



Ag Decision Maker

A Business Newsletter for Agriculture

Vol. 18, No. 12 www.extension.iastate.edu/agdm October 2014



Corn drying, shrink and storage decision tools now available

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The near ideal growing conditions to close out the 2014 corn and soybeans growing season benefited both yields and quality. However, the crops will be harvested later than normal. This leaves much of Iowa's corn harvest to stretch from October well into November. Higher corn moisture levels are adding to shrink losses and drying costs with depressed cash market prices.

Rather than take discounts for delivery of corn above 15 percent moisture content, many farmers will let their crop dry down naturally in the field before harvesting. ISU Extension and Outreach research indicates that unharvested corn could dry at a rate of 0.3 points of moisture per day in wet, cool weather during the fall. Dry

down improves to 1.0 points of moisture per day in hot, dry weather. This reduces the cost of artificially drying the crop, but it may delay harvest and result in additional stalk lodging and potential ear loss.

Cash flow constraints and lack of adequate on-farm storage are two reasons why some farmers may choose to deliver corn at harvest above 15 percent moisture content. Lack of adequate on-farm and commercial drying capacity are other possible reasons for making cash sales. Farmers may choose to deliver corn above 15 percent moisture, accepting a discounted price but avoiding additional shrink losses as well as drying costs. Commercial storage requires that the corn be adjusted to 14 percent moisture to be placed under warehouse receipt.

The farmer making cash corn sales could still choose to use a minimum price contract to improve the final settlement price. This likely anticipates a futures price rally in the deferred contracts, likely May or July 2015 corn futures.

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Handbook updates

For those of you subscribing to the handbook, the following new updates are included.

- Current Crop Insurance Policies** – A1-48 (9 pages)
- Fieldwork Days in Iowa** – A3-25 (2 pages)
- Farmland Value Survey** (Realtors Land Institute) – C2-75 (2 pages)

Please add these files to your handbook and remove the out-of-date material.

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Comparing cash sales with a moisture discount

Iowa State University has a new online decision tool you can use to compare selling your corn at harvest versus the shrink loss, drying and storage costs you would incur by drying and storing corn. Using the [ISU Extension and Outreach Ag Decision Maker Decision Tool A2-32, Corn Drying and Shrink Comparison](#), you plug in your own information and assumptions. Here's how it works.

Step 1 - Variable cost estimate for on-farm drying: Choose a drying system and input your variable costs. Those are propane, electricity, drying time labor, drying capacity, average points of moisture removed per bushel, total bushels per year and total investment in drying system.

Step 2- Yield and moisture projections for unharvested corn: Input your own decisions regarding acres harvested, wet gross bushels yield, corn moisture in field, days before harvesting and expected cash grain price at harvest.

Step 3 – Compare your grain sale alternatives at harvest: You can 1) Sell wet corn and incur a moisture discount; 2) Dry the grain commercially and then sell; 3) Dry it on-farm and sell it.

Step 4 - Input your own final moisture level for commercial sale, moisture discount for wet corn sale, commercial drying charge and shrink factor. You might want to consider additional on-farm costs for drying and hauling.

Step 5 - Input your own sales alternatives for after storage. This includes for the number of months grain will be stored, cash price paid after storage, moisture level for storage, minimum charge for commercial storage, base rate in months, monthly minimum charge commercial storage after minimum, quality deterioration on-farm storage, fans, electricity and labor on-farm storage and short-term interest rates.

Summary

This new *Corn Drying and Shrink Comparison*, available on ISU's [AgDM website](#), is a decision tool that uses assumptions and compares net revenue after storage costs and the breakeven selling price needed to pay storage costs.

The new ISU information files (pdfs) and decision tools (Excel spreadsheets) were developed by retired ISU Economics Professor William Edwards and are posted to the ISU Extension and Outreach Ag Decision Maker web page at www.extension.iastate.edu/agdm/cdmarkets.html. They are:

- *Estimating the Cost for Drying Corn* - A2-31
- *Corn Drying and Shrink Comparison* - A2-32
- *Cost of Storing Grain* - A2-33



Crop insurance policies in 2014

by Alejandro Plastina, extension economist, plastina@iastate.edu, 515-294-6160

The 2014 Farm Bill left the farm-level COMBO products introduced by the Risk Management Agency in 2011 unchanged, but released the Area Risk Protection Insurance (ARPI) to overhaul the county-level or Group products. This article describes COMBO and ARPI products and illustrates each of them with numerical examples.

