

2014

The Year in Review

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Overview

The 2014 year was another successful demonstration of sales and service for the crop insurance industry. Yet, the year turned out to be frustrating in several aspects. After two successive years of gross losses (indemnities exceeding premiums), the natural expectation was for a return to fewer losses and more normal returns. But that was not to be, as lower crop prices and pockets of production losses pushed the gross loss ratio to 0.89, the fourth highest in the past decade. (Unless indicated otherwise, data in this article are as of April 20, 2015.)

The 2013/14 winter featured extended periods of extreme cold. While many areas had adequate precipitation, cold and variable temperatures, wind, periods of inadequate snow covering and dryness hurt the 2014 winter wheat crop, which declined 11 percent from 2013. Spring was slow to come, and planting delays occurred in the Northern tier of states. Later in the spring and during the summer while California suffered, weather generally cooperated elsewhere, and much of the nation had a more favorable growing season.

Corn and soybeans consistently had high ratings of “good” to “excellent” throughout the summer and into the fall, and production of many crops was up in 2014. Corn yield and production set record highs. With soybean planted area up as corn area contracted, soybeans, too, featured record highs for yield and production. Other

oilseeds also saw production gains, such as sunflowers, canola and peanuts. The spring wheat crop was sharply higher with the Dakotas having record yields. Cotton and rice production were also higher, despite much lower rice area in California. Among specialty crops, vegetable and citrus production declined in 2014.

The increase in production of major crops again is leading to increased carryover stocks and lower prices. The index of prices received for crops by farmers was down nine percent from January-December 2014, which followed a 19 percent decline in the prior 12-month period. The weak farm markets resulted in sharp declines in crop insurance base prices for all major crops for 2014. The market price declines continued into 2015, reducing base prices again for all major 2015 crops. The drop in 2014 base prices, combined with lower volatility factors (which are used to set premium rates) for all major crops, contributed to a 15 percent drop in total program premiums.

As of this writing, the program provided farmers with protection on \$109.8 billion in crop value in 2014, and the crop year loss ratio (indemnities divided by premiums) stood at 0.89. While an improvement over the past two years, the final loss ratio is expected to exceed 0.90 and keep the returns to the crop insurance companies anemic under the financial terms of the current Standard Reinsurance Agreement (SRA), which has been in effect since 2011. The cumulative underwriting gains of the insurance companies during 2011-14 are likely to be

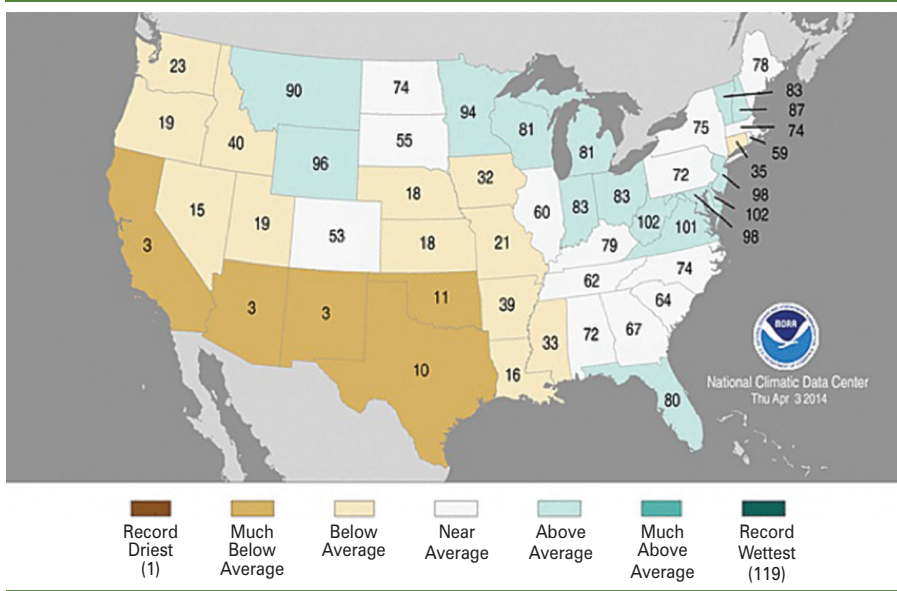
in the range of only five-six percent of their cumulative retained premiums. Since underwriting gains are only part of gross revenue, pre-tax net income returns would be considerably lower.

