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The Supplementary Insurance Coverage Option: A New Risk Management Tool for Wyoming Producers

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Introduction

Through the provisions of the 2014 Agricultural Act that became law on February 17, 2014, Wyoming farmers have new farm income safety net-related policy tools that can be used to improve the financial performance of their operations. These tools are intended to enable farmers to increase the average incomes they obtain from their operations and, at the same time, moderate the financial risks they face in managing their enterprises. However, the new set of policy tools requires farmers to make choices among the competing alternatives now available to them about which crop specific programs they should use.

In the case of a new crop-specific insurance policy called the Supplementary Insurance Coverage Option (SCO), farmers have to decide whether they should sign up for that policy and, at the same time, whether they should adjust the coverage levels they obtain through their current crop insurance policies. This policy issues paper provides Wyoming farmers with information about the SCO program and the risk management and crop insurance coverage options the program provides to them.

The 2014 Agricultural Act Commodity Title (Title I) and Crop Insurance Title (Title XI) Programs

Major changes were made to commodity polices in the 2014 Agricultural Act. As a result, for several crops grown in Wyoming - including winter and spring wheat, barley, and corn - some long-standing programs were discontinued. These include the Direct Payments Program (DPP), introduced in 1996 in the form of Production Flexibility Contracts and modified in 2002, the Countercyclical Payments Program (DPP), in 2002, and the Average Crop Revenue (ACRE) program introduced in 2008.

These discontinued programs were replaced by three new crop-related programs: the Price Loss Coverage (PLC) program, Agricultural Risk Coverage (ARC) program, and the Supplementary Insurance Coverage Option (SCO). The PLC and ARC programs are authorized under the provisions of Title I of the 2014 Agricultural Act; the SCO program is authorized under the provisions of Title XI of that Act.

Crops Eligible for the PLC, ARC and SCO Programs

Crops eligible for the PLC, ARC and SCO programs are the crops that were previously eligible for the Direct Payments, Countercyclical Payments and ACRE programs, with the exception of cotton, for which a separate crop-specific set of programs has been developed. As cotton is not produced by Wyoming farmers, those programs are not considered in this briefing paper. The crops eligible for the new PLC, ARC, and SCO programs are as follows:

- Wheat (winter, spring, durum)
- Corn
- Grain sorghum
- Barley
- Oats
- Rice
- Peanuts
- Soybeans
- Other oilseeds (including canola, sunflower, safflower, and other minor oilseeds)
- Small and large chickpeas, dry peas and lentils

For the 2015 crop year PLC and ARC will be available for all eligible crops and farmers are required to select which crops will be covered by PLC and which by ARC by ***March 31, 2015***. The choice between PLC and ARC for each crop is irrevocable and, under the provisions of the 2014 Agricultural Act, remains in effect from 2014 to 2018.

Nationally, the SCO will be available for the 2015 crop year in selected counties for barley, corn, soybeans, winter and spring wheat, sorghum, and rice, but will expand to other areas and crops in future years. In Wyoming, the only crops for which SCO coverage is available in 2015 are barely, corn, and wheat. Only crops for which the PLC program has been elected by a producer ***can*** be insured under an SCO contract.

Crops for which the producer has elected the ARC program ***cannot*** be insured under an SCO contract although they ***can*** be insured under a USDA Risk Management Agency (RMA) APH yield or revenue policies, or other RMA policies such as an Area Risk Protection (ARP) contract. The farmer's decision about whether or not SCO coverage should be purchased is an ***annual decision***. On a crop year by crop year basis farmers can choose whether or not to purchase SCO coverage for any given eligible crop as long as the farm has enrolled the crop in the PLC program ***and*** the SCO

program for the crop is available in the county in which the farm is located.

The Price Loss Coverage Program

The ***Price Loss Coverage program*** has the following structure. A ***reference price*** is established for each eligible commodity. If the ***national average marketing year price*** for the crop, as reported by the USDA National Agriculture Statistical Service (NASS), falls below the ***reference price***, the farmer receives a payment equal to the difference between the crop's ***reference price*** and the ***national average price over the marketing year*** on the amount of the crop eligible for a PLC payment.

For example, the reference price for wheat is $5.50 per bushel of wheat. If the national average price for wheat reported by NASS for the 2014 crop year is $5.00 per bushel then the per bushel ***price loss coverage payment*** will be $0.50, the difference between the reference price and the national average marketing year price for the crop ($5.50 - $5.00). Reference prices for all commodities covered under the PLC program are presented (Table 1).

Table 1: Price Loss Coverage Reference Prices for Covered Commodities: 2014-2018

Crop	Unit	Price Loss Coverage Reference Price
Wheat	Bushel	$5.50
Barley	Bushel	$4.95
Oats	Bushel	$2.40
Corn	Bushel	$3.70
Grain Sorghum	Bushel	$3.95
Rice	Cwt	$14.00
Minor Oilseeds	Cwt	$20.15
Soybeans	Bushel	$8.40
Peanuts	Ton	$535.00
Dry Peas	Cwt	$11.00
Lentils	Cwt	$19.97
Small Chickpeas	Cwt	$19.04
Large Chickpeas	Cwt	$21.54

Source: USDA Farm Service Agency

Under the PLC, a farm establishes a historical production base for each eligible crop and receives PLC payments for a crop on 85 percent of this production base. The farm's production base is calculated by multiplying a historically determined amount of base acres for the crop by a historically determined per acre base yield for the crop.

A PLC example

Suppose a farm has established 1,000 acres of wheat base acres and a payment yield for those base acres of 30 bushels per acre. The farm's PLC production base used to determine PLC payments will then be 30,000 bushels (30 bushels per acre x 1,000 acres). The farm will receive a total PLC payment equal to the per bushel price loss coverage payment which is the difference between the reference price of $5.50 and the national average marketing year price of $5 reported by NASS (0.50 dollars/bushel) on 85 percent of its production base (85 percent of 30,000 bushels of wheat). In this case, the example farm would receive a wheat PLC payment of $12,750 (85 percent x 30,000 bushels x $0.50).

The Agricultural Risk Coverage Program

The Agricultural Risk Coverage program (ARC) makes payments to farmers when the estimated average revenue per acre for a crop (the current year crop yield multiplied by the national average marketing year price for that crop) falls below ***86 percent*** of the ***estimated historical average revenue per acre*** for the crop over the most recent five years.

The ARC ***historical average revenue per acre*** for the crop, called the crop's ***benchmark revenue*** in the 2014 Agricultural Act, is computed as follows. First, the per acre historical Olympic average yield is computed using the previous five years of realized yields for the crop. Second, the historical Olympic average price is computed using the national average marketing year prices for the crop (as reported by NASS) for the same previous five years.

In computing the five-year Olympic average price used to calculate the ***benchmark revenue*** for a crop, if the national average price reported by NASS falls below the ***PLC reference price*** for the crop then the ***PLC reference price*** is used in computing the historical average price. Thus, the ARC Olympic average for a crop's price can never be lower than the PLC reference price (shown in Table 1 for each eligible crop).

