Current Crop Insurance Policies

The 2014 Farm Bill left the farm-level COMBO products introduced in 2011 by the United States Department of Agriculture (USDA) Risk Management Agency (RMA) unchanged, but released the Area Risk Protection Insurance (ARPI) to overhaul the county-level or Group products. It also created the Supplemental Coverage Option (SCO) endorsement to cover shallow losses for farms not enrolled in the Area Risk Coverage (ARC) program managed by the USDA Farm Service Agency (FSA). With the 2018 Farm Bill, changes were minimal with the exception of the Enhanced Coverage Option (ECO)[1] endorsement, to cover very shallow losses and not restricted by participation in Farm Service Agency programs. This article describes current COMBO and ARPI products and illustrates each of them with numerical examples using 2020 price data.

Farm-level COMBO Products[2]

The Common Crop Insurance policy provides four different options to choose from:
1) Insuring yields with the Yield Protection (YP) plan;
2) Insuring revenue with the Revenue Protection (RP) plan;
3) Insuring revenue with the Revenue Protection with Harvest Price Exclusion (RPHPE) plan;
4) Choosing Catastrophic Coverage (CAT)

The basic practical difference between yield and revenue protection is that while yield protection only triggers indemnities when yields are low, revenue protection can trigger indemnities even with high yields if prices are sufficiently low, or it can fail to trigger indemnities with low yields if prices are sufficiently high.

All four plans are multi-peril insurance plans, and protect against:
a) Adverse weather conditions (hail, frost, drought, excess moisture, etc.).
b) Failure of irrigation water supply if caused by an insured peril during the insurance period.
c) Fire, if due to natural causes.
d) Plant disease and insects, but not damage due to insufficient or improper application of pest or disease control measures.
e) Wildlife damage.

Insurable corn includes yellow dent or white corn; mixed yellow and white, high amylase, waxy or high-lysine corn; high-oil corn blends containing mixtures of at least 90% high yielding yellow dent female plants with high-oil male pollinator plants; commercial varieties of high-protein hybrids; blue corn, high-amylose corn, and silage in select counties; any open pollinated corn, by written agreement; or pink and purple hybrid corn, by written agreement.

Insurable soybeans include both "commodity" type soybeans and the following "specialty" types: all other food grades, large seeded food grade, small seeded food grade, low linolenic acid, low saturated fat, and high protein.

Corn and soybeans may be insurable if:
a) grown in the county on insurable acreage;
b) premium rates are provided;
c) farmer has a share; and
d) corn is planted for harvest as grain or silage, and soybeans are planted for harvest as beans.

The insurance period for both crops starts on the date the Risk Management Agency accepts the application or the date when the crop is planted, whichever is later. The insurance period ends with the earliest occurrence of one of the following:
a) total destruction of the crop;
b) harvest of the unit;
c) final adjustment of a loss;
d) abandonment of the crop; or
e) December 10.

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Table 1 lists important dates[3] for COMBO products.

Table 1. Important Dates for COMBO Products*

	Corn	Soybeans
Sales closing date	March 15	
Earliest planting date	April 11	April 21
Final planting date	May 31	June 15
Acreage reporting date	July 15	
Premium billing date	August 15	
Production reporting date	April 29	

* In some years the actual date may be the first business day after the listed date if the listed date falls on a weekend or holiday.

Crop insurance costs paid by farmers are the result of the interplay of acreage insured, premiums per acre and administrative fees per crop per county. The premiums for all types of multi-peril crop insurance are subsidized by the Federal Crop Insurance Corporation (FCIC). Current administrative fees can be found in the **RMA General Standards Handbook**. Consult with your crop insurance agent if you may qualify for benefits as a beginning farmer and rancher (BFR) or veteran farmer and rancher (VFR)[4].

