(Lecture notes for the first session, 2/3/14)

Introductory Pricing/Marketing Workshop for Grains, On-Line

Introduction

Michigan State University Extension (MSUE) and Michigan CORN are offering this on-line Introductory Pricing/Marketing Workshop for Grains, two nights a week for four weeks beginning the first week of February. You may attend this workshop at either several group meetings around the state, or at your home/work computer.

How the various pricing tools, such as cash sales, forward contracts, hedging, and options work, and when to use each will be covered.

The workshop will be taught by Jim Hilker, MSU Professor and Extension Marketing Economist who has been teaching this material to students and farmers for over 30 years. Hilker has written the Outlook Article in the Michigan Farm News for over 20 years, this workshop will help you better understand his and others pricing comments.

Setting

-It can be taken at a home computer through the internet or at several group meetings around the state where the site will have a group internet connection.
-Home computer and printer are highly recommended even for those going to group meetings for background readings, printing off worksheets, and receiving messages.
-The sessions will be taped and available for review, and/or for catching up on missed sessions on your home computer.
-The lecture notes will be posted on the web page, and sent out.
-The group meetings are to facilitate discussion, which is an important learning tool; worksheets may be provided at the group meetings.
-Worksheets will be used during the workshop to get some hands on learning.
-Questions can be typed in; the group meeting will have someone to do this. Hilker will answer them verbally, and at times may email out follow up answers. He will also take emailed questions anytime and respond by email.
-Will use practice worksheets, a bit like homework; example worksheets will be available as well.

Market Outlook & Probabilistic Price Forecasts for Grain & Livestock

Jim Hilker's Market Outlook & Probabilistic Price Forecasts For Grain & Livestock

Outlook Information • **Probabilistic Price Forecasts**

Supply/Demand Balance Sheets • **Commodity Marketing Material**

Outlook Information

- Commodity Market Outlook Jim Hilker (January 22, 2014, next update February 8, 2014)
- Commodity Market Update Jim Hilker, Presentation at the Thumb Ag Day, December 11, 2013
- Dairy Market Update Craig Thomas, Michigan State University Extension, December 17, 2013)
- 2013 Annual Agricultural Outlook (Ag., Food, and Resource Economics) (February 2013) **2014 coming February 8!**
- USDA Long-Term Agricultural Projection (February 2013)
- U.S. Baseline Briefing Book, Projections for Agricultural and Biofuel Markets (Food and Agricultural Policy Research Institute, FRAPI; University of Missouri, March 2013)
- August 2013 Baseline Update for U.S. Agricultural Markets (Food and Agricultural Policy Research Institute, FRAPI; University of Missourri, August 2013)

Probabilistic Price Forecasts ***(January 30, 2014; next update February 06, 2014)***

- Instructions on how to interpret the following Probabilistic Price Forecasts
- Corn
- Wheat
- Soybeans
- Soybean Meal
- Feeder Cattle
- Live Cattle
- Lean Hogs
- Milk

USDA and Hilker Supply/Demand Balance Sheets *(USDA/Hilker January 10, 2014; USDA January 10,2014; next USDA update February 10, 2014)*

- Corn (USDA/WASDE/Hilker) Corn (USDA/WASDE)
- Wheat (USDA/WASDE/Hilker) Wheat (USDA/WASDE)
- Soybeans (USDA/WASDE/Hilker) Soybeans (USDA/WASDE)

Introductory Pricing/Marketing Workshop for Grains

(An Online Course Offered by MSUE and Michigan CORN)

Introduction and Outline

Material to Print Off: **Presentations (Next morning)**

Week 1 (Feb 3 and 5)

- Pricing Decision Chart for Sellers — Sample
- Hedge Table
- Basis Chart

Week 2 (Feb 17 and 19)

Back Ground Material

Week 1

- Introduction to Futures and Hedging
- Commodity Pricing Tools (Chapter 2)
- Crop Marketing Alternatives (Weeks 1 and 2)

Week 2

- Commodity Pricing Tools (Chapter 3)
- Crop Marketing Alternatives (Weeks 1 and 2, duplicate)

Workshop Goal

To be in a position to work with your grain merchandisers to use pricing tools, such as cash sales, forward contracts, hedging, options, minimum price contracts, and to understand and be able to recognize the correct market situation to use each pricing tool.

