

(Lecture notes for the Week 1 Second session, Wednesday, 2/5/14)

Introductory Pricing/Marketing Workshop for Grains, On-Line

Review

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 $C - F = B$ ($C = F +/- B$)

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 price just the futures, and others just the basis, and others 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.

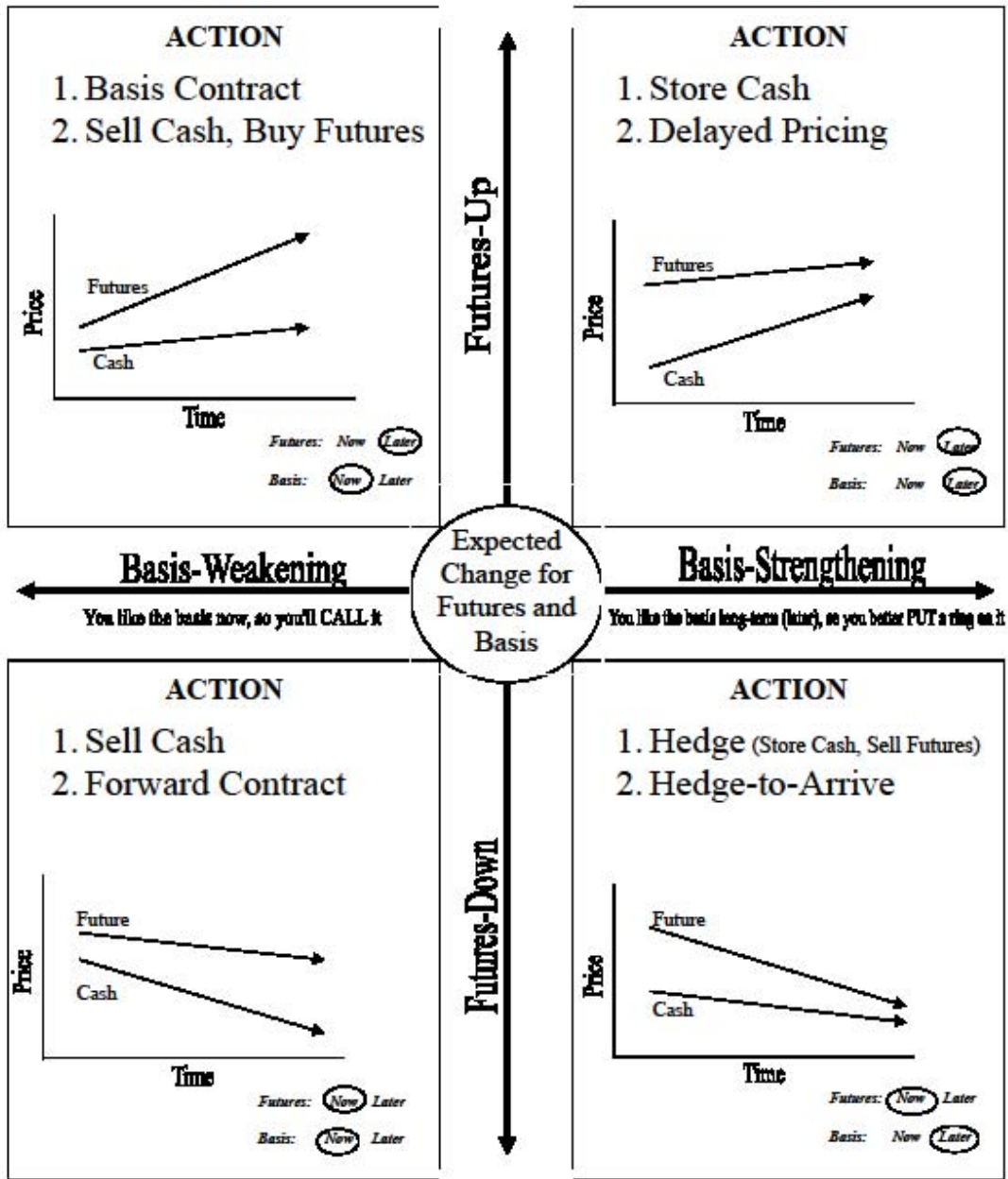
Hedging

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

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.

