

(Lecture notes for the Week 4 First Session, Monday, 3/3/14)

Introductory Pricing/Marketing Workshop for Grains, On-Line

Sponsored by MSUE and Michigan CORN

Possible Road Trip to tour CME GROUP

Description and interest

Review

Old Crop Corn Decision from last session

Continue with

Old Crop Soybean Pricing Alternatives and Decisions, up and down examples

New

New Crop Corn Pricing Alternatives and Decisions, up and down examples

Next and Last Session

Looking at where we are new and old crops and the present market situation. How do we decide?

Road Trip to tour CME GROUP

Tuesday, August 12, 2014

As the world grain and other commodity markets all utilize the CME GROUP it is the clearing house for commodity trading. Our hope is to take a close look at this institution in the agricultural pricing system.

The group would take an Indian Trails charter bus to travel to Chicago, Ill. @ 7 a.m.

Arrive at the CME spending some time on the observation deck to view trading at 12 noon

USDA crop report or the close. We will have a Box lunch with a member of CME Group -

presentation to the group in the CME meeting room. Tour other firms and presentation and

take in some Chicago sites. Group will stay the evening at hotel in the Chicago area.

Wednesday, August 13. Tour grain facility and/or Chicago shipping canal (Asian carp) Corp of Engineers and/or Kraft Headquarters /or other food processor. Return home.

If you are interested in taking part in this tour we need your contact information. This is not a reservation, rather only expressing interest in potential participation.

Name:

Email:

Phone:

County:

Send this information to:

Dennis Stein @ steind@msu.edu

Or Fax to 989-673-5953 Attn: Dennis Stein

Forward Pricing Alternatives for _____ (crop) in Storage

Date	Cash Market	Hedge/Hedge-to-Arrive	Put Options (Minimum Price HTA)	Call Options (Minimum Price)
_____	Current Price 1. Forward Contract Price for _____ (Date) _____ Less Storage Costs _____ ----- Equals Net Price From Forward Contract 2. Net Government Loan Rate 3. Basis Contract Relative to _____ (Date) _____ Expected Cash Price for _____ (Date) _____ Optimistic _____ Average _____ Pessimistic _____	_____ (Futures Month) _____ (Sell) Less: Expected Basis _____ Storage Costs _____ Brokerage Costs _____ ----- Equals Net Price Expected from Hedge _____	_____ (Futures Month) _____ Strike Price _____ Less: Expected Basis _____ Storage Costs _____ Brokerage Costs _____ Option Premium _____ ----- Equals Minimum Selling Price Expected _____	_____ (Futures Month) _____ Strike Price _____ Cash Sale _____ Forward Contract _____ Less: Storage Costs _____ Brokerage Costs _____ Option Premium _____ ----- Equals Minimum Selling Price Expected _____
_____	Cash Price _____ Less Storage Costs _____ ----- Equals Net Price from Cash Sale 4. Net Price from Basis Contract = Futures today+ Basis Contract 5.	_____ (Futures Month) _____ (Buy) Actual Basis _____	_____ (Futures Month) _____ Option Premium _____ (Sell) _____ (Sell) Intrinsic Value _____ Time Value _____	_____ (Futures Month) _____ Option Premium _____ (Sell) _____ (Sell) Intrinsic Value _____ Time Value _____
	Cash Price on _____ (Date) _____ Plus Sell and Buy Futures _____ Less: Storage Costs _____ Brokerage Costs _____ ----- Equals Net Returns _____ ----- Equals Net Price Received 6.	Cash Price _____ Plus Buy and Sell Options _____ Less: Storage Costs _____ Brokerage Costs _____ ----- Equals Net Returns _____ ----- Equals Net Price Received 7. 8.	Cash Sale/Forward Contract Price _____ Plus Buy and Sell Options _____ Less: Storage Costs _____ Brokerage Costs _____ ----- Equals Net Returns _____ ----- Equals Net Price Received 9. 10.	

July 2014 Corn Futures

**Table 1. Probability Futures Price @
Maturity Will Be Less Than Stated Value**

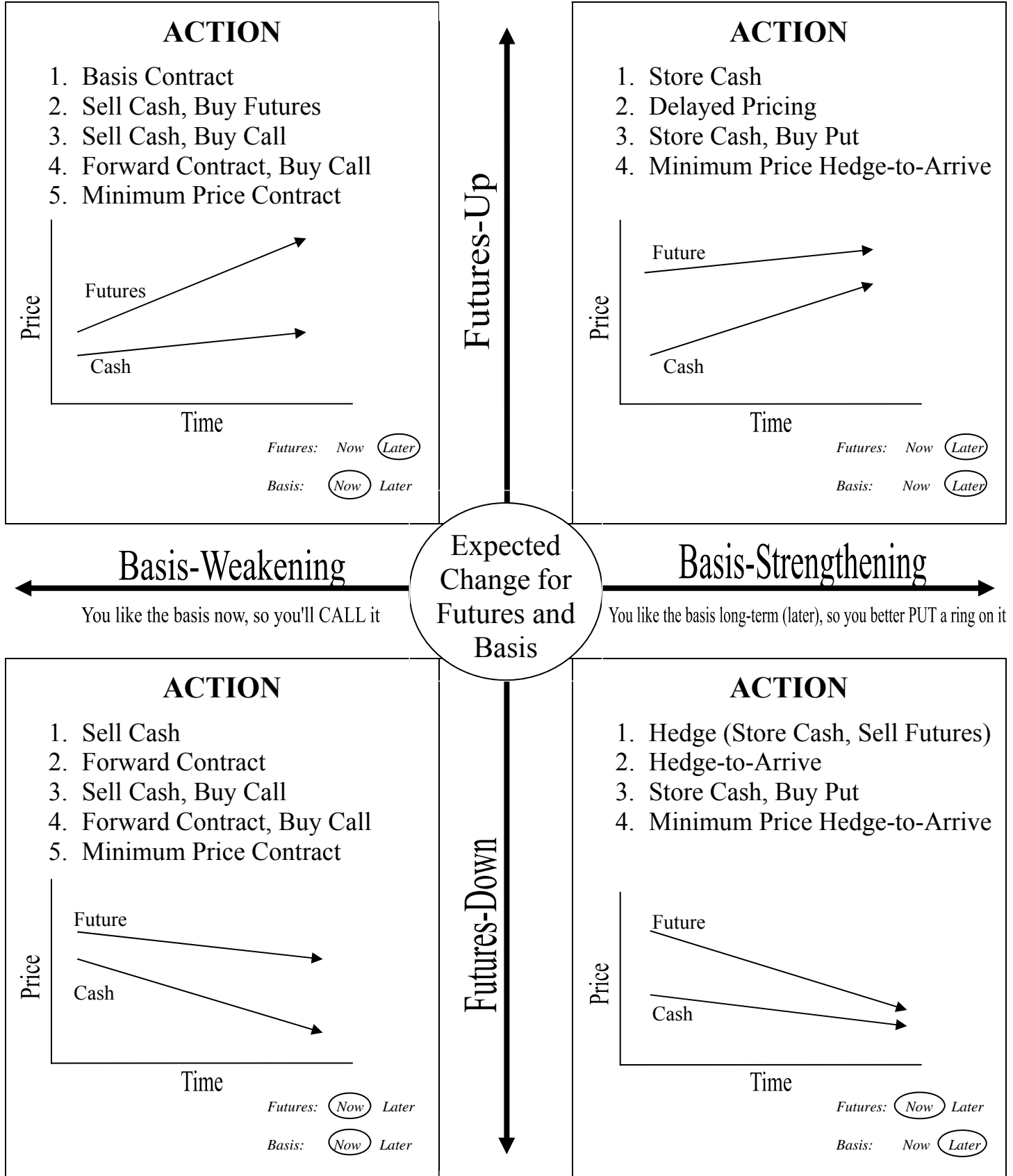
<u>Probability</u>	<u>Price</u>
10%	\$3.91
20%	\$4.15
25%	\$4.24
30%	\$4.32
40%	\$4.47
50%	\$4.63
60%	\$4.78
70%	\$4.95
75%	\$5.05
80%	\$5.16
90%	\$5.46