This workshop does not focus on forecasting prices, but rather what tools you should use given a price forecast. We do discuss forecasting the basis, as you will see and understand better as we go through the workshop.

(The next two charts were the examples (2/3/14) I used to show why pricing is important.)

Weekly Corn Futures

March 2014 Corn Futures

Week One (February 3 and 5)

Introduction and Explanation of Goal
Futures Markets
Cash Markets
Basis, the spread between Futures and Cash Markets
The four possible market situations
Brief introduction to the various pricing tools
Pricing tool(s) are appropriate for each market situation
How a hedge works, and how this understanding is Essential

Futures Market Prices – Hilker's version to make some points

Think of futures market prices as the world price, in the sense they are set by the U.S. and World Supply and Demand situation. (We will define futures market contracts in a bit)

Cash Market Price – Hilker's version

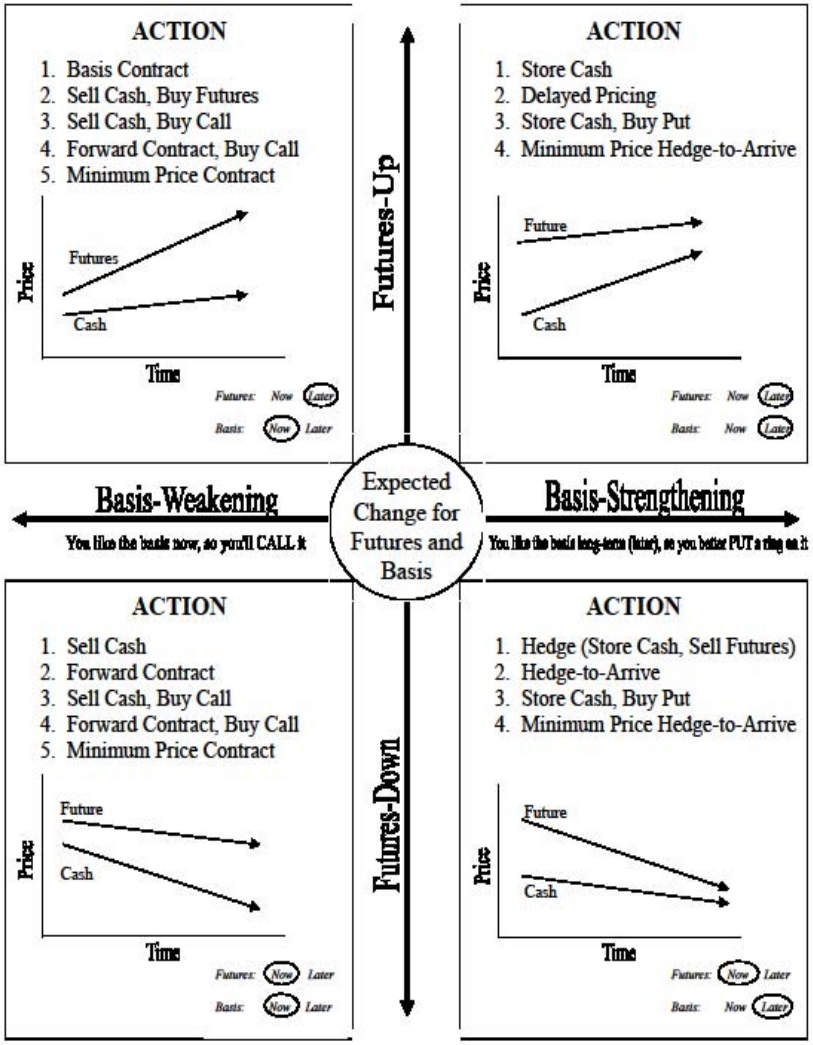
Price received at the local level, while based of the futures markets and the world supply and demand situation, they also include the distant to the futures market, storage, and *the local supply and demand situation*.