Pricing Decision Chart for Cash Product Sellers

















My DTN Cash Bids for Postal Code 48824, Radius 100 miles

[More DTN Cash Bids...](#)

Elevator	Distance (miles)	Corn	Soybeans	HRW #1	SRW	Wheat/Soft White
	Currency/Units:	USD/BU	USD/BU	---	USD/BU	---
THE ANDERSONS	10	4.00	---	---	---	---

Corn Futures Overview

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

	Month	Last	Chg	Open	High	Low	Time
 	Mar-14	440'0	-1'6	441'0	442'0	439'2	09:14
 	May-14	445'6	-2'0	447'0	448'0	445'2	09:14
 	Jul-14	450'6	-2'0	452'0	452'6	450'2	09:14
 	Sep-14	453'2	-2'2	454'4	455'0	452'6	09:15
 	Dec-14	457'2	-2'0	458'2	459'0	456'2	09:14
 	Mar-15	466'0	-2'0	466'6	467'6	465'2	09:14
 	May-15	472'4	-1'4	471'4	473'2	471'4	09:14
 	Jul-15	475'0	-1'6	475'6	477'0	474'4	09:09
 	Sep-15	466'6	-2'6	466'6	466'6	466'6	08:48
 	Dec-15	467'0	-2'2	468'6	469'0	466'4	09:15

Information needed for a hedge.

(All per bushel)		Date
July Corn Futures	\$4.51	2/5/14
Cash Price	\$4.00	2/5/14
Expected basis on	-\$0.30	6/18/14 (Historical Olympic 5-year Average)
Monthly storage costs	\$0.02	

HEDGE TABLE (Futures Down, Perfect Hedge)

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

↓
HEDGE TABLE (Futures Down, Perfect Hedge)

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
2/5/14	Store (Buy)	4.00.	Sell Fut July	4.51	-.51	-.51.
6/17/14	Sell	3.70	Buy July	4.00	-.30	-.30
Gain (+) or Loss (-)		-130.		+1.51	+1.21	+1.21
Storage Cost 4.5×2		<u>-1.09</u>			-1.09	-1.09
Net From Cash Market		-139				
Brokerage				<u>-1.01</u>	-1.01	-1.01
Net From Futures		<u>+1.50</u>		<u>+1.50</u>		
<u>Net From Hedge</u>		<u>+1.11</u>		<u>+1.11</u>		
Net Price Received		<u>4.11</u>				
Net Price Expected		<u>4.11</u>				
		4.00 + .11				

$$\begin{array}{r} 3.70 \\ + .09 \\ + 1.50 \\ \hline 4.11 \end{array}$$

0
 -30
 -51

HEDGE TABLE (Futures Down, Perfect Hedge)

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
<i>2/5/2014</i>	<i>Store</i>	<i>\$4.00</i>	<i>Sell July</i>	<i>\$4.51</i>	<i>-0.51</i>	<i>-0.51</i>
<i>6/20/2014</i>	<i>Sell</i>	<i>3.70</i>	<i>Buy July</i>	<i>4.00</i>	<i>-0.30</i>	<i>-0.30</i>
Gain (+) or Loss (-)		-0.30		+0.51	+0.21	+0.21
Storage Cost		-0.09			-0.09	-0.09
Net From Cash Market		-0.39				
Brokerage				-0.01	-0.01	-0.01
Net From Futures		+0.50		+0.50		
Net From Hedge		+0.11			+0.11	+0.11
Net Price Received		\$4.11				
Net Price Expected		\$4.11				

HEDGE TABLE (Futures up, Perfect Hedge)

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

↓
HEDGE TABLE (Futures up, Perfect Hedge)

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
2/5/14	Store	4.00	Sell July	4.51	- .51	-.51
6/20/14	Sell	4.70	Buy July	5.00	-.30 ←	-.30 ←
Gain (+) or Loss (-)		+ .70		- .49	+ .21	+ .21
Storage Cost		- .09			- .09	- .09
Net From Cash Market		+ .61				
Brokerage				- .01	- .01	- .01
Net From Futures		- .50 ←		- .50		
Net From Hedge		+ .11			+ .11	+ .11
Net Price Received		4.11				
Net Price Expected		4.11		4.20 - .09 - .01 - .50 ----- 4.11		

HEDGE TABLE (Futures Up, Perfect Hedge)