Forward Pricing Alternatives for Corn (crop) in Storage

Date	Cash Market	Hedge/Hedge To Arrive		Put Options (Minimum Price HTA)		Call Options (Minimum Price)				
2/24/2013	<i>Current Price</i>	<u>4.26</u>	July	<u>4.62</u>	July	<u>4.40</u>	<u>4.60</u>	July	<u>4.70</u>	<u>4.70</u>
	Forward Contract		Futures Month	Sell	Futures Month	Strike Price	Strike Price	Futures Month	Strike Price	Strike Price
	Price for:		Less:					Cash Sale	<u>4.26</u>	
	February 13, 2014	<u>4.37</u>	Expected Basis	<u>-0.20</u>	Expected Basis	<u>-0.20</u>	<u>-0.20</u>	Forward Contract		<u>4.37</u>
	Less Storage Costs	<u>-0.08</u>	Storage Costs	<u>-0.08</u>	Storage Costs	<u>-0.08</u>	<u>-0.08</u>	Storage Costs	N/A	<u>-0.08</u>
	<i>Net Price From</i>									
	<i>Forward Contract</i>	<u>4.29</u>	Brokerage Costs	<u>-0.01</u>	Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>	Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>
	Basis Contract				Options Premium	<u>-0.13</u>	<u>-0.22</u>	Options Premium	<u>-0.20</u>	<u>-0.20</u>
	Relative to:		Equals Net Price		Equals Minimum			Equals Minimum		
	July	-0.36	Expected From		Selling Price			Equals Minimum		
		Hedge	<u>4.33</u>	Expected	<u>3.98</u>	<u>4.09</u>	Selling Price	<u>4.05</u>	<u>4.08</u>	

OUTCOMES

Pricing Decision Chart for Cash Product Sellers



July 2014 Soybeans Futures and Options

February 28, 2014

July 2014 Soybean Futures \$13.8525 (13.85 ¼)

Cash \$14.09 June Forward Contract \$13.90

July 2014 Soybean Option Premiums

<u>Calls</u> <i>Buy</i>	<u>Strike</u> <u>Prices</u>	<u>Puts</u> <i>sell</i>	
1.22'2	12.80	0.17'2	
1.07'2	13.00	0.22'2	
0.93'2	13.20	0.28'1	
0.80'2	13.40	0.35'1	
0.68'4	13.60 -	0.43'3	(.43 3/8)
(.58 ¼) 0.58'2	13.80	0.53'0	(.53)
(.49 ¼) 0.49'2	14.00	0.64'0	(.64)
0.41'4	14.20	0.76'1	
0.34'6	14.40	0.89'3	
0.29'0	14.60	1.03'4	
0.24'1	14.80	1.18'5	

Forward Pricing Alternatives for _____ (crop) in Storage

Date	Cash Market	Hedge/Hedge-to-Arrive	Put Options (Minimum Price HTA)	Call Options (Minimum Price)
_____	Current Price 1. Forward Contract Price for _____ (Date) _____ Less Storage Costs _____ ----- Equals Net Price From Forward Contract 2. Net Government Loan Rate 3. Basis Contract Relative to _____ (Date) _____ Expected Cash Price for _____ (Date) _____ Optimistic _____ Average _____ Pessimistic _____	_____ (Futures Month) _____ (Sell) Less: Expected Basis _____ Storage Costs _____ Brokerage Costs _____ ----- Equals Net Price Expected from Hedge _____	_____ (Futures Month) _____ Strike Price _____ Less: Expected Basis _____ Storage Costs _____ Brokerage Costs _____ Option Premium _____ ----- Equals Minimum Selling Price Expected _____	_____ (Futures Month) _____ Strike Price _____ Cash Sale _____ Forward Contract _____ Less: Storage Costs _____ Brokerage Costs _____ Option Premium _____ ----- Equals Minimum Selling Price Expected _____
_____	Cash Price _____ Less Storage Costs _____ ----- Equals Net Price from Cash Sale 4. Net Price from Basis Contract = Futures today+ Basis Contract 5.	_____ (Futures Month) _____ (Buy) Actual Basis _____	_____ (Futures Month) _____ Option Premium _____ (Sell) _____ (Sell) Intrinsic Value _____ Time Value _____	_____ (Futures Month) _____ Option Premium _____ (Sell) _____ (Sell) Intrinsic Value _____ Time Value _____
	Cash Price on _____ (Date) _____ Plus Sell and Buy Futures _____ Less: Storage Costs _____ Brokerage Costs _____ ----- Equals Net Returns _____ ----- Equals Net Price Received 6.	_____ _____ _____ ----- _____ 6.	Cash Price _____ Plus Buy and Sell Options _____ Less: Storage Costs _____ Brokerage Costs _____ ----- Equals Net Returns _____ ----- Equals Net Price Received 7. 8.	Cash Sale/Forward Contract Price _____ Plus Buy and Sell Options _____ Less: Storage Costs _____ Brokerage Costs _____ ----- Equals Net Returns _____ ----- Equals Net Price Received 9. 10.