The ***benchmark revenue*** for the crop is calculated by multiplying the estimated historical average yield by the

estimated historical average price. The benchmark revenue for a crop is then multiplied by 86 percent to obtain the ***agricultural risk coverage guarantee***. The farmer receives a payment when the estimated per acre ***actual crop revenue*** for the current crop year, defined as the current crop year per acre yield multiplied by the national marketing year average price for the crop, is smaller than the applicable ***agricultural risk coverage guarantee***.

The farmer is then paid the difference between the applicable ***agricultural risk coverage guarantee*** and the estimated ***actual crop revenue*** on each acre eligible for a payment under the program. On a per acre basis, the ARC payment is capped at ***ten percent*** of the ***benchmark revenue*** used to calculate the ***agricultural risk coverage guarantee***.

The ARC county yield and farm yield options

The farmer has two options within the ARC program: payments can be based on either the farm's own current and historical yields for the crop (both in computing the historical average per acre revenue for the crop and the estimated current year revenue) or current and historical average yields in the county in which the farm is located.

However, if the farm bases its ARC program participation on its own yields for a crop, then it will receive ARC payments on only 65 percent of the farm's base acres for that crop. In addition, the farm will also have to enroll ***all*** eligible crops in the ARC program. If the farm choses to base its ARC participation on county yields, it will receive ARC payments on 85 percent of the farm's base acres for each crop enrolled in the program. In addition, the farm will be free to allocate other crops to either the county-based ARC program or the PLC program.

The following three factors bias many farms' decisions about whether to enroll a crop in the ARC county option or the ARC farm yield option towards the ARC county option:

1. There is a 20 percent difference between the percentages of base acres on which ARC farm (65 percent) and county yield (85 percent) payments will be made.

2. All crops eligible for PLC or ARC must be enrolled in ARC if the ARC farm yield option is selected for one crop.

3. If the farm enrolls a crop in the county ARC program, and other eligible crops in the PLC program, those other crops can also be covered by an SCO insurance policy.

Consider the following specific farm situation in which a farm's per acre yields are identical or very similar to the per acre yields in the county where the farm is located. If the farm selected the farm-yield based ARC program for its wheat crop, then the farm's per-acre ARC payments would be the same as under the county ARC program. However, the farm would receive a much smaller total payment because in the farm yield option, farms receive an ARC per acre payment on only 65 percent of the eligible acres for the crop.

For the farm yield ARC option to be attractive relative to the ARC county yield option, it is likely that the farm's average yield (and therefore the farm yield option ARC cap) will have to be substantially higher than the county average yield (to make up for the fact that payments are made on 20 percent fewer acres under the farm yield option). In addition, from one year to the next, on a proportional basis, farm yields would likely have to be much more variable than county yields (which is in fact often the case).

With respect to the choice between enrolling a crop in the PLC or either the ARC farm yield or county yield program, the fact that the SCO program is not available for either ARC program may be an important factor.

PLC and ARC Base Acres and Base Yields

Under the provisions of the 2014 Agricultural Act, agricultural producers have the option of using the base acres and payment yields that determined the subsidies they received under the Direct Payments Program in the new PLC and ARC programs. Many farms in Wyoming have base acres and payment yields that were established over 30 years ago and base acres established over 20 years ago. Some farmers may have up-dated their base acres and payment yields in late 2002 under the base updating option provided to them in the 2002 Farm Bill. In that case their current base acres will have been determined by their planting decisions and yields over the four year period 1998-

2001, with yields over that period adjusted downwards to be comparable to those they would have achieved in the mid-1980s.

However, under the 2014 Agricultural Act, farmers have the option of updating their production bases using much more recent data on areas planted to crops (the annual averages of the acres planted to each eligible crop over the four year period 2009-2012) and yields (the annual average yields on planted acres over the five year period 2008-2012). Under the base updating process, payment yields for each eligible crop will be set equal to 90 percent of the average yield for that crop on planted acres over the five year period 2008-2012.

Many farmers who plan to enroll crops in the PLC program are likely to update their payment yields to take advantage of increases in their yields over the past 30 years. For example, in the mid-1980s, the national annual average per acre yield for corn was about 90 bushels. Over the past five years, using an Olympic average, national corn yields have averaged close to 160 bushels per acre. Farms that take advantage of yield updating for corn are therefore likely to increase the per acre base yield eligible for subsidy payments by more than 60 percent, on average from about 90 bushels to about 145 bushels. Yields for many other crops have also increased substantially since the mid-

1980s, making base updating attractive for many farmers who plan to participate in the PLC.

The structure of the PLC is essentially identical to the structure of the Counter Cyclical Payment program (CCP), for which it is a replacement. The only differences are (1) that the prices that will trigger payments under the PLC are much higher than those used under the CCP, and (2) the production bases on which PLC payments will be made are likely to be larger for many crops because of base updating that results in substantially higher base yields.

The Supplementary Coverage Option (SCO)

The SCO is an insurance product that allows farmers to obtain coverage through a group-based area yield or revenue insurance product for shallow losses. It will be available for crops for which the farmer elects the PLC program but, as discussed above, ***not*** for crops placed in the ARC program. The program is being implemented for the 2015 crop year for some crops in some counties, but not for the 2014 crop year.

Under the SCO farmers have the option of purchasing an area yield or area revenue product that will pay them an indemnity when, at the county level, either average yields (in the case of the county yield product) or average revenues per acre (in the case of the county revenue product) fall below ***86 percent*** of their expected levels. The SCO will provide revenue protection if the farmer's underlying APH contract is a revenue contract and yield protection if the farmer's underlying APH contract is a yield contract. Expected county average yields and average revenues per acre will be determined by the USDA Risk Management Agency (RMA). Coverage will be capped at the difference between 86 percent of the expected area yield or revenue and the level of coverage selected by the farm under an underlying federally subsidized insurance contract. The underlying APH, ARP or other current insurance contract. Every acre of a crop placed in the PLC program that is insured under a standard federal agricultural insurance APH will be covered under an SCO endorsement if an SCO endorsement is chosen by the farmer.

For example, a farm that typically uses an Actual Production History (APH) insurance product based on the farm's own yield history may select a coverage level of 75 percent for on-farm yield losses, meaning that it will only receive an indemnity under that contract when the farm's actual yield or revenue for the crop falls below 75 percent of their expected level. In that case, the farm can use an SCO insurance contract where payments for losses are capped at 11 percent of the county expected yield or revenue (the difference between 86 percent and the farm's selected 75 percent coverage level for its underlying insurance contract). However, a farm that selects a 70 percent APH coverage level can use an SCO insurance contract where payments for losses are capped at 16 percent of the county yield or expected revenue (the difference between 86 percent and the farm's selected 70 percent coverage level for its underlying insurance contract).