Insurance policies offer an array of coverage levels for yield and/or revenue ranging from 50% to 85% in 5% increments. Farmers can also choose how to split their insurable acreage according to basic unit, optional unit, and enterprise unit for yield and revenue insurance. An additional option, whole farm unit, is available for revenue insurance only. A basic unit includes all of a farmer's insurable crop acreage (either corn or soybeans) in the county by share arrangement. If a basic unit consists of two or more sections of land, and certain record-keeping requirements are met, a farmer may apply for optional units by section.

An enterprise unit is generally all the insured crop acreage (either corn or soybeans) in a county. A whole farm unit includes all the insured crops (all covered commodities) in the county that are covered by the insurance plan.

Table 2 shows the premium subsidies currently available for corn and soybeans according to the units and coverage level chosen. For basic and optional units, subsidies range from a 67% premium subsidy for a 50% coverage level to a 38% premium subsidy for an 85% coverage level. For enterprise units, subsidies are flat with an 80% premium subsidy from the 50% to the 70% coverage level, then decline to a 53% premium subsidy at the 85% coverage level. Whole farm units have a flat 80% premium subsidy for the 50% to 75% coverage level, and then subsidies decline to a 56% premium subsidy at the 85% coverage level. While the subsidies for enterprise and whole farm units are higher at all coverage levels, actual premium rates and administrative fees vary across units, insurance product types and coverage levels each year. For more information about premium rates and administrative fees, contact a crop insurance provider.

Finally, farmers can choose to have their Actual Production History (APH) yields adjusted upward based on their county's historical yield by paying higher premiums for their insurance policies. As a result, farms with yields below county averages can increase the likelihood of triggering indemnity payments while also increasing the potential amount of the gross indemnity. For example, if a farmer in Wright County, Iowa, has an APH corn yield of 181 bushels per acre and a Trend-Adjusted APH yield (based on county historical data) of 191 bushels per acre, they may choose to pay an increased premium to use the higher

Table 2. Coverage Levels and Premium Subsidies for COMBO Products

Coverage Level	Unit	Percent Subsidized							
		50	55	60	65	70	75	80	85
Subsidy factors	Basic unit or Optional unit	67	64	64	59	59	55	48	38
	Enterprise unit	80	80	80	80	80	77	68	53
	Whole farm unit	80	80	80	80	80	80	71	56

Trend-Adjusted APH yield. This option is available for all insurance products except the Catastrophic Coverage.

All of the RMA insurance products listed in this publication use a projected and/or harvest price to determine if and how much of an indemnity is paid. RMA projected prices are calculated by using the December (corn) and November (soybeans) CME Group futures prices averaged during the month of February. These projected prices are announced in March each year. RMA harvest prices are calculated by using the December (corn) and November (soybeans) CME Group futures prices averaged during the month of October. RMA announces harvest prices in November. The 2021 projected prices announced in March 2021 were $4.58 and $11.87 for corn and soybeans, respectively. At the time of this publication, the harvest prices for 2021 have not been announced.

The next sections outline Iowa-specific examples of the different insurance products. Each example is based on the RMA 2020 projected and harvest prices. RMA projected prices for 2020 were $3.88 for corn and $9.17 for soybeans. RMA harvest prices for 2020 were $3.99 for corn and $10.55 for soybeans.

Yield Protection (YP)

The Yield Protection plan offers a production guarantee based on individual Actual Production History (APH) yield[5], which is an average of up to ten years of actual and/or assigned yields.

In the event of a yield loss, the gross indemnity is calculated as the bushels per acre loss (production guarantee based on coverage level minus actual yields) times the projected price. The net indemnity is calculated by subtracting the insurance premium cost from the gross indemnity.

As an example, assume that Mr. Farmer insured his corn and soybean acreage with a YP plan at the 75% coverage level and chose the basic unit coverage. He elects to use his Trend-Adjusted APH yields of 191 bushels per acre for corn and 54 bushels per acre for soybeans. His production guarantees are 143.25 bushels per acre for corn and 40.5 bushels per acre for soybeans (APH yield × .75 coverage level). Producer premiums (total premiums – 55% premium subsidy) amount to $3.80 per acre for corn and $4.95 per acre for soybeans.