Forward Pricing Alternatives for

Soybean

(crop) in Storage

Date	Cash Market	Hedge/Hedge-to-Arrive	Put Options (Minimum Price HTA)	Call Options (Minimum Price)
2/28 -1/14	Current Price <u>1.14.09</u> Forward Contract Price for <u>JUNE</u> (Date) <u>13.90</u> Less Storage Costs <u>-20</u> Equals Net Price From Forward Contract <u>2.13.70</u> Net Government Loan Rate <u>3.</u> Basis Contract Relative to <u>July</u> (Date) <u>+1.24</u> Expected Cash Price for _____ (Date) <u>?</u> Optimistic _____ Average _____ Pessimistic _____	<u>July</u> (Futures Month) <u>13.85</u> (Sell) ← <u>13.85</u> Less: Expected Basis <u>0.00</u> Storage Costs <u>-.20</u> Brokerage Costs <u>-.01</u> Equals Net Price Expected from Hedge <u>13.64</u>	<u>July</u> (Futures Month) Strike Price <u>13.60</u> <u>13.80</u> Less: Expected Basis <u>0.00</u> <u>0.00</u> Storage Costs <u>-.20</u> <u>-.20</u> Brokerage Costs <u>-.01</u> <u>-.01</u> Option Premium <u>-.43</u> <u>-.53</u> Equals Minimum Selling Price Expected <u>12.99</u> <u>13.06</u> Price ↑	<u>July</u> (Futures Month) Strike Price <u>14.00</u> <u>14.00</u> Cash Sale <u>14.09</u> Forward Contract <u>13.90</u> Less: Storage Costs <u>—</u> <u>-.20</u> Brokerage Costs <u>-.01</u> <u>-.01</u> Option Premium <u>-.49</u> <u>-.49</u> Equals Minimum Selling Price Expected <u>13.59</u> <u>13.20</u> 13.80 premium → 13.50
6/15 -14	Cash Price <u>15.00</u> Less Storage Costs <u>-.20</u> Equals Net Price from Cash Sale <u>4.14.80</u> Net Price from Basis Contract = Futures today + Basis Contract <u>5.15.34</u>	<u>July</u> (Futures Month) <u>15.10</u> (Buy) Actual Basis <u>-.10</u>	<u>July</u> (Futures Month) Option Premium <u>+.01</u> <u>+.01</u> (Sell) Intrinsic Value <u>0.00</u> <u>0.00</u> Time Value <u>+.01</u> <u>+.01</u>	<u>July</u> (Futures Month) Option Premium <u>1.11</u> <u>1.11</u> (Sell) Intrinsic Value <u>1.10</u> <u>1.10</u> Time Value <u>0.01</u> <u>0.01</u> 1.11 = .49 + .62
	Cash Price on <u>June</u> (Date) <u>15.10 + .24</u> Plus Sell and Buy Futures <u>-1.25</u> Less: Storage Costs <u>-.20</u> Brokerage Costs <u>-.01</u> Equals Net Returns <u>1.46</u> Equals Net Price Received <u>6.13.54</u>	<u>15.00</u> <u>15.00</u> Equals Net Returns <u>1.46</u> Equals Net Price Received <u>6.13.54</u>	Cash Price <u>15.00</u> <u>15.00</u> Plus Buy and Sell Options <u>-.42</u> <u>-.52</u> Less: Storage Costs <u>-.20</u> <u>-.20</u> Brokerage Costs <u>-.01</u> <u>-.01</u> Equals Net Returns <u>-.63</u> <u>-.73</u> Equals Net Price Received <u>7.14.37</u> <u>8.14.25</u>	Cash Sale/Forward Contract Price <u>14.09</u> <u>13.90</u> Plus Buy and Sell Options <u>.62</u> <u>.62</u> Less: Storage Costs <u>—</u> <u>-.20</u> Brokerage Costs <u>-.01</u> <u>-.01</u> Equals Net Returns <u>+.61</u> <u>+.41</u> Equals Net Price Received <u>9.14.70</u> <u>10.14.31</u>

Forward Pricing Alternatives for Soybean (crop) in Storage

Date	Cash Market	Hedge/Hedge To Arrive			Put Options (Minimum Price HTA)			Call Options (Minimum Price)		
		Current Price	July	13.85	July	13.60	13.80	July	14.00	14.00
2/28/2014	Forward Contract		Futures Month	Sell	Futures Month	Strike Price	Strike Price	Futures Month	Strike Price	Strike Price
	Price for:		Less:					Cash Sale		
	June 15, 2014	13.90	Expected Basis	0.00	Expected Basis	0.00	0.00	Forward Contract	14.09	13.90
	Less Storage Costs	-0.20	Storage Costs	-0.20	Storage Costs	-0.20	-0.20	Storage Costs	N/A	-0.20
	Net Price From									
	Forward Contract	13.70	Brokerage Costs	-0.01	Brokerage Costs	-0.01	-0.01	Brokerage Costs	-0.01	-0.01
	Basis Contract				Options Premium	-0.43	-0.53	Options Premium	-0.49	-0.49
	Relative to:		Equals Net Price		Equals Minimum			Equals Minimum		
	July	0.24	Expected From		Selling Price			Equals Minimum		
			Hedge	13.64	Expected	12.96	13.06	Selling Price	13.59	13.20

OUTCOMES Prices Up

6/15/2014	Cash Price	15.00	July	15.10	July		July			
	Less Storage Costs	-0.20	Futures Month		Futures Month		Futures Month			
	Equals Net Price		Actual Basis	-0.10	Options Premium	0.01	0.01	Options Premium	1.11	1.11
	From Cash Sale	14.80			Intrinsic Value	0.00	0.00	Intrinsic Value	1.10	1.10
	Net Price From				Time Value	0.01	0.01	Time Value	0.01	0.01
	Basis Contract	15.34								
	Cash Price On	06/15/14		15.00		15.00	15.00	Cash Sale/ Forward Contract	14.09	13.90
	Sell and Buy Futures			-1.25	Plus Buy and Sell Options	-0.42	-0.52	Plus Buy and Sell Options	0.62	0.62
	Less:									
	Storage Costs			-0.20	Storage Costs	-0.20	-0.20	Storage Costs	N/A	-0.20
	Brokerage Costs			-0.01	Brokerage Costs	-0.01	-0.01	Brokerage Costs	-0.01	-0.01
	Equals Net Return			-1.46	Equals Net Return	-0.63	-0.73	Equals Net Return	0.61	0.41
	Equals Net Price Received			13.54		14.37	14.27		14.70	14.31

Forward Pricing Alternatives for Soybeans (crop) in Storage

Date	Cash Market	Hedge/Hedge-to-Arrive	Put Options (Minimum Price HTA)	Call Options (Minimum Price)
2/28	Current Price <u>1. \$14.09</u> Forward Contract Price for <u>June</u> (Date) <u>13.90</u> Less Storage Costs <u>- .20</u> Equals Net Price From Forward Contract <u>2. 13.70</u> Net Government Loan Rate <u>3. 5.00</u> Basis Contract Relative to <u>July</u> (Date) <u>+ .24</u> Expected Cash Price for _____ (Date) Optimistic _____ Average _____ Pessimistic _____	July <u>13.85</u> (Futures Month) (Sell) Less: Expected Basis <u>0.00</u> Storage Costs <u>-0.20</u> Brokerage Costs <u>-0.01</u> Equals Net Price Expected from Hedge <u>13.64</u>	July _____ (Futures Month) Strike Price <u>13.60</u> <u>13.80</u> Less: Expected Basis <u>0.00</u> <u>0.00</u> Storage Costs <u>-0.20</u> <u>-0.20</u> Brokerage Costs <u>-0.01</u> <u>-0.01</u> Option Premium <u>-0.43</u> <u>-0.53</u> Equals Minimum Selling Price Expected <u>12.96</u> <u>13.06</u>	July _____ (Futures Month) Strike Price <u>14.00</u> <u>14.00</u> Cash Sale <u>14.09</u> Forward Contract _____ <u>13.90</u> Less: Storage Costs _____ <u>-0.20</u> Brokerage Costs <u>-0.01</u> <u>-0.01</u> Option Premium <u>-0.43</u> <u>-0.43</u> Equals Minimum Selling Price Expected <u>13.59</u> <u>13.20</u>
	Cash Price <u>11.90</u> Less Storage Costs <u>- .20</u> Equals Net Price from Cash Sale <u>4. 11.70</u> Net Price from Basis Contract = Futures today + Basis Contract <u>5. 12.24</u>	July <u>12.00</u> (Futures Month) (Buy) Actual Basis <u>- .10</u>	July _____ (Futures Month) Option Premium <u>1.61</u> <u>1.81</u> (Sell) (Sell) Intrinsic Value <u>1.60</u> <u>1.80</u> Time Value <u>.01</u> <u>.01</u>	July _____ (Futures Month) Option Premium <u>.01</u> <u>.01</u> (Sell) (Sell) Intrinsic Value _____ Time Value <u>.01</u> <u>.01</u>
	Cash Price on <u>July</u> (Date) <u>12.00 + 24</u> Plus Sell and Buy Futures <u>+ 1.85</u> Less: Storage Costs <u>- .20</u> Brokerage Costs <u>- .01</u> Equals Net Returns <u>1.64</u> Equals Net Price Received <u>6. 13.54</u>	<u>11.90</u> <u>+ 1.85</u> <u>- .20</u> <u>- .01</u> <u>1.64</u> <u>6. 13.54</u>	Cash Price <u>11.90</u> <u>11.90</u> Plus Buy and Sell Options <u>1.18</u> <u>1.28</u> Less: Storage Costs <u>- .20</u> <u>- .20</u> Brokerage Costs <u>- .01</u> <u>- .01</u> Equals Net Returns <u>+ .97</u> <u>1.07</u> Equals Net Price Received <u>7. 12.87</u> <u>8. 12.97</u>	Cash Sale/Forward Contract Price <u>14.09</u> <u>13.90</u> Plus Buy and Sell Options <u>1.63 .83</u> Less: Storage Costs <u>- .48</u> <u>- .48</u> Brokerage Costs <u>- .01</u> <u>- .01</u> Equals Net Returns <u>- .49</u> <u>- .69</u> Equals Net Price Received <u>9. 13.61</u> <u>10. 13.21</u>

