ESTABLISHMENT OF PREVENTED PLANTING COVERAGE FACTORS FOR THE FEDERAL CROP INSURANCE PROGRAM

Risk Management Agency (RMA)
November 2016

AN RMA EXAMINATION OF THE INDEPENDENT EVALUATION OF PREVENTED PLANTING COVERAGE FACTORS AND AN ASSESSMENT OF STAKEHOLDER COMMENTS FOR THE MAJOR PROGRAM CROPS OF BARLEY, CORN, COTTON, GRAIN SORGHUM, RICE, SOYBEANS AND WHEAT

Methods to Determine Appropriate Changes to Prevented Planting Factors

Overview

Prevented planting is defined as the failure to plant the insured crop, by a specified final planting date, due to an insured cause of loss that is general to the surrounding area and that prevents other producers from planting acreage with similar characteristics. Coverage for prevented planting is designed to cover the entirety of normal costs associated with preparing the land up to the point of the seed going into the ground. Prevented planting coverage has historically been subject to a maximum of 60 percent of the total insurance guarantee. This helps maintain program integrity and limit any potential adverse incentives to claim prevented planting when the acreage could have been planted. It also keeps prevented planting coverage from claiming an excessive portion of overall coverage.

The Risk Management Agency (RMA) commissioned an external evaluation of its prevented planting coverage factors. These factors determine the per-acre payment that prevented planting coverage provides. The evaluation, and its recommendations, were made available to the public for comment. RMA received 27 comments from 16 commenters. In response to the comments, RMA has performed additional analysis and made final determinations. This document explains the determinations and the basis for them.

The three principle critiques of the evaluation were raised by public comment and was the focus of RMA's additional analysis. The critiques are:

1) **Liability**. The evaluation improperly omitted the insurance deductible when estimating liability. This results in over-estimated prevented planting payments, which precipitates a recommendation to decrease prevented planting coverage factors.
2) **Time Period**. Evaluating the period 2003-2012 concerned many commenters, due to the frequency of irregularly high commodity prices.
3) **Pre-planting Cost Allocation**. The total cost of production may be allocated into stages, including the pre-planting stage. The evaluation made decisions on how to allocate costs to the pre-planting period which were challenged by commenters.

The prevented planting coverage factor is a percentage of the individual insurance guarantee for timely planted acreage. The factor established for each crop is based on the ratio of **pre-planting costs of production** to **insurance liability**.

Pre-planting costs are based on a pre-plant cost factor, which represents the proportion of total costs that are incurred before planting. A higher pre-plant cost factor increases the indicated prevented planting coverage factor. Conversely, any increase in the insurance liability decreases the indicated prevented planting coverage factor.

The following are the results and a discussion of the methods employed by RMA to arrive at the final determinations for the prevented planting coverage factors for corn, soybeans, wheat, cotton, grain sorghum, barley, and rice. RMA has determined these methods are defensible, appropriate and generally applicable to all the remaining crops for which prevented planting coverage is available.

As noted below, the ratio of pre-plant cost-to-liability determined to be appropriate and defensible will be consistently applied for all crops for which prevented planting coverage factors are required. As identified by commenters, the external evaluation employed a less transparent and uniform approach in establishing recommended prevented planting coverage factors. The two significant ratios considered by the contracted study were estimated prevented planting indemnities-to-pre-planting costs of production; and pre-planting costs of production-to-total costs of production.

What follows is a discussion of the major elements used to calculate the prevented planting coverage factors.

Insurance Liability

Insurance liability is the product of crop price, historical yield, and the base insurance coverage level. In response to comments received from a variety of groups, we analyzed the methods the contractor used to estimate insurance liability.

A significant finding that was brought up in public comments, and confirmed by RMA, concerns the use of an unrepresentative base insurance coverage level or liability. The evaluation did not account for the insurance deductible, resulting in an estimate of the insurance liability equaling total crop value (i.e. crop price multiplied by historical yield). Effectively, this results in a deductible being applied to prevented planting coverage, so that a prevented planting payment does not cover all cost incurred up to planting. RMA concludes that not recognizing the insurance deductible is inappropriate when determining the most reasonable prevented planting coverage factors.

