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Risk Management Options for Wyoming Farms

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Executive Summary

Farm managers know they are involved in financially risky enterprises and, as a result, develop strategies and tools to manage that risk. Typically, those strategies involve the use of multiple production, price and business risk management tools.

Farm managers protect their farm businesses against production risk and adverse movements in commodity and input prices. They use output price risk management techniques such as hedging in futures and options markets and forward contracting. They also manage input price risk, often through bulk purchasing and forward contracting for price and quantity of inputs such as fertilizer and fuel.

Increasingly, crop insurance for agricultural commodities offered by the Federal Crop Insurance Corporation (FCIC) has become an important and attractive risk management tool for agricultural producers. Farm managers in Wyoming now have a range of federally subsidized crop insurance products to facilitate their ability to manage production and revenue risks.

This paper describes federally subsidized production and revenue insurance products available to Wyoming farming operations and presents simulations of the effects of alternative risk management strategies for a representative Wyoming farm.

A farm that represents operations in Big Horn and Washakie counties is used to evaluate alternative production and revenue risk management strategies that involve Risk Management Agency (RMA) insurance products.

The representative farm has a resource base of 880 acres with 800 acres of irrigated cropland. Crops in the usual rotation are produced for cash markets. The 800 acres of cropland is allocated to the production of 265 acres of malting barley, 105 acres of alfalfa, 35 acres of new seeding alfalfa, 250 acres of sugar beets, and 180 acres of corn for grain. The remaining 80 acres consists of roads, ditches, fences and waste.

Many different risk management strategies can be pursued on a farm. Farm managers choose among these alternatives on the basis of the farm's financial structure and their preferences about taking on or avoiding risk. In this study, farm managers are assumed to be interested in risk management strategies that involve different combinations of the crop insurance products available to Wyoming crop producers. Two strategies employ combinations of the individual crop RMA-approved production and revenue risk products to Wyoming crop producers. The third strategy is to use AGR-Lite as a stand-alone insurance product. In the fourth and fifth strategies, AGR-Lite is used as an umbrella product in conjunction with the crop specific products used in the first two strategies.

Three "production year outcome" scenarios are examined. In scenario one, producers have an average or good year in which actual crop yields are close to, or exceed, average yields, and harvest prices are also similar to those that were expected when insurance coverage is purchased. Consequently, there are no shortfalls in yields or revenues, and the farm receives no insurance indemnities but pays premiums for the insurance coverage it purchases.

In scenario two, severe drought occurs and crop and forage yields (or proxy measures for yields) are 40 percent lower than expected because of reduced water supplies. In this scenario, the farm receives indemnities under Strategies 1 and 2 (in which the farm purchases APH yield and revenue crop insurance products for each of the cash crops it produces). Under Strategy 3, in which the farm only purchases an AGR-Lite policy, no indemnity is paid. Indemnities are paid Strategies 4 and 5 (and, respectively, are identical to those paid under Strategies 1 and 2) because the farm receives indemnities from its purchase of the individual commodity crop insurance products.

In scenario three, severe drought causes a 40 percent decline in crop and forage yields and over two thirds of the barley harvested by the farm to be rejected for malt barley. Indemnities are paid under Strategies1 and 2, and, in this scenario, also under Strategy 3 (in which AGR-Lite is used as a stand-alone policy). Under Strategies 4 and 5, indemnities are paid for commodities covered by individual crop insurance products but not from the umbrella coverage provided by AGR-Lite.

RISK MANAGEMENT OPTIONS FOR WYOMING FARMS

Agricultural production is a financially risky business. In Wyoming, production losses from natural hazards do occur even on irrigated farms (for example, lack of moisture, hail and insect damage, and failed water supply).   Farm managers also face substantial price risks, both in resource markets where they purchase their inputs and in commodity markets where they sell their crops. Energy prices can vary substantially from one month to the next, as can nitrogen and other fertilizer prices. Crop prices can be volatile. Moreover, the link between farm-level production losses and commodity prices is weak. At the market level, when production is relatively low prices tend to be relatively high, but an individual agricultural producer may experience low levels of production because of locally adverse production conditions when commodity prices are also low.

Farm managers know they are involved in risky enterprises and typically use several tools to reduce the likelihood that they will suffer financial losses; that is, they develop and implement risk management strategies for their operations. They use production techniques that reduce crop production losses except in cases of extremely low precipitation that reduce stream flows and limit water accumulation in storage reservoirs. These include crop rotations and other cropping practices to improve soil moisture retention and to control the incidence of weed infestations. Individual producers may also respond to the risk of crop loss by spreading production of a specific crop over several locations to limit damage from hail or localized insect and disease infestations.

Farm managers also protect themselves against adverse price movements. They use output price risk management techniques such as hedging in futures and options markets and forward contracting. They also manage input price risk, often through bulk purchasing and/or forward contracting for price and delivery of key inputs such as fuel and fertilizer.

Increasingly, federal insurance for agricultural commodities offered by the Federal Crop Insurance Corporation has become an important and attractive risk management tool for crop producers. Farm managers in Wyoming can use a range of federally subsidized insurance products to facilitate their management of production and revenue risks. These include crop insurance products based on a producer's actual production history (APH) that provide farm managers with indemnities when their farm operations experience crop-specific yield losses or crop-specific revenue losses. Both types of products are widely known as Actual Production History or APH products. Crop-specific yield APH insurance products, also described as Multiple Peril Crop Insurance (MPCI) products, provide indemnities when crop yields are relatively low. Crop specific revenue APH products provide indemnities when per acre revenues for a crop are low (because of either low per acre yields, low prices, or both). Crop Revenue Coverage (CRC) is a revenue-based insurance product available for select Wyoming crops.

For some crops in Wyoming, farm managers are able to purchase insurance products that provide indemnities when the areas in which their farms are located experience low per acre crop yields (called Group Risk Plans) or low per acre revenues (called Group Risk Income Protection plans)**.** Historically, the area has been the county in which a farm is located. Recently an area-based product that provides insurance for forage loss, the Pasture, Rangeland and Forage (PRF) insurance product, became available to Wyoming farm managers. The PRF product bases indemnities on estimates of forage loss using satellite information on vegetation for areas that are approximately five miles square instead of using county-wide yield and/or production estimates.

Until recently, farm managers could only insure each crop under a separate insurance contract, leading to a complex set of insurance choices for multi-enterprise operations. Since 2007, whole-farm revenue insurance has been available to Wyoming farm managers in the form of Adjusted Gross Revenue-Lite (AGR-Lite). AGR-Lite provides indemnities to producers when a farm's adjusted gross income is either low relative to historical levels or low relative to expected revenues. It may be used as a stand-alone product or in conjunction with crop enterprise specific insurance products.

