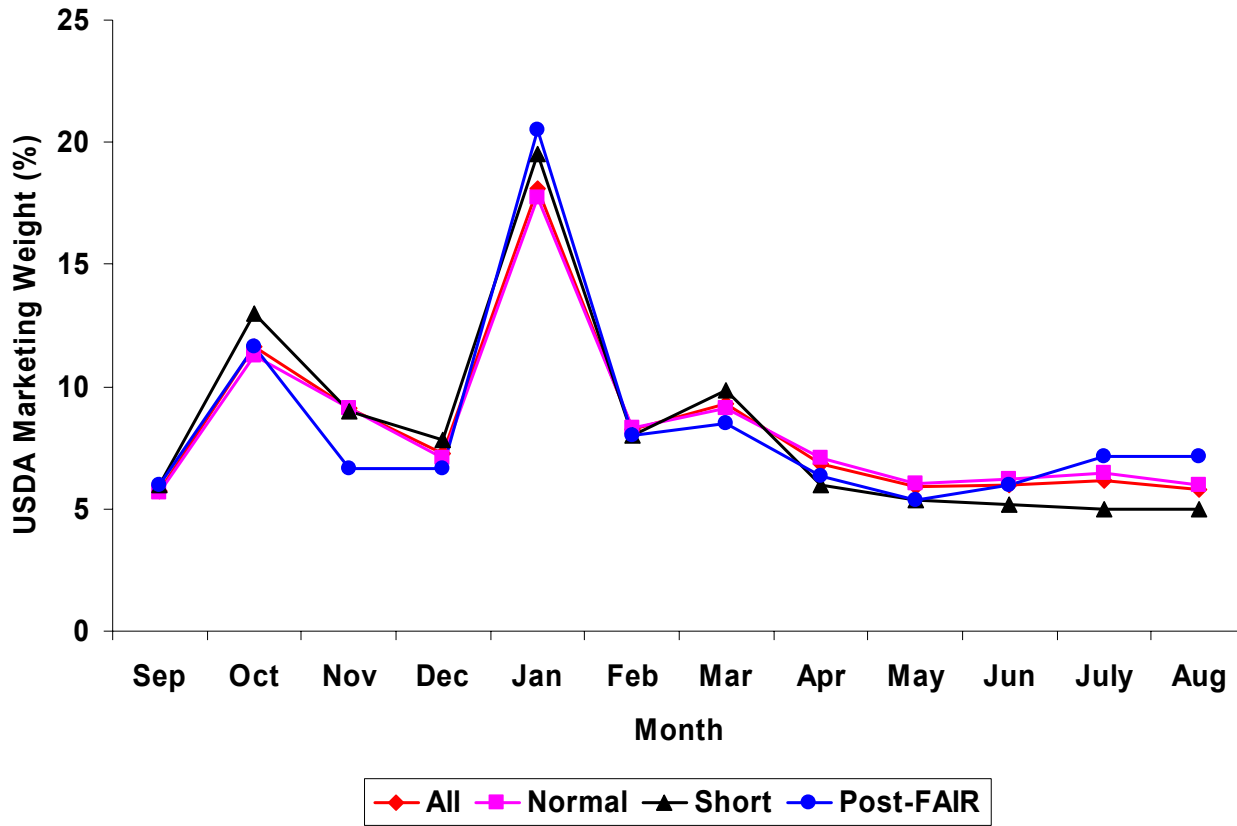


# Soybean Marketing Pattern of Illinois Farmers, 1975-2001

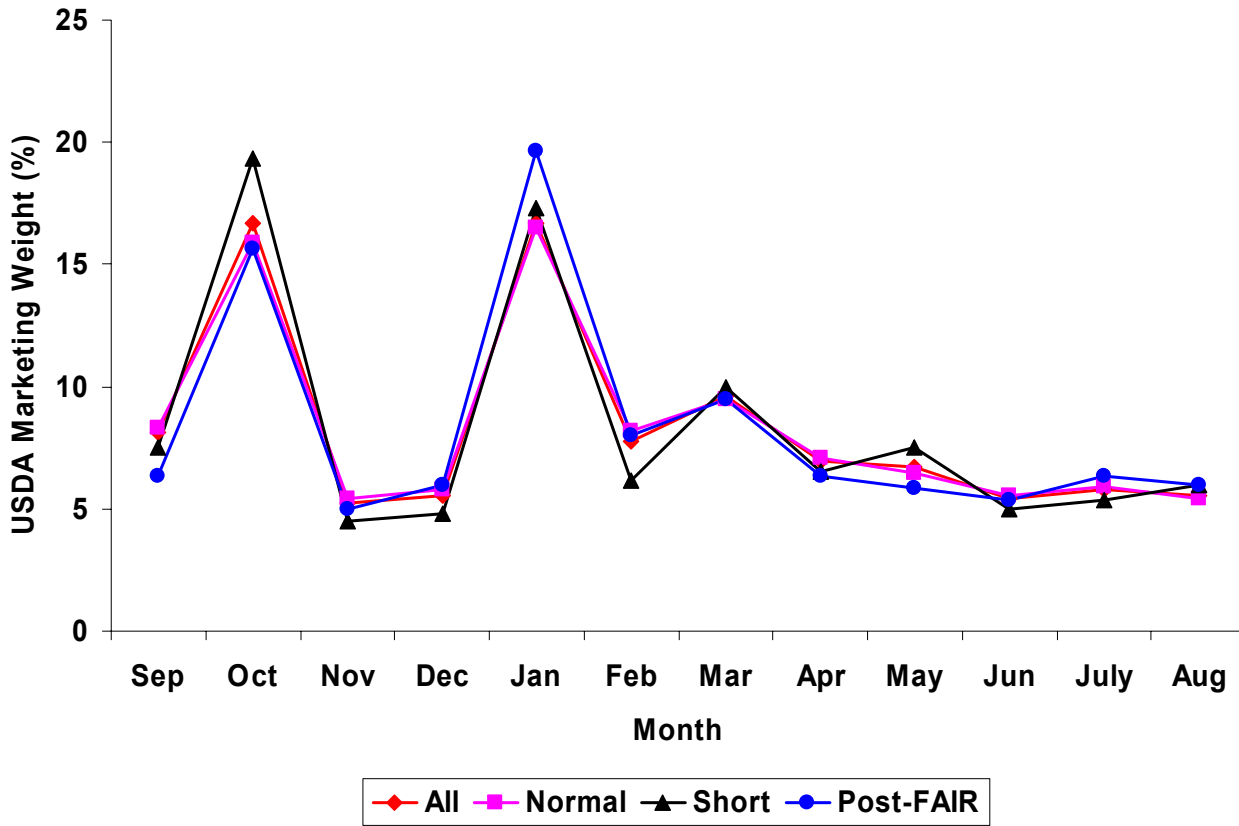




# Corn Marketing Pattern of Illinois Farmers by Crop Year Classification, 1975-2001



# Soybean Marketing Pattern of Illinois Farmers by Crop Year Classification, 1975-2001



# Corn Marketing Pattern of Illinois Farmers by Crop Year Classification, 1975-2001

	Sep.-Dec. Avg.	Jan.-Apr. Avg.	May-Aug. Avg.
All Crop Years	34%	42%	24%
Normal Crop Years	33%	42%	25%
Short Crop Years	36%	43%	21%
Post-FAIR	31%	43%	26%