Corn and soybeans continued to be the top premium crops, accounting for two-thirds of U.S. premiums in 2014, with wheat coming in third. Minnesota had the highest loss ratio among major states and Iowa had the highest level of claims among all states, with excess moisture and lower prices being the principal causes of loss in both states. Minnesota and Texas were second and third in claims while Oklahoma and Iowa were second and third in loss ratio among major states. By crop, loss ratios were highest for ELS cotton, olives, macadamia nuts, burley tobacco and pistachios. The losses on ELS cotton, olives and pistachios were all due to California's persistent drought.

Implementation of the 2014 Farm Bill led the list of program and policy developments in 2014. The new Farm Bill was signed into law on February 7, 2014 and features many new products and changes for crop insurance. The new law reduced the 10-year projected outlays on farm programs by an estimated \$14.3 billion but continued the emphasis on risk management and crop insurance by raising crop insurance projected funding by \$5.7 billion. The increase in crop funding is primarily due to the addition of two new supplemental revenue programs, the Stacked Income Protection Plan, or STAX, for upland cotton, and the Supplemental Coverage Option, or SCO for other crops. These plans will be available for cotton and major crops beginning in 2015.

Implementation of the Farm Bill's crop insurance provisions has proceeded timely and effectively during 2014, with opportunities for industry input into the Risk Management Agency's (RMA) development of regulations and procedures. Farmers will have many new opportunities to expand coverage under the new programs and provisions. One concern continues to be the risk of loss for the program and the companies created by the new products that will raise producer coverage levels, such as the provision to exclude loss history in years of low county yields (APH Exclusion) and by the use of premium rating methods that have limited or no historical experience on which to base rates.

Figure 1. Winter 2013-2014 (Dec-Feb) Statewide Precipitation Rank, 1895-2014



In addition to protection provided by the crop insurance program, farmers had \$39.7 billion in privately provided crop-hail insurance protection in 2014. Farmers' premiums for 2014, as currently reported to NCIS, were the largest in the history of the program at \$992 million, up from \$953 million in 2013. This coverage proved valuable in 2014 as it paid out \$1.2 billion in losses as the program had the largest hail losses in its history and became only the third year since 1948 in which the U.S. loss ratio exceeded 1.0. Canada, too, experienced 2014 hail losses that were significantly worse than 2013. The Canadian 2014 loss ratio was 0.84, as compared to the 2013 loss ratio of 0.50.

U.S. Weather and Production of Major Crops

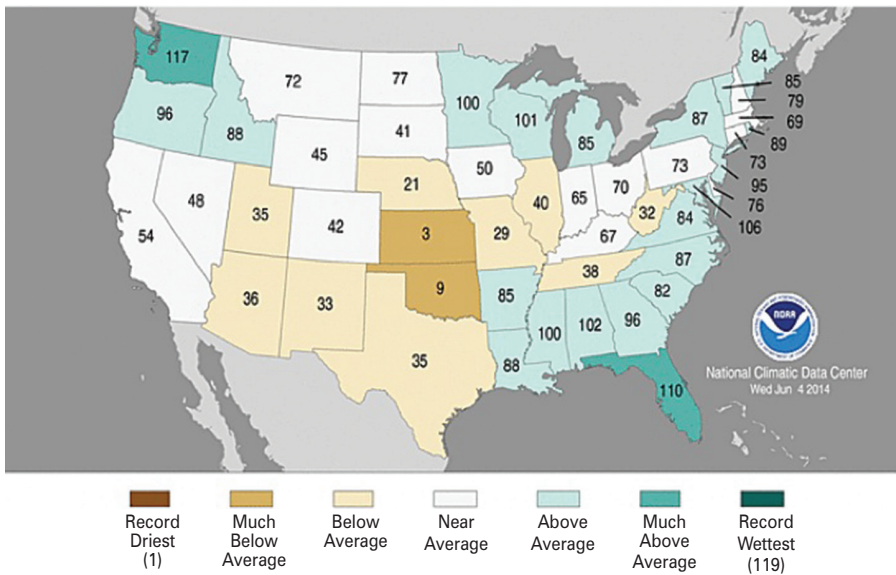
Winter 2013/14. The production cycle for the major 2014 crops commenced with planting of winter wheat beginning in August 2013. Most of the nation had near to above average fall rainfall and by the end of September, seeding was slightly behind the 5-year average pace, but exceeded that pace over the next month and most acreage was rated good to excellent in late November. Planted acreage was 42.4 million, down about two percent from 2013, with an increase in Hard Red Winter (HRW) wheat, particularly in the Central and Northern Plains, which was offset by a sharp drop in Soft Red Winter (SRW)