This paper describes the crop insurance products available to Wyoming farm operations and presents simulations of the effects of alternative risk management strategies for a representative Wyoming farm. The alternatives include strategies in which each enterprise is insured under a separate RMA insurance product, the whole farm is insured solely using AGR Lite, and the farm uses AGR-Lite in combination with individual crop risk management products. The focus is on the premium outlays required and indemnities received under each strategy in different production and revenue environments.

RISK MANAGEMENT ON WYOMING FARMS

Some production risk management efforts undertaken by farm managers are highly visible. Other efforts may not be so obvious.

Production Risk Management: In most Wyoming counties, hay is produced as a forage crop. Even under irrigation hay is subject to considerable production risk. Many farm managers produce hay, especially alfalfa hay, as a rotation crop that is irrigated from stream diversion or a small water storage reservoir. In drought years, irrigation may not be possible, or may be limited to the early part of the production season and total alfalfa production will be reduced because of lower yields per cutting and/or fewer cuttings. Farm managers will endeavor to sustain some alfalfa production as an integral part of a crop rotation.

Perils such as hail and insect infestations are often a concern because they can severely limit crop production. As farm size has increased, some managers have designed their rotations and managed their selection of fields for planting so that a crop is geographically dispersed across their operations. The objective is to limit the chances of production losses due to localized storms or insect and/or disease infestations. For instance, a farm manager may plant a high value crop such as malt barley in several different fields within the farm.

In recent years, the range of federally subsidized crop insurance products that address farm production risks has been expanded. These products have been developed by several entities under contractual agreements with the Federal Crop Insurance Corporation (FCIC). Each new product must be reviewed and approved by the Risk Management Agency (RMA) of the United Stated Department of Agriculture (USDA) prior to being offered to farm managers and other agricultural producers. These insurance products are intended to reduce the adverse economic impacts of production losses associated with natural events beyond a farmer's control. Federally subsidized insurance products provide protection against yield losses of food and feed grains, forage crops, oil seed crops, other seed crops and sugar beets on many Wyoming farms.

Revenue Risk Management: Revenue variability is a source of risk encountered by farm operations. Farm managers pursue several strategies to reduce revenue risks. These risks are associated with commodities that are produced and sold by a farm. Farm managers may contract for the future delivery of commodities they produce for sale. For instance, a farm manager may contract for the future delivery of a stated quantity of malt barley at a pre-specified price.

In recent years, some revenue risk insurance products have been approved by RMA to address crop revenue risks for individual crops based on specific commodity futures prices and either individual farm yields or area yields, depending on the insurance product. These federally subsidized insurance products are available in several Wyoming counties for a limited number of crops. A farm-level adjusted gross revenue insurance product is also available in all Wyoming counties.

FUNDAMENTAL ELEMENTS OF RMA PRODUCTION INSURANCE PRODUCTS

Introduction: Farm managers generally consider three production risk management options with respect to crop insurance. First, they may not purchase any type of insurance. Farm managers who pursue this option are choosing to *self-insure.* Second, for certain potential causes of production loss, *single peril* crop insurance products may be available. For instance farm managers may choose to purchase insurance coverage that would provide an indemnity if their growing barley crop were to burn as a result of a range fire. Single peril insurance products are available through private insurance companies, but are not developed under RMA funding and their premiums are not federally subsidized. Third, farm managers may use *multiple peril* crop insurance products developed under the auspices of the RMA with premium subsidies provided by the federal government.

Actual Production History Insurance (APH): RMA-approved *multiple peril* products that that cover production losses from several natural causes. There are two general APH categories. *Yield insurance*, also called *Multiple Peril Crop Insurance* (*MPCI*), provides indemnities for losses when per acre yields are low. *Revenue insurance* provides indemnities when per acre revenues (price x quantity) are low, or when whole farm adjusted gross revenue is low because of shortfalls in production, declines in product quality, and/or low prices.

These products provide risk protection for production and revenue losses because of unavoidable natural occurrences, including but not limited to adverse weather, fire, insects, disease, wildlife, earthquakes, volcanic eruption, failure of irrigation supply that cause production losses and, in the case of revenue insurance, unanticipated decreases in prices. Insurance payments are not made for losses due to negligence or failure to use good farming practices.

APH yield and revenue multiple peril insurance products are sold and serviced by private-sector insurance companies. They are approved by the Federal Crop Insurance Corporation (FCIC) prior to being offered to producers. The FCIC, a public corporation, oversees the operations of Risk Management Agency (RMA), the agency that manages federal crop insurance programs on a day-to-day basis.

Units for Insurance Coverage: Producers who use RMA production and revenue insurance products that cover risks associated with individual commodities need an understanding of insurable units. For an individual insurable commodity where coverage is based on the insured producer's *actual production history* (individual established yields), multiple peril insurance is usually available at the *optional, basic,* and *enterprise unit* levels. In group risk plans, where the producer buys insurance based on area yields (typically county yields or county level per acre revenues)) for the insured commodity, coverage is only available at the *enterprise level.*

An *optional unit* is land planted to a specific crop in a specific section (per the legal definition of section). Land planted to the same crop in another section by the same operator is in a different optional unit.

A *basic unit* is land planted to a particular crop under the same share arrangements. So a basic unit could be two fields planted to the same crop, either in different sections or the same section, owned and operated by a farm manager. Alternatively, two fields operated under the same share or lease arrangements with a particular landlord would form a basic unit.

An *enterprise unit* consists of all the land in a county planted to particular crop by the operation.

Farm managers have the option of selecting different units for different crops in most multiple peril contracts. For example, corn for silage might be insured at the optional unit level while feed barley might be insured at the basic unit level.

Farm managers consider two issues in making the decision on units– the possibility of being indemnified for an insurable loss and the premium incurred for crop insurance coverage. For example, if a farm manager knows that there is considerable difference in most years in yields on two geographically separated fields for the same crop (perhaps because of hail), a manager may want to insure at the optional unit level to increase the likelihood of receiving an indemnity. However, premium rates per dollar of coverage for a crop are highest for optional units, lower for the basic unit, and lowest for enterprise units. In deciding whether to insure optional, basic or enterprise units, farm managers weigh the tradeoffs between the indemnities they are likely to receive and the premium costs they will incur.