Basis

Basis is the difference between some specified cash market price and some specified futures contract price. It reflects the difference between the world situation and the local situation.

Basis defined as: Cash – Futures = Basis or C – F = B (C = F +/- B)

Pricing Decision Chart for Cash Product Sellers



The four possible market situations

1- **Futures up, basis weakening**
2- **Futures up, basis strengthening**
3- **Futures down, basis weakening**
4- **Futures down, basis strengthening**

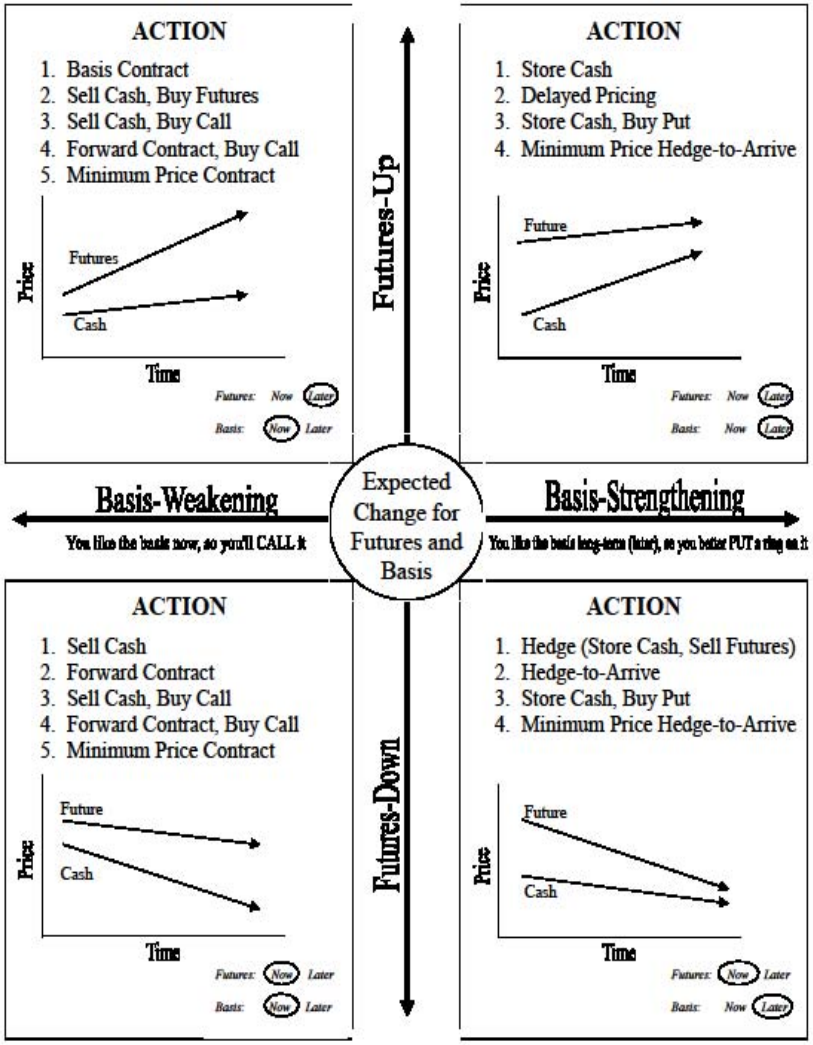
There are different pricing tools for each situation. Some tools prices just the futures, and others just the basis, and other both at once.

Before choosing the proper tool, TWO decisions need to be made.
- **Futures direction, up or down**
- **Basis direction, weakening or strengthening**

You NEVER choose a pricing tool without making TWO decisions

For example, you NEVER just decide you like the cash price, but rather you think futures are going down, and the basis may weaken.

Pricing Decision Chart for Cash Product Sellers



Understanding Hedging is a Key in understanding the above concept.

So we are going to jump in and learn how a hedge works. To understand a hedge, you have to understand futures, cash, and the basis.