Prices ↓

~~13.44~~ ~~13.05~~
- .49 = 13.19

13.60

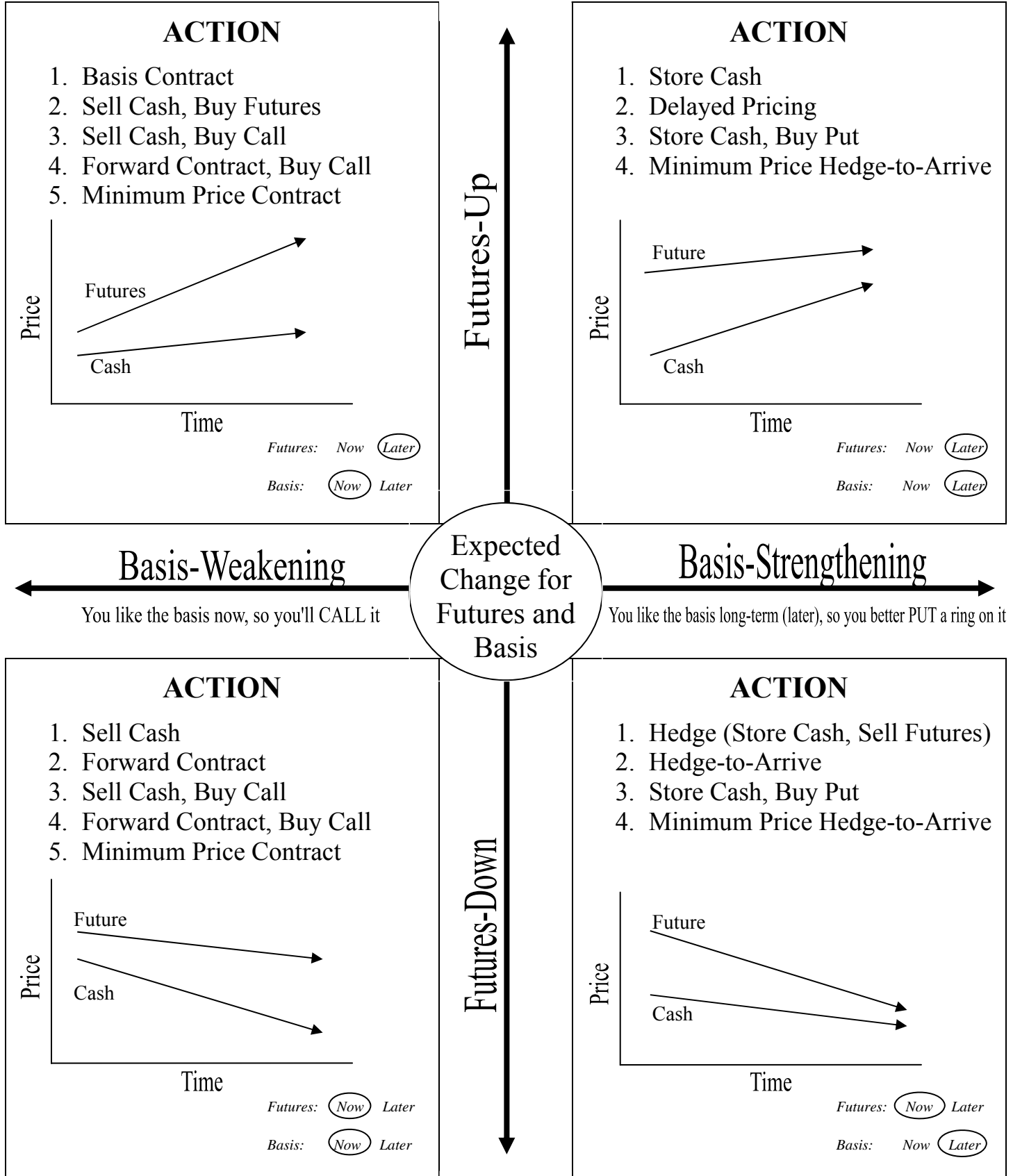
Forward Pricing Alternatives for Soybean (crop) in Storage

Date	Cash Market	Hedge/Hedge To Arrive			Put Options (Minimum Price HTA)			Call Options (Minimum Price)		
		Current Price	July	13.85	July	13.60	13.80	July	14.00	14.00
2/28/2014	Forward Contract		Futures Month	Sell	Futures Month	Strike Price	Strike Price	Futures Month	Strike Price	Strike Price
	Price for:		Less:					Cash Sale		
	June 15, 2014	13.90	Expected Basis	0.00	Expected Basis	0.00	0.00	Forward Contract	14.09	13.90
	Less Storage Costs	-0.20	Storage Costs	-0.20	Storage Costs	-0.20	-0.20	Storage Costs	N/A	-0.20
	Net Price From									
	Forward Contract	13.70	Brokerage Costs	-0.01	Brokerage Costs	-0.01	-0.01	Brokerage Costs	-0.01	-0.01
	Basis Contract				Options Premium	-0.43	-0.53	Options Premium	-0.49	-0.49
	Relative to:		Equals Net Price		Equals Minimum			Equals Minimum		
	July	0.24	Expected From		Selling Price			Equals Minimum		
			Hedge	13.64	Expected	12.96	13.06	Selling Price	13.59	13.20