Another important issue raised in the comments received concerns the period of time used to establish the average liability in determining the prevented planting coverage factor. Crop prices have a significant influence on average liability and there has been significant variability in crop prices in recent years. In the evaluation, estimated liability for the most recent ten-year period for which cost of production data could be obtained was 2003-2012. Multiple commenters representing growers argue that this period contains too many years of abnormally high commodity prices, which can result in downward bias in recommended prevented planting coverage factors. However, the influence of this bias on recommendations is not uniform across crops. In certain cases, such as soybeans, the corrected liability may not result in a recommendation which differs from the evaluation.

A couple commenters suggested an alternative approach of combining historical prices, yields, and coverage levels with forecasts of future prices and yields. This approach was tested using, for example, eight years of historical data and two years of forecast data. The difference between this hybrid approach and a completely historical approach was minimal. There are additional drawbacks to a hybrid timeframe: estimating future year liability can only be used for a small portion of the crops which offer prevented planting coverage, and there is an inherently high level of uncertainty in commodity price forecasts.

As a result, RMA finds the use of price forecasts in the calculation of prevented planting factors to not be the most appropriate approach. Instead, historical data, specifically the most recent five years (rather than the longer time period used in the evaluation), produces a result that is more representative of current conditions. In addition, RMA anticipates the prevented planting coverage factors will be updated on a period basis (generally every five years) so that they remain representative of current conditions.

Time Period

In the evaluation, the primary insurance liability and cost of production estimates are established using the years 2003-2012. A common criticism of the evaluation was that relying on commodity price data from the years 2007 to 2011, in particular, is unsound. For many of the large-acreage commodities which crop insurance covers, these years contained historically high farm-gate prices. Further, reaching over a decade in the past masks the increases in average buy-up coverage levels, which may skew results.

In response, this analysis uses the five most recent years where complete data is available, 2010-2014. This period contains both near-peak commodity price years and the resulting softening of the commodity market. Profit margins for growers have tightened significantly during the past several crop years, and this situation is worth noting in the analysis. Finally, using a five-year window is consistent with recommendations from the evaluation for revisiting the prevented planting coverage factors.

Pre-Planting Cost Allocation

The Economic Research Service (ERS) Commodity Cost and Return accounts are the production cost basis for our prevented planting estimates. To estimate pre-planting cost of production, a pre-plant cost factor (percentage) is applied to the full-year cost of production. For the seven crops presented, each has two sets of factors, one generated by the evaluation and one by ERS studies completed in 2007 and 2013. Our general approach is to use the factors from the more recent contracted study, unless there is disagreement between the evaluation and the ERS factors. In situations where there is disagreement, we use the factor best supported by available data.

One concern with the evaluation, expressed by multiple commenters, was the lack of regional differentiation in production costs, specifically for land. The evaluation noted the administrative burden of determining appropriate coverage factors at the regional, state, or sub-state level would entail due to a lack of data. However, land prices generally reflect underlying productivity, which, in turn is reflected in the insurance guarantee; i.e. guarantees generally correlate with land prices. Since the amount of prevented planting coverage is determined by the insurance guarantee, then it will tend to also correlate with land prices; i.e. prevented planted coverage is generally greater where land prices are higher.

Other Costs

For the remaining cost categories, there is a general consensus between the evaluation and previous estimates provided by the Economic Research Service (ERS). Therefore, these costs are not discussed further. These cost are:

Variable Costs: seed, chemicals, custom operations, fuel, repairs, purchase irrigation water, interest on operating capital

Allocated Overhead Costs: hired Labor, unpaid labor

Summary

Based RMA's re-examination of the evaluation in response to comments received, the recommendations provided by the evaluation have been revised. The following table summarizes the current prevented planning coverage factors, the evaluation's recommendation, and the final results from RMA's analysis.

Prevented Planting Coverage Factors

Crop	Current	Recommendation from Evaluation	Final
Corn	60%	50%	55%
Soybeans	60%	60%	60%
Wheat	60%	60%	60%
Cotton	50%	35%	50%
Grain Sorghum	60%	60%	60%
Barley	60%	60%	60%
Rice	45%	45%	55%

Corn

The prevented planting coverage factor will be decreased to 55 percent (from 60 percent) of the base policy insurance guarantee. The evaluation had recommended a larger decrease to 50 percent. While there are several differences between the evaluation's methods and the final RMA analysis, in the case of corn, there was a significant decrease in average liability and a significant increase in the cost of fertilizer incurred prior to planting. Both changes work to increase the prevented planting coverage factor needed to cover pre-planting costs.