Actual Production History Yield Issues: The yields that are relevant to assessments of the benefits of insurance contracts depend on whether the insurance product is an individual APH-based yield or revenue product, or a group risk product.

For group risk products, yields on which coverage is based, and on which indemnities are determined, are county (or area) yields for an insured commodity. Yield and production information reported by the National Agricultural Statistics Service (NASS) of USDA is used for most commodities.

Farm managers who select individual farm-specific based insurance products must establish an *actual production history* (APH) for each crop on each insured unit.

Establishing an APH is a critical part of the insurance process. An APH must be developed for each insured unit of a crop. A yield history of *four* to *ten* consecutive years is required and must include the most recent crop year. If a producer changes cropping practices, their APH may change. The term "consecutive years" applies to years the unit is cropped under the cropping practice for which insurance is provided. If the cropping practice requires that a unit be fallowed in certain years,

those years don't count as part of the APH yield history. For example, under a summer fallow cropping practice in which a field is fallowed in alternate years, a 10-year crop APH would require information on crop yields over the previous twenty years.

To illustrate how APHs are established, consider the following information on the production histories of two producers for the same crop (Table 1).

Table 1: Production Histories of a Crop as Reported by Two Producers

Year	Producer A (bushels per acre)	Producer B (bushels per acre)
1998	—	104
1999	—	80
2000	—	60
2001	—	86
2002	—	105
2003	—	60
2004	90	0
2005	60	60
2006	75	75
2007	50	50
APH Yield	69	77

Producer A has only four years of acceptable yield records. Adding these yields and dividing by four provides an APH of 69 bushels per acre. Producer B had 10 years of acceptable yield records. Adding these yields and dividing by 10 provides an APH of 77 per acre.

If a farm has a crop with less than four years of recorded yield history, a *Transitional Yield* or *T-yield* provided by RMA (often on a county basis) is used to calculate an APH for the crop.

A farm manager who has produced a crop in a particular county but has no acceptable yield information will be given an APH equal to 65 percent of the *T-yield* for the crop. If a farm manager has acceptable annual yield data, but for less than four years, then *T-yields* will used in the APH calculation according to a set of specifications related to the years of recorded information (Table 2).

Table 2: Specifications for the Use of T-Yields Predicated on Years of Proven Production

Proven Production	Use of T-Yield
If there is yield/production information for **one year**	Use **80 percent** of the *T-Yield* for the other three years

If there is yield/production information for **two years**	Use **90 percent** of the *T-yield* for the other two years
If there is yield /production information for **three years**	Use **100 percent** of the *T-yield* for the missing year

If a farm manager is a "new" producer who has not previously produced a commodity in a county, then the APH for the commodity will be 100 percent of the relevant *T-yield.*

In many years, Wyoming producers realize yields a little below or above their APH yields. In other years, atypically low yields are realized. RMA allows producers to substitute a value equal to 60 percent of the relevant *T-yield*, called a plug yield, for atypically low yields in their APH calculations. Using plug yields enables producers to avoid large year-to-year decreases in their APH, but when plug yields are used producers pay higher premiums.

Coverage, Premiums and Subsidies, and Price and Indemnity Information for Crop Insurance Products Using Individual Yields: Both conventional yield insurance, often referred to as APH MPCI, and revenue products like *Crop Revenue Coverage* (CRC) use a producer's actual production history as the basis for determining their multiple peril crop insurance coverage.

Yield based insurance requires a farm manager to establish a *Yield Guarantee* by selecting an insurance coverage level for losses and multiplying the coverage level by a farm's APH; that is, the *Yield Guarantee = Actual Production History x Coverage Level. Coverage Level* is defined as the percentage of an *APH* a farm manager selects for coverage of a crop planted on an insurable unit. A farm manager's choice of *coverage level* also determines the percent of total premium that will be subsidized by the federal government (Table 3).

Table 3: Applicable Subsides for APH and Crop Revenue Products

Coverage Levels (% of *APH*)	Premium Subsidies (% of **Total Premium**)
50	67
55	64
60	64
65	59
70	59
75	55
80	48
85	38

For each MPCI crop product, in advance of the sales closing date, RMA announces an *Established Price* for the commodity based on expected marketing conditions. Sometimes, prior to the sales closing date, RMA may amend the *Established Price* by announcing an *Additional Price* for a crop based on updated market information. A farm manager establishes a *Price Election* by taking 55 to 100 percent of the *Established Price* (or *Additional Price*).

The per acre *Gross Premium* associated with a producer's insurance contract is:

$$\text{Gross Premium} = [(\textbf{\textit{Yield Guarantee}} \text{ x } \textbf{\textit{Price Election}})] \text{ x } [\textbf{\textit{Premium Rate}}].$$

The producer premium, the premium the farm business incurs, equals the difference between the **gross premium** and the **gross premium** multiplied by the **premium subsidy percentage**.

Catastrophic Risk Protection (or **CAT** coverage) is available for all crops for which yield-based APH insurance is offered at the 50 percent **coverage level** and a 55 percent **price election** for **$300 per crop** insured by a farm manager (up to a maximum of three crops per farm).

An indemnity is paid when, because of some insurable cause, a producer's actual yield is less than the **yield guarantee** for the crop. On a per acre basis, a farm then receives the following indemnity:

$$\textbf{\textit{Indemnity}} = [\textbf{\textit{Yield Guarantee - Actual Yield}}] \text{ x } \textbf{\textit{Price Election}}.$$

Crop Revenue Coverage (CRC), a revenue insurance product, considers two prices for an insured crop. Prior to the production of a crop and prior to the sales closing date for CRC coverage, a **CRC Base Price** is announced. The **CRC Base Price** is specified as a specific average futures contract settlement price for delivery at harvest time for a crop over a period just prior to the closing date for the **CRC** contract (typically at or just before the crop is planted). Using the CRC **Base Price**, a producer establishes an initial per acre **Revenue Guarantee** as follows:

$$\textbf{\textit{Revenue Guarantee}} = \textbf{\textit{APH}} \text{ x } \textbf{\textit{Coverage Level}} \text{ x } \textbf{\textit{CRC Base Price}}.$$

At harvest time, the **Revenue Guarantee** may be increased if a crop's **Harvest Price** exceeds its CRC **Base Price**. The **Harvest Price** is defined as a specific average futures contract settlement price at harvest time.

The CRC per acre **Gross Premium** is:

$$\textbf{\textit{Gross Premium}} = \textbf{\textit{Revenue Guarantee}} \text{ x } \textbf{\textit{Premium Rate}}.$$

The premium to be paid by a farm manager is the difference between the **gross premium** and the **gross premium** multiplied by the **premium subsidy percentage**. The **premium subsidy percentage** is determined by a farm manager's **coverage level**.