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
<i>2/5/2014</i>	<i>Store</i>	<i>\$4.00</i>	<i>Sell July</i>	<i>\$4.51</i>	<i>-0.51</i>	<i>-0.51</i>
<i>6/20/2014</i>	<i>Sell</i>	<i>4.70</i>	<i>Buy July</i>	<i>5.00</i>	<i>-0.30</i>	<i>-0.30</i>
Gain (+) or Loss (-)		<i>+0.70</i>		<i>-0.49</i>	<i>+0.21</i>	<i>+0.21</i>
Storage Cost		<i>-0.09</i>			<i>-0.09</i>	<i>-0.09</i>
Net From Cash Market		<i>+0.61</i>				
Brokerage				<i>-0.01</i>	<i>-0.01</i>	<i>-0.01</i>
Net From Futures		<i>-0.50</i>		<i>-0.50</i>		
Net From Hedge		<i>+0.11</i>			<i>+0.11</i>	<i>+0.11</i>
Net Price Received		<i>\$4.11</i>				
Net Price Expected		<i>\$4.11</i>				

HEDGE TABLE (Futures Down, Imperfect Hedge)

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

HEDGE TABLE (Futures Down, Imperfect Hedge)

CASH		FUTURES		BASIS	E.B.	
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
2/15/14	Store (Buy)	4.00	Sell July	4.51	-0.51	-0.51
6/20/14	sell	3.70	Buy July	3.95	-0.25	-0.30
Gain (+) or Loss (-)		-0.30		+0.56	+0.26	+0.21
Storage Cost		-0.09			-0.09	-0.09
Net From Cash Market		-0.39				
Brokerage				-0.01	-0.01	-0.01
Net From Futures		+0.55		+0.55		
Net From Hedge		+0.16		+0.16		+0.11
Net Price Received		4.16				
Net Price Expected		4.11				