Mr. Farmer suffers substantial yield losses due to hail that leaves him with a corn yield of 70 bushels per acre and a soybean yield of 20 bushels per acre. Because the actual production is below the production guarantee, Mr. Farmer would collect a net indemnity payment of $280.41 per acre of corn and $183.04 per acre of soybeans, as outlined in Table 3.

Note that if Mr. Farmer's yields were at least 143.25 and 40.5 bushels per acre for corn and soybeans, respectively, he would have received no indemnity payment for his crop losses and would have spent $3.80 and $4.95 per acre of corn and soybeans, respectively, plus the current $30 administrative fee per crop per county to insure his crop.

Table 3. Numerical Example for Yield Protection Plan

Item		Corn	Soybeans	Comments
a	Trend-adjusted APH yield	191	54	From individual history
b	Coverage level	0.75	0.75	Chosen by farmer
c=a×b	Production guarantee	143.25	40.5	
d	Bushels per acre actually produced	70	20	
e=c−d	Bushels per acre loss	73.25	20.5	>0 to trigger payments
f	Projected price	$3.88	$9.17	Announced by RMA, March 2020
g=e×f	Gross indemnity per acre	$284.21	$187.99	
h	Producer premium per acre	$3.80	$4.95	Total premium – subsidy
i=g−h	Net indemnity per acre	$280.41	$183.04	

Table 4. Numerical Example for Revenue Protection Plan

Item		Corn	Soybeans	Comments
a	Trend-adjusted APH yield	191	54	From individual history
b	Coverage level	0.75	0.75	Chosen by farmer
c	Projected price	$3.88	$9.17	Announced by RMA, March 2020
d	Harvest price	$3.99	$10.55	Announced by RMA, November 2020
e=max(c,d)	Greater of projected or harvest price	$3.99	$10.55	
f=a×b×e	Revenue guarantee	$571.57	$427.28	
g	Bushels per acre actually produced	70	20	
h=d×g	Actual revenue per acre	$279.30	$211.00	
i=f−h	Gross indemnity per acre	$292.27	$216.28	= 0 if actual revenue ≥ revenue guarantee
j	Producer premium per acre	$6.52	$6.96	Total premium − subsidy
k=i−j	Net indemnity per acre	$285.75	$209.32	

Revenue Protection (RP)

The Revenue Protection plan offers protection against loss of revenue due to a production loss, change in price, or a combination of both.

In this example, assume that Mrs. Farmer faces identical production conditions and choses the same insurance options as Mr. Farmer except she insures her crops with the RP plan instead of the YP plan, paying premiums of $6.52 per corn acre and $6.96 per soybean acre. The RP plan utilizes a revenue guarantee instead of the production guarantee, which is calculated by multiplying the APH yield, the coverage level and the RMA projected or harvest price, whichever is greater. Since the RMA harvest price is greater than the projected price for both corn and soybeans, Mrs. Farmer's revenue guarantee for this example is $571.57 per acre of corn and $427.28 per acre of soybeans. The actual revenue is calculated by multiplying the actual production and the RMA harvest price. Based on her yield losses, Mrs. Farmer's actual revenue amounts to $279.30 per acre of corn and $211.00 per acre of soybeans. Because the actual revenue per acre is lower than the revenue guarantee for her contract, Mrs. Farmer collects net indemnities of $285.75 per acre of corn and $209.32 per acre of soybeans as outlined in Table 4.

Note that if the actual revenues per acre obtained by Mrs. Farmer were greater than or equal to the revenue guarantee of $571.57 for corn and $427.28 for soybeans, then Mrs. Farmer would collect no indemnity. Since actual revenue is affected by both actual yield and harvest price, a decline in one could trigger an indemnity payment even if the other remains close to the guarantee values. In this example, the harvest price was slightly higher than the projected price, but a drop in actual yield led to an indemnity payment.