Catastrophic Risk Protection is not available for Crop Revenue Coverage.

An indemnity is paid when a farm's estimated per acre **Crop Value**, defined as a producer's **actual yield** x **coverage level** x **harvest price,** is less than the farm's **revenue guarantee**.

In certain states, other revenue products such as **Income Protection** and **Revenue Assurance** may be offered for certain crops. These products are not offered in Wyoming.

Coverage, Premiums and Subsidies, Price and Indemnity Information for Multiple Peril Group Risk and Income Protection Plans:

Group Risk Plan (GRP) and **Group Risk Income Protection (GRIP)** insurance products employ county-based yields or proxies for yields as the basis for determining multiple peril crop insurance coverage.

For GRP products, farm managers determine their **yield guarantee** by multiplying a **coverage level** percentage they select by the **expected yield** for a crop in a county, where the National Agricultural Statistics Service (NASS) average yield (or a proxy measure) for a county is generally used as the **expected yield.** For **GRIP** products farm managers determine their **trigger revenue** by multiplying the **coverage level** they select by the **expected revenue** for the crop, as established by RMA.

Premium subsidies are provided at each coverage level for GRP and GRIP (Table 4). These two sets of subsidies differ from those applied to insurance products based on individual APH yields.

Table 4: Applicable Subsides for GRP and GRIP Products

Coverage Levels (% of *APH*)	Premium Subsidies For GRP (%)	Premium Subsides For GRIP (%)
70	59	59
75	59	55
80	55	55
85	55	49
90	51	44

For GRP products, a producer specifies a **Trigger Yield** by choosing a coverage level where

$$\text{Trigger Yield} = \text{Expected Yield} \times \text{Coverage Level}.$$

On a county-by-county basis, RMA announces an **Amount of Protection** per acre, but does not announce an **established price** for crops covered under GRP policies. Farm managers planning risk management strategies for the next insurance year can approximate the **Amount of Protection** by multiplying the GRP county-level historical average yield for a crop by the announced price (**established price**) for APH coverage for the same crop, and then further multiplying this product by 1.5.

Farm managers may insure from 60 to 100 percent of the **Amount of Protection** per acre to establish a **Dollar Protection per Acre. Catastrophic Risk Protection** (**CAT**) is available at 45 percent of the **Amount of Protection**.

The gross premium per acre for GRP product is as follow:

Gross Premium = [**Dollar Protection per Acre**] x **Premium Rate**.

The per acre producer premium for GRP insurance equals the difference between the gross premium and the gross premium multiplied by a subsidy rate. The coverage level selected by a farm manager determines a subsidy rate.

The indemnity per insured acre is:

Indemnity per Acre = [(**Trigger Yield** - **Payment Yield**) / (**Trigger Yield**)] x
[**Dollar Protection per Acre**].

Group Risk Income Protection products are similar to GRP products except that several terms are expressed in revenues per acre rather than production per acre. The **Expected County Yield** per acre is based on the NASS data on annual average yields for the county. The **Expected Price** is defined by the average daily settlement price for the appropriate underlying futures contract. Per acre **Expected County Revenue** = **Expected Yield** x **Expected Price**. The **Maximum Protection per Acre** available to the producer is 150 percent of the **Expected County Revenue.**

A farm manager determines **Protection per Acre** by selecting 60 to 100 percent of the **Maximum Protection per Acre.**

Gross premium per acre is calculated as:

Gross Premium = **Protection per Acre** x **Premium Rate**.

A farm manager's per acre premium is the difference between the gross premium and the gross premium multiplied by the premium subsidy percentage. The premium subsidy percentage is determined by a farm manager's choice of **coverage level,** that is, the percent of **expected county revenue** used to identify a **trigger revenue** for the farm.

A farm manager determines the **Trigger Revenue per Acre** by multiplying the selected **coverage level** (70, 75, 80, 85 or 90

percent) by the *Expected County Revenue*.

A farm manager with a crop insured under GRIP receives an indemnity when actual county revenue, a value determined by RMA by multiplying the final county yield by the national estimated average harvest price, is less than the *Trigger Revenue* established by a farm manager.

An indemnity is calculated by first establishing a *payment calculation factor*, which is defined as:

$$\textit{Payment Calculation Factor} = [\textit{Trigger Revenue - Actual County Revenue}] / [\textit{Trigger Revenue}].$$

The per acre indemnity is then:

$$\textit{Indemnity} \ = \ [\ \textit{Payment Calculation Factor} \ \text{x} \ \textit{Protection per Acre}].$$

FUNDAMENTAL ELEMENTS OF AGR-LITE, A WHOLE FARM RISK MANAGEMENT PRODUCT

Introduction: *Adjusted Gross Revenue Lite* (*AGR-Lite*) is a whole-farm revenue protection insurance plan available to producers in all Wyoming counties. The product covers revenue losses from crops, livestock and unprocessed (unaltered) livestock products such as milk and wool. The plan protects against low revenue due to losses in production and declines in product quality and market price. Specifically, the plan provides protection against low revenue attributable to unavoidable natural disasters and market fluctuations during the insurance year. *AGR-Lite* may be used as a stand-alone insurance plan or an "umbrella plan" in conjunction with other RMA insurance plans that address crop production and revenue risks and livestock price risks. *AGR-Lite* premiums are reduced when other multiple peril RMA insurance plans are used to address specific crop production and revenue risks.

In the *AGR-Lite* insurance program, coverage is based on the lower of either (a) the farm's most recent five-year average of its gross revenue as reported by the Internal revenue Service on Schedule F or other pertinent federal income tax return or (b) the farm's expected revenue for the current production year computed using the farm's expected yields and planted acreages, livestock numbers, and the expected prices for all crops and livestock products (as defined by RMA).

AGR-Lite protects against revenue losses attributable to unavoidable natural occurrences or market fluctuations that cause revenue losses during the insurance year. Some losses are not covered by AGR-Lite. No insurance indemnities will be paid for losses attributable to negligence, mismanagement, a failure to use good farming practices, theft, or mysterious disappearance. Nor will indemnification occur if losses are attributable to lack of labor, crop abandonment, or bypassing of acreage. On the marketing side, no indemnification is due when commodities cannot be marketed because of quarantines, boycotts, or failure of buyers to make payments for commodities to producers. Losses due to an insured operator's failure to obtain a price for any commodity that is reflective of the local market value will also not be indemnified. Procedurally, if a producer fails to provide adequate records when seeking indemnification for revenue losses, indemnifications will not be awarded.