But first some definitions:

Futures Contract (Short version, Hilker)

A futures contract is a legally binding commitment to deliver or take delivery of a given quantity and quality of a commodity. To deliver, you sell a futures contract. And to take delivery, you buy a futures contract. Corn contract, 5000 bushels of #2 corn

Terms and Rules:

1. Basic grade, discounts or premiums for other grades.
2. Delivery times.
3. Delivery points, inspection procedures.
4. Minimum price fluctuation.
5. Daily price limits.
6. Position limits for one trader.

Corn Futures Overview

ELEC. CORN (@C) **[10 Minute Delay]**

Month	Last	Chg	Open	High	Low	Time
Mar-14	**437'2**	3'2	433'4	438'0	433'2	08:50
May-14	**442'4**	3'0	438'6	443'2	438'6	08:50
Jul-14	**447'0**	3'0	443'4	447'6	443'2	08:49
Sep-14	**449'0**	2'6	445'6	449'6	445'6	08:49
Dec-14	**453'2**	3'2	449'6	453'6	449'4	08:50
Mar-15	**462'4**	3'2	459'0	463'0	459'0	08:49
May-15	**468'6**	3'0	467'0	469'0	466'0	08:39
Jul-15	**472'0**	2'4	471'6	472'0	471'6	08:36
Sep-15	**464'4s**	0'6	463'0	464'2	463'0	13:30
Dec-15	**464'0**	3'0	460'6	464'0	460'2	08:48

Buying and selling futures, how you can make or lose money.

(the next page is my hand written class example)

Buying and selling futures, how you can make or lose money.

Buy Sept Fut at 4.49 2/3

Sell Sept Fut at 4.69 2/15

+.20 x5000 =

Sell SeptFut 4.29 2/50

-.20

Sell Sept Fut at 4.49 2/5

Buy Sept Fut at 4.29 2/15

+.20

Buy Sept at 4.69 2/5

-.20

Economic Functions of Futures Markets

1. Transfer risk, allow pricing in advance:
   a. Speculators;
   b. Hedgers.
2. Price discovery.
3. Information collection and dissemination.
4. Coordination of economic activity. Reduces cost of marketing.
5. Market stabilization.
6. Flexibility in pricing products and inputs.

Hedging

Definition: Taking an opposite position in the futures market as in the cash market, concurrently.

Concept of how a hedge works, leaving out the basis and costs:

(The next page is my hand written class example)

Hedging

Definition: Taking an opposite position in the futures market as in the cash market, concurrently.

P ↑ ↓

Concept of how a hedge works:

	Fut	Cash	Long
Sell Last	4.49	4.49	B = C − 4
Buy	4.69	Store	0 = 4.49 − 4.49
	−.20	4.69	
		+.20	