3.70
- 3.95

4/20/14

-0.25
26
-0.51

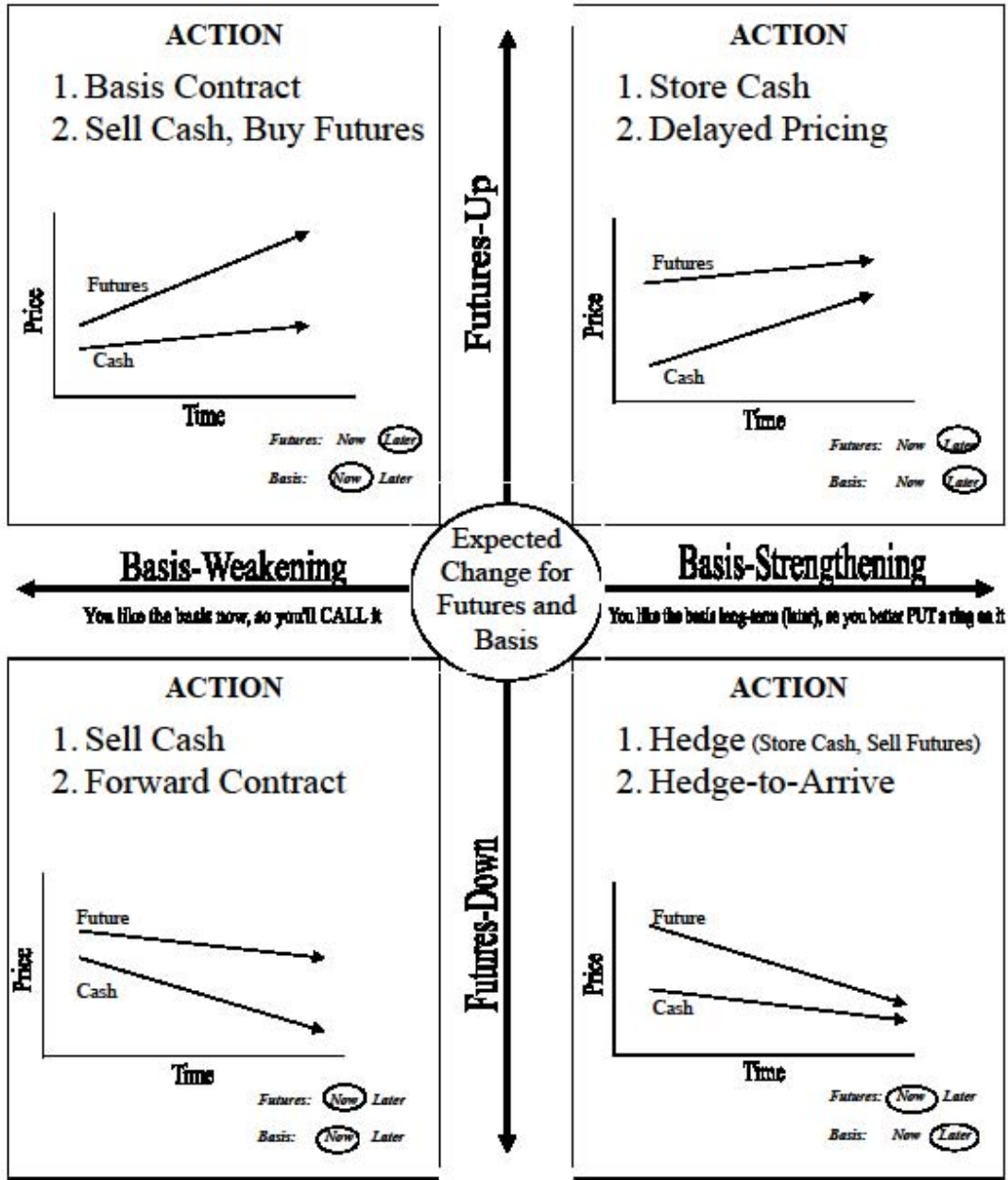
Sold 3.70
- 0.09
+ 0.55
net 4.16

4.00 + 0.11

HEDGE TABLE (Futures Down, Imperfect Hedge)

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
<i>2/5/2014</i>	<i>Store</i>	<i>\$4.00</i>	<i>Sell July</i>	<i>\$4.51</i>	<i>-0.51</i>	<i>-0.51</i>
<i>6/20/2014</i>	<i>Sell</i>	<i>3.70</i>	<i>Buy July</i>	<i>3.95</i>	<i>-0.25</i>	<i>-0.30</i>
Gain (+) or Loss (-)		<i>-0.30</i>		<i>+0.56</i>	<i>+0.26</i>	<i>+0.21</i>
Storage Cost		<i>-0.09</i>			<i>-0.09</i>	<i>-0.09</i>
Net From Cash Market		<i>-0.39</i>				
Brokerage				<i>-0.01</i>	<i>-0.01</i>	<i>-0.01</i>
Net From Futures		<i>+0.55</i>		<i>+0.55</i>		
Net From Hedge		<i>+0.16</i>			<i>+0.16</i>	<i>+0.11</i>
Net Price Received		<i>\$4.16</i>				
Net Price Expected		<i>\$4.11</i>				

Pricing Decision Chart for Cash Product Sellers























(Storage costs 6 cents/month) HEDGE TABLE (Futures Down) DON'T HEDGE!!!

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
<i>2/5/2014</i>	<i>Store</i>	<i>\$4.00</i>	<i>Sell July</i>	<i>\$4.51</i>	<i>-0.51</i>	<i>-0.51</i>
<i>6/20/2014</i>	<i>Sell</i>	<i>3.70</i>	<i>Buy July</i>	<i>4.00</i>	<i>-0.30</i>	<i>-0.30</i>
Gain (+) or Loss (-)		<i>-0.30</i>		<i>+0.51</i>	<i>+0.21</i>	<i>+0.21</i>
Storage Cost		<i>-0.26</i>			<i>-0.26</i>	<i>-0.26</i>
Net From Cash Market		<i>-0.56</i>				
Brokerage				<i>-0.01</i>	<i>-0.01</i>	<i>-0.01</i>
Net From Futures		<i>+0.50</i>		<i>+0.50</i>		
Net From Hedge		<i>-0.06</i>			<i>-0.06</i>	<i>-0.06</i>
Net Price Received		<i>\$3.94</i>				
Net Price Expected		<i>\$3.94</i>				