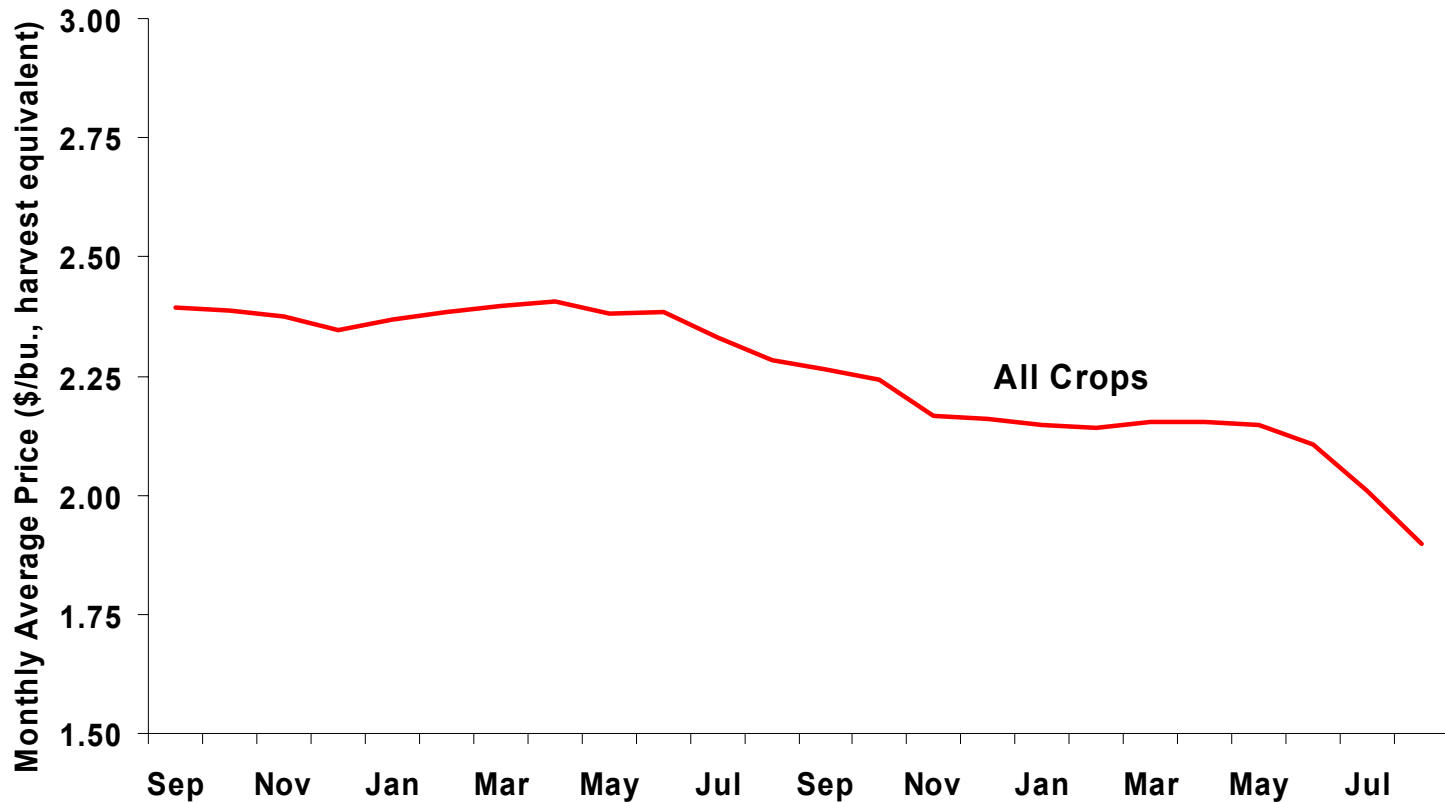
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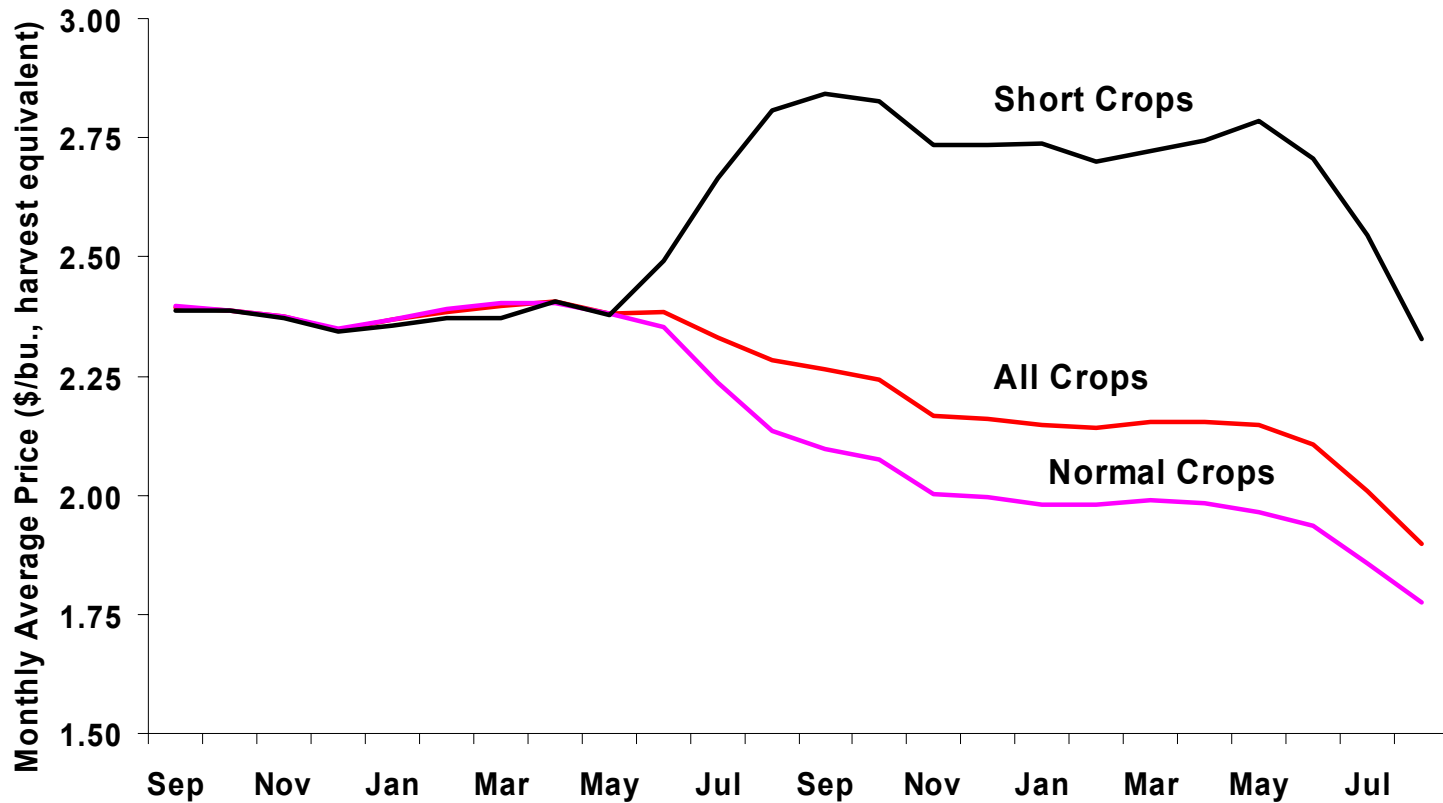
	Sep.-Dec.	Jan.-Apr.	May-Aug.
	Avg.	Avg.	Avg.
All Crop Years	36%	41%	23%
Normal Crop Years	35%	41%	23%
Short Crop Years	36%	40%	24%
Post-FAIR	33%	44%	24%