Farm-level COMBO products

The Common Crop Insurance policy provides three choices of buy-up plans: 1) insuring yields with the Yield Protection plan, or revenue with either; 2) the Revenue Protection plan, or; 3) the Revenue Protection with Harvest Price Exclusion plan. A fourth choice is to choose Catastrophic coverage, which is only available under the Yield Protection plan.

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

The four plans are multi-peril insurance plans, and protect against a) adverse weather conditions (hail, frost, drought, excess moisture, etc.); b) failure of irrigation water supply if caused by an insured peril during the insurance period; c) fire, if due to natural causes; d) plant disease and insects, but not damage due to insufficient or improper application of pest or disease control measures; and e) wildlife damage.

Insurable corn includes yellow dent or white corn; mixed yellow and white, high amylose, waxy or high-lysine corn; high-oil corn blends containing mixtures of at least 90 percent high yielding yellow dent female plants with high-oil male pollinator plants; or commercial varieties of high-protein hybrids.

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

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

The insurance period for both crops starts on the later of the date the Risk Management Agency accepts the application or the date when the crop is planted, and it ends with the earliest occurrence of one of the following: a) total destruction of the crop; b) harvest of the unit; c) final adjustment of a loss; d) abandonment of the crop; or e) December 10, 2014. Table 1 lists the most important dates for COMBO products. A detailed description of all important dates for crop insur-

ance can be found in *Ag Decision Maker File A1-50/FM-1858, Important Crop Insurance Dates.*

Table 1. Important dates for COMBO products

	Corn	Soybeans
Sales closing date	March 15, 2014	
Earliest planting date	April 11, 2014	April 21, 2014
Final planting date	May 31, 2014	June 15, 2014
Acreage reporting date	July 15, 2014	
Premium billing date	August 15, 2014	
Production reporting date	April 29, 2015	

Crop insurance costs paid by farmers are the result of the interplay of acreage insured, premiums per acre, and administrative fees per crop per county. The premiums for all types of multi-peril crop insurance are subsidized by the Federal Crop Insurance Corporation. The administrative fees are \$30 per crop per county for coverage levels above catastrophic coverage, and \$300 per crop per county for catastrophic coverage.

Insurance policies offer an array of coverage levels (be it of yield or revenue) ranging from 50 percent to 85 percent in 5 percent increments. Farmers can also choose how to split their insurable acreage according to basic unit, optional unit, and enterprise unit for yield and revenue insurance. A fourth option, whole farm unit, is available for revenue insurance. A basic unit includes all of a farmer’s insurable crop acreage (either corn or soybeans) in the county by share arrangement. If a basic unit consists of two or more sections of land, and certain recordkeeping requirements are met, a farmer may apply for optional units by section. An enterprise unit is generally all the insured crop acreage (either corn or soybeans) in a county. A whole farm unit includes all the insured crops (corn and soybeans) in the county that are covered by the insurance plan.

Crop insurance policies in 2014, continued from page 3

Table 2 shows the coverage levels and premium subsidies currently available for corn and soybeans according to the units chosen. For basic and optional units, premium subsidies decline from 67 percent for a 50 percent buy-up coverage level to 38 percent for an 85 percent coverage level. But that is not the case for enterprise and whole farm units, for which premium subsidies are flat at 80 percent for coverage levels, 50 percent-70 percent, and 50 percent-75 percent, respectively, and only decline slightly for higher coverage levels, remaining at 53 percent and 56 percent, respectively, at the 85 percent coverage level.

By choosing enterprise or whole farm units instead of basic or optional units, farmers get higher premium subsidies for all coverage levels. These enterprise or whole farm unit “discounts” increase with the coverage level up to the 75 percent coverage level, reaching a maximum of 22 percentage points for the enterprise unit discount and 25 percentage points for the whole farm unit discount. The discounts for the 80 percent and 85 percent coverage levels are 2 and 7 percentage points lower, respectively, than their corresponding maximums.

Finally, farmers can choose to have their Actual Production History (APH) yields adjusted upward based on their county’s historical yield by paying higher premiums for their insurance policies. As a result, farms with yields below county averages can increase the likelihood of triggering indemnity payments while also increasing the potential amount of the gross indemnity. For example, the APH corn yield in Wright County, Iowa, for 2014 is 174 bushels per acre, while the Trend-Adjusted

APH yield is 186 bushels per acre. One caveat is that Trend-Adjusted APH yields cannot be used with catastrophic coverage.