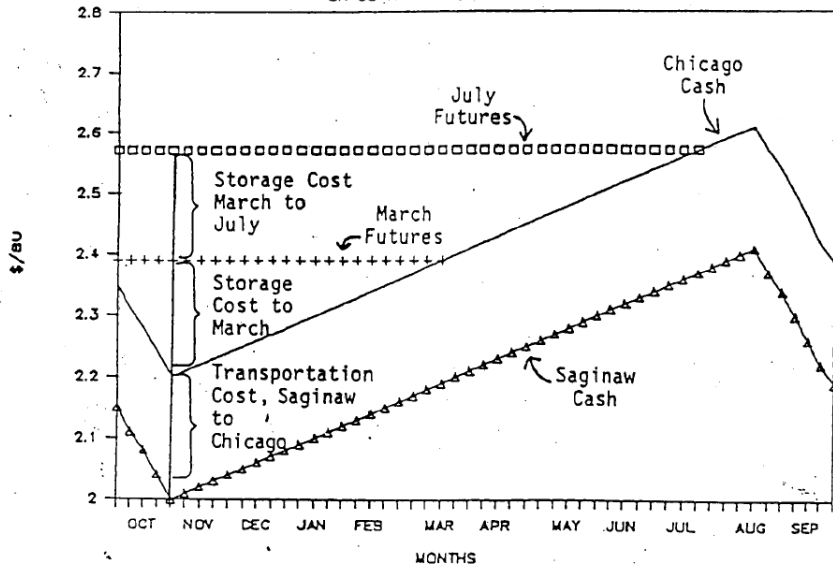
Corn Futures Overview

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

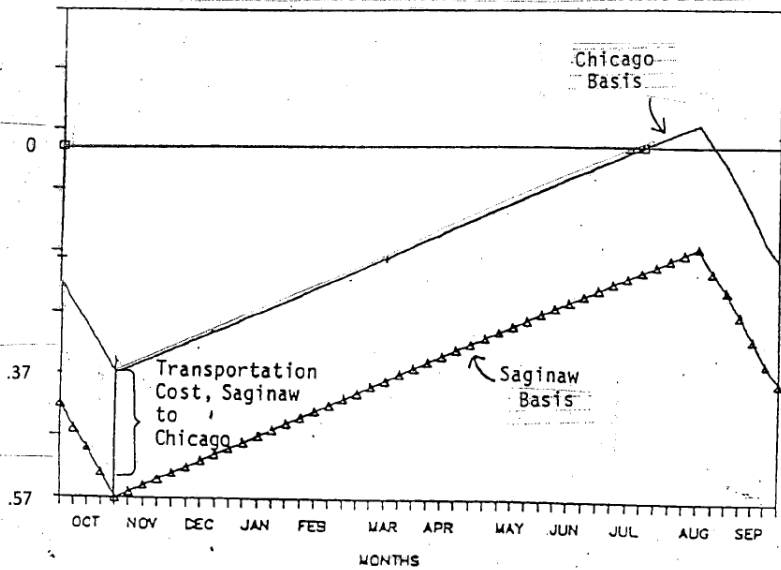
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 	May-14	445'6	-2'0	447'0	448'0	445'2	09:14
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 	Sep-14	453'2	-2'2	454'4	455'0	452'6	09:15
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 	Dec-15	467'0	-2'2	468'6	469'0	466'4	09:15

THEORETICAL CASH AND FUTURES PRICES

ON CORN IN A PERFECT MARKET



JULY BASIS CHART



















Wed, Feb 5, 2014 12:36 PM *Elevator 1 prices are USD/BU

■ Elevator 1 ■ Future(C)



Soybeans Futures Overview

ELEC. SOYBEANS (@S) [10 Minute Delay]

	Month	Last	Chg	Open	High	Low	Time
 	Mar-14	1316'2	3'0	1312'0	1321'2	1305'0	13:03
 	May-14	1298'6	1'2	1295'6	1304'2	1289'0	13:03
 	Jul-14	1280'0	0'4	1277'4	1285'0	1271'0	13:02
 	Aug-14	1234'6	1'2	1231'0	1238'6	1227'0	12:49
 	Sep-14	1160'2	0'2	1161'4	1163'6	1155'2	12:52
 	Nov-14	1111'2	0'6	1108'6	1117'0	1108'2	13:02
 	Jan-15	1115'6	0'4	1114'4	1121'0	1113'6	13:01
 	Mar-15	1121'6	2'2	1119'0	1125'6	1118'4	12:41

Information needed for a hedge.