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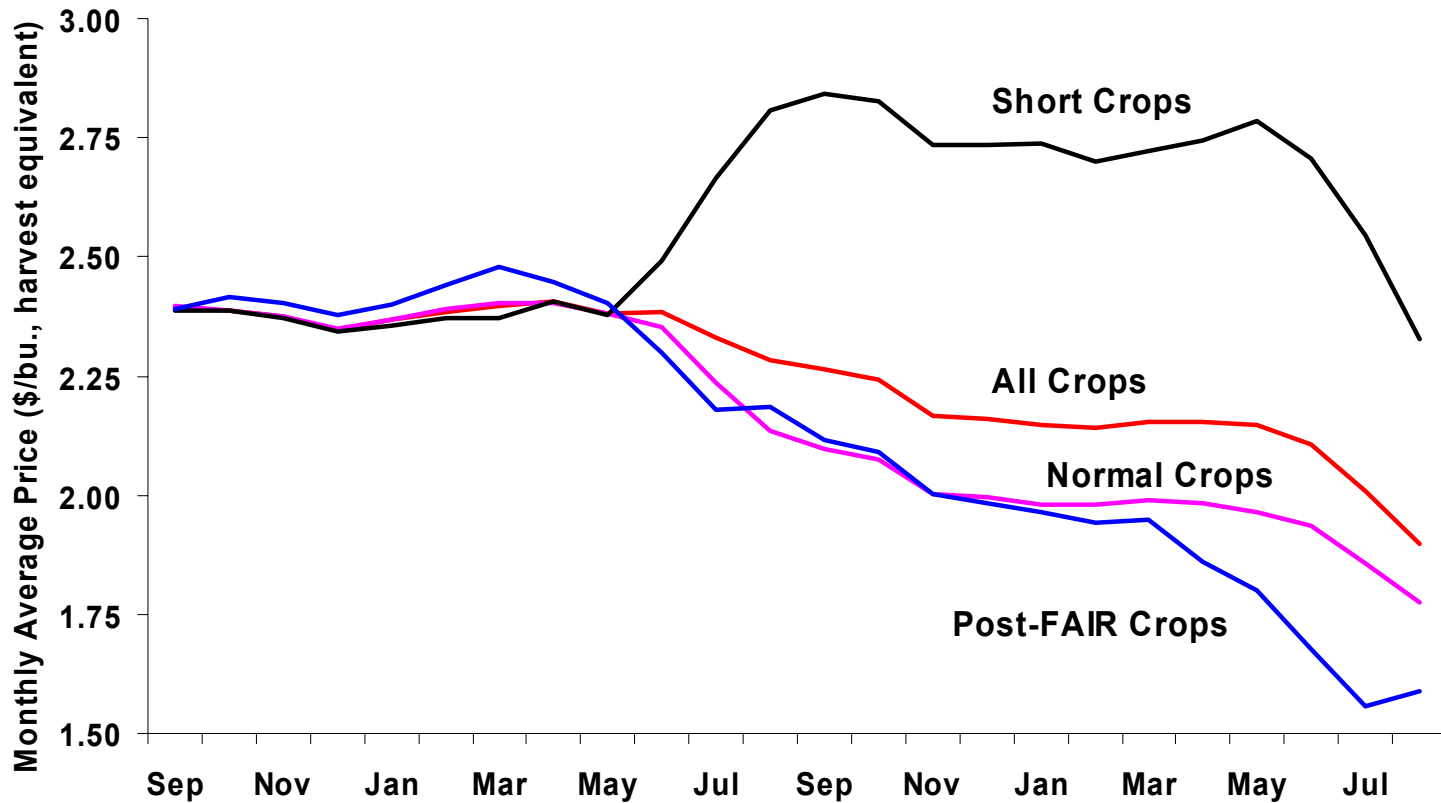
# Central Illinois Corn Prices Over the 24-Month Marketing Window, 1975-2001, Adjusted for Carrying Charges, w/out LDP/MLGs