However, an indemnity payment could also be triggered by a drop in harvest prices even if yields remain normal. For example, if Mrs. Farmer's actual yields remained at 191 bushels per acre for corn and 54 bushels per acre for soybeans, but the harvest prices dropped to $2.70 for corn and $6.65 for soybeans, her actual revenue would be $515.70 for corn $359.10 for soybeans. This would trigger a net indemnity payment of $33.59 per acre of corn and $5.32 per acre of soybeans.

Given the 2020 harvest prices, Mrs. Farmer's maximum yield trigger (revenue guarantee / harvest price) would be 143.3 bushels per acre for corn and 40.5 bushels per acre for soybeans. At these yields, the calculated actual revenue would be equal to the revenue guarantee and trigger no indemnity payments. Any yield less than these trigger values would lead to a positive gross indemnity. However, given the premium costs, yields would have to be lower than 141.6 bushels per acre of corn and 39.8 bushels per acre of soybeans to trigger a positive net indemnity.

If we assume normal yields of 191 bushels per acre for corn and 54 bushels per acre for soybeans, any indemnity would result from a drop in harvest prices. In this case, gross indemnities are triggered by harvest prices under $2.91 for corn and $6.88 for soybeans. However, only harvest prices under $2.88 for corn and $6.75 for soybeans result in positive net indemnities.

Revenue Protection with Harvest Price Exclusion (RPHPE)

The Revenue Protection with Harvest Price Exclusion plan is similar to RP but carries a lower premium because the revenue guarantee is determined by the projected price only and excludes the possibility of benefiting from higher harvest prices.

Consider the case of Mr. Farmer Junior, whose production conditions are the same as those for Mr. and Mrs. Farmer, but who saved some money by purchasing RPHPE instead of RP for his crops, paying premiums of $3.38 per acre of corn and $5.03 per acre of soybeans. Based on his yield losses, Mr. Farmer Junior will collect net indemnities of $273.13 for corn and $155.36 for soybeans as outlined in Table 5.

In this example, Mr. Farmer Junior does not benefit from the price increase between the projected and harvest prices for corn and soybeans. However, if the harvest price had decreased from the projected price, Mr. Farmer Junior would have had the same gross indemnity as Mrs. Farmer, but a higher net indemnity due to his lower premium cost.

Catastrophic Coverage (CAT)

The Catastrophic Coverage plan is offered under the YP plan at 50% of the APH yield and 55% of the projected price. In this example, Miss Farmer Junior has the same production conditions as the

Table 5. Numerical Example for Revenue Protection with Harvest Price Exclusion Plan

Item		Corn	Soybeans	Comments
a	Trend-adjusted APH yield	191	54	From individual history
b	Coverage level	0.75	0.75	Chosen by farmer
c	Projected price	$3.88	$9.17	Announced by RMA, March 2020
d=a×b×c	Revenue guarantee	$555.81	$371.39	
e	Bushels per acre actually produced	70	20	
f	Harvest price	$3.99	$10.55	Announced by RMA, November 2020
g=e×f	Actual revenue per acre	$279.30	$211.00	
h=d−g	Gross indemnity per acre	$276.51	$160.39	>0 to trigger payments
i	Producer premium per acre	$3.38	$5.03	Total premium – subsidy
j=h−i	Net indemnity per acre	$273.13	$155.36	

Table 6. Numerical Example for Catastrophic Coverage Plan

Item		Corn	Soybeans	Comments
a	APH yield	181	51	From individual history
b	Coverage level	0.5	0.5	Fixed by RMA
c=a×b	Production guarantee	90.5	25.5	
d	Bushels per acre actually produced	70	20	
e=c−d	Bushels per acre loss	20.5	5.5	>0 to trigger payments
f	Projected price	$3.88	$9.17	Announced by RMA, March 2020
g=e×0.55×f	Gross indemnity per acre	$43.75	$27.74	Uses 55% of projected price
h	Producer premium per acre	$0.00	$0.00	Premium fully subsidized
i=g−h	Net indemnity per acre	$43.75	$27.74	