Yield Protection (YP)

The YP plan offers a production guarantee based on individual APH yield, which is an average of up to ten years of actual and/or assigned yields. An explanation of how the individual APH yield is determined can be found in [Ag Decision Maker File A1-55/FM-1860, Proven Yields and Insurance Units for Crop Insurance](#).

The gross indemnity is calculated as the bushels per acre loss (production guarantee minus actual yields) times the projected price. The projected prices for corn and soybeans are, respectively, the averages of December and November CBOT futures contract prices during February. The Risk Management Agency (RMA) announces projected prices in March, and in 2014 they are \$4.62 and \$11.36 for corn and soybeans, respectively.

Revenue Protection (RP)

The RP plan offers a revenue guarantee based on individual APH yield and the highest of Projected and Harvest Price. The Projected Prices are the same ones used for the YP plan. The Harvest Prices for corn and soybeans are, respectively, the average of December and November CBOT futures contract prices during October. The RMA announces Harvest Prices in November.

Revenue Protection with Harvest Price Exclusion (RPHPE)

The RPHPE plan is similar to RP but carries a lower premium because the revenue guarantee

Table 2. Coverage levels and premium subsidies for COMBO products

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

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is determined by the projected price only and excludes the possibility of benefiting from higher Harvest Prices.

Catastrophic Coverage (CAT)

The CAT plan is offered under the YP plan at 50 percent of the APH yield and 55 percent of the projected price. It is not possible to use Trend-Adjusted APH yields with the CAT plan.

Additional examples and discussion of other provisions affecting COMBO products (prevented planting and replanting, coverage units and discounts, maximum price movements, etc.) can be found in [Ag Decision Maker File A1-54/FM-1853, Revenue Protection Crop Insurance](#).

County-level ARPI products

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

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

The ARPI policy replaces the Group Risk Plan (GRP) and Group Risk Income Protection (GRIP) plan policies that were available in the past.

Schnitkey (2014) provides a detailed comparison of ARPI to the GRP/GRIP policies.

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

The insurance period and most important dates for ARPI are identical to COMBO products. The only important date that differs is the production reporting date for both corn and soybeans: February 15, 2015 under ARPI and April 29, 2015 under COMBO products.

As with the COMBO products, crop insurance costs paid by farmers depend on area insured, premiums per acre, and administrative fees per crop per county. The administrative fees are \$30 per crop per county for coverage levels above catastrophic coverage, and \$300 per crop per county for catastrophic coverage.

Insurance policies offer coverage levels ranging from 70 percent to 90 percent in 5 percent increments, but are only available for basic units. Table 3 shows the coverage levels and premium subsidies currently available for corn and soybeans through the Federal Crop Insurance Corporation.

Table 3. Coverage levels and premium subsidies for ARPI products

Item	Percent				
Coverage Level	70	75	80	85	90
Premium Subsidy	59	59	55	55	51

Area Yield Protection (AYP)

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

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The expected county yield is determined using historical National Agricultural Statistics Service county average yields, as adjusted by the Federal Crop Insurance Corporation, and published by the Risk Management Agency annually.

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

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

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

Area Revenue Protection (ARP)

The ARP plan offers protection against loss of revenue due to a county level production loss, price decline, or a combination of both, and includes upside harvest price protection.

ARP offers similar protection to the COMBO's RP plan, except that ARP uses county revenue instead of unit revenue for indemnity calculation.

Area Revenue Protection with Harvest Price Exclusion (ARPHPE)

The ARPHPE is similar to the ARP but excludes upside Harvest Price protection. ARPHPE offers similar protection to the COMBO's RPHPE plan, except that ARPHPE uses county revenue instead of unit revenue for indemnity calculation.

Area Catastrophic Coverage (ACAT)

The ACAT coverage is available at 65 percent of the yield coverage and 45 percent of the price coverage. The total cost for ACAT coverage is an administrative fee of \$300, since its premium is fully subsidized.

More information

[Ag Decision Maker Information File A1-48](#), **Current Crop Insurance Policies**, includes more detail and examples on the programs described in this article.

Schnitkey, Gary. 2014. Area Risk Protection Insurance Policy: Comparison to Group Plans. <http://farmdocdaily.illinois.edu/2014/01/area-risk-protection-insurance-policy.html>. Accessed on 07/18/2014.

Updates, continued from page 1

Current Profitability

The following tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html.

Corn Profitability – A1-85

Soybean Profitability – A1-86

Iowa Cash Corn and Soybean Prices – A2-11

Season Average Price Calculator – A2-15

Ethanol Profitability – D1-10

Biodiesel Profitability – D1-15

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