The farmer is required to pay only 35 percent of the actuarially fair premium for an SCO policy, where the actuarially fair premium is the expected average annual indemnity payment as estimated by RMA. The federal government will pay all administrative costs and the remaining 65 percent of the actuarially fair premium.

Availability of SCO Contracts Nation-Wide and in Wyoming

For the 2015 crop year, nationally SCO contract endorsements are only available in select counties for barley, corn, soybeans, winter and spring wheat, sorghum, cotton, and rice, but will expand to other areas and crops in future years. Information on SCO availability for the three crops - barley, corn and wheat (and the specific production practices for those crops) – for which SCO policies in selected Wyoming counties have been developed for 2015 is presented in Table 2. For example, in 2015, in Big Horn County only barley raised under irrigation is eligible for an SCO contract, but in Park County barley raised under irrigation, or summer fallow, or continuous cropping is eligible for an SCO contract.

RMA's choice of counties selected for an SCO contract for each covered crop in 2015 was based on the availability of county yield data from USDA's National Agricultural Statistics Service (NASS), subject to the following criteria designed to maximize the availability of SCO while maintaining actuarial soundness and program integrity. These criteria are similar to those used for the area-based ***Area Risk Protection*** insurance programs administered by RMA. In general, the criteria were that (a) to ensure sufficient data were available t

Table 2: Crops for which SCO contracts are available in Wyoming Counties in 2015

	Crop (production practices covered shown in parentheses)			
County	**Barley**	**Corn**	**Spring Wheat**	**Winter Wheat**
Big Horn	Yes (irrigated)	Yes (irrigated)	No	No
Converse		Yes (irrigated)	No	No
Fremont	Yes (irrigated)	Yes (irrigated)	No	No
Hot Springs	Yes (irrigated)	No	No	No
Goshen	No	Yes (irrigated and dry land)	Yes (irrigated)	Yes (irrigated and summer fallow)
Lincoln	Yes (irrigated, summer fallow, continuous cropping)	No	No	No
Laramie	No	Yes (irrigated and dry land)	Yes (irrigated)	Yes (irrigated, summer fallow, continuous cropping)
Park	Yes (irrigated, summer fallow, continuous cropping)	Yes (irrigated)	No	No
Platte	No	Yes (irrigated)	No	No
Teton	Yes (irrigated, summer fallow, continuous cropping)	No	No	No
Washakie	Yes (irrigated, summer fallow, continuous cropping)	Yes (irrigated)	No	No

Source: USDA Risk Management Agency

estimated expected yields, NASS county yield estimates had to be available for the crop for at least 20 of the most recent 30 years, (b) to account for recent yield trends, NASS county yield estimates were available for at least 8 of the last 10 years, with an average of at least 10,000 acres planted to the crop in the county over those years, and that (c) at least 50 or more farming entities had been raising the crop in the county according to the most recent Census of Agriculture, limiting the possibility for a single producer (or small group) to skew or influence the county estimate for a given year.[1]

The SCO Participation and Coverage Level Decision

The maximum amount of coverage that can be obtained under an SCO contract is directly linked to the amount of coverage purchased by the farmer in their farm's underlying insurance contract. The trade-off between the coverage available under an SCO and the farm's underlying APH (or Area Risk Protection) yield or revenue contract is shown in Table 3. Lower levels of coverage in the underlying crop insurance contract enable the farm to insure at higher levels of SCO coverage. The choice about how much farm specific insurance should be purchased and how much SCO insurance should be purchased depends on each farm's specific situation.

The farm's first decision is whether or not it is advantageous to obtain an SCO contract for a given crop as an endorsement to the underlying APH or ARP contract. For example, a farm insuring an irrigated corn crop using an APH contract at an 85 percent coverage level could only acquire an SCO contract that covers one percent of the expected value of the crop at the county level. The small level of coverage could make the SCO irrigated corn endorsement undesirable, even though the actuarially fair premium associated with that endorsement is subsidized by the federal government at a rate of 65 percent.

Second, indemnity payments are made under the farm specific APH (or ARP) contract when estimated yields or revenues at the farm level fall below the coverage level multiplied by the farm's expected yield or revenue for the crop. However, SCO contract indemnity payments are made only when estimated yields or revenues at the county level fall below 86 percent of the expected county yield or revenue for the crop. County yields are considerably less volatile than farm yields and so an SCO contract with a higher level of coverage (and therefore a lower level of coverage for the farm's APH contract) may provide the farm with indemnity payments for losses less frequently and in smaller average amounts than a farm specific APH contract with a higher level of coverage (and therefore a lower level of SCO coverage).

Table 3: Coverage Levels Available under an SCO for Different Levels of Coverage Selected in the underlying APH or ARP contract*

APH or ARP Coverage Level (Percent of expected farm yield or revenue)	Available SCO Coverage Level (Percent of expected county yield or revenue)
85 percent	1 percent (= 86 percent - 85 percent)
80 percent	6 percent (= 86 percent - 80 percent)
75 percent	11 percent (= 86 percent - 75 percent)
70 percent	16 percent (= 86 percent - 70 percent)
65 percent	21 percent (= 86 percent - 65 percent)
60 percent	26 percent (= 86 percent - 60 percent)
55 percent	31 percent (= 86 percent - 55 percent)
50 percent	36 percent (= 86 percent - 50 percent)

Source: USDA Risk Management Agency

* Note that indemnity payments will only be made under the farm specific APH (or ARP) contract when estimated yields or revenues at the farm level fall below the coverage level multiplied by the farm's expected yield or revenue for the crop. Indemnity payments will be made under the SCO contract only when estimated yields or revenues at the county level fall below 86 percent of the expected county yield or revenue for the crop.

Third, premium subsidy rates differ for the SCO and farm specific APH contracts. Average subsidy rates for APH yield and revenue contracts are presented (Table 4) where the unit insured is either an optional unit or an enterprise unit (and there are no adjustments to premiums for the use of approved methods for substituting plug yields for atypically low farm yields, or other farm specific characteristics that might affect premium rates).

[1] The source for the information on the procedure used to determine for which crops an SCO policy would be available in which counties in 2015 on which this paragraph is largely based is the USDA RMA Fact Sheet *Supplemental Coverage Option for Federal Crop Insurance*, available at www.rma.usda.gov/news/currentissues/farmbill/2014NationalSupplementalCoverageOption.pdf.