rest of her family, only she elects to use the CAT insurance plan. Because Trend-Adjusted APH yields may not be used with the CAT plan, she must use her APH yields of 181 bushels per acre for corn and 51 bushels per acre for soybeans. With 50% yield coverage and 55% price coverage, her calculated net indemnity per acre amount to $43.75 for corn and $27.74 for soybeans. Note that for the CAT plan, premiums are fully subsidized and the producer does not have any premium cost. However, the administrative fee is $655 for each crop per county, significantly higher than the $30 required by the other plans. Given the administrative fees, Miss Farmer Junior would need at least 15 acres of corn or 24 acres of soybeans to have her net indemnity equal the administrative fees she paid for the CAT plan.

Additional examples and discussion of other provisions affecting COMBO products (prevented planting and replanting, coverage units and discounts, maximum price movements, etc.) can be found in FM1853, AgDM File A1-54: **Revenue Protection Crop Insurance**.

County-level ARPI products[6]

Area Risk Protection Insurance (ARPI) is a risk management tool to insure against widespread loss of yield or revenue in a county resulting from natural causes that cause the final county yield or the final county revenue to be less than the trigger yield or revenue. ARPI was developed on the basis that when an entire county's crop yield is low, most farmers in that county would also have low yields. ARPI has less paperwork and generally lower premium costs than individual farm level insurance. However, a farmer may have low yields or low revenue on their acreage and still not receive a payment. Also, lenders may not accept ARPI coverage as collateral. In general, ARPI would be more attractive to farmers with low APH yields with respect to their expected yields and to those with expected yields similar to county yields seeking a higher price protection than offered by RP.

ARPI provides four plan choices: Area Yield Protection, Area Revenue Protection, Area Revenue Protection with Harvest Price Exclusion, and Catastrophic Coverage (which is only available under Area Yield Protection).

The requirements for corn and soybeans to be insurable under ARPI are similar to those to be insurable under the COMBO products. The main differences are that corn planted for seed may be insurable under ARPI but not under the COMBO products, and specialty soybeans are not insurable under ARPI.

The insurance period and most important dates for ARPI are identical to COMBO products. The only important date that differs is the production reporting date for both corn and soybeans: February 15 under ARPI and April 29 under COMBO products.

As with the COMBO products, crop insurance costs paid by farmers depend on area insured, premiums per acre, and administrative fees per crop per county. Current administrative fees can be found in the **RMA General Standards Handbook**.

ARPI insurance policies offer coverage levels ranging from 70-90% in 5% increments, but are only available for basic units. Table 7 shows the coverage levels and premium subsidies currently available for corn and soybeans through the Federal Crop Insurance Corporation.

Table 7. Coverage Levels and Premium Subsidies for ARPI Products

Item	Percent Subsidized				
Coverage level	70	75	80	85	90
Premium subsidy	59	59	55	55	51

Area Yield Protection (AYP)

The Area Yield Protection plan offers protection against loss of yield due to a county-level production loss. AYP offers similar protection to the COMBO's YP plan, except that AYP uses county yields instead of unit yields for indemnity calculation.

The expected and final county yields are determined using RMA data (prior to crop year 2020[7], data from the National Agricultural Statistics Service was used). Where possible, this change allows for unique yield data as it relates to irrigated and non-irrigated practices.

The calculation of the net indemnity follows a similar procedure to the COMBO's YP plan, but two new elements must be accounted for in AYP: the protection factor and the loss limit factor (Table 8).

The protection factor is chosen by the farmer and used to increase or reduce the dollar amount of insurance per acre and policy protection, ranging from 0.8 to 1.2. Policy premiums are higher for higher protection factors.

The loss limit factor represents the percentage of the expected county yield at which no additional indemnity amount is payable, and it is currently set at 0.18. For example, if the expected county yield is 100 bushels and the final county yield is 18 bushels, then no additional indemnity is due even if the yield falls below 18 bushels.