wheat. White wheat in the Pacific Northwest was down from a year earlier.

The 2013/14 winter was extremely cold with much snowfall in the Midwest. Many Corn Belt states had the coldest winter since 1978/79. The drought continued from California to the Southern Plains as indicated in Figure 1. California had its warmest and third driest winter on record. Arizona, New Mexico, Oklahoma and Texas all had abnormally dry winters. California also experienced a damaging December freeze that affected citrus and other crops in the Central Valley. Many wheat areas had adequate precipitation, much as snow, but variable temperatures, wind, periods of inadequate snow covering and dryness in the Southern Plains caused poorer wheat conditions across the Central and Southern Plains. The South and East also saw wintry weather and extreme cold but did not experience the severity of the Midwest.

Spring 2014. Despite late spring showers, the Central and Southern Plains and the Southwest experienced below-normal spring precipitation (Figure 2). The late rains were too late to alleviate stress on the winter wheat crop. California's three-year drought continued with above-normal temperatures, which, along with a limited snowpack, boosted irrigation needs. Most of the rest of the nation had near- to above-normal precipitation, with the wettest areas being the Pacific Northwest, North Central states, and the South and

Figure 2. Spring 2014 (Mar-May) Statewide Precipitation Ranks, 1895-2014



Southeast. Dryness in the interior Northwest states became a concern for pasture, range, and wheat as the spring continued, while spring temperatures during March-May averaged at least 4 - 6°F below normal in the Great Lakes states.

Cold, wet conditions in early spring delayed planting in the Northern tier of states, but corn producers had planted three percent of the 2014 crop by April 13, slightly ahead

of the prior year but 50 percent of the five-year average (Figure 3). Wet fields and low soil temperatures slowed progress and by May 4, 29 percent of the crop was planted, only 70 percent of the five-year average. In May, warmer and drier weather across most of the nation enabled producers to catch up with planting and improve on the poor pace of 2013. Soybean planting started slowly due to the cold, wet weather, but as May progressed,