Table 4: APH and SCO Subsidy Rates

APH Coverage level	APH Average Premium Subsidy Rate		SCO Coverage Level	SCO Subsidy Rate
	Optional Units	APH Enterprise Units		
50 percent	67 percent	80 percent	36 percent (= 86 percent - 50 percent)	65 percent
55 percent	64 percent	80 percent	31 percent (= 86 percent - 55 percent)	65 percent
60 percent	59 percent	80 percent	26 percent (= 86 percent - 60 percent)	65 percent
65 percent	59 percent	80 percent	21 percent (= 86 percent - 65 percent)	65 percent
70 percent	55 percent	80 percent	16 percent (= 86 percent - 70 percent)	65 percent
75 percent	55 percent	77 percent	11 percent (= 86 percent - 75 percent)	65 percent
80 percent	48 percent	68 percent	6 percent (= 86 percent - 80 percent)	65 percent
85 percent	38 percent	53 percent	1 percent (= 86 percent - 85 percent)	65 percent

Source: USDA Risk Management Agency

Farms currently insuring crops through an APH contract on an enterprise unit (farm operation wide basis) have average premium subsidy rates of 80 percent for coverage levels from 50 percent to 70 percent of their expected yields or revenues, an average subsidy rate of 77 percent at a 75 percent coverage level, 68 percent at an 80 percent coverage level, and 53 percent at an 85 percent coverage level. With the exception of the average subsidy rate at the 85 percent coverage level, these average premium subsidy rates are higher than the 65 percent subsidy provided for an SCO contract. As a result, it seems unlikely that many farms insuring their crops at an enterprise unit level at coverage levels of 75 percent or lower will reduce their APH coverage in order to have a higher level of coverage under an SCO contract. This is especially the case given that indemnities are tied to the farm's actual yields and revenues under an APH contract while indemnities are tied to county yields and revenues under an SCO contract. However, the cost to the farm of increasing APH coverage from the 75 percent level to the 80 percent or 85 percent level is relatively substantial and requires farmers to pay a much higher share of the additional APH coverage, a share that is close to the full additional premium cost of the extra coverage. Farms insuring a crop through an APH contract on an optional unit basis receive substantially lower levels of subsidies at most coverage level than under an enterprise unit APH contract. Average premium subsidy rates are also substantially lower under optional unit APH contracts than under an SCO for coverage levels from 60 percent (where the average APH subsidy rate is 59 percent) to 85 percent (where the average subsidy rate is 38 percent). In addition, buying up from one coverage level to the next coverage level (for example, from 75 percent to 80 percent) also involves much lower premium subsidy rates (close or even equal to zero) for the additional coverage. Farmers who are currently insuring their crops using APH optional unit contracts may, therefore, also be interested in assessing whether trading off less APH coverage for more SCO coverage is a useful strategy. These issues are illustrated in the next sections.

Examples of Different APH and SCO Coverage Levels for a Representative Wyoming Farm

A Representative Farm

The representative Wyoming farm is assumed to be located in Goshen county where coverage for corn (irrigated and dryland), winter wheat (irrigated and summer fallow) and spring wheat (irrigated) is available. Records on planted acres for a small sample of farms from Goshen county indicate irrigated corn, irrigated barley, and winter wheat raised on a summer fallow rotation are representative crops with 50 percent of planted acres allocated to wheat, 35 percent to corn, and 15 percent to barley. Sunflowers are raised by many farms, typically on relatively small acreages.

As SCO contracts are not available for barley or sunflowers in Goshen County in 2015, the representative farm is assumed to plant corn and barley under irrigation practices and winter wheat under summer fallow practices. ***Corn*** is assumed to generate yields that average ***140 bushels an acre*** under irrigation and ***winter wheat*** to generate yields that average ***25 bushels per acre*** under a summer fallow dry land rotation, equal to the county average yields for each crop.[2] The farm is assumed to consist of 800 acres of

[2] In its SCO decision tool, based on information from NASS, for the 2015 crop year, RMA reports Goshen county expected yields for corn produced on irrigated land as 140 bushels per acre and expected yields for wheat produced on dryland under a summer fallow rotation of 25 bushels an acre.

cropland, of which 200 irrigated acres are planted to corn, 300 dry land acres are planted to winter wheat, and 300 dry land acres are left fallow in the wheat summer fallow rotation. The focus of the SCO-APH crop insurance examples is therefore on irrigated corn and winter wheat planted on dryland in a summer-fallow rotation.

The APH Crop Insurance Decision

Farms in Wyoming, as throughout the United States, typically select a multiple peril APH insurance contract to cover losses for each of their crops (such policies are used to cover over 94 percent of all crops insured through the federal crop insurance program). Most farmers use APH based revenue insurance (which covers over 70 percent of all insured crops) and the most widely utilized APH revenue insurance policy for crops like corn and wheat includes the ***harvest price option*** endorsement Under the harvest price option endorsement, if the national crop price at harvest time is estimated by RMA to be higher than the price expected at planting time then yield losses are compensated at the higher estimated harvest time price.[3] For both corn and winter wheat, therefore, the farmer is assumed to choose an RMA APH revenue insurance product that includes the harvest price option.

The revenue insurance contract provides coverage based on the farm's expected per acre revenue, defined as the farm's APH yield for the crop multiplied by the expected national price for the crop. In all of the scenarios examined here, at planting time when the insurance coverage is purchased the expected harvest time price for corn is $4 per bushel and the expected harvest time price for wheat is $6 per bushel. Given the farm has an APH yield of 140 bushels for corn and 25 bushels for wheat, the expected revenue for corn is $560 per acre ($4 per bushel x 140 bushels) and the expected revenue for wheat is $150 per acre ($6 per bushel x 25 bushels).

The farm must pick an APH contract coverage level for each crop ranging from 50 percent to 85 percent of the expected revenue in increments of 5 percentage points to establish liability, the amount the farmer would be paid for each acre if there was a total crop loss. For example, if the farm selected a 75 percent coverage level for both corn and wheat, on a per acre basis the liability for corn would be $420 (75 percent x $560) and the liability for wheat would be $112.50 (75 percent x $150). The liability per acre for the crop is also called the ***crop revenue guarantee***. The farmer receives an indemnity for a crop under the APH revenue contract when, at harvest time, the actual yield for the crop multiplied by the harvest time price estimated by RMA, called the ***crop revenue*** is lower than the per acre liability. The ***crop revenue guarantee*** is therefore the per-acre revenue trigger for indemnity payments. When an indemnity is triggered, the farmer receives a payment equal to the difference between the ***crop revenue guarantee*** and the estimated ***crop revenue***.

For example, if the farm's corn yield is 100 bushels per acre and the estimated harvest time price were $4 per bushel, the farm's estimated ***crop revenue*** would be $400 per acre ($4 x 100 bushels). Given the farm had selected a 75 percent coverage level, its ***revenue guarantee*** would be $420, as shown above. The farm would therefore receive an indemnity of $20 per acre, equal to the difference between the farm's ***revenue guarantee*** and the estimated ***crop revenue*** ($420 - $400), on all of the farm's insured corn acres. However, if the farm's corn yield were 110 bushels per acre, the farm would not receive an APH indemnity for corn because the farm's estimated ***crop revenue*** of $440 ($4 x 110 bushels) would exceed the farm's ***revenue guarantee*** for the crop ($420).