For an example of AYP, assume that Mr. Cropp plants corn and soybeans in the same county as Mr. Farmer from the YP example, but Mr. Cropp uses AYP to insure his crops. The expected county yields are 190 bushel per acre for corn and 54 bushel per acre for soybeans. He chooses a coverage level of 85% and the maximum protection factor of 1.2, paying premiums of $7.31 and $5.67 for corn and soybeans, respectively.

Mr. Cropp's net indemnity is calculated based on the county yield deficiency and the projected price, adjusted by the protection factor, loss limit factor and producer premiums as outlined in Table 8. Regardless of whether he had a bumper crop, total loss, or average yields in his farms, Mr. Cropp collects indemnity payments from the AYP plan because the actual county yields in this example are lower than the county production guarantees. His net indemnity payments are $142.10 per acre for corn and $173.35 per acre for soybeans.

Area Revenue Protection (ARP)

The Area Revenue Protection plan offers protection against loss of revenue due to a county-level production loss, price decline, or a combination of both. ARP offers similar protection to the COMBO's RP plan, including upside harvest price protection, except that ARP uses county revenue instead of unit revenue for indemnity calculation.

The net indemnities under the ARP depend not only on county yields and projected prices, but also on harvest prices. Under the ARP plan, a harvest price higher than the projected price produces two simultaneous effects: it increases the county revenue guarantee and it increases the actual county crop revenue. Its final effect on the gross indemnity per acre depends on the coverage level, the protection factor, and expected and actual county yield.

Table 8. Numerical Example for Area Yield Protection Plan

Item		Corn	Soybeans	Comments
a	Expected county yield	190	54	Published by RMA
b	Coverage level	0.85	0.85	Chosen by farmer
c=a×b	County production guarantee	161.5	45.9	
d	Actual county yield	140	35	
e=c−d	County yield deficiency	21.5	10.9	>0 to trigger payments
f=b−0.18	Coverage level above loss limit factor	0.67	0.67	Loss limit factor = 0.18
g	Projected price	$3.88	$9.17	Announced by RMA, March 2020
h	Protection factor	1.2	1.2	Chosen by farmer
i=g×h×e/f	Gross indemnity per acre	$149.41	$179.02	
j	Producer premium per acre	$7.31	$5.67	Total premium – subsidy
k=i−j	Net indemnity per acre	$142.10	$173.35	

Table 9. Numerical Example for Area Revenue Protection Plan

Item		Corn	Soybeans	Comments
a	Expected county yield	190	54	Published by RMA
b	Coverage level	0.85	0.85	Chosen by farmer
c	Projected price	$3.88	$9.17	Announced by RMA, March 2020
d	Harvest price	$3.99	$10.55	Announced by RMA, November 2020
e=max(c,d)	Highest of projected or harvest price	$3.99	$10.55	
f=a×b×e	County revenue guarantee	$644.39	$484.25	
g	Actual county yield	140	35	
h=d×g	Actual county revenue	$558.60	$369.25	
i=f–h	County revenue deficiency	$85.79	$115.00	>0 to trigger payments
j	Protection factor	1.2	1.2	Chosen by farmer
k=b–0.18	Coverage level above loss limit factor	0.67	0.67	Loss limit factor = 0.18
l=i×j/k	Gross indemnity per acre	$153.64	$205.96	
m	Producer premium per acre	$18.47	$11.76	Total premium – subsidy
n=l–m	Net indemnity per acre	$135.17	$194.20	

Consider the case where Mrs. Cropp plants corn and soybeans in the same county as her husband, but she uses ARP instead of AYP to insure her crops (Table 9). Like her husband, Mrs. Cropp chooses a coverage level of 85% of county revenue and a protection factor of 1.2. She pays higher premiums, however, for insuring revenues instead of yields only, $18.47 vs. $7.31 for corn and $11.76 vs. 5.67 for soybeans.

