

Assume November soybean price drops to \$7 at harvest and the actual basis is 45 cents. You exercise the put option, which places you in the futures market at \$10. You buy back that position at \$7 for a \$3 futures gain. At the same time you sell your cash beans for \$6.55 (actual basis is 45 cents under November futures). Add the \$3 futures gain, and the 78 cent call premium to the \$6.55 cash price. Then subtract the 88 cent put premium and the 5 cent trading cost. The net price is \$9.40. The net price is 5 cents higher than expected price (\$9.35) because the basis is 5 cents smaller than expected.

Example.Price decline—\$7.00 Nov. futures

Put strike price	\$	10.00
Nov. futures	-	<u>7.00</u>
Futures gain	\$	3.00
Cash sale futures	\$	6.55
Gain	+	3.00
Call premium	+	.78
Put premium	-	.88
Trading cost	-	<u>.05</u>
Net Price	\$	9.40

The results would be about the same if you sold your put option to someone else rather than exercising it. The call option will expire worthless.

Maximum selling price

The maximum selling price from the fence is the strike price of the call, less the put premium, plus the call premium, less option trading costs, less the basis.

Example.Maximum Selling Price

Call strike price	\$	10.50
Put premium	-	.88
Call premium	+	.78
Trading cost	-	.05
Basis	-	<u>.50</u>
Net Price	\$	9.85

Assume at harvest November beans are \$12.50. Cash beans rise to \$11.90. The actual basis is 60 cents under November. The call option for \$10.50, which you sold (wrote), is now worth \$2 to the call option buyer. So, the option may be exercised by the call option buyer. If so, you have to sell the buyer November futures for \$10.50 and buy back the position for \$12.50 for a \$2 loss. The results would be about the same if you bought the call option back for a loss.

Example.Price rise - \$12.50 November futures

Call strike price	\$	10.50
Nov. futures	-	<u>12.50</u>
Loss	\$-	2.00
Cash sale	\$	11.90
Loss	-	2.00
Put premium	-	.88
Call premium	+	.78
Trading cost	-	<u>.05</u>
Net Price	\$	9.75

You sell your cash beans for \$11.90. After making the adjustments the net price is \$9.75. That's 10 cents less than the maximum expected selling price because basis is 10 cents wider than projected. The put option expires worthless.

Below are minimum and maximum selling prices at various put and call strike prices.

Options fence at different strike prices
Minimum selling price

	Alt 1	Alt 2	Alt 3
Put strike price	\$10.00	\$ 9.75	\$10.00
Put premium	- .88	- .77	- .88
Call premium	+ .89	+ .89	+ .67
Trading Cost	- .05	- .05	- .05
Basis	- .50	- .50	- .50
Net price	\$ 9.46	\$ 9.32	\$ 9.24

Maximum selling price

Call strike price	\$10.25	\$ 10.25	\$11.00
Put premium	- .88	- .77	- .88
Call premium	+ .89	+ .89	+ .67
Trading Cost	- .05	- .05	- .05
Basis	- .50	- .50	- .50
Net price	\$ 9.71	\$ 9.82	\$ 10.24

Remember, if you're writing call options and the market goes up, you have margin calls. The increased value of the crop offsets the margin calls. However, you need to pay the margin calls before you receive cash from the sale of the grain. So you need to make arrangements with your lender to cover margin calls.