Application Information: Producers must provide five consecutive years of income and expense information from their IRS income tax returns for the same entity (Schedule F or equivalent) and certify that the information is accurately reported. [1] Specifically, historical information is needed from the Farm Income and Farm Expenses sections of a producer's IRS tax filings. [2] Some items are included in farm income reported for income tax purposes but excluded from AGR-Lite *allowable income*; these include (1) cooperative distributions not tied to the commodities insured, (2) agricultural program payments, (3) crop insurance indemnities and federal disaster payments, (4) custom hire income, and (5) income attributable to post-harvest value added activities. Some items are included in farm expenses reported for income tax purposes but excluded from AGR-Lite *allowable expenses*; these include (1) depreciation costs (except for animals), (2) employee benefits including pensions

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[1] In addition, producers must provide the tax return for the year prior to the five-year sequence of tax returns used to establish the operation's adjusted gross income.

[2] In some situations, if a producer meets the qualifying person requirements described in the AGR-Lite policy documents, tax returns from a different entity may be used.

and profit sharing, (3) interest costs, (4) rents paid, and (5) post-harvest costs (including costs associated with value-added production).

The five years of *allowable income* are summed and then divided by five to obtain the *5-Year Average Preliminary Adjusted AGR. Allowable expenses* for each tax year are summed and then divided by five to obtain the *5-Year Average Preliminary Adjusted Expenses.*

For each revenue generating commodity, in each insurance year, producers work with their insurance agent to report the acres (or head, number, etc.) that are to be produced, total expected production, price per unit of production, and total value of production. These commodity specific total value estimates are summed to provide *Total Expected Income.* Producers who select higher *coverage levels* will also be required to submit commodity profiles for the two years prior to the current insurance year.

Adjustments and Uses of Information: To increase the effectiveness of insurance coverage an *Indexed Average AGR* (*Indexed Income*) can be calculated for an operation whose annual adjusted gross revenues are increasing. To qualify for indexing, (1) allowable income in at least one of the last two most recent years in the five year base period must be greater than the *Average AGR* and (2) the insurance year's *Total Expected Income* must be greater than the *Average AGR.* An *Income Trend Factor* is developed and the *Average AGR* is multiplied by the *income trend factor* to provide the *Indexed Average AGR* (*Indexed Income*).

The *Approved AGR* is the *lesser of:* (1) the *Average AGR* or *Indexed AGR* (*Indexed Income*) or (2) *Total Expected Farm Income*, the estimated expected income for the insurance year.

Approved Expenses depend on which adjusted gross income value is designated as the *Approved AGR*. *Approved Expenses* may be derived by direct assignment, indexing or factoring *Allowable Expenses* up or down. Approved Expenses are not used to determine the insurance guarantee but can be used for adjustment of the Approved AGR if conditions warrant.

Producer Decisions and Contract Specifications: To be eligible for **AGR-Lite** a producer has to meet several criteria, including a maximum liability of less than $1,000,000 and an *Approved AGR* of less than $ 2,051,181. Once their *Approved AGR* and *Approved Expenses* are determined, farm managers have to make two decisions. They must first select a *coverage level*. In part, the *coverage level* depends on the number of revenue generating commodities included in the operation's production and marketing plan. The available coverage levels are 65, 75 and 80 percent of the *Approved AGR*. For a producer to obtain the highest *coverage level* (80 percent), at least three commodities must each contribute a significant portion of total income. A significant portion is defined as 1/number of commodities in the annual farm plan x 0.333 x *Total Expected Income*, where *Total Expected Income* is the amount defined in the insurance year farm plan.

A farm manager must also select a *payment rate*. Two *payment rates,* 75 or 90 percent, are available at each *coverage level*.

One *coverage level/payment rate* combination is applied to all commodities in a farm plan.

Once a coverage level is selected, a *Loss Inception Point* (also called a *Trigger Revenue*) is established where :

 Loss Inception Point = Trigger Revenue = Approved AGR x *Coverage Level*.

AGR-Lite Premium Calculations: Joint application of the coverage level and the payment rate determines a farm's maximum liability, called the *AGR-Liability* or *Coverage*. *Coverage* is specified as:

AGR-Liability = Coverage = Approved AGR x *coverage level* x *payment rate.*

When *AGR-Lite* is used as an "umbrella" policy, other RMA-approved multiple peril insurance policy coverage is subtracted from the AGR-Lite Liability up to a maximum reduction of 50 percent of the AGR-Lite liability.[3] The reduced liability is

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[3] MPCI is the primary policy and MPCI claims must be filed before the AGR claim can be filed if applicable. Any MPCI indemnity becomes revenue-to-count for the AGR-claim.

called the **Premium Liability**.

Premium Calculations are as follows:

> **Total Premium = Premium Liability** x **AGR premium rate**.
> **Subsidy Amount = Total Premium** x **Subsidy Rate**.
> **Producer Premium = Total Premium - Subsidy Amount.**

The **AGR premium rate** is calculated by accounting for (1) the actual commodities grown on the farm, (2) degree of diversification on the farm, and (3) number of commodities grown on the farm. **Subsidy rates** vary by **coverage level** and equal 59 percent for 65 percent coverage, 55 percent for 75 percent coverage, and 48 percent for 80 percent coverage.

Indemnities: An indemnity is paid when **Revenue-to-Count,** as specified in a farm's report of actual income performance for the insurance year, is less than the **Trigger Level.**

When a farm's **allowable income** appears likely to fall below its **Trigger Level**, a farm manager is expected to contact his insurance agent for guidance on how to document an actual loss in farm revenue. In addition to submitting the information required to document **Total Income**, a farm manager must also submit an IRS returns for the insurance year and each of the previous five years.

Actual expenses for the insurance year are determined from IRS forms. Some accrual adjustments may be needed to ensure that the expenses considered in the adjustment process are those for the insurance year. When actual expenses are less than 70 percent of their five year average, the **Approved AGR** is reduced by one tenth of a percent for each one tenth of a percent that expenses fall below their average. The farm's **Trigger Level** is then recalculated as follows:

> **Trigger Level = Approved AGR** (for expense reductions) x **coverage level** percentage.

Revenue to Count is subtracted from the **Trigger Level**. **Revenue to Count** includes allowable income from the sale of covered commodities, other crop insurance indemnities, NAP payments, income lost due to non-insured causes, and net gains from hedging. Claims are then adjusted on an accrual basis to remove revenues received for commodities produced in the previous year and at add the value of commodities produced but not sold in the insurance year.