The SCO/APH Coverage Level Choice

As discussed and illustrated above (Table 3), when the farm selects an APH coverage level for a crop, that choice determines the coverage available to the farmer under the SCO endorsement. Lower APH coverage levels permit higher SCO coverage levels. Under the SCO, crop revenue guarantees per acre, crop revenues per acre, and indemnities per acre are determined by area yields (typically county wide yields) and the estimated national price for the crop. ***SCO indemnities are not linked to the farm's actualcrop yields in any way***.

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[3] The expected harvest price at time of planting is computed using the relevant futures contract for the crop (the contract expected to expire closest to harvest time). The same contract is used at harvest to estimate that actual harvest time price. Exact details of how these prices are determined for crops for which revenue insurance is available are provided by RMA on its website at www.rma.usda.gov/policies/cepp.html where information on RMA's ***Commodity Exchange Price Provisions*** is provided.

For example, suppose the county yield for corn is also 140 bushels per acre (the farm's APH just happens to be equal to the county APH) and the national corn price is estimated to be $4 bushel (the same price is used in APH and SCO contracts). The county level expected revenue is therefore $560 per acre. The SCO revenue guarantee at the farm level will then be 86 percent of the expected county revenue per acre, multiplied by the ratio of the farm's APH yield to the county average yield. In this example, the county SCO revenue guarantee or loss trigger for corn would therefore be $481.60 per acre (86 percent x $560). A farmer with an SCO contract will receive an SCO indemnity if the estimated county level crop revenue per acre (calculated using the county wide average yield for the crop as reported by NASS multiplied by the harvest time price as estimated by RMA) falls below the county loss trigger.

If the farmer selects an APH coverage level of 75 percent and opts for an SCO endorsement he will therefore receive an indemnity if the estimated county wide crop revenue falls below the SCO revenue guarantee of $481.60 per acre. However, the farm's SCO payment is capped at 11 percent of the county-wide expected revenue per acre or $61.60 (11 percent x $560) multiplied by the ratio of the farm's APH yield to the county APH yield because the farm selected a 75 percent coverage level in its APH contract. The example farm's APH yields are assumed to be identical to the county expected yield, which simplifies the example.

For example, if the county-wide average yield for corn is reported by NASS to be 110 bushels per acre and the estimated harvest price is $4 per bushel of corn, then the current crop year estimated county wide average revenue per acre for corn is $440. Given an SCO revenue guarantee of $481.60, under the farm's SCO contract, on each insured acre of corn the farm will receive a per acre SCO indemnity payment of $41.60, equal to the difference between the SCO per acre revenue guarantee ($481.60) and the estimated county wide crop revenue ($440). The farm will receive the full amount of the estimated indemnity ($41.60) because it is less than farm's SCO payment cap of $61.60 (11 percent x $560), the maximum per acre SCO indemnity available to the farm because the farm selected a 75 percent coverage level under the APH revenue insurance contract.

If, because of much lower county wide yields resulting from extreme drought, the county wide estimated crop revenue for corn is only $300 per acre, the difference between the SCO revenue guarantee and the estimated county wide crop revenue per acre for corn would be $181.60. Nevertheless, the farm would only receive an SCO indemnity of $61.60 per insured acre, equal to the farm's SCO indemnity cap. However, in such severe drought circumstances, the farm would also almost certainly receive an indemnity for losses under the underlying APH revenue contract.

Note that a farm with a lower (higher) APH yield than the county average yield would always receive a lower (higher) SCO indemnity in terms of dollars, although identical in terms of the proportion of the farm and county expected per acre revenues.

SCO and APH Insurance Premiums

Farmers have to pay premiums in order to have federal crop insurance coverage. If a farm uses both an APH revenue insurance contract and an SCO revenue insurance contract, then the premium rate will have two components: the premium for the APH revenue coverage and the premium for the SCO revenue coverage. On a per acre basis, the premium rates that the representative farm would have to pay for corn and wheat are presented for each alternative APH coverage level (Tables 5 and 6).[4] Tables 5 and 6 include the premium rate the producer pays (the producer premium), the premium subsidy (the part of the total premium paid by the federal government), and the amount of revenue protection (the revenue guarantee) available under the APH contract (columns 3-5) and the SCO contract (columns 6-8). Total per acre producer premiums, premium subsidies and total premiums are shown in columns 9-11 (Tables 5 and 6).

[4] The premium rates for the representative farm, which is assumed to have APH per acre yields of 140 bushels for irrigated corn and 25 bushels for wheat were obtained for Goshen County using the RMA crop information and decision tool available at http://prodwebnlb.rma.usda.gov/apps/CIDT/.

Table 5: Corn APH and SCO Coverage Levels and Per Acre Premiums (Goshen County, 2015)

APH Coverage Level	SCO Coverage Level	APH			SCO			APH plus SCO Premiums		
		Producer Premium	Premium subsidy	APH Revenue Protection	Producer Premium	Premium subsidy	SCO Revenue Protection	Total Producer Paid Premium	Total Subsidy	Total Premium
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10	(11)
85 percent	1 percent	$56.92	$34.89	$476.00	$0.71	$1.32	$5.60	$57.63	$36.21	$93.84
80 percent	6 percent	$41.13	$37.97	$448.00	$3.50	$6.49	$33.60	$44.63	$44.46	$89.09
75 percent	11 percent	$30.30	$37.03	$420.00	$5.25	$9.73	$61.60	$35.55	$46.76	$82.31
70 percent	16 percent	$23.28	$33.50	$392.00	$6.32	$11.73	$89.60	$29.60	$45.23	$74.83
65 percent	21 percent	$19.42	$27.95	$364.00	$6.90	$12.81	$117.60	$26.32	$40.76	$67.08
60 percent	26 percent	$14.07	$25.02	$336.00	$7.19	$13.34	$145.60	$21.26	$38.36	$59.62
55 percent	31 percent	$11.51	$20.47	$308.00	$7.32	$13.60	$173.60	$18.83	$34.07	$52.90
50 percent	36 percent	$8.50	$17.25	$280.00	$7.41	$13.76	$201.60	$15.91	$31.01	$46.92

Table 6: Wheat APH and SCO Coverage Levels and Per Acre Premiums

APH Coverage Level	SCO Coverage Level	APH			SCO			APH plus SCO Premiums		
		Producer Premium	Premium subsidy	APH Revenue Protection	Producer Premium	Premium subsidy	SCO Revenue Protection	Total Producer Paid Premium	Total Subsidy	Total Premium
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10	(11)
85 percent	1 percent	$24.18	$14.82	$127.50	$0.25	$0.46	$1.50	$24.43	$15.28	$39.71
80 percent	6 percent	$17.36	$16.02	$120.00	$1.33	$2.47	$9.00	$18.69	$18.49	$37.18
75 percent	11 percent	$12.64	$15.45	$112.50	$2.17	$4.03	$16.50	$14.81	$19.48	$34.29
70 percent	16 percent	$9.71	$13.98	$105.00	$2.85	$5.29	$24.00	$12.56	$19.27	$31.83
65 percent	21 percent	$8.11	$11.66	$97.50	$3.36	$6.24	$31.50	$11.47	$17.90	$29.37
60 percent	26 percent	$6.18	$10.98	$90.00	$3.72	$6.90	$39.00	$9.90	$17.88	$27.78
55 percent	31 percent	$5.28	$9.39	$82.50	$3.94	$7.32	$46.50	$9.22	$16.71	$25.93
50 percent	36 percent	$4.08	$8.28	$75.00	$4.09	$7.60	$54.00	$8.17	$15.88	$24.05