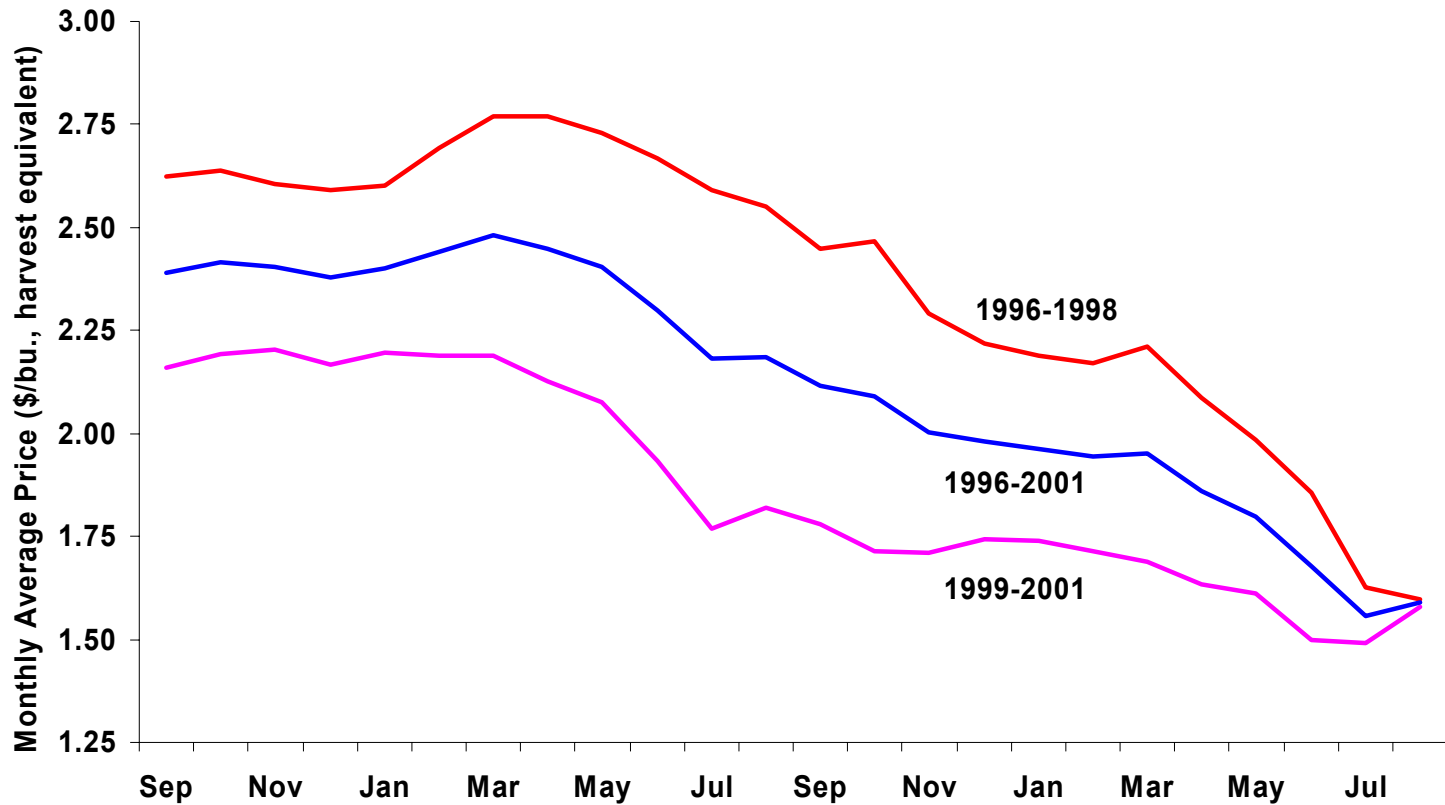
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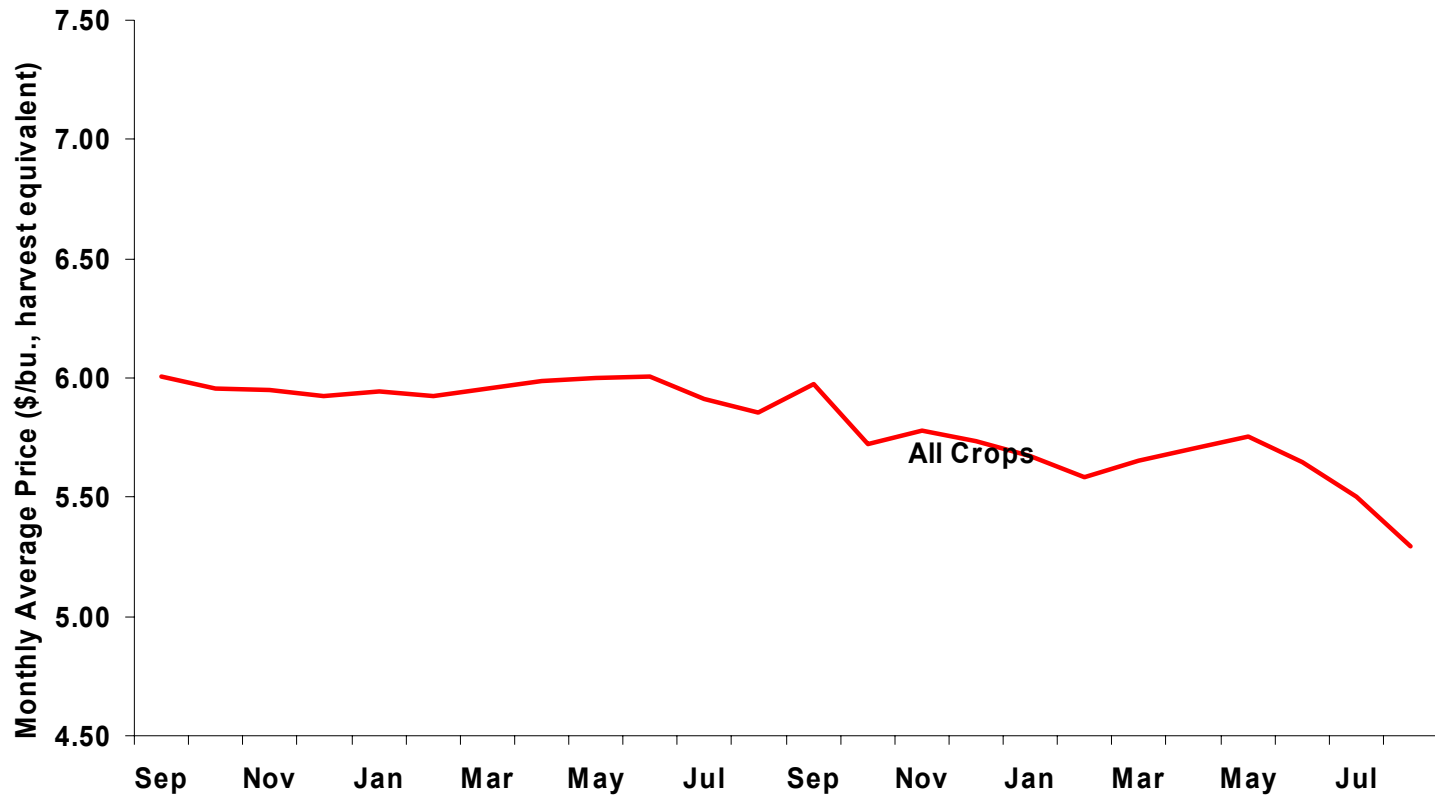


# Central Illinois Corn Prices Over the 24-Month Marketing Window, 1996-2001, Adjusted for Carrying Charges, w/out LDP/MLGs