Once **Revenue to Count** has been identified, the farm's **Revenue Deficiency** is calculated as:

> **Revenue Deficiency = Trigger Level - Revenue to Count**

The payment rate is then applied to determine the indemnity: that is,

> **Indemnity = Revenue Deficiency x Payment Rate.**

Risk Management Strategy Alternatives for a Representative Wyoming Irrigated Farm:

The example farm represents an irrigated farming operation in two northern Wyoming counties, Big Horn and Washakie. The farm consists of 880 acres, of which 800 are irrigated cropland and 80 consist of roads, ditches, fence lines, farmland and incidental waste areas. In a typical year, the farm plants 265 acres of malt barley, 180 acres corn for grain, 105 acres of alfalfa, and 250 acres of sugar beets (Table 5). The farm business expects to have an income of $510,795 in the insurance year (2008). Historical allowable incomes realized by the farm for the 2002 through 2006 crop years are presented in the Appendix (Table A1).

Table 5: Wyoming Representative Farm 2008 Expected Gross Income

Commodity	Acres	Expected Yield[1]	Expected Production	Expected Price[2]	Expected Income
Mart Barley	265	96 bu	25,440	$6.50	$165,360
Alfalfa	105	3.5 ton	367.5	$92.00	$33,810

Corn	180	125 bu	22,500	$4.75	$106,875
Sugar Beets	250	21 ton	5,250	$39.00	$204,750
Farm Total	800[3]	NA[4]	NA[4]	NA[4]	$510,795

[1] The 2008 yields are the average of the 2001 through 2006 yields

[2] Expected prices are those specified by RMA for the 2008 crop year for MPCI products. The barley price includes a $2.00 per bushel component for malt barley and, where malt barley is sold under contract, the contract price is insured. For other commodities, approved futures prices must be used when they are available and contract prices must be used when commodities are contracted for sale.

[3] In some production years 35 acres of alfalfa is new seeding, so that harvested alfalfa is reduced to 70 acres. The new seeding of alfalfa is insured under forage seeding insurance, a dollar amount per acre, multiple peril insurance.

[4] NA denotes not applicable.

Table 6:   Alternative RMA Product-Based Risk Management Strategies for a Representative Wyoming Farm

Commodity	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 5
Barley:					
Feed	MPCI	MPCI	NA[2]	MPCI	MPCI
Malt[1]	Option B	Option B	NA[2]	Option B	Option B
Alfalfa	MPCI	PRF	NA[2]	MPCI	PRF
Corn	MPCI	CRC	NA[2]	MPCI	CRC
Sugar Beets	MPCI	MPCI	NA[2]	MPCI	MPCI
Whole Farm	NA[2]	NA1	AGR-Lite	AGR-Lite	AGR-Lite

[1] Approved malting barley varieties include all varieties approved by the American Malting Barley Association for the current crop year.

[2] NA denotes not applicable.

Typically, several different risk management strategies are available to a farm. Farm managers choose among these alternatives of the basis of the farm business's financial condition and the farm manager's preferences about taking or avoiding risk. In this analysis the farm manager is assumed to be interested in three basic strategies and two combinations of those strategies for managing production and revenue risks (Table 6).

The insurance premiums for each product in each strategy are estimated using the RMA Premium Calculator. Producer-selected characteristics for each insurance product are described in the Appendix (Table A2). These premiums are presented by commodity and strategy (Table7).

Table 7: **Insurance Premium[1] for the RMA Product-Based Risk Management Strategies for a Representative Wyoming Farm**

Commodity	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 5
Barley:					
Feed	$1,506[1]	$1,506[1]	NA[3]	$1,506[1]	$1,506[1]
Malt	$948	$948	NA[3]	$948	$948
Alfalfa	$436	$407	NA[3]	$436	$407
Corn	$2,438	$3,972	NA[3]	$2,438	$3,972
Sugar Beets	$2,263	$2,263	NA[3]	$2,263	$2,263
Subtotal	$7,591	$9,096	NA[3]	$7,591	$9,096
Whole Farm	NA[3]	NA[3]	$3,950	$1,990[2]	$1,990[2]
Total	$7,591	$9,096	$3,950	$9,581	$11,086

[1] The $30 administrative fee is included in each product premium total.
[2] The premiums for AGR-Lite, when used as umbrella coverage are reduced in part by the coverage (maximum liability) of other
 crop insurance products as shown in the Appendix (Table A3).
[3] NA denotes not applicable.

Scenarios

Three production outcome scenarios are examined to assess the risk management provided by each of the risk management strategies.

In Scenario 1, producers have an average or good year. Crop yields are close to or exceed their average. Prices are close to their expected levels. No insurance indemnities are received for losses in production or revenue due to insurable causes. However, the farm incurs premium charges for the crop insurance the manager purchased (as shown in Table 7).

In Scenario 2, a severe drought results in the failure of the irrigation water supply and leads to a 40 percent decline in all crop yields. Fortunately, the failed water supply does not create crop quality problems and the barley harvested by the farm is of malt quality. Alfalfa hay has been contracted for price so the producer does not obtain higher revenues from the sale of hay because of price increases in local markets. Corn prices are primarily determined in the national market and are unaffected by drought in certain Wyoming counties. Sugar beets have also been contracted for acres and price per ton prior to planting, so the drought does not affect the sugar beet prices received by the farm. Per acre and total indemnities for crop losses under this scenario are as follows:

Malt Barley: (feed barley component)

APH	=	96 bushels per acre
Payment Yield	=	96 bushels per acre x 0.65 = 62.40 bushels per acre
Actual Yield	=	57.60 bushels per acre
Per Acre Indemnity	=	[62.40 – 57.60] x $4.50 per bushel =$21.60 per acre
Total Indemnity	=	$21.60 per acre x 265 acres = $5,724.

Malt Barley: (malt component):

APH	=	96 bushels per acre
Payment Yield	=	96 bushels per acre x 0.65 = 62.40 bushels per acre
Premium Guarantee	=	62.40 bushels per acre x 265 acres = 16,536 bushels
Actual Yield	=	57.60 bushels per acre
Total Actual Yield	=	57.60 bushels per acre x 265 acres – 15,264 bushel
Malt Barley Indemnity	=	[16,536 bushels - 15,264 bushels] x $2.00 per bushel = $2,544

Alfalfa: (under MPCI)

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APH	=	3.5 tons
Payment Yield	=	3.5 tons per acre x 0.65 = 2.28 tons per acre
Actual Yield	=	2.10 tons per acre
Per Acre Indemnity	=	[2.28 – 2.10] x $ 92.00 per ton = $16.56 per acre
Total Indemnity	=	$16.56 per acre x 105 acres = $1,739.