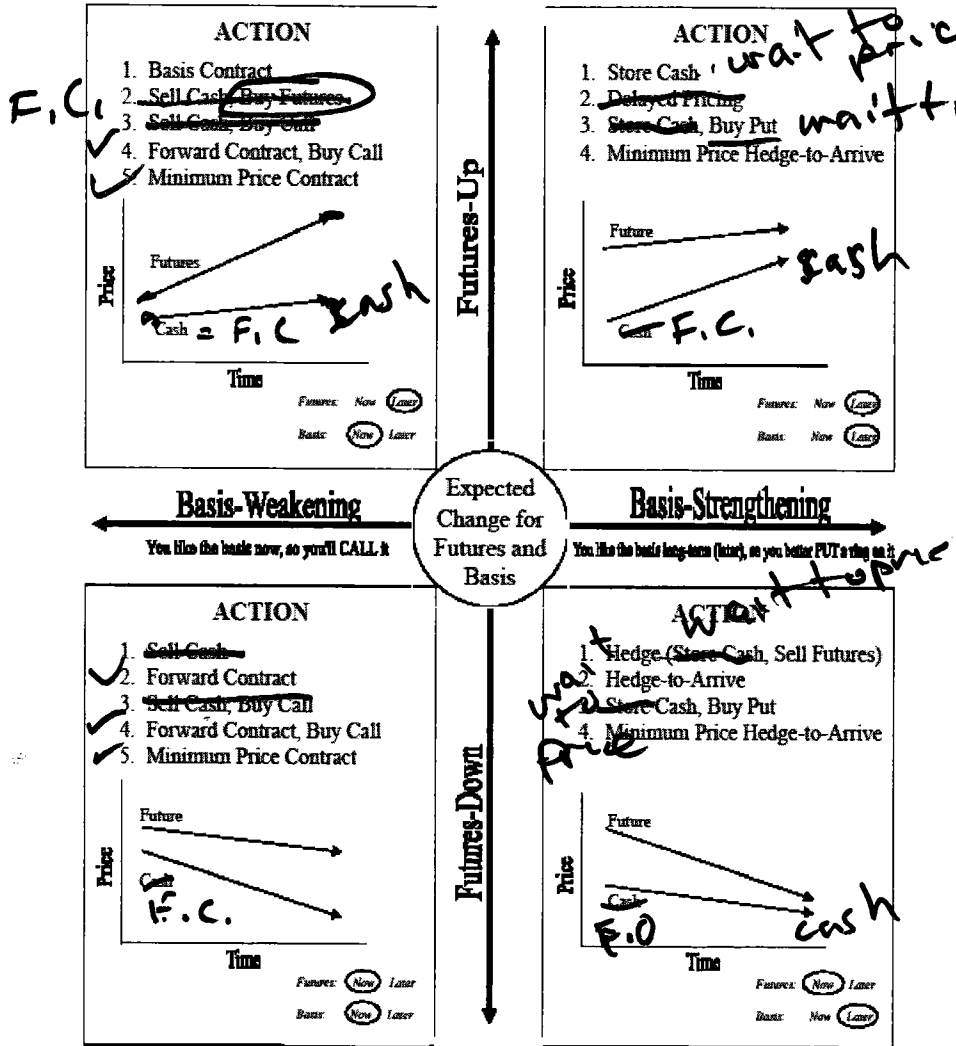
OUTCOMES h)

6/15/2014	Cash Price	11.90	July	12.00	July			July		
	Less Storage Costs	-0.20	Futures Month		Futures Month			Futures Month		
	Equals Net Price		Actual Basis	-0.10	Options Premium	1.61	1.81	Options Premium	0.01	0.01
	From Cash Sale	11.70			Intrinsic Value	1.60	1.80	Intrinsic Value	0.00	0.00
	Net Price From				Time Value	0.01	0.01	Time Value	0.01	0.01
	Basis Contract	12.24								
	Cash Price On	06/15/14		11.90		11.90	11.90	Cash Sale/ Forward Contract	14.09	13.90
	Sell and Buy Futures		1.85		Plus Buy and Sell Options	1.18	1.28	Plus Buy and Sell Options	-0.48	-0.48
	Less:									
	Storage Costs		-0.20		Storage Costs	-0.20	-0.20	Storage Costs	N/A	-0.20
	Brokerage Costs		-0.01		Brokerage Costs	-0.01	-0.01	Brokerage Costs	-0.01	-0.01
	Equals Net Return		1.64	Equals Net Return	0.97	1.07	Equals Net Return	-0.49	-0.69	
	Equals Net Price Received		13.54			12.87	12.97		13.60	13.21

Pricing Decision Chart for Cash Product Sellers



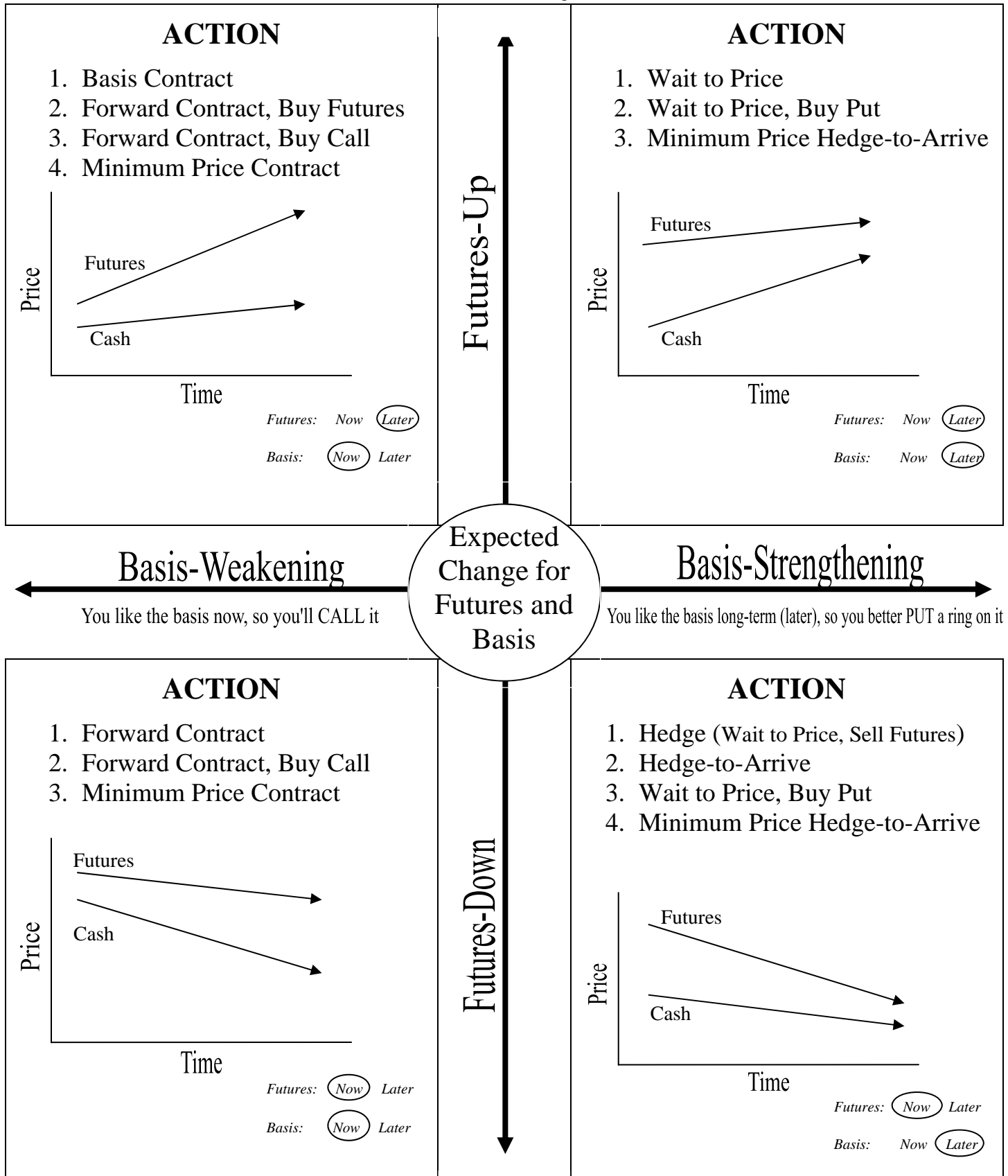
New Crop
Pricing Decision Chart for Cash Product Sellers



No Storage Costs
How we Basis Contract
F.I. Fut
See next Page!
Made New Crop Pricing Decision Chart!!