Public Comments

One commenter cited specific concerns cover a lack of transparency in the evaluation's coverage determination, the specific time period analyzed, the unrepresentative nature of ERS numbers, and the lack of regional distinction. A couple commenters concurred with the contracted study's recommendation to decrease the prevented planting coverage factor to 50 percent.

Pre-Planting Factor Adjustments

Fertilizer[1]: The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. The only examples RMA uncovered of specific dollar savings comes from Purdue University agricultural economists studying corn, suggesting a fertilizer savings of $10 per acre, or approximately seven percent of the estimated fertilizer cost for 2014, for the year following a prevented planting year. Analysis from the University of Illinois advising corn growers on the additional costs of planting a replacement crop versus fallowing in a prevented planting year do not factor any savings from stored fertilizer. Thus, the full cost of pre-plant fertilizer is included.

Crop Insurance: The evaluation arrived at the crop insurance pre-plant cost factor according to the historical proportion of total indemnities attributable to prevented planting coverage. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

Capital Recovery: This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

[1] "Prevented Planting Payments versus Planting Soybeans." Schnitkey, Gary. Farmdocdaily, University of Illinois. http://farmdocdaily.illinois.edu/2013/06/prevented-planting-payments-soybeans.html
"The Economics of Prevented Planting." Gloy, Brent. Center for Commercial Agriculture, Purdue University. https://ag.purdue.edu/commercialag/Documents/Resources/Crop-Insurance/Prevented-Delayed-Plantings/2011_05_31_Gloy_Economics_Prevented_Planning.pdf

Land Rental (opportunity cost): Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100 percent of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

Taxes and Insurance and General Farm Overhead: Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is rounded to the nearest five percent, resulting in determined prevented planting coverage factor of 55 percent.

Summary of Prevented Planting Coverage Factor Calculation for Corn

	Full-Year Production Cost (2010-2014 Avg/acre)	Pre-Plant Factor	Pre-Plant Cost
Seed	91.32	0%	0.00
Fertilizer	143.69	63%	90.53
Chemicals	27.59	21%	5.79
Custom operations	17.24	28%	4.83
Fuel, lube, and electricity	30.78	22%	6.77
Repairs	25.24	19%	4.80
Purchased irrigation water	0.11	0%	0.00
Interest on operating capital	0.19	32%	0.06
Crop insurance	19.85	0%	0.00
Total, cash costs	$ 356.02		$ 112.78
Hired labor	3.04	34%	1.03
Unpaid labor (opportunity cost)	23.62	31%	7.32
Capital recovery	92.83	13%	12.07
Land Rental (opportunity cost)	152.76	100%	152.76
Taxes and insurance	8.98	100%	8.98
General farm overhead	19.11	100%	19.11
Total, allocated overhead	$ 300.35		$ 201.28

Total PP Cost	$ 314.06
Liability (2010-2014 Avg/Acre)	$ 595.58
Calculated PP Coverage Factor	53%
Determined PP Coverage Factor	**55%**

Soybeans

The prevented planting coverage factor will be maintained at 60 percent of the base policy insurance guarantee, consistent with the evaluation's recommendation.

Public Comment

Several comments were supportive of the evaluation's recommendation to maintain the current prevented planting coverage factor for soybeans.

Pre-Planting Factor Adjustments

<u>Fertilizer:</u> The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. RMA uses the higher ERS factor.

<u>Crop Insurance:</u> The evaluation calculated the insurance pre-plant cost factor according to the historical rate of total indemnities attributed to prevented planting. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

<u>Capital Recovery:</u> This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

<u>Land Rental (opportunity cost):</u> Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100% of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

<u>Taxes and Insurance and General Farm Overhead:</u> Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is rounded to the nearest five percent, resulting in determined prevented planting coverage factor of 60 percent.

Summary of Prevented Planting Coverage Factor Calculation for Soybeans

	Full-Year Production Cost (2010-2014 Avg/acre)	Pre-Plant Factor	Pre-Plant Cost
Seed	57.89	0%	0.00
Fertilizer	30.78	80%	24.63
Chemicals	23.06	25%	5.77
Custom operations	8.81	23%	2.03
Fuel, lube, and electricity	20.44	24%	4.90
Repairs	19.10	19%	3.63
Purchased irrigation water	0.10	0%	0.00
Interest on operating capital	0.09	23%	0.02
Crop insurance	13.87	0%	0.00
Total, cash costs	$ 174.13		$ 40.97
Hired labor	2.63	31%	0.81
Unpaid labor (opportunity cost)	17.39	29%	5.04
Capital recovery	82.54	11%	9.08
Land Rental (opportunity cost)	136.18	100%	136.18
Taxes and insurance	9.81	100%	9.81
General farm overhead	16.74	100%	16.74
Total, allocated overhead	$ 265.29		$ 177.66

Total PP Cost	$ 218.63
Liability (2010-2014 Avg/Acre)	$ 376.28
Calculated PP Coverage Factor	58%
Determined PP Coverage Factor	**60%**

Wheat

The prevented planting coverage factor will be maintained at 60 percent of the base policy insurance guarantee, consistent with the evaluation's recommendation.