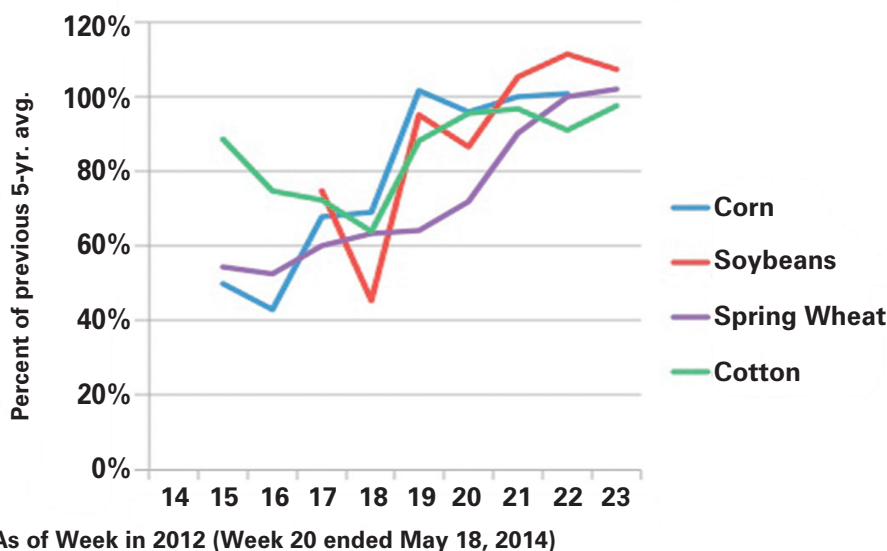
producers made significant gains, particularly during the latter part of the month as they completed corn planting and concentrated on soybeans. Producers had planted 78 percent of the Nation's soybean crop by June 1, 23 percentage points ahead of last year and 11 percent more than the five-year average. Following the pattern of other crops in the North Central states, planting progress for spring wheat started well behind normal with the largest delays in Minnesota and North Dakota. By May 4, producers had planted 26 percent of the spring wheat crop, ahead of the previous year, but only 63 percent of the five-year average. However, 88 percent of the spring wheat crop was in the ground by June 1, equal to the five-year average. The severe drought conditions in the Southern Plains led to poor fields in Oklahoma and Texas being baled for hay or abandoned.

With cotton planting activity limited to Arizona, California, and Texas in early spring, six percent of the U.S. crop was planted by April 6, slightly ahead of 2013 and equal to the five-year average. By May 4, producers had planted 16 percent of the cotton acreage, only 63 percent of the five-year average. Similar to other crops, May's above-average temperatures and below-average precipitation greatly aided planting, with 62 percent of cotton planted by May 25, 97 percent of the five-year average. Rice showed a similar pattern and was 95 percent complete by May 25.

When spring planting was complete, total U.S. acreage planted to principal crops was 326.8 million, up about two million from 2013. With lower prices and reduced returns expected compared with soybeans, corn plantings fell nearly five million acres to 90.6 million, while soybean plantings increased nearly seven million acres to 83.7 million. A number of other crops also had planting increases as corn area decreased. For example, other oilseed plantings including canola, peanuts, safflower and flaxseed all saw higher area planted, while sunflower acreage remained about the same. Upland cotton area increased by over a half million acres to 10.8 million. Even, spring wheat overcame its planting delays and over 13 million acres were sown, nearly 1.5 million above 2013. Rice, too, experienced an increase, rising to 2.9 million acres compared with 2.5 million in 2013.

Summer 2014. The winter wheat harvest

Figure 3. Planting Progress: Acres Planted in 2014 as a Share of 2009-13 Average



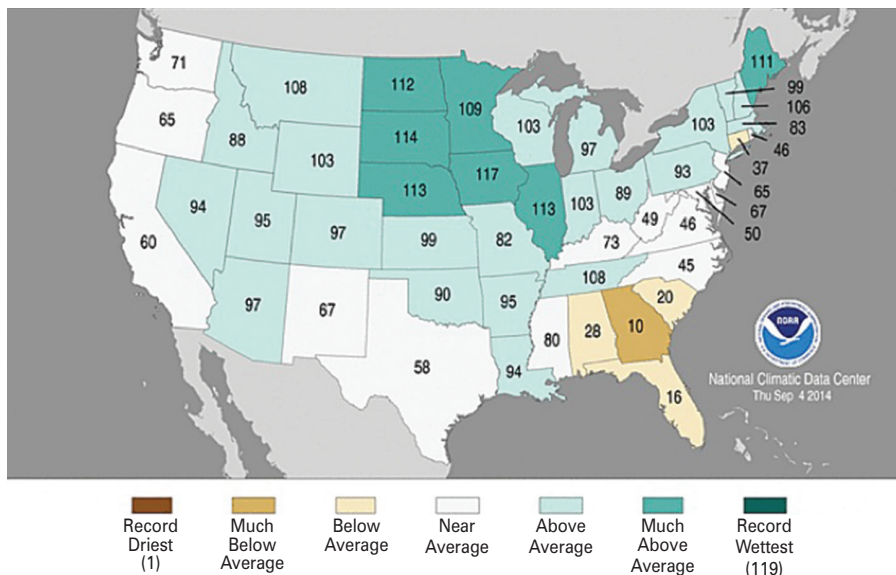
ended with production down 11 percent. Yields were favorable in many North Central and Midwest States, but reduced Southern Plains acreage and yields, suffering from the harsh winter and continued dryness, accounted for most of the decline (Table 1). Summer weather developments were conducive to corn and soybean progress during 2014 (Figure 4). Rainfall was average-to-above average in most of the nation, and temperatures did not stress crops, particularly in the Midwest. Farther south, precipitation was inconsistent or lacking, resulting in some stress on Southern crops. Late summer rain affected grains across portions of the Northern Plains, reducing quality and slowing harvest. While many western states experienced helpful summer rain, California remained hot and dry.