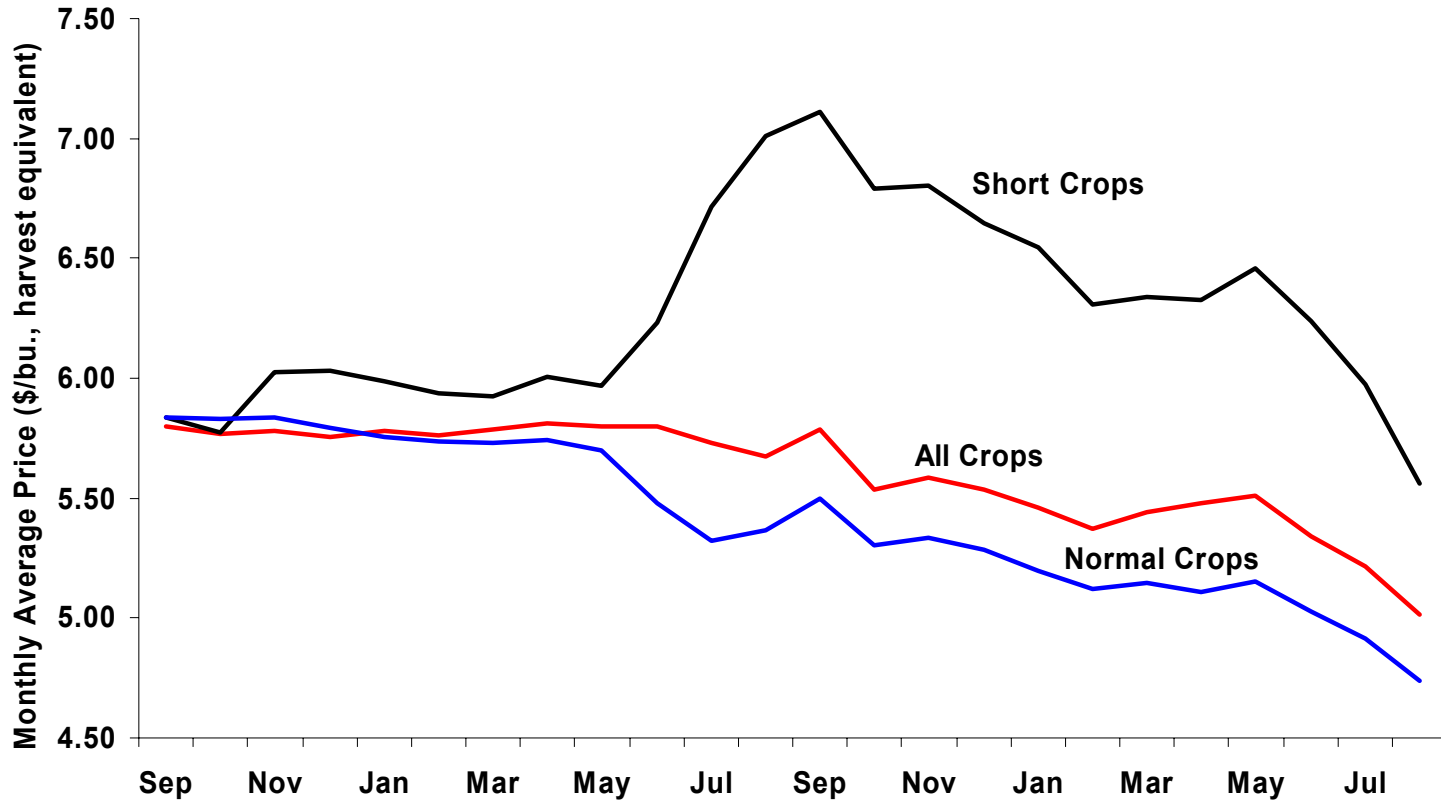




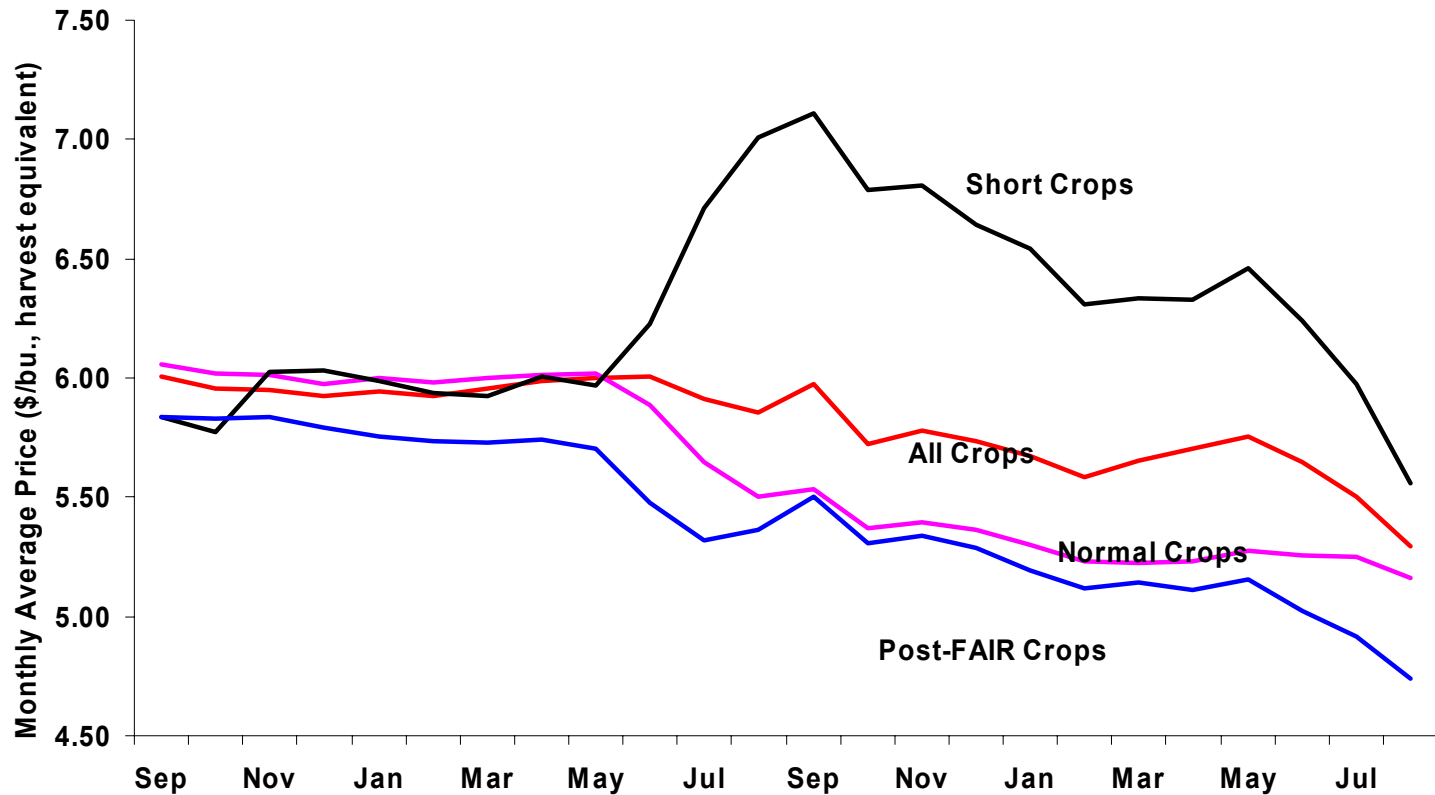
# Central Illinois Soybean Prices Over the 24-Month Marketing Window, 1975-2001, Adjusted for Carrying Charges, w/out LDP/MLGs