Alfalfa: (under PRF)

Dollar Amount of Protection	=	$161.67 per acre x 1.00 x 0.70 = $113.17 per acre
Trigger Grid Level	=	100 x 0.70 =70
Final Grid Index	=	60
Payment Calculation Factor	=	[70 – 60]/70 = 0.14
Per Acre Indemnity	=	$113.17 per acre x 0.14 = $15.84 per acre
Total Indemnity	=	$15.84 per acre x 105 acres = $1,664. [4]

Corn: (under MPCI)

APH	=	125 bushels per acre
Payment Yield	=	81.30 bushels per acre
Actual Yield	=	2.10 tons per acre
Per Acre Indemnity	=	[81.30 – 75.00] x $ 4.75 per bushel = $ 29.93 per acre
Total Indemnity	=	$29.93 per acre x 180 acres = $5,387

Corn: (under CRC)

APH	=	125 bushels per acre
Initial Revenue Guarantee per Acre	=	125 bushels per acre x 0.65 x $5.40 per bushel = $439.02
Final Revenue Guarantee per Acre	=	125 bushels per acre x 0.65 x $5.40 per bushel = $439.02
Actual Yield	=	75 bushels per acre
Indemnity per Acre	=	$439.02 per acre – [75 x $4.13 per bushel] = $129.27
Total Indemnity	=	$129.27 per acre x 180 acres = $23,269.

Sugar Beets:

APH	=	21.00 tons per acre
Payment Yield	=	21.00 tons per acre x 0.65 = 13.65 tons per acre
Actual Yield	=	12.60 tons per acre
Per Acre Indemnity	=	[13.65 – 12.60] x $39.00 per ton = $40.95
Total Indemnity	=	$40.95 per acre x 250 acres = $10,238.

AGR-Lite: (as a stand alone product):

5-Year Income Average	=	$457,017 see table A1
Intended Commodities	=	$510,795
Approved AGR	=	**Lower o**f 5-Year Income or Intended Revenue
		Approved AGR = $457,017

Approved AGR x Coverage Level = Trigger
$457,017 x 0.65 = $297,061 Trigger
Approved AGR x Coverage Level x Payment Rate = AGR Liability
$510,795 x 0.65 x 0.90 = **$267,355 AGR Liability**

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[4] The PRF coverage selected by the producer does not affect the AGR-Lite premium and nor PRF indemnities included in the AGR-Lite Revenue to Count.

AGR-Lite Coverage = $510,795 x 0.65 x 0.90 = $298,815

Malt Barley sales = 57.60 bushels per acre x $6.50 per bushel x 265 acres =		$ 99,216
Alfalfa sales = 2.10 tons per acre x $92.00 per ton x 105 acres	=	$ 20,286
Corn sales = 75 bushels per acre x $4.75 per bushel x 180 acres	=	$ 64,125
Sugar Beet sales: 12.60 tons per acre x $ 39.00 per ton x 250 acres	=	$ 122,850
Revenue to Count		**$ 306,477**

The AGR-Lite Indemnity is zero because the AGR *Revenue to Count* ($306,477) is greater than the AGR-Lite *Coverage Level*). **$297,061**

> *Trigger Level* minus Revenue to Count = $297,061 - $306,677 ≤ 0 = Revenue Deficiency
> **$297,061** - $ 306,477 = $0 Revenue Deficiency
> Indemnity = Revenue Deficiency x Payment Rate = $0 x 0.90 = $0

AGR-Lite: (as umbrella coverage with Strategy 1 or Strategy 2 individual products)

Indemnities from individual insurance products are added to commodities sales to calculate the AGR-Lite Revenue to Count when AGR-Lite is used as an umbrella product. So, under Strategies 4 and 5, in Scenario 2, the AGR-Lite Revenue to Count would increase and continue to exceed AGR-Lite Coverage, resulting in no additional indemnity.

The indemnities that would be received by the farm under Scenario 2 are presented below (Table 8).

Table 8: Scenario 2 Insurance Indemnities Received for Production and Revenue Losses on the Representatives Wyoming Farm

Commodity	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 5
Barley:					
Feed	$5,724	$5,724	NA[1]	$5,724	$5,724
Malt	$2,544	$2,544	NA[1]	$2,544	$2,544
Alfalfa	$1,739	$1,664	NA[1]	$1,739	$1,664
Corn	$5,387	$23,269	NA[1]	$5,387	$23,269
Sugar Beets	$10,238	$10,238	NA[1]	$10,238	$10,238
Subtotal	$25,632	$43,439	NA[1]	$25,632	$43,439
Whole Farm	NA[1]	NA[1]	0	0	0
Total	$25,632	$43,435	0	$25,632	$43,439

[1] NA denotes not applicable.

Scenario 3:

In Scenario 3, the water supply failure again results in crop yields that are 40 percent lower than average (as described in Scenario 2). As in Scenario 2, there are also no changes in the prices of the alfalfa, corn, and sugar beets as a result of the drought. However, in Scenario 3, there is considerable quality damage associated with malt barley. Only 5,000 bushels of the 15,264 bushels of barley harvested by the farm make malt quality. Furthermore, the 10,264 bushels that did not make malt have little feed value, and are sold for only $2.25 per bushel.

The total malt barley option B premium guarantee of 16,536 bushels is calculated as follows:

Premium Guarantee   =   96 bushels per acre APH x 0.65 coverage level x 265 acres
                =   16,536 bushels.

The malt barley indemnity is calculated as:

Malt Barley Indemnity = [16,536 bushels – 5,000 bushels] x $2.00 per bushel = $23,072

In Scenario 3, malt barley indemnities are received under Strategies 1, 2, 4, and 5 (Table 9)

Table 9: Scenario 3 Insurance Indemnities Received for Production and Revenue Losses on the Representative Wyoming Farm

Commodity	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 5
Barley:					
Feed	$5,724	$5,724	NA[1]	$5,724	$5,724
Malt	$23,072	$23,072	NA[1]	$23,072	$23,072
Alfalfa	$1,739	$1,664	NA[1]	$1,739	$1,664
Corn	$5,387	$23,269	NA[1]	$5,387	$23,269
Sugar Beets	$10,238	$10,238	NA[1]	$10,238	$10,238
Subtotal	$46,160	$63,967	NA[1]	$46,160	$63,967
Whole Farm	NA[1]	NA[1]	$31,734	0	0
Total	$46,140	$63,967	$31,734	$46,140	$63,967

[1] NA denotes not applicable.