Figure 5 provides a snapshot of general weather conditions as of midsummer (July 29, 2014). The Drought Monitor indicates the persistent drought faced in the Southwest and California. Exceptional drought covered large parts of California. A 2014 study by the University of California at Davis indicated that the drought was the third most severe on record and caused the greatest water loss ever seen in California agriculture, with river water for Central Valley farms reduced by roughly one-third. Groundwater pumping replaced river water losses, with some areas more than doubling their pumping rate over the previous year, the study indicated. Reduced acreage, yields and higher pumping costs were estimated to result in \$1.5 billion in direct costs to California agriculture.

While California suffered, much of the nation had much more favorable growing seasons. Corn and soybeans consistently had high ratings of “good” to “excellent” throughout the summer and into the fall (Figure 6). Spring wheat conditions tailed off as the season progressed, as wet weather damaged grain, slowing development and causing sprouting. Cotton conditions were lower than those for grains in the Midwest, reflecting erratic rainfall and temperatures in the South and Southern Plains, although cotton crop development was slightly ahead of the previous five-year average.

Fall 2014. Most of the Nation had average-to-above-average fall rains, although there were somewhat dry conditions in the upper Midwest and interior Northeast (Figure 7).

Figure 4. Summer 2014 (Jun-Aug) Statewide Precipitation Ranks, 1895-2014



The Midwest dry weather aided the maturing and harvesting of corn and soybeans. Precipitation was insufficient to provide much relief in the West's drought areas. California also had its warmest September-November period on record. While the west was warm, it was cool in the central and eastern states, with fall temperatures among the ten coolest in Illinois and Indiana. By the week ending Au-

gust 31, the corn crop was rated 74 percent in good-to-excellent condition compared with 55 percent for the previous five-year average, and soybeans was rated 72 percent good-to-excellent condition, compared with 54 percent for the five-year average. Both crops maintained those high ratings through the fall harvest period. The corn crop condition was the highest October rating since 2004.