(All per bushel)		Date	
May Soy Futures	\$12.99	2/5/14	
Cash Price	\$12.93	2/5/14	
Expected basis on	\$-0.30	4/18/14	(Historical Olympic 5-year Average)
Monthly storage costs	\$ 0.06		
Brokerage cost	\$ 0.01		

HEDGE TABLE (Soybeans)

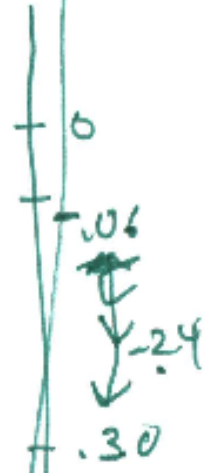
CASH		FUTURES		BASIS	E.B.	
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
Gain (+) or Loss (-) Storage Cost _____ Net From Cash Market Brokerage _____ Net From Futures _____ Net From Hedge _____ Net Price Received _____ Net Price Expected _____						

$$B = C - F$$

$$-30 = 12.00 - 12.30$$

HEDGE TABLE (Soybeans) Perfect Hedge

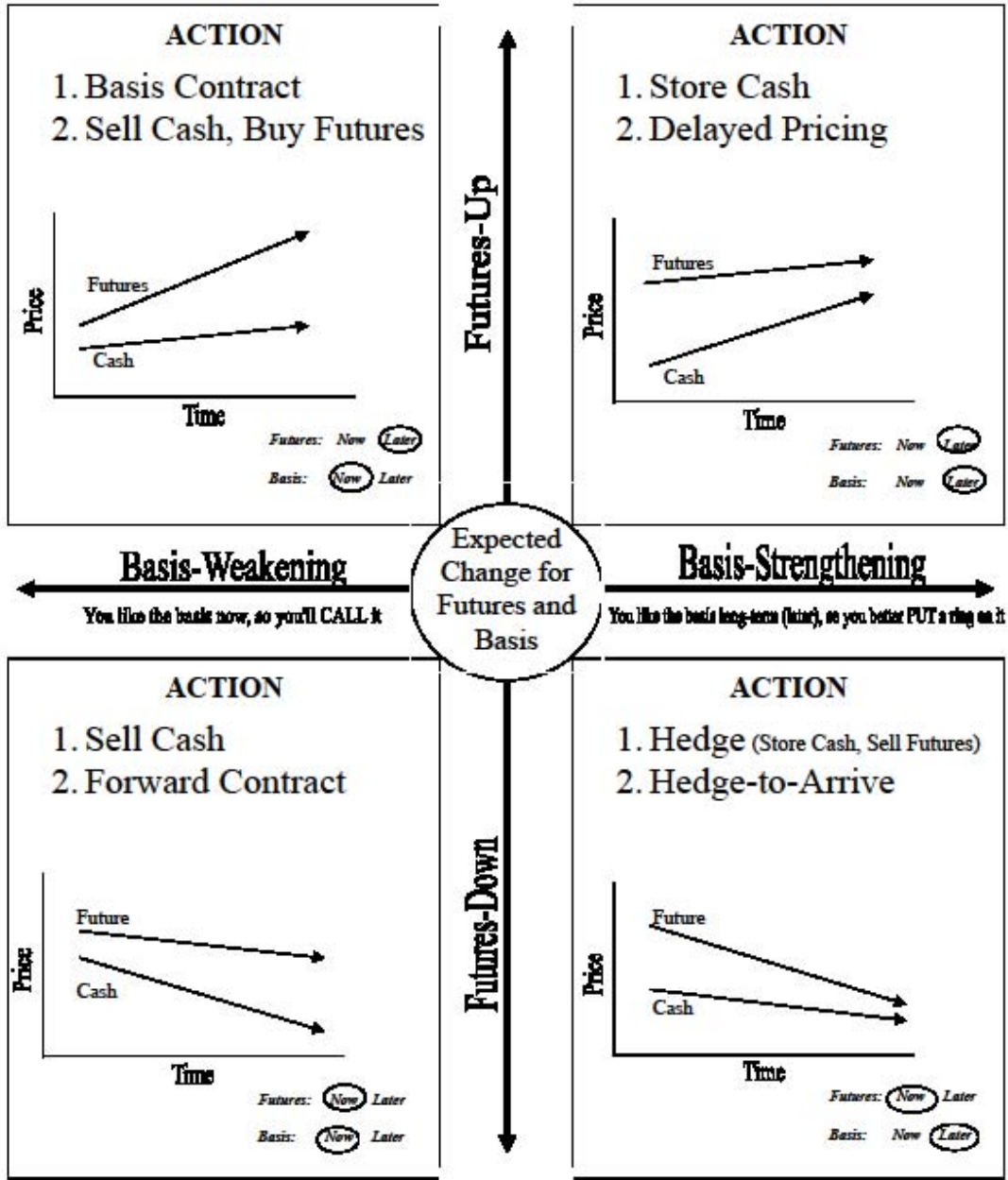
CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
2/5/14	Store (Buy)	12.93	Sell May	12.99	-0.06	-0.06
4/20/14	Sell	12.00	Buy May	12.30	-0.30	-0.30
Gain (+) or Loss (-)		-0.93		+0.69	-0.24	-0.24
Storage Cost <small>25¢/bu * 6 mos</small>		-0.15			-0.15	-0.15
Net From Cash Market		-1.08				
Brokerage				-0.01		
Net From Futures		+0.68		+0.68	-0.01	-0.01
Net From Hedge		-0.40			-0.40	-0.40
Net Price Received		12.53				
Net Price Expected		\$12.53				
		12.93 - 0.40				