The farm receives the following revenues from harvested barley of feed quality and harvested barley of malt quality:

Malt Quality Barley Revenue = 5,000 bushels x $6.50 per bushel = $32,500

Feed Quality Barley Revenue = [(57.6 bushels per acre x 265 acres) – 5,000 bushels] x $2.25 per bushel
 = 10,264 bushels x $2.25 per bushel
 = $23,094

These revenues are included in the farm's Revenue to Count in computing indemnities when the farm manager uses AGR-Lite as a stand alone product (Strategy 3, Table 9). The farm's AGR-Lite situation is as follows:

AGR-Life Coverage = $510,795 x 0.65 x 0.90 = **$267,355**

Revenue to Count:

    Barley:
      Malt $ 32.500
      Feed $ 23,094
      Alfalfa $ 20,286
      Corn $ 64,125
      Sugar Beets   <u>$122,850</u>

    Total Revenue to Count $262,855

In Scenario 3, under Strategy 3, the farm's AGR-Lite Coverage Level is less than its Revenue to Count and the farm receives the following indemnity:

Revenue Deficiency = [**$297,061** - $262,855] = $34,206
AGR-Lite Indemnity = [**$297,061** - $262,855] x 0.90 = $30,785

Now consider AGR-Lite when it is used in Strategies 4 and 5 as umbrella coverage over the individual crop insurance products used in Strategies 1 and 2. In Strategies 4 and 5, indemnities paid under the individual crop insurance products are included in the farm's Revenue to Count. In Scenario 3, under Strategy 4, these indemnities total $46,160 and the farm's Revenue to Count increases to $309,015 ($262,855 + $46,160) and exceeds the farm's AGR-Lite Trigger **$297,061** Thus the farm receives no indemnity payments from its AGR-Lite insurance coverage Strategy 4. Under Strategy 5, the farm's indemnities from individual crop insurance products total $62,303, its Revenue to Count is $325,158 ($262,855 + $62,303) which also exceeds the farm's AGR-Lite Trigger **$297,061**, and the farm receives no indemnity payments from its AGR-Lite coverage.

Appendix 1: Supporting Information

Table A1: Wyoming Representative Farm Historical Allowed Income

Crop Year 2002:

Crop	Acres	Yield	Production	Price/Unit	Income
Barley	265	76 bu	20,140	$5.23	$105,332
Alfalfa	105	3.1 ton	325.5	$111.00	$36,130
Corn	180	135 bu	24,300	$2.60	$63,180
Sugar Beets	250	18.9 ton	4,725	$42.30	$199,868
TOTAL	800	NA[1]	NA[1]	NA[1]	$400,009

[1] NA denotes not applicable.

Crop Year 2003:

Crop	Acres	Yield	Production	Price/Unit	Income
Barley	265	103 bu	27,295	$5.40	$147,393
Alfalfa	105	3.6 ton	378	$80.00	$30,240
Corn	180	133 bu	23,940	$2.50	$59,850
Sugar Beets	250	22.7 ton	5,675	$41.20	$233,810
TOTAL	800	NA[1]	NA[1]	NA[1]	$471,293

[1] NA denotes not applicable.

Crop Year 2004:

Crop	Acres	Yield	Production	Price/Unit	Income
Barley	265	110 bu	29,150	$5.41	$157,701
Alfalfa	105	3.8 ton	399	$73.50	$29,327
Corn	180	131 bu	23,580	$2.48	$58,478
Sugar Beets	250	23.3 ton	5,835	$41.70	$242,902
TOTAL	800	NA[1]	NA[1]	NA[1]	$488,408

[1] NA denotes not applicable.

Crop Year 2005:

Crop	Acres	Yield	Production	Price/Unit	Income
Barley	265	106 bu	28,090	$5.28	$148,315
Alfalfa	105	3.5 ton	367.5	$74.50	$27,379
Corn	180	130 bu	23,400	$2.45	$57,330
Sugar Beets	250	23.1 ton	5,575	$42.80	$247,170
TOTAL	800	NA[1]	NA[1]	NA[1]	$480,194

[1] NA denotes not applicable.

Crop Year 2006:

Crop	Acres	Yield	Production	Price/Unit	Income
Barley	265	95 bu	25,175	$5.32	$133,931
Alfalfa	105	3.7 ton	388.5	$101.00	$39,239
Corn	180	112 bu	20,160	$2.64	$53,222
Sugar Beets	250	18.7 ton	4,675	$46.80	$218,790
TOTAL	800	NA[1]	NA[1]	NA[1]	$445,182

[1] NA denotes not applicable.

5-Year Average Allowable Income
$2,285,086 / 5 = **$457,086**

Table A2:   Producer-selected Characteristics of RMA Insurance Products that Compose Risk Management Strategies 1, 2, and 3

Commodity	Strategy 1	Strategy 2	Strategy 3

Barley
  Feed
  Malt
	APH:
	65% coverage level
	100% price election
	Option B:
	$2.00 price election
		APH:
		65% coverage level
		100% price election
		Option B:
		$2.00 price election	

Alfalfa	APH: 65% coverage 100% price election	PRF: 70% coverage 100% price election	
Corn	APH: 65% coverage 100% price election	CRC: 100% productivity factor 70% coverage	
Sugar Beets	APH: 65% coverage 100% price election	APH: 65% coverage 100% price election	
Whole Farm	NA[1]	NA[1]	AGR-Lite: 65% coverage 90% payment

[1] NA denotes not applicable.

Table A3:   Coverage (Maximum Liability) by Crop, Strategies 1, 2, & 3

Commodity	Strategy 1	Strategy 2	Strategy 3

Barley
  Feed
  Malt
	
	$74,412
	$33,072
		
		$74,412
		$33,072
			
			NA[2]
			NA[2]

Alfalfa	$22,025	$22,025	NA[2]
Corn	$69,512	$79,024	NA[2]
Sugar Beets	$133,088	$133,088	NA[2]
Whole Farm	NA[2]	NA[2]	NA[2]
Total	$332,109	$331,479	$298,815[1]

[1] The maximum MPCI liability is $149,408, the amount the AGR-Lite liability can be reduced when used as an   umbrella over multiple peril coverage for individual crops.
[2] NA denotes not applicable.