Both the producer premiums and premium subsidies represent important information for a farm manager. The producer premium is the farm manager's out of pocket cost of the insurance. The premium subsidy is typically a pretty good indicator of the average long term net farm income benefit from the insurance contract. The premium subsidy is approximately equal to the difference between the average annual indemnity received under contract and the premium paid by the farmer. The reason why this is the case is that the RMA makes every effort to establish total premium rates (the sum of the premium paid by the producer and the subsidy paid by the government) that are equal to the indemnities that on average farmers can expect to receive.

For both corn and wheat, the patterns with respect to farmer paid premiums and premium rates are similar for the APH and SCO contracts, as well as for the total producer paid premium and total premium subsidy. The similarity in these patterns is intended and in fact required by the legislation that mandates that the same APH and SCO proportional subsidy rates be applied for all crops at each coverage level in each county for typical farm operations.

For corn, as the APH coverage level falls from 85 percent to 80 percent and then to 75 percent, the APH per acre producer paid premium declines rapidly from $56.92 to $41.13 (a decrease of 27 percent in the per acre producer paid premium) and then to $30.30 (a further decrease of 15 percent relative to the producer paid premium at the 85 percent coverage level). However, the APH per acre income guarantee (the APH level of revenue protection) declines from $476 to $420, a decrease of only 12 percent, as the coverage level is reduced from 85 percent to 75 percent. The APH per acre premium subsidy also changes as the coverage level falls from 85 percent to 80 percent and then 75 percent but in perhaps an unexpected way. In fact, the APH per acre subsidy actually increases by $3.06 as coverage is reduced from 85 percent to 80 percent (from $34.89 to $37.97) and before declining by less than a dollar to $37.03 as coverage is further reduced from 80 percent to 75 percent.

As the APH coverage level declines, the SCO coverage level and the SCO amount revenue protection increase. For example, as the corn coverage level falls from 86 percent to 81 percent and then 75 percent, the SCO coverage level increases from 1 percent to 6 percent and then 11 percent and (at the county level) the amount of per acre revenue protection increases from $5.60 to $33.60 and then $61.60. The SCO per acre producer paid premium also correspondingly increases, initially from $0.71 (at the 1 percent coverage level) to $3.50 (at the 6 percent coverage level) and then $5.25 (at the 11 percent coverage level). However, because the SCO subsidy rate is constant at 65 percent (see table 4), the SCO per acre premium subsidy also increase substantially from $1.32 (at the 1 percent coverage level) to $6.49 (at the 6 percent coverage level, and then $9.73 (at the 11 percent coverage level).

Over the range of APH coverage levels for corn from 85 percent to 75 percent, therefore, for the representative farm the total producer premium paid per acre for the APH-SCO joint coverage falls substantially, from $57.63 (at the 85 percent APH coverage level) to $44.63 (at the 80 percent APH coverage level) and then $35.55 (at the 75 percent APH coverage level). However, the total per acre premium subsidy paid by the government actually increases from $36.21 (at the 85 percent APH coverage level) to $44.46 (at the 80 percent APH coverage level) and then $46.76 (at the 75 percent APH coverage level). The reason, discussed above, is that for increases in APH coverage levels from 75 percent to 85 percent, essentially farmers are required to pay all or almost all of the additional premium needed to cover expected indemnity payments but all additional premiums for increased SCO coverage are subsidized at the same rate of 65 percent.

For APH corn coverage levels of less than 75 percent, as the APH coverage level is further reduced (in five percent increments from 75 percent to 50 percent) and the SCO coverage level is increased, both total producer paid premiums and total subsidy payments decline. However, the decrease in total per acre subsidies is relatively modest as the APH coverage level is reduced from 75 percent to 70 percent (the total per acre subsidy declines from $46.76 to $45.23), but considerably more substantial thereafter. While the SCO per acre subsidy consistently increases as the APH coverage level declines, it does so at a slower rate than

the APH subsidy decreases and so total subsidies decline.

As noted above very similar patterns are reflected in the APH and SCO per acre producer paid premiums and premium subsidies for wheat presented in table 6. While these rates are not discussed in detail, it is worth noting that, just as in the case of corn, as the APH coverage level for wheat declines from 85 percent to 80 percent and then 75 percent, total per acre subsidies for the joint APH-SCO contract increase (from $15.28 to $18.49 and then $19.48), and for the same reasons. As APH coverage levels for wheat are reduced below 75 percent, and correspondingly SCO coverage levels are increased, again as in the case of corn total per acre premium subsidies decline.

Farmers who view the net income effects of crop insurance as especially important for their operations and who have enrolled a crop in the PLC program may therefore pay considerable attention to APH-SCO contracts with coverage levels in the range of 70 percent to 75 percent. Farmers concerned with managing shorter term financial risks and, therefore, ensuring they receive indemnity payments when on-farm crop losses occur may prefer higher APH coverage levels.

SCO and APH Indemnities: Examples of the Effects of Different APH and SCO Coverage Choices

Numerous possible APH-SCO contract and farm and county revenue scenarios can occur, resulting in equally numerous possible outcomes with respect to APH and SCO indemnities. To illustrate and give a sense of potential differences in indemnity outcomes for different APH-SCO contracts, we show the indemnity outcomes for each APH-SCO coverage option that could be chosen for corn and wheat by the representative farm under one scenario for county farm yields and county yields (Tables 7 and 8). The indemnity outcomes are shown on a per acre basis for each crop. The scenario is that the farm's actual per acre revenue is 65 percent of the farm's APH expected revenue and the county revenue is 75 percent of the SCO expected revenue. In tables 7 and 8, for each crop (corn and wheat), at each APH and SCO coverage level (columns 1 and 2), the per acre APH indemnity and the per acre SCO indemnity are reported (columns 4 and 6), along with producer paid premiums (columns 3 and 5). The per acre total indemnity paid under each of the alternative APH-SCO coverage levels, the sum of the APH and SCO indemnities, is also reported (column 8), along with the total per acre net indemnity, the total indemnity less the total producer paid premium (column 9).