Public Comment

The comments received were in favor of the evaluation's recommendation to maintain the current prevented planting coverage factor for wheat.

Pre-Planting Factor Adjustments

Fertilizer: The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. RMA uses the higher ERS factor.

Crop Insurance: The evaluation calculated the insurance pre-plant cost factor according to the historical rate of total indemnities attributed to prevented planting. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

Capital Recovery: This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

Land Rental (opportunity cost): Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100% of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

Taxes and Insurance and General Farm Overhead: Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is rounded to the nearest five percent, resulting in determined prevented planting coverage factor of 60 percent.

Summary of Prevented Planting Coverage Factor Calculation for Wheat

	Full-Year Production Cost (2010-2014 Avg/acre)	Pre-Plant Factor	Pre-Plant Cost
Seed	14.33	0%	0.00
Fertilizer	42.56	38%	16.17
Chemicals	14.11	43%	6.07
Custom operations	10.19	16%	1.63
Fuel, lube, and electricity	18.61	32%	5.96
Repairs	20.75	30%	6.22
Purchased irrigation water	0.61	30%	0.18
Interest on operating capital	0.07	31%	0.02
Crop insurance	13.73	0%	0.00
Total, cash costs	$ 134.96		$ 36.25
Hired labor	2.13	38%	0.81
Unpaid labor (opportunity cost)	16.85	37%	6.23
Capital recovery	80.12	17%	13.62
Land Rental (opportunity cost)	57.16	100%	57.16
Taxes and insurance	6.37	100%	6.37
General farm overhead	10.96	100%	10.96
Total, allocated overhead	$ 173.59		$ 95.16

Total PP Cost	$ 131.41
Liability (2010-2014 Avg/Acre)	$ 210.46

Calculated PP Coverage Factor	62%
Determined PP Coverage Factor	**60%**

Cotton

The prevented planting coverage factor will be maintained at 50 percent of the base policy insurance guarantee. The evaluation had recommended a decrease to 35 percent. As the evaluation noted, a drop in cotton prices would affect the decision to decrease preventing planting coverage factors. This decrease in price has occurred in the additional years added to the RMA analysis, affecting the liability estimate; in conjunction with the correction RMA used to estimate liability inclusive of the insurance deductible. The increase in fertilizer expense allocated to the pre-plant period is also significant for cotton.

Public Comment

A commenter felt that ERS costs do not reflect increases in chemical costs for certain regions of the country. RMA believes the chemical costs are adequate for much of the country, but in cases where it is not, there are options for growers in high-cost areas to increase their prevented planting coverage factor by 5 or 10 percentage points. Another comment was that including only a portion of crop insurance premiums is arbitrary. RMA's approach is to eliminate it as a pre-plant cost. Another commenter expressed support for the evaluation's recommendation to reduce the prevented planting coverage factor for cotton to 30 percent.

Pre-Planting Factor Adjustments

<u>Fertilizer:</u> The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. RMA uses the higher ERS factor.

<u>Crop Insurance:</u> The evaluation calculated the insurance pre-plant cost factor according to the historical rate of total indemnities attributed to prevented planting. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

<u>Capital Recovery:</u> This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

<u>Land Rental (opportunity cost):</u> Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100% of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

Taxes and Insurance and General Farm Overhead: Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is 50 percent, which is applied as the determined prevented planting coverage.