Although Mr. and Mrs. Cropp's policies are based on the same expected and actual county yields, Mrs. Cropp has higher gross indemnity values, $153.64 vs. $149.41 for corn and $205.96 vs. $179.02 for soybeans, due partly to a higher harvest price. However, after factoring in the higher premiums for the ARP plan, Mrs. Cropp ends up collecting a higher net indemnity payment for soybeans, while Mr. Cropp collects the higher net indemnity payment for corn.

Area Revenue Protection with Harvest Price Exclusion (ARPHPE)

The Area Revenue Protection with Harvest Price Exclusion plan offers similar protection to the COMBO's RPHPE plan, except that ARPHPE uses county revenue instead of unit revenue for indemnity calculation. ARPHPE is similar to the ARP plan but excludes upside harvest price protection. Thus, the revenue guarantee is calculated using only the projected price and not the harvest price, even if the harvest price is higher. Indemnity payments are calculated similar to the ARP plan.

As an example, consider the case where Mr. Cropp Junior decides to insure his corn and soybeans with ARPHPE because it requires lower producer premiums per acre than ARP: $14.82 vs. $18.47 per corn acre and $9.91 vs. $11.76 per soybean acre (Table 10).

In this example, Mr. Cropp Junior does not benefit from the price increase between the projected and harvest prices for corn and soybeans. Thus, his revenue guarantee is lower than his mother's for both corn and soybeans, leading to a lower gross indemnity for both crops. If the price had decreased from projected to harvest, Mr. Cropp Junior would have had the same revenue guarantee and gross indemnity values as his mother. However, because of his lower producer premiums, he would have had a higher net indemnity for both crops.

Table 10. Numerical Example for Area Revenue Protection with Harvest Price Exclusion Plan

Item		Corn	Soybeans	Comments
a	Expected county yield	190	54	Published by RMA
b	Coverage level	0.85	0.85	Chosen by farmer
c	Projected price	$3.88	$9.17	Announced by RMA, March 2020
d=a×b×c	County revenue guarantee	$626.62	$420.90	
e	Actual county yield	140	35	
f	Harvest price	$3.99	$10.55	Announced by RMA, November 2020
g=e×f	Actual county revenue	$558.60	$369.25	
h=d−g	County revenue deficiency	$68.02	$51.65	>0 to trigger payments
i	Protection factor	1.2	1.2	Chosen by farmer
j=b−0.18	Coverage level above loss limit factor	0.67	0.67	Loss limit factor = 0.18
k=h×i/k	Gross indemnity per acre	$121.83	$92.51	
l	Producer premium per acre	$14.82	$9.91	Total premium – subsidy
m=k−l	Net indemnity per acre	$107.01	$82.60	

Table 11. Numerical Example for Area Catastrophic Coverage Plan

Item		Corn	Soybeans	Comments
a	Expected county yield	190	54	Published by RMA
b	Coverage level	0.65	0.65	Chosen by farmer
c=a×b	County production guarantee	123.5	35.1	
d	Actual county yield	115	25	
e=c−d	County yield deficiency	8.5	10.1	>0 to trigger payments
f=b−0.18	Coverage level above loss limit factor	0.47	0.47	Loss limit factor = 0.18
g	Projected price	$3.88	$9.17	Announced by RMA, March 2020
h	Protection factor	0.45	0.45	Chosen by farmer
i=g×h×e/f	Gross indemnity per acre	$31.58	$88.68	
j	Producer premium per acre	$0.00	$0.00	Premium fully subsidized
k=i−j	Net indemnity per acre	$31.58	$88.68	

Area Catastrophic Coverage (ACAT)

The Area Catastrophic Coverage plan is similar to the COMBO's CAT plan but, like other area plans, uses county yields instead of unit yields. Coverage levels are also different as ACAT is available at 65% of the yield coverage and 45% of the price coverage. Like CAT, premiums are fully subsidized and the total cost for ACAT coverage is an administrative fee of $655.