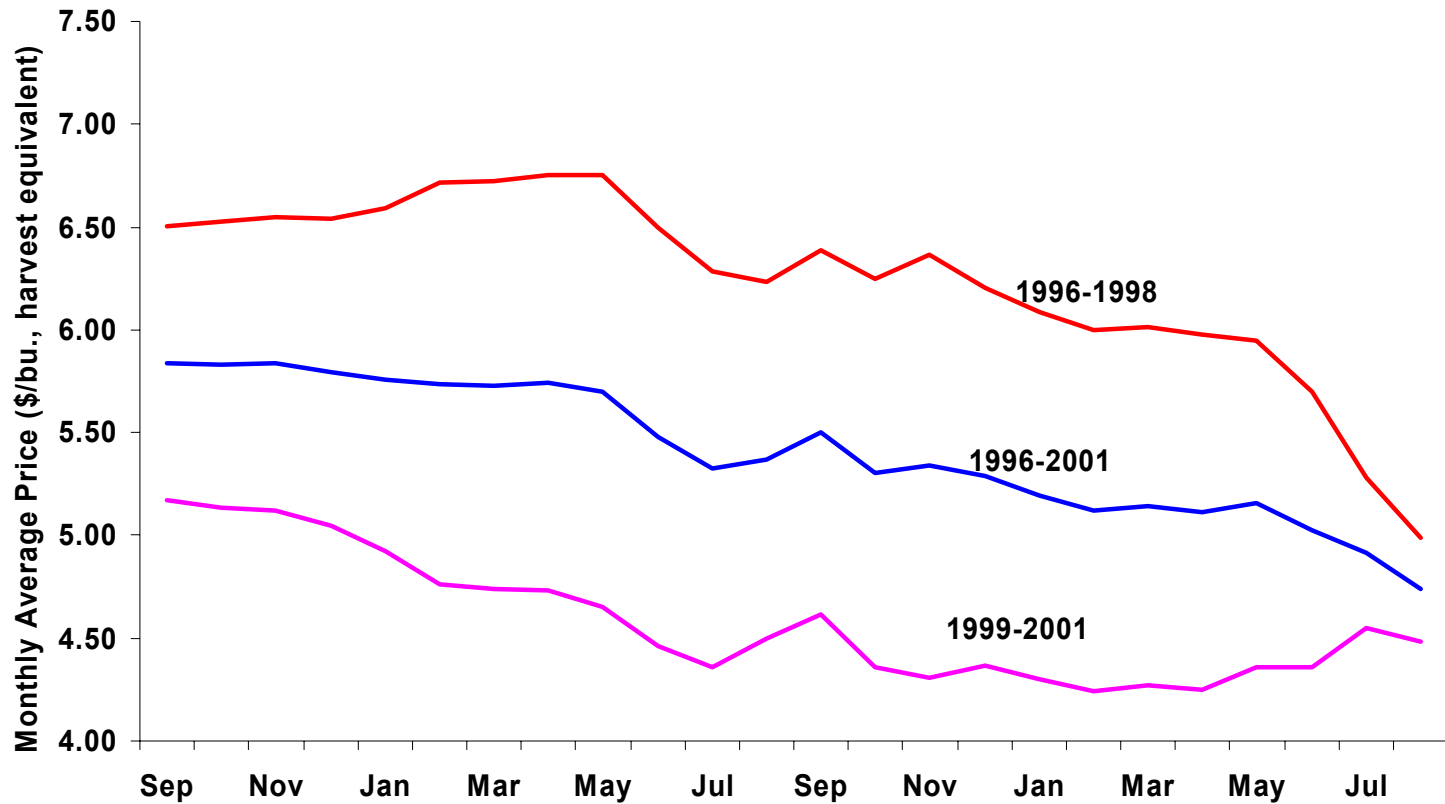
# Central Illinois Soybean Prices Over the 24-Month Marketing Window, 1975-2001, Adjusted for Carrying Charges, w/out LDP/MLGs



# Central Illinois Soybean Prices Over the 24-Month Marketing Window, 1975-2001, Adjusted for Carrying Charges, w/out LDP/MLGs



# Central Illinois Soybean Prices Over the 24-Month Marketing Window, 1996-2001, Adjusted for Carrying Charges, w/out LDP/MLGs



# What Have We Learned?

- Producer pricing performance is not as poor as advertised
- On average, however, producers do under-perform the market—more so in corn than in soybeans
- Producers tend to out-perform the market in “short crop” years
- Performance has not worsened since 1996

# What Have We Learned?

- Average producer marketing patterns change very little from year-to-year
- Performance is determined by price pattern, not marketing pattern
- May need to alter marketing pattern to improve performance
  - price more during pre-harvest period
  - price less during the summer after harvest

# What Is the Problem?

A farmer's perspective:

"If there's anything I've learned in the past 30 years of studying and marketing grain, it's this: Even with the right marketing plan and advisories, the critical calls to price grain are often not made."

*---Top Producer, December 2001*

# Potential Psychological Mistakes in Marketing

- Anchoring
  - We are reluctant to revise long-held opinions
  - “This is what I always do!”
- Loss Aversion and Regret
  - We put off realizing losses to avoid painful regret involved in a “losing” decision
  - Results in maintaining losing positions too long
  - Store grain too long because unwilling to accept that price has peaked



# Potential Psychological Mistakes in Marketing

- Fallacy of Small Numbers
  - We place too much weight on limited data
  - Results in chasing “hot” strategies or advisors
- Overconfidence
  - We are overconfident about our abilities
  - Over-estimate accuracy of price expectations
  - Store grain too long because too much confidence placed on bullish forecasts

# Potential Psychological Mistakes in Marketing

- Hindsight bias
  - We tend to remember successes and forget failures
  - Past marketing successes are too influential in forming expectations

# Avoiding Psychological Mistakes in Marketing

- Get the facts on your performance
  - Compute your track record
  - Compare to objective benchmarks
- Study your decision-making weaknesses
- Where ever possible, seek independent views
- Focus on whole farm profits, not individual pricing decisions
- Focus on results over a large number of years
- Consider “automated” pricing strategies that you cannot reverse

## Some Helpful References

- Belsky, G. and T. Gilovich. *Why Smart People Make Big Money Mistakes-and How to Correct Them*. Simon and Schuster: New York, 1999.
- Brorsen, B.W. and K.B. Anderson. "Implications of Behavioral Finance for Farmer Marketing Strategy Recommendation." NCR-134 Conference Proceedings, <http://agecon.lib.umn.edu/>
- Shefrin, H. *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*. Harvard Business School Press: Boston, 2000.

# The Starting Point

What is your grain marketing track record?

Good?

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Average?

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Poor?

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A related question:

What is your average price received compared to a realistic benchmark?