Pricing Decision Chart for Cash Product Sellers

"New Crop"



December 2014 Corn Futures and Options

February 28, 2014

Dec 2014 Corn Futures \$4.715 (4.71 ½)

Fall 14 Delivery Forward Contract \$4.21

Dec 2014 Corn Option Premiums

<u>Calls</u>	<u>Strike</u>	<u>Puts</u>
	<u>Prices</u>	
.66'4	4.20	.15'3
.60'1	4.30	.18'7
.53'7	4.40	.22'5
.48'3	4.50	.27'0
.43'2	4.60	.31'7
.38'5	4.70	.37'7
.34'3	4.80	.42'7
.30'5	4.90	.49'0
.27'1	5.00	.55'4
.24'0	5.10	.62'2
.21'2	5.20	.69'4

I
FORWARD PRICING ALTERNATIVES FOR NEW CROP _____

Top Half ↘

Date	Cash Market	Futures	Put Options	Forward Contract and Buy Calls
	Production Cost \$ _____ Forward Contract Price (1) <input style="width: 50px;" type="text"/> Basis Contract Relative to _____ (Futures Month) Net Government Loan Rate (2)* <input style="width: 50px;" type="text"/> Expected Harvest Price Optimistic _____ Average _____ Pessimistic _____	_____ (Futures Month) (Sell) Less: Expected Basis ^b _____ Brokerage Costs ^c _____ Equals Net Price Expected From Hedge _____	_____ (Futures Month) Strike Price _____ Less: Option Premium _____ (Buy) (Buy) Expected Basis ^b _____ Brokerage Costs ^c _____ Equals Minimum Selling Price Expected _____	_____ (Futures Month) Strike Price _____ Forward Contract Price _____ Less: Option Premium _____ Brokerage Costs ^c _____ Equals Minimum Selling Price _____
	Harvest Price (3) <input style="width: 50px;" type="text"/> Net Price From Basis Contract = Futures + Basis Contract (4) <input style="width: 50px;" type="text"/>	_____ (Futures Month) (Buy) Actual Basis ^d _____	_____ (Futures Month) Optimum Premium ^e _____ (Sell) (Sell)	_____ (Sell)
	Net Price Received From Hedge and Options Cash Price at Harvest Plus Net Returns From Futures and Options Sell and Buy (Futures) or Buy and Sell (Options) Less Brokerage Costs ^c Equals Net Returns Equals Net Price Received	_____ _____ _____ (5) <input style="width: 50px;" type="text"/>	_____ _____ _____ _____ (6) <input style="width: 50px;" type="text"/> (7) <input style="width: 50px;" type="text"/>	Forward Contract Price _____ _____ _____ (8) <input style="width: 50px;" type="text"/>

Bottom Half ↗

*Government loan rate less storage costs to maturity.
^bThe expected value, at harvest, of the cash price less the given futures.
^cCommissions and interest on margins or premiums.
^dThe actual value, at harvest, of the cash price less the given futures.

FORWARD PRICING ALTERNATIVES FOR NEW CROP

Corn PL

Top Half ↘

Date	Cash Market	Futures	Put Options	Forward Contract and Buy Calls
2/28 1/4	Production Cost \$ <u>4.50</u> Forward Contract Price (1) → <u>4.21</u> Basis Contract Relative to <u>Dec</u> (Futures Month) <u>-1.50</u> Net Government Loan Rate (2) <u> </u> Expected Harvest Price Optimistic <u> </u> Average <u> </u> Pessimistic <u> </u>	<u>Dec</u> <u>4.71</u> (Futures Month) (Sell) Less: Expected Basis ^b <u>-0.45</u> Brokerage Costs ^c <u>-0.01</u> Equals Net Price Expected From Hedge <u>4.25</u>	<u>Dec</u> (Futures Month) Strike Price <u>4.60</u> <u>4.70</u> Less: Option Premium <u>-0.32</u> <u>-0.38</u> (Buy) (Buy) Expected Basis ^b <u>-1.45</u> <u>-1.45</u> Brokerage Costs ^c <u>-0.01</u> <u>-0.01</u> Equals Minimum Selling Price Expected <u>3.82</u> <u>3.95</u>	<u>Dec</u> (Futures Month) Strike Price <u>4.70</u> Forward Contract Price <u>4.21</u> Less: Option Premium <u>-1.39</u> Brokerage Costs ^c <u>-0.01</u> Equals Minimum Selling Price <u>3.81</u>
Oct 15 2014	Harvest Price (3) <u>3.25</u> Net Price From Basis Contract = Futures + Basis Contract (4) <u>3.30</u>	<u>Dec</u> <u>3.80</u> (Futures Month) (Buy) Actual Basis ^d <u>-1.55</u>	<u>Dec</u> (Futures Month) Optimum Premium ^e <u>+0.81</u> <u>+0.91</u> (Sell) (Sell)	T.U. <u>0.01</u> (Sell)
	Net Price Received From Hedge and Options Cash Price at Harvest Plus Net Returns From Futures and Options Sell and Buy (Futures) or Buy and Sell (Options) Less Brokerage Costs ^c Equals Net Returns Equals Net Price Received	<u>3.25</u> <u>+0.91</u> <u>-0.01</u> <u>4.15</u> (5)	<u>3.25</u> <u>3.25</u> <u>+0.49</u> <u>-0.10</u> <u>3.73</u> <u>3.77</u> (6) (7)	Forward Contract Price <u>4.21</u> <u>-0.38</u> <u>-0.01</u> <u>3.82</u> (8)

Bottom Half ↗

^aGovernment loan rate less storage costs to maturity.
^bThe expected value, at harvest, of the cash price less the given futures.
^cCommissions and interest on margins or premiums.
^dThe actual value, at harvest, of the cash price less the given futures.