Figure 5. U.S. Drought Monitor

July 29, 2014 (Released Thursday, July 29, 2014) Valid 8 a.m. EST

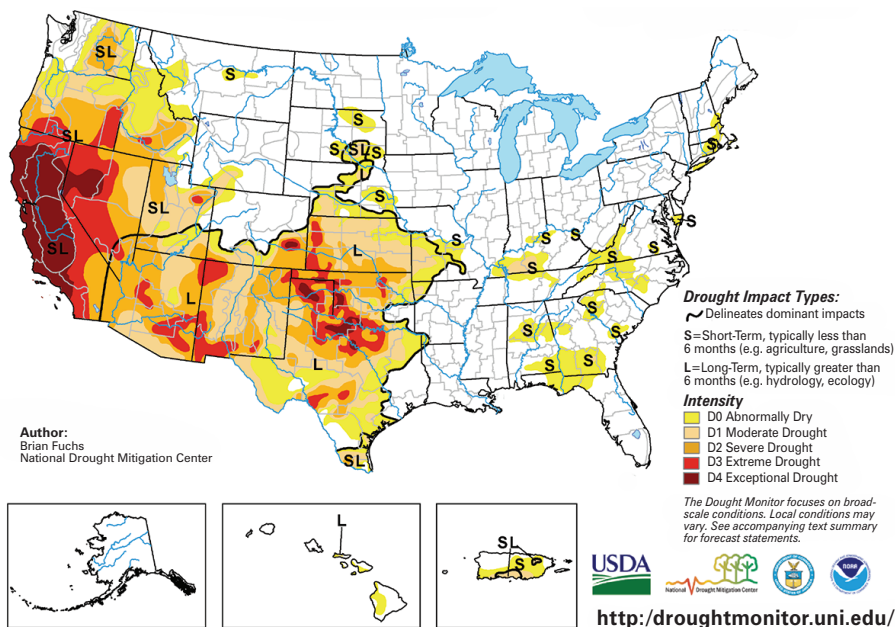
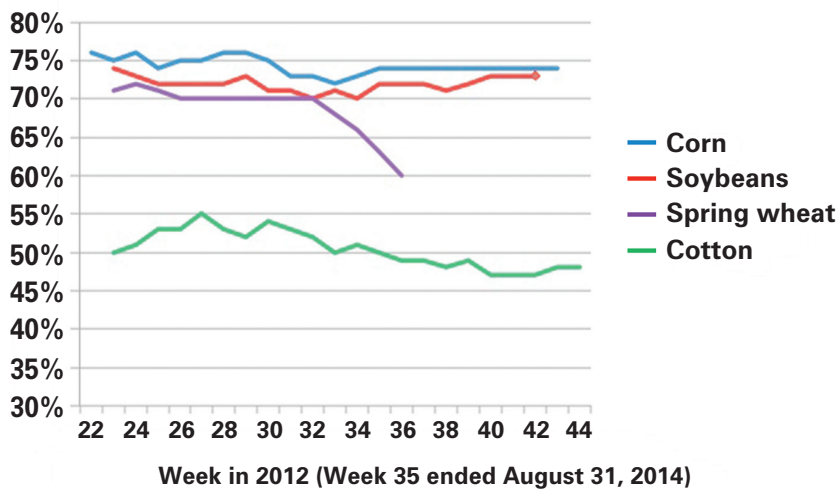


Figure 6. U.S. Crop Conditions, 2014: Share of Crop Rated “Good” to “Excellent”



By November 2, producers had planted 90 percent of the U.S. intended winter wheat acreage for the 2015 crop year, equal to the 2014 crop and slightly ahead of the five-year average. Fall seedings totaled 40.5 million acres, five percent below the year earlier. Overall, 59 percent of the 2015 winter wheat crop was reported in good-to-excellent condition at the end of the month, four percentage points below the same time in 2013. As the year ended, rain and snow provided beneficial moisture across winter wheat areas of the Central and Southern Plains, although

continuing drought in the Southern Plains and late planting and poor establishment in parts of the Corn Belt troubled the 2015 winter wheat crop. Late precipitation also afforded some drought relief in California helping pastures, but groundwater depletion and low reservoir levels continued to be an issue. Precipitation also spread into other areas of the West, although snowpack was limited by warm conditions.

Table 1 indicates 2014 production totals for major crops based on the annual end-of-year estimates reported by USDA's National

Agricultural Statistics Service (NASS). With generally more favorable weather and higher overall planted area than in 2013, production of many crops was up in 2014. NASS estimates record-high corn yield and production at 171.1 bushels per acre and 14.22 billion bushels, respectively. As for other feed grains, even though planted area declined, grain sorghum production is estimated at 433 million bushels in 2014, up slightly over 10 percent from 2013, as harvested area relative to planted area improved. Average yield, at 67.6 bushels per acre, is also up eight bushels from 2013. Despite a good yield, barley production fell 18 percent under reduced plantings.