Table 7: Per Acre Indemnities, Producer Paid Premiums, and Net Indemnities for Corn at Different Coverage Levels When Farm Revenues are 65 percent of APH yields and County Revenues are 75 percent of SCO Expected Revenues

APH Coverage Level	SCO Coverage Level	APH Producer Premium	APH Indemnity	SCO Producer Premium	SCO indemnity	Total Producer Premium	Total Indemnity	Net Indemnity
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
85 percent	1 percent	$56.92	112	$0.71	$5.60	$57.63	$117.60	$59.97
80 percent	6 percent	$41.13	84	$3.50	$33.60	$44.63	$117.60	$72.97
75 percent	11 percent	$30.30	56	$5.25	$61.60	$35.55	$117.60	$82.05
70 percent	16 percent	$23.28	28	$6.32	$61.60	$29.60	$89.60	$60.00
65 percent	21 percent	$19.42	0	$6.90	$61.60	$26.32	$61.60	$35.28
60 percent	26 percent	$14.07	0	$7.19	$61.60	$21.26	$61.60	$40.34
55 percent	31 percent	$11.51	0	$7.32	$61.60	$18.83	$61.60	$42.77
50 percent	36 percent	$8.50	0	$7.41	$61.60	$15.91	$61.60	$45.69

Table 8: Per Acre Indemnities, Producer Paid Premiums, and Net Indemnities for Wheat at Different Coverage Levels When Farm Revenues are 65 percent of APH yields and County Revenues are 75 percent of SCO Expected Revenues (Goshen County, 2015)

APH Coverage Level	SCO Coverage Level	APH Producer Premium	APH Indemnity	SCO Producer Premium	SCO indemnity	Total Producer Premium	Total Indemnity	Net Indemnity
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
85 percent	1 percent	$24.18	$30.00	$0.25	$1.50	$24.43	$31.50	$7.07
80 percent	6 percent	$17.36	$22.50	$1.33	$9.00	$18.69	$31.50	$12.81
75 percent	11 percent	$12.64	$15.00	$2.17	$16.50	$14.81	$31.50	$16.69
70 percent	16 percent	$9.71	$7.50	$2.85	$16.50	$12.56	$24.00	$11.44
65 percent	21 percent	$8.11	$0.00	$3.36	$16.50	$11.47	$16.50	$5.03
60 percent	26 percent	$6.18	$0.00	$3.72	$16.50	$9.90	$16.50	$6.60
55 percent	31 percent	$5.28	$0.00	$3.94	$16.50	$9.22	$16.50	$7.28
50 percent	36 percent	$4.08	$0.00	$4.09	$16.50	$8.17	$16.50	$8.33

Indemnities and net indemnities follows similar patterns for corn and wheat because, for both crops, the farm per acre revenue is 65 percent of its APH expected revenue and the county per acre revenue is 75 percent of the SCO expected revenue. On the representative farm, for corn, the APH expected revenue is $560 per acre and for wheat the APH expected revenue is $150 per acre. Given that the farm's actual revenue per acre is 65 percent of the expected revenue per acre (either because of a yield shortfall or lower corn prices), the actual per acre revenue for corn is $360 and the actual per acre revenue for wheat is $97.50. At an APH 85 percent coverage level the farm's per acre revenue guarantee is therefore $476 and, as shown in table 7, if the farm's actual revenue per acre is estimated to be $364, the farm will receive an APH indemnity of $112. A five percent reduction in the farm's APH revenue coverage level reduces the farm's revenue guarantee by $28 and, correspondingly, the indemnity it receives by the same amount (as is the case as the APH coverage level falls from 85 percent to 80 percent, then to 75 percent, and to 70 percent). Once the farm's coverage level falls to 65 percent, the farm's corn revenue guarantee becomes $360 per acre, equal to the farm's estimated corn revenue per acre and at that and lower APH coverage levels, the farm receives no APH indemnity (as also shown in table 6).

The SCO contract will make a payment when the estimated county level per acre revenue falls below 86 percent of the SCO county level expected revenue. In the case of the representative farm, whose APH proven yield is assumed to be equal to the county expected yield, the county expected revenue for corn is also $560 (because, as discussed above, the same expected price is used in computing expected revenues at the farm and county level). The SCO revenue guarantee is therefore $481.60 (86 percent x $560). The actual county revenue is assumed to be 75 percent of the SCO expected county revenue of $560 and equals $420 (75 percent x $560). As the farm reduces the APH coverage level, however, correspondingly the SCO coverage level increases.

At an APH coverage level of 85 percent, for example, the maximum SCO indemnity the farm can receive is 1 percent of the SCO revenue guarantee (the difference between 86 percent of the SCO expected revenue and the APH coverage level of 85 percent), regardless of the fact that the estimated per acre county revenue is only 75 percent of SC0 expected revenue. Thus, if the representative farm does select an APH coverage level of 85 percent, the SCO indemnity the farm receives will be $5.60 per acre (1 percent x $560) as shown (table 7). If the farm reduces the APH coverage level by 5 percent, the corn SCO coverage level increases by 5 percent of the SCO expected per acre revenue or $28 (5 percent X $560) to $33.60, as also shown in table 7, and the farm will also receive that amount as an SCO indemnity. Given that the SCO estimated county revenue for corn is $420 (75 percent of the county expected revenue), the maximum per acre SCO indemnity the farm can receive, regardless of the APH and SCO coverage levels selected, is the difference the SCO corn revenue guarantee of

$481.60 and the estimated SCO revenue per acre of $420, or $61.60 per acre. Thus for APH coverage levels of 75 percent and below, the farm's SCO per acre indemnity payment is capped at that amount (Table 7).

For the representative farm, ***because the farm's per acre yield is assumed to be identical to the county per acre yield***, as the farm reduces its APH coverage from 85 percent to 75 percent and the SCO coverage increases from 1 percent to 11 percent, the total indemnity from both the APH contract and the SCO endorsement received by the farm remains constant. The decline in the APH indemnity is exactly offset by an equivalent increase in the SCO indemnity. If the county SCO expected yield were higher (lower) than the farm's APH yield, total indemnities would increase as the APH coverage level is reduced because the SCO indemnity would grow more (less) rapidly than the APH indemnity would decline. Farms whose APH yields differ from the county SCO expected yield should therefore carefully evaluate what APH and SCO indemnities may look like for their farms at different APH and SCO coverage levels. As the APH coverage level falls to 70 percent and below, the total indemnity also falls because the APH indemnity falls and the SCO indemnity is capped at its maximum amount of $61.60. When the APH coverage level falls to 65 percent and below, the SCO indemnity of $61.60 is the only indemnity received by the farm because the farm's estimated per acre revenue exceeds the farm's revenue guarantee at those lower coverage levels.

Total net indemnities, the difference between total indemnities and total premiums increase as the APH coverage level falls from 85 percent to 75 percent in this scenario because total APH and SCO per acre indemnities remain constant but per acre producer premium payments fall (as SCO coverage is more heavily subsidized than APH coverage at those levels). For coverage levels below 75 percent, as those coverage levels decline, in this scenario where estimated farm revenues per acre are 65 percent of the APH expected revenue and county estimated SCO revenues are 75 percent of their expected level, net indemnities also decline because producer paid premiums fall more slowly than total indemnities. Finally, the same indemnity and net indemnity patterns occur with respect to wheat (table 8) because the farm's per acre estimated wheat revenues is assumed to be 65 percent of their APH expected levels and the county estimated SCO per acre revenue is also 75 percent of their expected level (Table 8).