net 0

sell cash 4.69
Last Fut −.20
4.49

Sell Fut	4.49	Store Cash	4.49
Buy Fut	4.29		4.29
	+.20		−.20

Net Price

net 0

sell cash
4.29
+.20
4.49

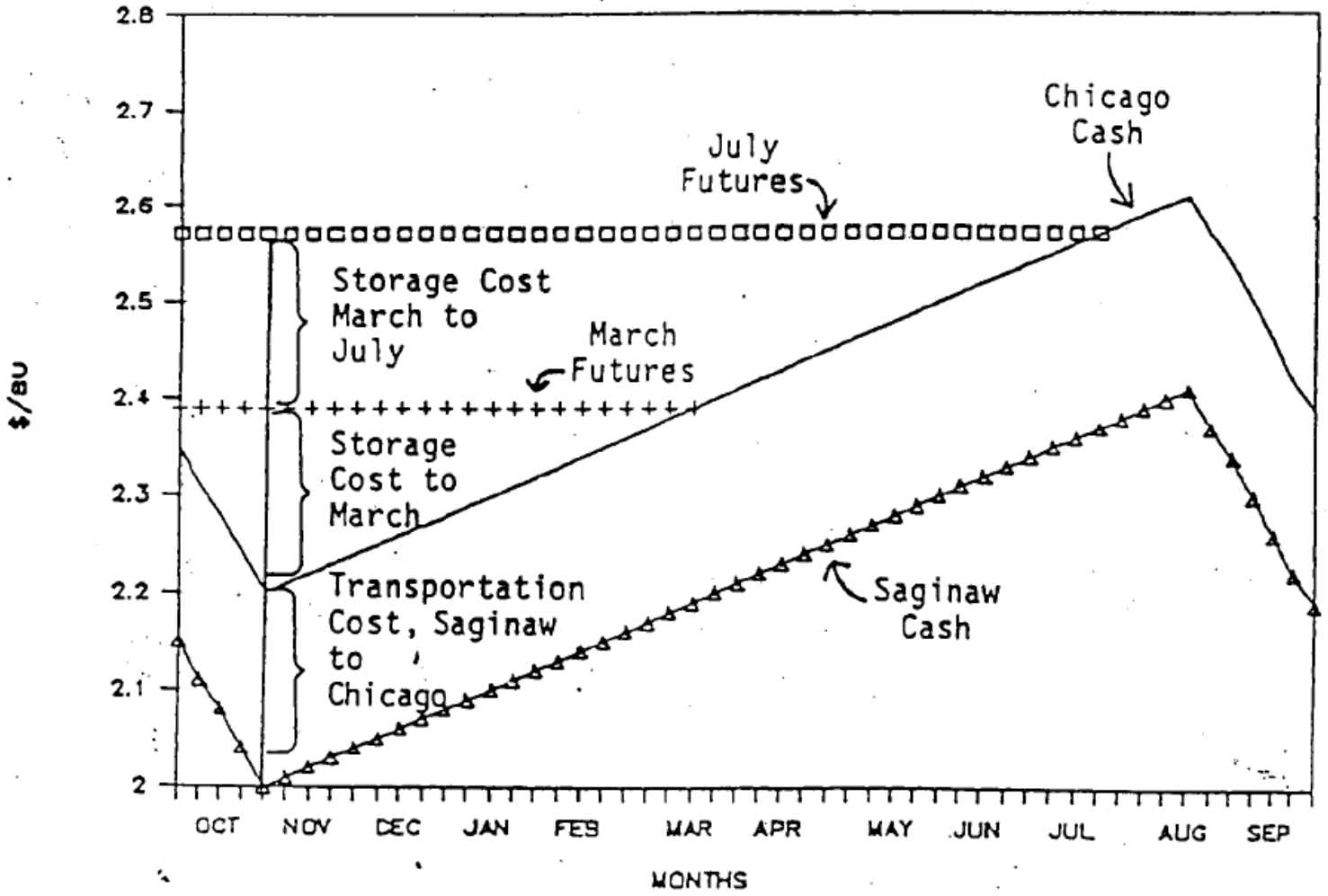
Basis

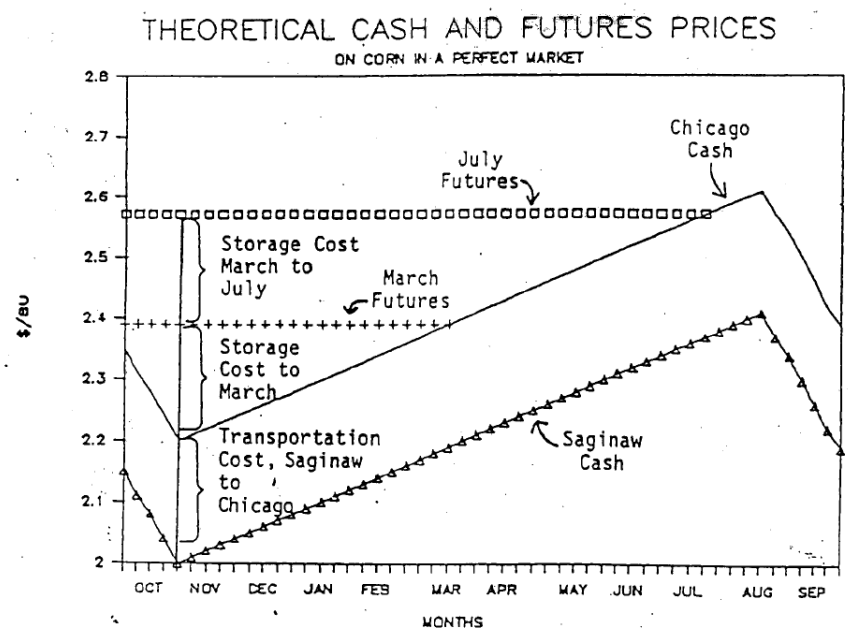
Definition: "Basis" is the difference between some specified cash market price and some specified futures contract.