With soybean planted area up as corn area contracted, NASS estimates record-high yields and production for the 2014 soybean crop—just as for corn—with average yield of 47.8 bushels per acre and production of 3.97 billion bushels. Other oilseeds also saw gains, with sunflower production up 10 percent over 2013, despite slightly lower planted area, as South Dakota led the nation in production. Much higher planted area boosted 2014 canola production by 14 percent, even though yields were off a bit, with North Dakota being the leading production state. Peanut acreage was up 27 percent in 2014, helping to boost production by 25 percent over 2013.

Although there were late season weather issues, spring wheat production is estimated at 595 million bushels for 2014, up 11 percent from 2013. U.S. average yield is estimated at 46.7 bushels per acre, down slightly from 2013, with the Dakotas having record-high yields. Upland cotton production is estimated at 15.5 million bales, up a substantial 26 percent from 2013, although U.S. upland cotton average yield is estimated at 781 pounds per acre, down 21 pounds from 2013. With increased plantings, rice production in 2014 is estimated at 221 million cwt, up 16 percent from 2013. However, planted acreage in California for 2014 declined 23 percent due to the ongoing drought. With generally better weather across much of the country, production of all dry hay is estimated at 139.8 million tons, up four percent from 2013.

Among other crops, production of dry edible beans is estimated at up 19 percent from last year as planted area increased 26 percent from 2013. Production of dry edible peas is estimated up 10 percent as planted area rose nine percent.

Figure 7. Fall 2014 (Jun-Aug) Statewide Precipitation Ranks, 1895-2014

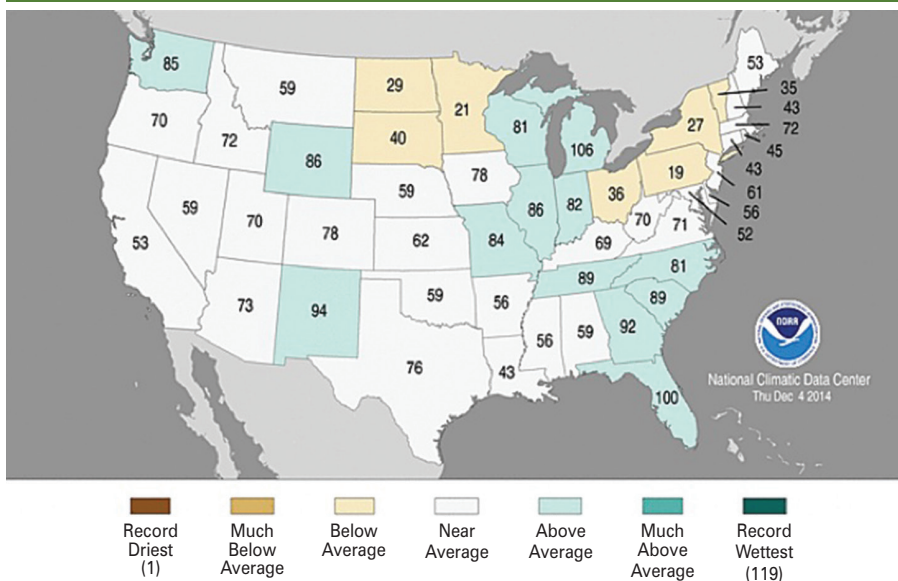


Table 1. Crop Yields and Production

CROP	2013 YIELD	2014 YIELD	2013 PRODUCTION	2014 PRODUCTION	% CHANGE
	Bu./Harv. Ac.	Bu./Harv. Ac.	Mil. Bu.	Mil. Bu.	
Corn	158.1	171.1	13,829	14,216	2.8
Barley	71.3	72.4	217	177	-18.4
Grain Sorghum	59.6	67.6	392	433	10.3
Soybeans	44.0	47.8	3,358	3,969	18.2
All Wheat	47.1	43.7	2,135	2,026	-5.1
Winter Wheat	47.3	42.6	1,543	1,378	-10.7
Other Spring	47.1	46.7	534	595	-11.4
	Lbs./Harv. Ac.	Lbs./Harv. Ac.	1,000 Bales	1,000 Bales	
Upland Cotton	802	781	12,275	15,496	-26.2
	Lbs./Harv. Ac.	Lbs./Harv. Ac.	1,000 Cwt.	1,000 Cwt.	
Rice	7,694	7,572	189,953	221,035	-16.4