Consider the case where Ms. Cropp Junior chose ACAT for her crops. Based on the 65% coverage level, the county production guarantees for corn and soybeans are 123.5 and 35.1 bushels per acre, respectively (Table 11). Therefore, actual county yields of 140 bushels per acre of corn does not trigger ACAT indemnities but 35 bushels per acre of soybeans does trigger a net ACAT indemnity of $0.88 per acre. Assume instead that the actual county yields for this example are 115 and 25 bushels per acre, respectively. In this case, given that the mandated price protection factor is 45%, the gross and net indemnities amount to $31.58 and $88.68 per acre. However, given the administrative fees, Ms. Cropp Junior would need at least 21 acres of corn and 7 acres of soybeans to have her net indemnity equal the administrative fees she paid for the ACAT plan.

Conclusion

This publication has presented per acre comparisons between various crop insurance plans based on similar production parameters. While these examples give an overview of the risk management options available with crop insurance, producers should also consider individual production situations, crop acreages, personal risk-bearing ability, and other risk management strategies when deciding between crop insurance policies. Consultation with a trusted crop insurance provider is key to finding the right combination for each farm's individual needs.

Additional Resources

Ag Decision Maker Crop Insurance Publications, www.extension.iastate.edu/agdm/cdcostsreturns.html#insurance

FM1853, AgDM File A1-54: **Revenue Protection Crop Insurance**, store.extension.iastate.edu/product/1843

USDA Risk Management Agency, www.rma.usda.gov

USDA RMA–**Specialty Crops**, www.rma.usda.gov/Topics/Specialty-Crops

USDA RMA–**St. Paul, Minnesota Regional Office**, www.rma.usda.gov/RMALocal/Field-Offices/Regional-Offices/St-Paul-Minnesota-Regional-Office-Page

Farmdoc Insurance Premium Calculator, https://fd-tools.ncsa.illinois.edu/premiums

All links accessed 07/2021.

Endnotes

[1] A detailed explanation can be found in FM 1872c, AgDM File A1-44: **Supplemental Coverage Option (SCO and Enhanced Coverage Option (ECO)**, www.extension.iastate.edu/agdm/crops/pdf/a1-44.pdf.

[2] This section is based on the **Risk Management Agency Fact Sheets on Corn and Soybeans in Iowa** available online at www.rma.usda.gov.

[3] A detailed description of all important dates for crop insurance can be found in FM1858, AgDM File A1-50: **Important Crop Insurance Dates**, www.extension.iastate.edu/agdm/crops/pdf/a1-50.pdf.

[4] Current administrative fees can be found on the RMA website in the **General Standards Handbook**,www.rma.usda.gov/Policy-and-Procedure/Coverage-Plans-–18000. Consult with a crop insurance agent about qualifying for benefits as a **beginning farmer and rancher (BFR) or veteran farmer and rancher (VFR)**, www.rma.usda.gov/en/News-Room/Frequently-Asked-Questions/Beginning-Farmer-and-Rancher-and-Veteran-Farmer-and-Rancher.

[5] An explanation of how the individual APH yield is determined can be found in FM1860, AgDM File A1-55: **Proven Yields and Insurance Units for Crop Insurance**, https://store.extension.iastate.edu/product/1849.

[6] This section is based on the **Risk Management Agency Fact Sheets on Corn ARPI and Soybeans ARPI** in Iowa, Minnesota, and Wisconsin, available online at www.rma.usda.gov. The ARPI policy replaced the Group Risk Plan (GRP) and Group Risk Income Protection (GRIP) plan policies available in the past. Gary Schnitkey provides a detailed comparison of ARPI to GRP/GRIP policies. University of Illinois, farmdoc daily, 2014, **Area Risk Protection Insurance Policy: Comparison to Group Plans**, https://farmdocdaily.illinois.edu/2014/01/area-risk-protection-insurance-policy.html.

[7] Additional explanation of changes in yield data is available from the **USDA RMA Frequently Asked Questions**, www.rma.usda.gov/en/News-Room/Frequently-Asked-Questions/ARPI-Crop-Year-2020.

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