Summary of Prevented Planting Coverage Factor Calculation for Cotton

	Full-Year Production Cost (2010-2014 Avg/acre)	**Pre-Plant Factor**	**Pre-Plant Cost**
Seed	95.55	0%	0.00
Fertilizer	91.49	43%	39.34
Chemicals	68.90	15%	10.33
Custom operations	23.70	14%	3.32
Fuel, lube, and electricity	61.43	15%	9.22
Repairs	36.40	15%	5.46
Ginning	108.79	0%	0.00
Purchased irrigation water	3.35	0%	0.00
Interest on operating capital	0.27	13%	0.03
Crop insurance	26.49	0%	0.00
Total, cash costs	$ 516.37		$ 67.70
Hired labor	15.11	36%	5.44
Unpaid labor (opportunity cost)	27.66	35%	9.68
Capital recovery	146.49	13%	19.04
Land Rental (opportunity cost)	79.93	100%	79.93
Taxes and insurance	8.14	100%	8.14
General farm overhead	16.96	100%	16.96
Total, allocated overhead	$ 294.30		$ 139.20

Total PP Cost	$ 206.90
Liability (2010-2014 Avg/Acre)	$ 415.04

Calculated PP Coverage Factor	50%
Determined PP Coverage Factor	**50%**

Grain Sorghum

The prevented planting coverage factor will be maintained at 60 percent of the base policy insurance guarantee consistent with the evaluation's recommendation.

Public Comment

A commenter suggested that grain sorghum, as well as hybrid sorghum seed and silage sorghum, have similar seedbed preparation as corn and would recommend that the prevented planting coverage factor be reduced from 60 percent and be aligned with the corn prevented planting coverage factor.

Pre-Planting Factor Adjustments

Fertilizer: The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. RMA uses the higher ERS factor.

Crop Insurance: The evaluation calculated the insurance pre-plant cost factor according to the historical rate of total indemnities attributed to prevented planting. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

Capital Recovery: This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

Land Rental (opportunity cost): Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100% of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

Taxes and Insurance and General Farm Overhead: Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is subject to the overall maximum of 60 percent.

Summary of Prevented Planting Coverage Factor Calculation for Grain Sorghum

	Full-Year Production Cost (2010-2014 Avg/acre)	Pre-Plant Factor	Pre-Plant Cost
Seed	12.00	0%	0.00
Fertilizer	43.08	64%	27.57
Chemicals	22.70	40%	9.08
Custom operations	12.50	17%	2.13
Fuel, lube, and electricity	28.97	16%	4.64
Repairs	21.21	24%	5.09
Purchased irrigation water	0.17	0%	0.00
Interest on operating capital	16.17	0%	0.00
Crop insurance	0.08	27%	0.02
Total, cash costs	$ 156.88		$ 48.52
Hired labor	4.28	36%	1.54
Unpaid labor (opportunity cost)	19.01	27%	5.13
Capital recovery	78.36	20%	15.67
Land Rental (opportunity cost)	51.37	100%	51.37
Taxes and insurance	5.09	100%	5.09
General farm overhead	10.74	100%	10.74
Total, allocated overhead	$ 168.84		$ 89.54

Total PP Cost	$ 138.07
Liability (2010-2014 Avg/Acre)	$ 209.87

Calculated PP Coverage Factor	66%
Determined PP Coverage Factor	**60%**

Rice

The prevented planting coverage factor be increased to 55 percent from the current 45 percent. The evaluation had recommended maintaining the factor at 45 percent, which RMA believes to be inadequate. The major difference between the evaluation and the RMA analysis is the estimate of liability. When a deductible is included, the RMA analysis shows that the average coverage carried by rice growers is significantly under the amount shown in the evaluation.

Public Comment

A commenter noted that USDA estimates of total cost of production appear to be underestimated, which would imply that the current prevented planting coverage factors are insufficient.

Pre-Planting Factor Adjustments

<u>Fertilizer:</u> The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. In the case of rice, there was no adjustment made by the evaluation decreasing the pre-plant fertilizer factor.

<u>Crop Insurance:</u> The evaluation calculated the insurance pre-plant cost factor according to the historical rate of total indemnities attributed to prevented planting. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

<u>Capital Recovery:</u> This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

<u>Land Rental (opportunity cost):</u> Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100% of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

<u>Taxes and Insurance and General Farm Overhead:</u> Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is rounded to the nearest five percent, resulting in determined prevented planting coverage factor of 55 percent.