HEDGE TABLE (Soybeans)

CASH			FUTURES		BASIS	E.B.
Date	Operation	¢/bu.	Operation	¢/bu.	¢/bu.	¢/bu.
<i>2/5/2014</i>	<i>Store</i>	<i>\$12.93</i>	<i>Sell May</i>	<i>\$12.99</i>	<i>-0.06</i>	<i>-0.06</i>
<i>6/20/2014</i>	<i>Sell</i>	<i>12.00</i>	<i>Buy May</i>	<i>12.30</i>	<i>-0.30</i>	<i>-0.30</i>
Gain (+) or Loss (-)		<i>-0.93</i>		<i>+0.69</i>	<i>-0.24</i>	<i>-0.24</i>
Storage Cost		<i>-0.15</i>			<i>-0.15</i>	<i>-0.15</i>
Net From Cash Market		<i>-1.08</i>				
Brokerage				<i>-0.01</i>	<i>-0.01</i>	<i>-0.01</i>
Net From Futures		<i>+0.68</i>		<i>+0.68</i>		
Net From Hedge		<i>-0.40</i>			<i>-0.40</i>	<i>-0.40</i>
Net Price Received		<i>\$12.53</i>				
Net Price Expected		<i>\$12.53</i>				

Pricing Decision Chart for Cash Product Sellers



Information needed for a hedge.

(All per bushel)		Date	
July Corn Futures	\$4.51	2/5/14	
Cash Price	\$4.00	2/5/14	
Expected basis on	\$-0.30	6/18/14	(Historical Olympic 5-year Average)
Monthly storage costs	\$0.02		
Brokerage cost	\$0.01		

Hedge (can be different only by the amount different from expected basis)

July Futures	\$4.51	or	\$4.51	or	\$4.51
Basis	-0.30		-0.25 (if)		-0.35 (if)
Storage	-0.09		-0.09		-0.09
Brokerage	<u>-0.01</u>		<u>-0.01</u>		<u>-0.01</u>
Net Price	\$4.11		\$4.16		\$4.16

Information needed for a hedge.

(All per bushel)		Date	
July Corn Futures	\$4.51	2/5/14	
Cash Price	\$4.00	2/5/14	
Expected basis on	\$-0.30	6/18/14	(Historical Olympic 5-year Average)
Monthly storage costs	\$0.02		
Brokerage cost	\$0.01		

Hedge (can be different only by the amount different from expected basis)

July Futures	\$4.51	or	\$4.51	or	\$4.51
Basis	-0.30		-0.25 (if)		-0.35 (if)
Storage	-0.09		-0.09		-0.09
Brokerage	<u>-0.01</u>		<u>-0.01</u>		<u>-0.01</u>
Net Price	\$4.11		\$4.16		\$4.16

*adjust
Futures to cash = 4.21*

4.26

Expected net

This happened

4.06

Simple Hedge Calculation

Simple Hedge Calculation

Example

4.30	Futures Today
- .20	Expected Basis (Historical)
- .10	Storage
- .05	Br
<hr/>	
3.95	net

net will only change
if actual basis
when hedge is lifted
is not expected, and
will differ by exactly
the same amount,