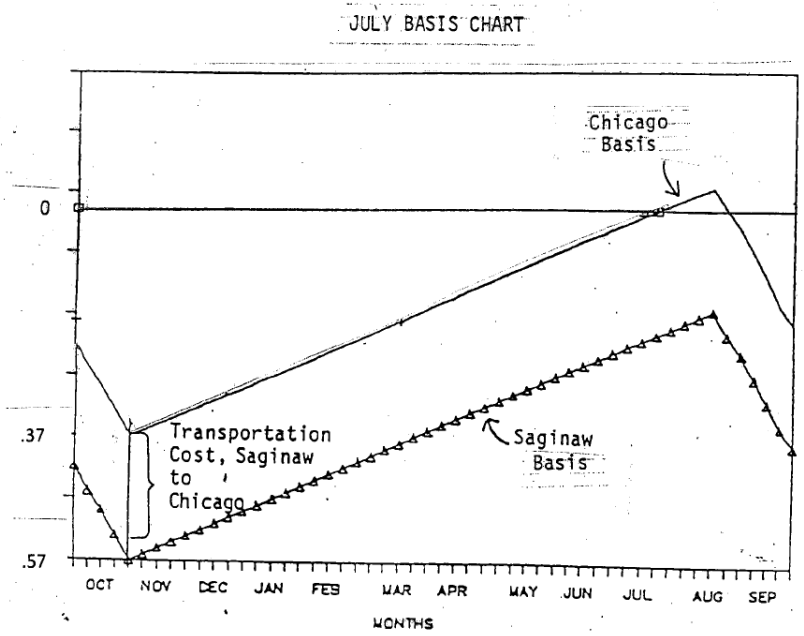
Importance: The key to effective hedging is that the "basis" is reasonably predictable as delivery time approaches. Basis risk is small relative to the risk in the level of price. "Arbitrage" tends to keep basis risk small.