Last Year? \_\_\_\_\_

3-Year Average? \_\_\_\_\_

5-Year Average? \_\_\_\_\_

# Benchmarking Your Marketing Track Record

- **Quick Approach**
  - Compute your marketing weights
  - Compute marketing performance based on a standard market price series
- **Complete Approach**
  - Compute net price received that is comparable across years
  - Compute market, peer and professional benchmarks on a comparable basis to your track record

# Quick Approach to Benchmarking

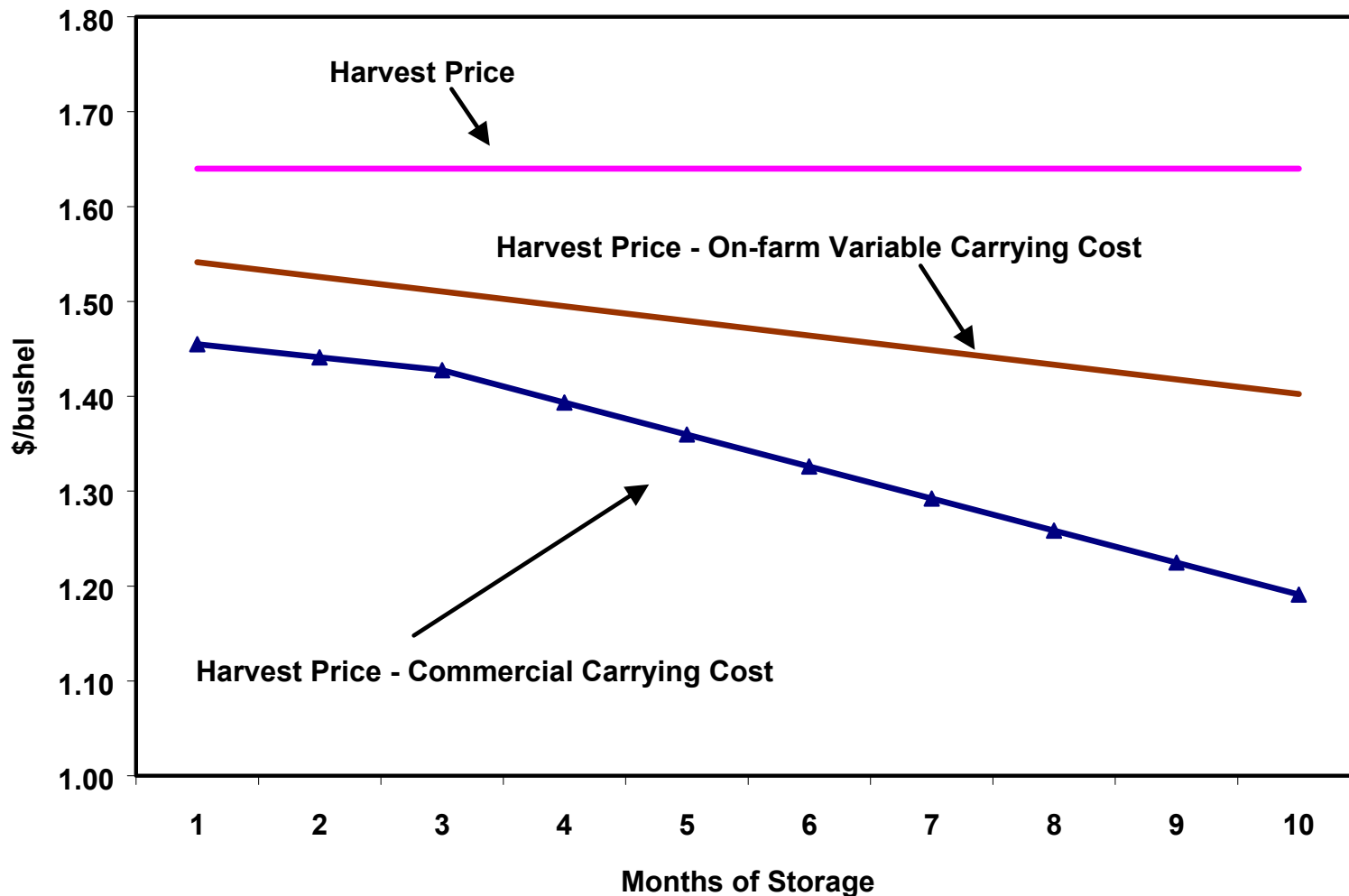
1. Assemble data to compute marketing weights each month over the 24-month pricing window for a crop year
  - Account for forward, futures and options sales
2. Multiply weights by monthly average prices
  - Prices should be adjusted for storage costs
  - Prices should be for a comparable area, e.g., central Illinois
3. Add speculative futures/options gains or losses
4. Add your weighted-average LDP/MLG gains
5. Compare to the 24-month average cash price
  - Adjusted for storage costs
  - Includes LDP/MLGs