To explore how APH and SCO indemnities change when estimated farm and county revenues change, for both wheat and corn the representative farm is assumed to select a 75 percent APH coverage level contract that provides a maximum SCO coverage of 11 percent of the expected county revenue per acre. T premiums and indemnities associated with different farm and county per acre estimated revenue outcomes are presented (Table 9). For each crop, the following six joint farm and county outcomes are considered:

Scenario	Farm Estimated Percent of APH Expected Revenue	County Estimated Percent of SCO Expected Revenue
1	75 percent	86 percent
2	70 percent	80 percent
3	65 percent	75 percent
4	60 percent	70 percent
5	55 percent	65 percent
6	50 percent	65 percent

If the farm and county estimated are equal to (or exceed) the farm's APH and SCO revenue guarantees (as in Scenario 1because the farm is assumed to select an APH revenue guarantee of 75 percent), then the farm does not receive either an APH or SCO indemnity (Table 9). The farm does have to make per acre premium payments that, given the farm's selected APH coverage level, total $31.05 for corn and $14.81 for wheat and the farm's net indemnities (the difference between the farm's total indemnities and total producer paid premiums) are negative. When at the farm and county level, per acre revenues fall below the selected APH and SCO revenue guarantees, total indemnities consistently increase and by the same amount as the declines in estimated farm per acre revenues. However, once county revenues fall below 75 percent of their expected levels, the SCO 11 percent indemnity cap applies. Per acre SCO indemnities for corn remain fixed at their cap of $61.50 and per acre SCO indemnities for wheat remain fixed at their cap of $16.50 even when estimated county revenues for either crop fall to as low as 50 percent of their expected levels. The SCO cap exists because the SCO contract is designed to provide indemnities to cover relatively shallow losses while the APH contract is explicitly intended to cover major crop losses at the farm level.

Table 9. Per Acre Premiums and Indemnities When the Farm Selects a 75 percent APH Coverage Level and 11 percent SCO Coverage level under Different Farm and County Yield Outcomes

Corn										
Farm Percent of APH Expected Revenue	County Percent of SCO Expected Revenue	APH Coverage Level	SCO Coverage level	APH Producer Premium	SCO Producer Premium	APH Indemnity	SCO Indemnity	**Total Producer Premium**	**Total Indemnity**	**Net Indemnity**
75 percent	86 percent	75 percent	11 percent	$30.30	$5.25	$0.00	$0.00	$31.05	$0.00	-$31.05
70 percent	80 percent	75 percent	11 percent	$30.30	$5.25	$28.00	$33.60	$31.05	$61.60	$30.55
65 percent	75 percent	75 percent	11 percent	$30.30	$5.25	$56.00	$61.60	$31.05	$117.60	$86.55
60 percent	70 percent	75 percent	11 percent	$30.30	$5.25	$84.00	$61.60	$31.05	$145.60	$114.55
55 percent	65 percent	75 percent	11 percent	$30.30	$5.25	$112.00	$61.60	$31.05	$173.60	$142.55
50 percent	65 percent	75 percent	11 percent	$30.30	$5.25	$140.00	$61.60	$31.05	$201.60	$170.55
Wheat										
Farm Percent of APH Expected Revenue	**County Percent of SCO Expected Revenue**	**APH Coverage Level**	**SCO Coverage level**	**APH Producer Premium**	**SCO Producer Premium**	**APH Indemnity**	**SCO Indemnity**	**Total Producer Premium**	**Total Indemnity**	**Net Indemnity**
75 percent	86 percent	75 percent	11 percent	$12.64	$2.17	$0.00	$0.00	$14.81	$0.00	-$14.81
70 percent	80 percent	75 percent	11 percent	$12.64	$2.17	$7.50	$9.00	$14.81	$16.50	$1.69
65 percent	75 percent	75 percent	11 percent	$12.64	$2.17	$15.00	$16.50	$14.81	$31.50	$16.69
60 percent	70 percent	75 percent	11 percent	$12.64	$2.17	$22.50	$16.50	$14.81	$39.00	$24.19
55 percent	65 percent	75 percent	11 percent	$12.64	$2.17	$37.50	$16.50	$14.81	$54.00	$39.19
50 percent	65 percent	75 percent	11 percent	$12.64	$2.17	$37.50	$16.50	$14.81	$54.00	$39.19

USDA and RMA Decision Tools

The 2014 Agricultural Act has created many farm program options for farmer and, therefore, farmers who produce major crops like corn, wheat and barley have to make important choices about the programs in which they should enroll their different crops. These choices require farmers to be thoughtful about the options that will work best for their operations. To aid farmer in making these decisions, both the USDA Farm Service Agency (FSA) and the USDA Risk Management Agency have developed web-based decision tools that each farmer can use to assess the potential benefits of the different programs and insurance options for their crop operations. The FSA provides access to two decision tools that are designed to facilitate the ability of farmers to make these assessment. The tools generally focus on the PLC-ARC choices but also include information about the SCO program. One of the tools has been developed by a consortium including Texas A&M University and the Food and Agricultural Policy Research Institute at the University of Missouri. The other decision tool has been developed by a consortium of several universities led by the University of Illinois. These decision tools can be accessed at the following urls:

https://usda.afpc.tamu.edu/ and
http://farmbilltoolbox.farmdoc.illinois.edu/.

The FSA has also developed decision tools to facilitate farmers' decisions about whether or not to update base acres and base yields for eligible crops. Those tools can be accessed through the web at the FSA decision tool page located at:
http://www.fsa.usda.gov/Internet/FSA_File/evaluate_arc_plc.pdf.

In addition, the RMA has developed a county specific decision tool to facilitate farmers' decisions about their APH-SCO options. The RMA Crop Insurance Decision Tool is located at:
http://prodwebnlb.rma.usda.gov/apps/CIDT/.

Summary

The 2014 Agricultural Act has created a broad range of new risk management options for Wyoming farmers. This briefing paper has focused on one major set of choices available to those producers: the decision about whether to use the new Supplementary Crop Insurance Option. The briefing paper also provides examples about the effects of changing a farm's current crop insurance coverage under (typically) an APH contract when the farm is also utilizing an SCO contract. Those effects include impacts on producer paid premiums, premium subsidies and the indemnities available to the farm. The focus of the examples used in this briefing paper has been on a representative farm located in Goshen County in Wyoming and impacts on per acre producer paid premiums, premium subsidies and indemnities for two major crops for which SCO insurance is currently available. Clearly the SCO has the potential to be a useful financial risk management tool for many producers but every farm manager should carefully evaluate the usefulness of the SCO in conjunction with other USDA farm programs fort their own operation.