Forward Pricing Alternatives for New Crop

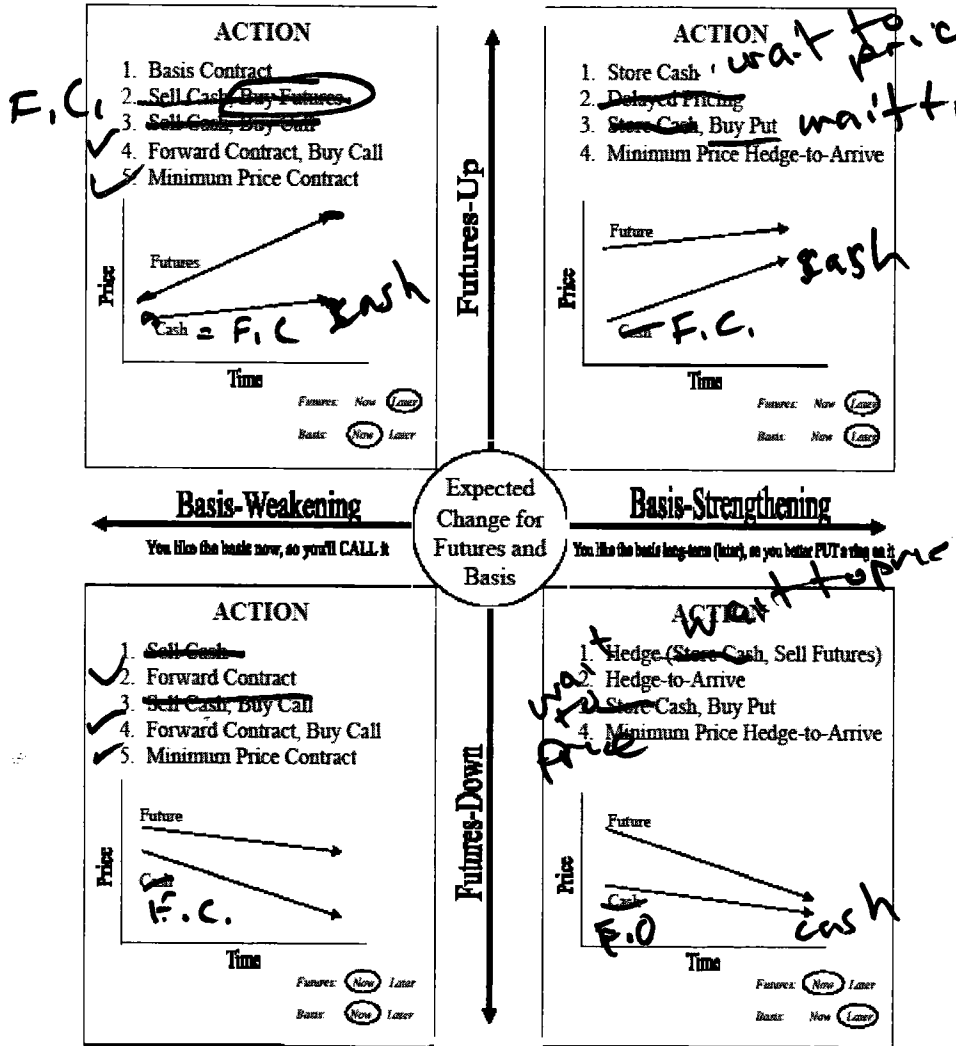
Corn

Date	Cash Market	Hedge/Hedge To Arrive		Put Options (Minimum Price HTA)			Call Options (Minimum Price)			
	Production Costs	<u>4.50</u>	December	<u>4.71</u>	December	<u>4.60</u>	<u>4.70</u>	December	<u>4.70</u>	<u>4.80</u>
2/28/2014	Forward Contract Price for:		Futures Month	Sell	Futures Month	Strike Price	Strike Price	Futures Month	Strike Price	Strike Price
	October 15, 2014	<u>4.21</u>	Expected Basis	<u>-0.45</u>	Expected Basis	<u>-0.45</u>	<u>-0.45</u>	Forward Contract	<u>4.21</u>	<u>4.21</u>
	Basis Contract Relative to:		Brokerage Costs	<u>-0.01</u>	Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>	Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>
	December	<u>-0.50</u>			Options Premium	<u>-0.32</u>	<u>-0.38</u>	Options Premium	<u>-0.39</u>	<u>-0.34</u>
			Equals Net Price		Equals Minimum			Equals Minimum		
			Expected From		Selling Price			Equals Minimum		
			Hedge	<u>4.25</u>	Expected	<u>3.82</u>	<u>3.86</u>	Selling Price	<u>3.81</u>	<u>3.86</u>

OUTCOMES

10/15/2014	Harvest Price	<u>3.25</u>	December	<u>3.80</u>	December			December		
			Futures Month		Futures Month			Futures Month		
	Net Price From Basis Contract	<u>3.30</u>	Actual Basis	-0.55	Options Premium	<u>0.81</u>	<u>0.91</u>	Options Premium	<u>0.01</u>	<u>0.01</u>
					Intrinsic Value	0.80	0.90	Intrinsic Value	0.00	0.00
					Time Value	0.01	0.01	Time Value	0.01	0.01
	Cash Price On	<u>10/15/14</u>		<u>3.25</u>		<u>3.25</u>	<u>3.25</u>	Cash Sale/ Forward Contract	<u>4.21</u>	<u>4.21</u>
					Plus Buy and			Plus Buy and		
	Sell and Buy Futures		<u>0.91</u>		Sell Options	<u>0.49</u>	<u>0.53</u>	Sell Options	<u>-0.38</u>	<u>-0.33</u>
	Less:									
	Brokerage Costs		<u>-0.01</u>		Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>	Brokerage Costs	-0.01	-0.01
	Equals Net Return		<u>0.90</u>	Equals Net Return	<u>0.48</u>	<u>0.52</u>	Equals Net Return	<u>-0.39</u>	<u>-0.34</u>	
	Equals Net Price Received		<u>4.15</u>			<u>3.73</u>	<u>3.77</u>		<u>3.82</u>	<u>3.87</u>

New Crop
Pricing Decision Chart for Cash Product Sellers

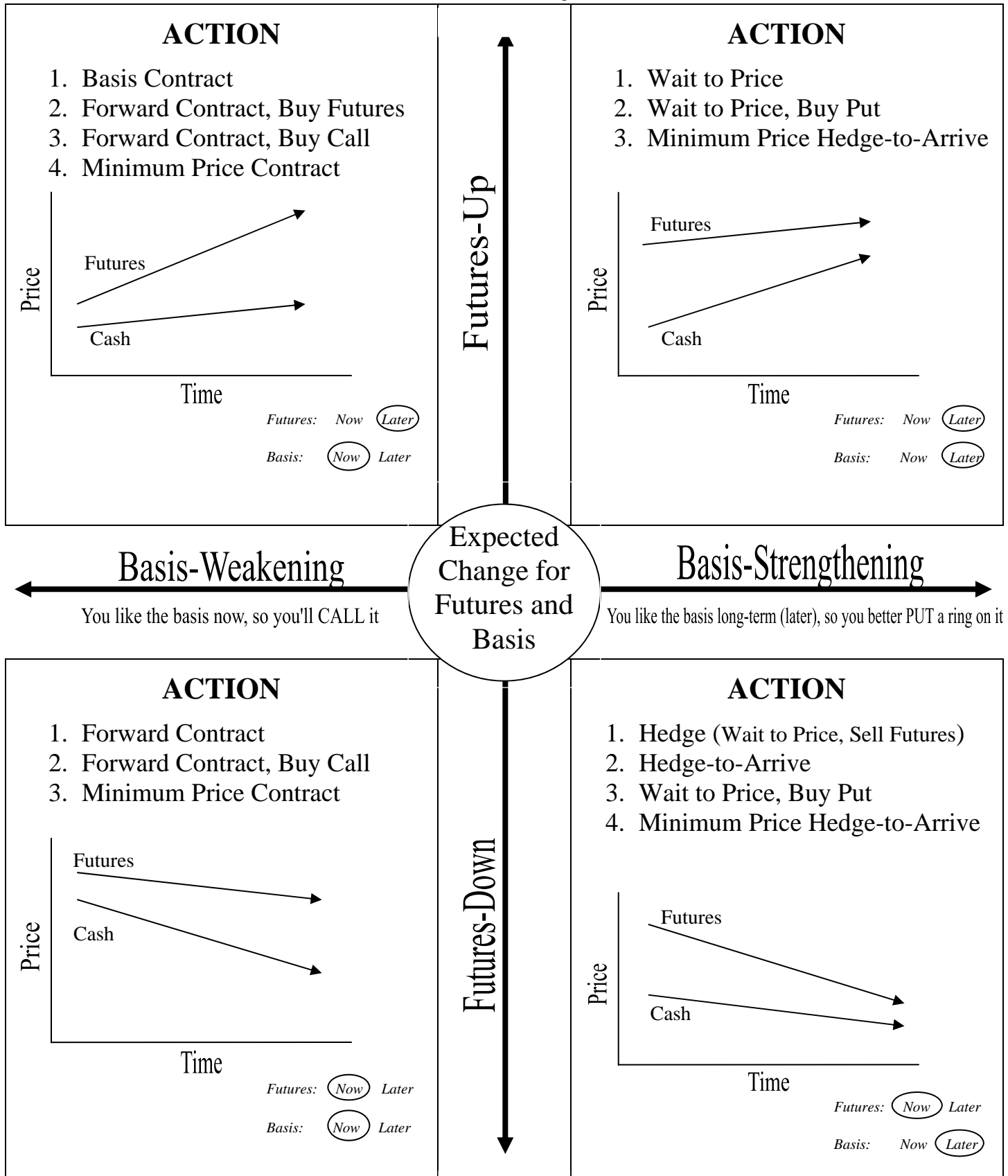


Handwritten notes:

wait to price
 No
 Storage Costs
 How we Basis Contract
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 See next Page!
 Made New Crop Pricing Decision Chart!

