

This newsletter explains how you can use Revenue Protection to lock in your forward contracted grain prices with a small amount of risk. Producers know that the main risk in forward contracting grain comes from not having enough bushels to deliver on your contract and having to purchase the bushels you are short at prices that are higher than your contract.

The following will walk through an example based on 2021 price data. We will assume that a producer has a corn APH of 200 and purchased 85% Revenue Protection (RP) in 2021. All of the following dollar amounts are expressed in dollars per acre.

RP Minimum Guarantee = $200 \times .85 \times \$4.58$ (2021 base price in Feb) or \$778.60.

During the growing season, the producer was able to forward contract 170 bushels at \$4.75 for delivery in October for \$807.50.

You should remember that you can safely forward contract up to the bushel guarantee of your RP policy. In this case, that is $200 \times .85$ or 170 bushels. You should also remember that the crop insurance harvest price is based on the December CBOT price during the month of October. Therefore, you should try to have your contracts expire around that time. If you know that you usually have corn yet to harvest on November 1, some of your contracts may have to deliver in November.

Actual harvest was 150 bushels per acre (this is not representative of the yields that occurred last year, but for illustrative purposes, I needed a yield under the 170). The RP harvest price was \$5.37 in 2021 and the average price received by farmers in October last year was \$5.02. Let's also assume that the elevator is charging a 10 cent fee for short bushels.

RP Harvest Guarantee = $200 \times .85 \times 5.37$ or \$912.90.

We assumed the producer purchased the RP with harvest price option, so the producer's final guarantee will be the higher of the Minimum or Harvest.

RP Minimum Guarantee = \$778.60.

RP Harvest Guarantee = \$912.90.

RP Final Guarantee = \$912.90.

Now let's walk through the forward pricing. You forward priced 170 bushels at \$4.75, but you only produced 150 and current cash prices are \$5.02 plus a 10 cent fee (this will vary).

Your contract = $170 \times \$4.75$ or \$807.50

Bushels short = $-20 \times \$5.12$ or -\$102.40

Net before RP indemnity \$705.10

RP Final Guarantee = \$912.90

Harvest Revenue = 150×5.37 or \$805.50

RP indemnity \$107.40

So how did the producer do?

Net after delivering forward contracts and paying fee	= \$705.10
RP Indemnity	= <u>\$107.40</u>
Producer income	= \$812.50

The producer made income of \$812.50/acre on production of 150 bushels/acre. This was very close to the original contract amount of \$807.50/acre. There will always be some timing and basis issues because the short bushels will be charged the cash price on a given day when the RP harvest price is based on a monthly average of a CBOT futures contract. But, I think you can see, if the cash price plus fee you pay for short bushels is below the harvest price, you will come out higher than your original contract dollars. Of course, the other consideration is that you had to pay premium on your crop insurance for 85% coverage. Last year, that could have amounted to \$25 to \$30/acre.

On pages 3 and 4, I have laid out the steps that I just went through in spreadsheet form. I hope it is understandable. Page 3 is a sample of the spreadsheet using today's prices. Page 4 is a blank spreadsheet in which you can use your own numbers and what-ifs. The bold-faced numbers on page 3 are the result of formulas which are shown in the right margin using the lines identified by the letters in the left margin. I hope to be able to put this spreadsheet on my website for you to download and easily change your what-ifs.

To summarize, Revenue Protection can lock-in current forward contract prices if you remember to:

- Do not contract more than your guaranteed bushels (APH X coverage level)
- Schedule delivery for as close to the month of October as you can

REVENUE PROTECTION AND FORWARD CONTRACTING

Revenue Protection		Explanation
A	APH	200
B	Base Price	\$5.85
C	RP %	80%
D	Minimum Guarantee	\$936.00
E	Premium	\$14.00
Forward Contracts Per Acre		
F	Bushels Sold	160
G	Average Price	\$5.90
H	Dollars Contracted	\$944.00
What-if Harvest		
I	Bushels Produced	150
J	Cash Price	\$6.00
K	Penalty (if short)	\$0.10
L	RP Harvest Price	\$6.30
Revenue Protection Guarantees Per Acre		
M	Minimum Guarantee	\$936.00
N	Harvest Guarantee	\$1,008.00
O	Final Guarantee	\$1,008.00
Harvest Sales Per Acre		
P	Forward Contracts	\$944.00
Q	Short or Long Bushels	-10
R	Purchase if Short	-\$61.00
S	Sales if Long	\$0.00
T	Revenue from Sales	\$883.00
Indemnity Calculation Per Acre		
U	Final Guarantee	\$1,008.00
V	Harvest Revenue	\$945.00
W	Indemnity (if any)	\$63.00
Final Comparison Per Acre		
X	Revenue from Sales	\$883.00
Y	Indemnity	\$63.00
Z	Premium	-\$14.00
	Net Revenue w/RP	\$932.00
	Net Revenue wo/RP	\$883.00

REVENUE PROTECTION AND FORWARD CONTRACTING

Revenue Protection		Explanation
A	APH	
B	Base Price	Corn-avg Dec futures, Sbeans-avg Nov futures; during Feb
C	RP %	
D	Minimum Guarantee	$A \times B \times C$
E	Premium	
<u>Forward Contracts Per Acre</u>		
F	Bushels Sold	
G	Average Price	Average price of contracted
H	Dollars Contracted	$F \times G$
<u>What-if Harvest</u>		
I	Bushels Produced	
J	Cash Price	Average cash price when settling contracts
K	Penalty (if short)	Ask your elevator if there is a penalty
L	RP Harvest Price	Corn-avg Dec futures, Sbeans-avg Nov futures; during Oct
<u>Revenue Protection Guarantees Per Acre</u>		
M	Minimum Guarantee	D
N	Harvest Guarantee	$A \times C \times L$
O	Final Guarantee	Larger of M or N
<u>Harvest Sales Per Acre</u>		
P	Forward Contracts	$I \times J$
Q	Short or Long Bushels	$I - F$
R	Purchase if Short	If $Q < 0$, $Q \times (J+K)$
S	Sales if Long	If $Q > 0$, $Q \times J$
T	Revenue from Sales	$P + R + S$
<u>Indemnity Calculation Per Acre</u>		
U	Final Guarantee	O
V	Harvest Revenue	$I \times L$
W	Indemnity (if any)	If $U > V$, $U - V$
<u>Final Comparison</u>		
X	Revenue from Sales	T
Y	Indemnity	W
Z	Premium	E is an expense
	Net Revenue w/RP	$X + Y + Z$
	Net Revenue wo/RP	X