Summary of Prevented Planting Coverage Factor Calculation for Rice

	Full-Year Production Cost (2010-2014 Avg/acre)	Pre-Plant Factor	Pre-Plant Cost
Seed	74.82	0%	0.00
Fertilizer	103.31	27%	27.89
Chemicals	77.87	8%	6.23
Custom operations	52.93	25%	13.23
Fuel, lube, and electricity	137.77	10%	13.78
Repairs	30.75	23%	7.07
Purchased irrigation water	13.95	0%	0.00
Interest on operating capital	31.96	0%	0.00
Commercial Drying	13.80	0%	0.00
Crop insurance	0.28	16%	0.05
Total, cash costs	$ 537.44		$ 68.25
Hired labor	21.21	46%	9.75
Unpaid labor (opportunity cost)	48.65	49%	23.84
Capital recovery	134.44	27%	36.30
Land Rental (opportunity cost)	186.17	100%	186.17
Taxes and insurance	19.87	100%	19.87
General farm overhead	27.97	100%	27.97
Total, allocated overhead	$ 438.30		$ 303.90

Total PP Cost	$ 372.15
Liability (2010-2014 Avg/Acre)	$ 683.30
Calculated PP Coverage Factor	54%
Determined PP Coverage Factor	**55%**

Barley

The prevented planting coverage factor be maintained at 60 percent of the base policy insurance guarantee consistent with the evaluation's recommendation.

Public Comment

No specific comments were received regarding barley prevented planting.

Pre-Planting Factor Adjustments

Fertilizer: The evaluation suggested that some fertilizer remains in the soil and thus is usable for future crops, prompting a lower factor than the initial ERS assignment. The evidence supporting stored value of fertilizer applied on a field prevented from planting is minimal. RMA uses the higher ERS factor.

Crop Insurance: The evaluation calculated the insurance pre-plant cost factor according to the historical rate of total indemnities attributed to prevented planting. That method does not reflect the true cost of crop insurance. Regardless, including crop insurance premiums as a pre-plant cost would essentially amount to insuring insurance, which would be inconsistent with other RMA programs' treatment of these costs. Regardless of where the coverage factor is set, the effect is minimal given the relationship of crop insurance premiums to total cost of production.

Capital Recovery: This allocated overhead cost category is comprised of depreciation and interest expense on farm machinery, equipment, and facilities. Depreciation is not a cash expense, but generally an accounting technique to spread the cost of capital assets out over time, especially in prevented planting years. The evaluation did not present a convincing explanation for including the full amount of capital recovery costs in the calculation of the prevented planting coverage factor. Therefore, RMA uses the ERS factor.

Land Rental (opportunity cost): Given that land costs, whether rental agreements or opportunity cost of owned land, are generally fixed, this cost is fully allocated to the pre-plant period. Growers have minimal ability to recoup the sunk cost of land payments if they are prevented from planting. The alternative percentage which ERS assigns is strictly the ratio of the months considered to be pre-planting to the total months of the year. RMA concurs with the evaluation's recommendation to use 100 percent of this cost. This cost category is often the largest on the farm income statement, so the pre-plant percentage has significant influence on the determined coverage factor.

Taxes and Insurance and General Farm Overhead: Property taxes, non-crop insurance premiums and other general overhead are one-time costs not influenced by whether a crop was planted. Yet, the expenses must be paid to keep the farm business in operation. Therefore, 100 percent of these overhead costs are considered pre-planting for RMA purposes, concurring with the approach taken in the evaluation. The effect on the determined coverage factor is minimal.

Final Determination

The calculated factor is subject to the overall maximum of 60 percent.

Summary of Prevented Planting Coverage Factor Calculation for Barley

	Full-Year Production Cost (2010-2014 Avg/acre)	Pre-Plant Factor	Pre-Plant Cost
Seed	18.78	0%	0.00
Fertilizer	58.42	47%	27.46
Chemicals	18.67	17%	3.17
Custom operations	12.60	29%	3.65
Fuel, lube, and electricity	33.11	23%	7.62
Repairs	28.37	20%	5.67
Purchased irrigation water	5.80	0%	0.00
Interest on operating capital	12.07	0%	0.00
Crop insurance	0.10	25%	0.02
Total, cash costs	$ 187.91		$ 47.60
Hired labor	7.22	29%	2.09
Unpaid labor (opportunity cost)	26.59	25%	6.65
Capital recovery	103.63	17%	17.62
Land Rental (opportunity cost)	80.46	100%	80.46
Taxes and insurance	9.18	100%	9.18
General farm overhead	16.08	100%	16.08
Total, allocated overhead	$ 243.16		$ 132.08

Total PP Cost	$ 179.68
Liability (2010-2014 Avg/Acre)	$ 221.10

Calculated PP Coverage Factor	81%
Determined PP Coverage Factor	**60%**