THEORETICAL CASH AND FUTURES PRICES

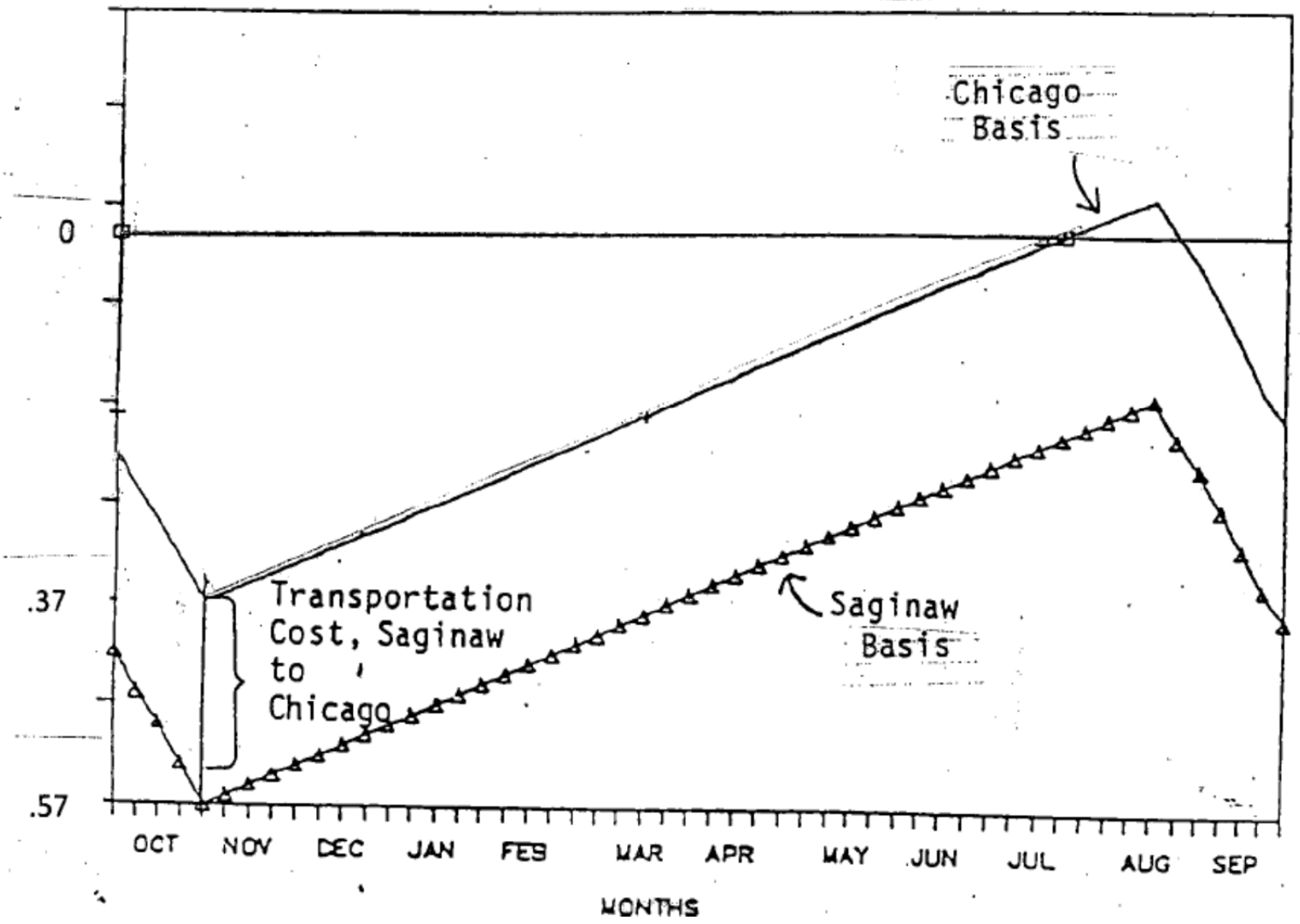
ON CORN IN A PERFECT MARKET




THEORETICAL CASH AND FUTURES PRICES
ON CORN IN A PERFECT MARKET
$/BU
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
Chicago Cash
July Futures
Storage Cost March to July
March Futures
Storage Cost to March
Transportation Cost, Saginaw to Chicago
Saginaw Cash
OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP
MONTHS


JULY BASIS CHART
Chicago Basis
0
.37
.57
Transportation Cost, Saginaw to Chicago
Saginaw Basis
OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP
MONTHS

JULY BASIS CHART



Corn Futures Overview

ELEC. CORN (@C) [10 Minute Delay]

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May-14	441'6s	2'2	438'6	444'4	438'6	13:30
Jul-14	446'6s	2'6	443'4	449'6	443'2	13:30
Sep-14	449'0s	2'6	445'6	451'4	445'6	13:30
Dec-14	453'0s	3'0	449'6	455'4	449'4	13:30
Mar-15	462'0s	2'6	459'0	464'4	459'0	13:30
May-15	468'0s	2'2	467'0	470'4	466'0	13:30
Jul-15	471'0s	1'4	471'6	474'0	469'4	13:30
Sep-15	466'2s	1'6	467'0	467'0	466'0	13:30
Dec-15	463'6s	2'6	460'6	466'4	460'2	13:30

Information needed for a hedge.

(All per bushel)

July Corn Futures	**$4.47, 2/3/14**
Cash Price	**$3.96, 2/3/14**
Expected basis =	**$0.30, 6/18/14**
Monthly storage costs	**$0.02**
Brokerage cost	**$0.01**

(will fill out several hedge tables Wednesday, 2/5/14)

HEDGE TABLE

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
Gain (+) or Loss (-)						
Storage Costs						
Net From Cash Market						
Brokerage						
Net From Futures						
Net From Hedge						
Net Price Received						
Net Price Expected						