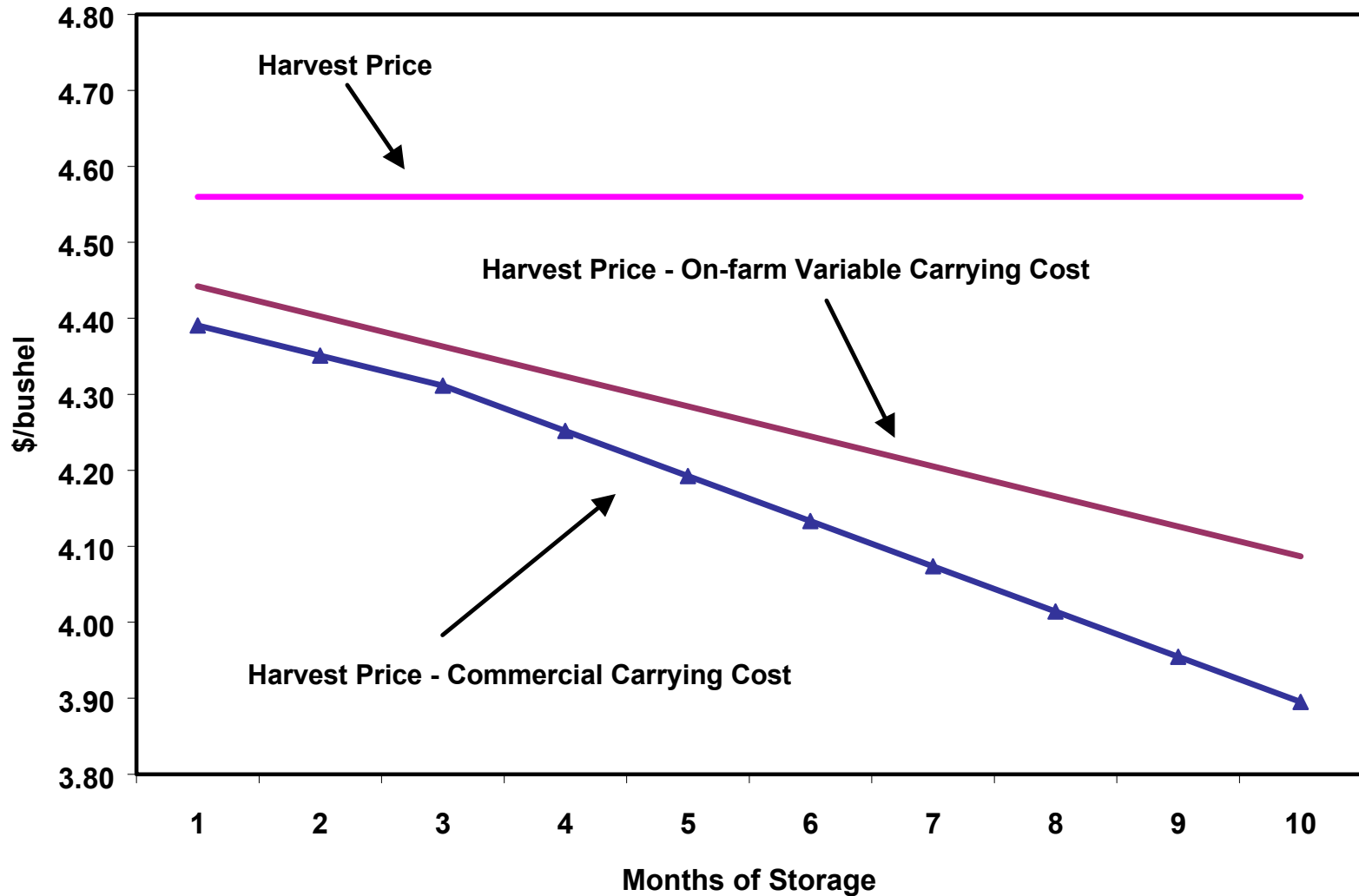
# Complete Approach to Benchmarking

1. Assemble records for a given crop: bushels sold, cash and forward sales, futures and options transactions
2. Adjust each sale for moisture and quality discounts; sale prices should be stated on a No.2 basis for corn and No. 1 basis for soybeans
3. Compute the weighted-average cash price received
4. Subtract physical storage charges on all bushels stored post-harvest
5. Subtract interest opportunity cost on all bushels stored post-harvest
6. Compute profit/loss on all futures and options transactions
7. Add LDP and/or marketing loan benefits

# Carrying Cost Comparison for Corn, Central Illinois, 2000 Crop Year



# Carrying Cost Comparison for Soybeans, Central Illinois, 2000 Crop Year



# Three Basic Types of Benchmarks

- **Market benchmarks:** prices offered by the market
- **Peer benchmarks:** prices received by other farmers
- **Professional benchmarks:** prices received by agricultural market advisory services

# Market Benchmarks: Comparing Your Performance to the Market

- **Basic concept: Measure average price offered by the market**
- **Critical that you use same assumptions used for your track record and the benchmark**
  - Need to use local forward and spot prices

# Key Issues in Building a Market Benchmark

- Forward and cash prices should be for the same (or similar) location, grade and quality as your sales (preferably No. 2 corn, No. 1 soybeans)
- Commercial bid prices should be used instead of USDA average price received
- Physical storage and interest opportunity costs should be the same as those in your track record
- LDPs and MLGs should be included
- Time window for averaging should be similar to your typical decision horizon for marketing grain

# Peer Benchmarks: Comparing Your Performance to Other Farmers

- **USDA average price received**
  - An “indicator” of marketing performance of farmers
- **Proceed by:**
  - Applying the same physical storage and interest opportunity costs as used in your track record and market benchmark
  - Adding state average LDPs and MLGs
  - Making basis adjustment if outside central Illinois

# Professional Benchmarks: Comparing Your Performance to Market Advisory Services

- Compute net prices for market advisory services
  - Comparable basis to your own track record and other benchmarks
  - Not practical for most farmers
- AgMAS Project does compute net prices for a number of advisory services
- AgMAS prices are based on central Illinois data
- If farming outside of this area, AgMAS prices are not directly comparable to your track record
  - Basis and yield differences



# Your Marketing Performance

- I'm a Good Marketer
  - Inclined to be an active marketer
- I'm A Poor Marketer
  - Inclined to be a passive marketer

# New Generation Grain Marketing Contracts

- Contracts follow prescribed rules for generating sales
- Goal is to achieve a price near or above the average price offered by the market over a given time
- Interest in new generation contracts has increased rapidly in recent years
  - one set of contracts is offered by about 650 grain elevators in a dozen Midwestern states

# Who Are the Major Players?

- **Cargill Ag Horizons**
  - <http://www.cargill.com/aghorizons/performance/marketing/us.htm>
- **E-markets/Decision Commodities**
  - [http://www.e-markets.com/drc\\_tour/index2.html](http://www.e-markets.com/drc_tour/index2.html)
- **Diversified Services**
  - <http://www.cgb.com/>
- **Many local elevators**

# Three Basic Types of New Generation Contracts

1. Automated pricing rules
2. Managed hedging
3. Combination of the first two

# Averaging Contract

- Most basic form of automated pricing rule contracts
- Average price over some pre-specified time window
  - Average futures price, you set basis, or
  - Average a local cash price
- With some exceptions, limited to pre-harvest pricing windows

# Motivation for Averaging Contracts

- Provide discipline to make systematic sales
- Finding that professionals and farmers have a tough time beating the market
- Consistent with idea of efficient markets (stock index funds)

# More Complex Forms of Automated Pricing Rule Contracts

- Loan-rate provision
- Only sell on down days
- Establish minimum, maximum price or both
- Vary proportion sold by month
- Sell only when pre-specified targets are reached

# Managed Hedging Contracts

- Bushels committed to contract are hedged according to the recommendations of a market advisory service
- Advisor may use a variety of instruments, including futures, options or forward contracts
- May include a minimum futures price



# Combination Contracts

- An automated pricing contract plus share of professional's hedging profits
  - Average price contract most typical
- May include a minimum futures price
- In addition to a service charge, may include additional incentive for professional
  - Example: if hedge in top third of price range, professional earns additional fee

## Some Potential Cautions

- Final price not known when contract is signed
- Transparency of transactions
- Ability to monitor transactions
- Creditworthiness and trustworthiness of counter-party
- Want to avoid “rogue trader” problems

# Keys to Successful Marketing

- 1) Develop a realistic marketing objective
  - ✓ average market price
  - ✓ top one-third of price range
- 2) Construct a track record of marketing performance
  - ✓ marketing pattern
  - ✓ average price received
- 3) Compute marketing benchmarks
  - ✓ market
  - ✓ peers
  - ✓ professionals

# Keys to Successful Marketing

- 4) Evaluate marketing performance
  - ✓ on average
  - ✓ by type of year: normal, short crop
- 5) Identify persistent marketing mistakes
- 6) Determine portfolio of marketing strategies
  - ✓ active
  - ✓ passive
- 7) Evaluate role of new generation contracts