Pricing Decision Chart for Cash Product Sellers

"New Crop"



I
FORWARD PRICING ALTERNATIVES FOR NEW CROP _____

Top Half ↘

Date	Cash Market	Futures	Put Options	Forward Contract and Buy Calls
_____	Production Cost \$ _____ Forward Contract Price (1) <input style="width: 50px;" type="text"/> Basis Contract Relative to (Futures Month) _____ Net Government Loan Rate (2)* <input style="width: 50px;" type="text"/> Expected Harvest Price Optimistic _____ Average _____ Pessimistic _____	_____ (Futures Month) (Sell) Less: Expected Basis ^b _____ Brokerage Costs ^c _____ Equals Net Price Expected From Hedge _____	_____ (Futures Month) Strike Price _____ Less: Option Premium _____ (Buy) (Buy) Expected Basis ^b _____ Brokerage Costs ^c _____ Equals Minimum Selling Price Expected _____	_____ (Futures Month) Strike Price _____ Forward Contract Price _____ Less: Option Premium _____ Brokerage Costs ^c _____ Equals Minimum Selling Price _____
_____	Harvest Price (3) <input style="width: 50px;" type="text"/> Net Price From Basis Contract = Futures + Basis Contract (4) <input style="width: 50px;" type="text"/>	_____ (Futures Month) (Buy) Actual Basis ^d _____	_____ (Futures Month) Optimum Premium ^e _____ (Sell) (Sell)	_____ (Sell)
	Net Price Received From Hedge and Options Cash Price at Harvest Plus Net Returns From Futures and Options Sell and Buy (Futures) or Buy and Sell (Options) Less Brokerage Costs^c Equals Net Returns Equals Net Price Received	_____ _____ _____ (5) <input style="width: 50px;" type="text"/>	_____ _____ _____ (6) <input style="width: 50px;" type="text"/> (7) <input style="width: 50px;" type="text"/>	Forward Contract Price _____ _____ (8) <input style="width: 50px;" type="text"/>

Bottom Half ↗

*Government loan rate less storage costs to maturity.
^bThe expected value, at harvest, of the cash price less the given futures.
^cCommissions and interest on margins or premiums.
^dThe actual value, at harvest, of the cash price less the given futures.

FORWARD PRICING ALTERNATIVES FOR NEW CROP CORN

Top Half ↘

Date	Cash Market	Futures	Put Options	Forward Contract and Buy Calls
2/28/14	Production Cost	4.50	<u>Dec</u> (Futures Month) 4.71 (Sell)	<u>Dec</u> (Futures Month) 4.70
	Forward Contract Price (1)	4.21		4.70
	Basis Contract Relative to <u>Dec</u> (Futures Month)	-1.50	Less: Expected Basis ^b -1.15	Strike Price 4.60 4.70
	Net Government Loan Rate (2) ^a	 	Brokerage Costs ^c -1.01	Less: Option Premium -0.32 → -0.32 -0.38 (Buy) (Buy)
	Expected Harvest Price Optimistic Average Pessimistic	 	Equals Net Price Expected From Hedge 4.25	Expected Basis ^b -1.15 -1.15 Brokerage Costs ^c -1.01 -1.01
			Equals Minimum Selling Price Expected 3.82 3.86	Forward Contract Price 4.21 Less: Option Premium -1.39 Brokerage Costs ^c -1.01 Equals Minimum Selling Price 3.81
10/15/14	Harvest Price (3)	6.00	<u>Dec</u> (Futures Month) 6.40 (Buy)	
	Net Price From Basis Contract = Futures + Basis Contract (4)	5.90	Actual Basis ^d -1.40	<u>Dec</u> (Futures Month) 1.71 (Sell)
		CF	Optimum Premium ^e .01 .01 (Sell) (Sell)	1.71
			I.V. = 0	
	Net Price Received From Hedge and Options Cash Price at Harvest	6.00		6.00 6.00
	Plus Net Returns From Futures and Options Sell and Buy (Futures) or Buy and Sell (Options) Less Brokerage Costs ^c Equals Net Returns	-1.69 <u>-1.01</u>	-1.70	-0.31 <u>-0.01</u>
	Equals Net Price Received	(5) 4.30	-0.32 <u>-0.38</u>	1.32 <u>-0.01</u>
			(6) 5.68 (7) 5.62	(8) 5.58

4.30

Bottom Half ↗

^aGovernment loan rate less storage costs to maturity.
^bThe expected value, at harvest, of the cash price less the given futures.
^cCommissions and interest on margins or premiums.
^dThe actual value, at harvest, of the cash price less the given futures.

Forward Pricing Alternatives for New Crop

Corn

Date	Cash Market	Hedge/Hedge To Arrive		Put Options (Minimum Price HTA)			Call Options (Minimum Price)			
	Production Costs	<u>4.50</u>	December	<u>4.71</u>	December	<u>4.60</u>	<u>4.70</u>	December	<u>4.70</u>	<u>4.80</u>
2/28/2014	Forward Contract		Futures Month	Sell	Futures Month	Strike Price	Strike Price	Futures Month	Strike Price	Strike Price
	Price for:		Less:							
	October 15, 2014	<u>4.21</u>	Expected Basis	<u>-0.45</u>	Expected Basis	<u>-0.45</u>	<u>-0.45</u>	Forward Contract	<u>4.21</u>	<u>4.21</u>
	Basis Contract		Brokerage Costs	<u>-0.01</u>	Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>	Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>
	Relative to:									
	December	<u>-0.50</u>			Options Premium	<u>-0.32</u>	<u>-0.38</u>	Options Premium	<u>-0.39</u>	<u>-0.34</u>
			Equals Net Price		Equals Minimum			Equals Minimum		
			Expected From	Selling Price	Expected			Selling Price		
			Hedge	<u>4.25</u>	Expected	<u>3.82</u>	<u>3.86</u>	Selling Price	<u>3.81</u>	<u>3.86</u>

OUTCOMES

10/15/2014	Harvest Price	<u>6.00</u>	December	<u>6.40</u>	December			December		
			Futures Month		Futures Month			Futures Month		
			Actual Basis	-0.40	Options Premium	<u>0.01</u>	<u>0.01</u>	Options Premium	<u>1.71</u>	<u>1.61</u>
	Net Price From				Intrinsic Value	0.00	0.00	Intrinsic Value	1.70	1.60
	Basis Contract	<u>5.90</u>			Time Value	0.01	0.01	Time Value	0.01	0.01
	Cash Price On	10/15/14		<u>6.00</u>		<u>6.00</u>	<u>6.00</u>	Cash Sale/ Forward Contract	<u>4.21</u>	<u>4.21</u>
					Plus Buy and			Plus Buy and		
	Sell and Buy Futures		<u>-1.69</u>		Sell Options	<u>-0.31</u>	<u>-0.37</u>	Sell Options	<u>1.32</u>	<u>1.27</u>
	Less:				Brokerage Costs	<u>-0.01</u>	<u>-0.01</u>	Brokerage Costs	-0.01	-0.01
	Brokerage Costs		<u>-0.01</u>							
	Equals Net Return		<u>-1.70</u>	Equals Net Return	<u>-0.32</u>	<u>-0.38</u>	Equals Net Return	<u>1.31</u>	<u>1.26</u>	
	Equals Net Price Received		<u>4.30</u>			<u>5.68</u>	<u>5.62</u>		<u>5.52</u>	<u>5.47</u>

Pricing Decision Chart for Cash Product Sellers

"New Crop"