Source: NASS Crop Production Annual Summary, January 2015

U.S. production of principal fresh vegetables was down a little over one percent in 2014, reflecting less acreage. Interestingly, in California, which accounts for a little over half of all U.S. vegetable production, acreage fell 3.4 percent but production was about the same as in 2013. The largest production drops in 2014 were in Florida and Texas and reflected lower planted area. Production of principal processing vegetables in 2014 was up 12 percent from 2013. Tomatoes, sweet corn, and snap beans account for 93 percent of the total. California leads the nation with 74 percent of the processing vegetable production. In 2014, California processing acreage planted was up 10 percent and production was up 15 percent. Despite the drought, strong prices for some vegetables, such as tomatoes, increased acre-

age. Many producers relied on well water for irrigation, which, over time, could increase soil salinity problems.

Citrus production is mostly in California and Florida and was down 15 percent during the 2013-14 year compared with the year earlier. California citrus is mostly fresh, and despite a modest drop in production, value was up 33 percent. Florida citrus is mostly for processing and both production and value fell in 2014. U.S. production of noncitrus fruit and nuts was down three percent in 2014 compared with a year earlier. In California, grape production was down 11 percent, with growers reporting hail and drought as contributing factors.

[Information sources for this section include: NOAA National Climatic Data Center,

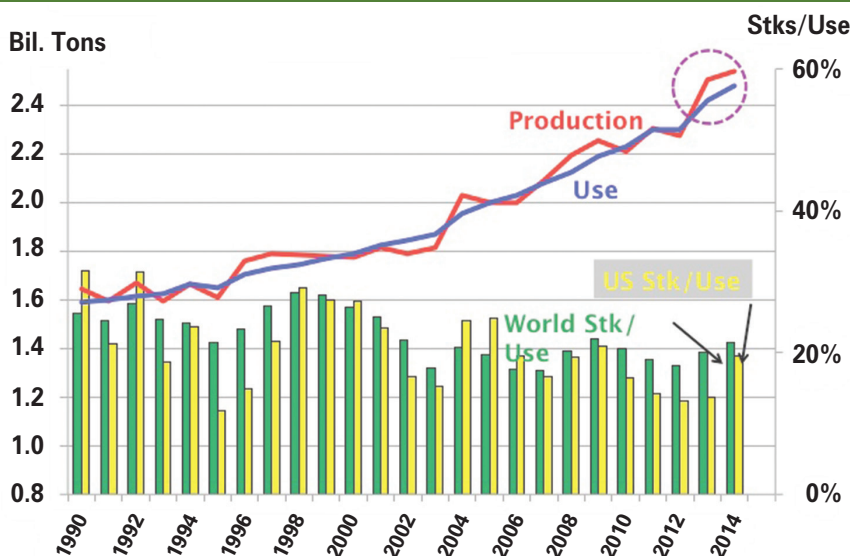
State of the Climate: National Overview for Annual 2014, published online December 2014, retrieved on February 24, 2015 from <http://www.ncdc.noaa.gov/sotc/national/2014/13>; from USDA NASS, Quick Stats available at www.nass.usda.gov/Quick_Stats/index.php and the following annual reports: Crop Production 2014 Summary, January 2015, Vegetables Annual Summary, January 2015, Citrus Fruits 2014 Summary, September 2014 and Noncitrus Fruits and Nuts 2014 Preliminary Summary, January 2015; Center for Watershed Sciences, University of California, Davis, UC Agricultural Issues Center, ERA Economics, Economic Analysis of the 2014 Drought for California Agriculture, Davis, California, July 23, 2014.]

Commodity Market Developments

The adequate rainfall and moderate temperatures over much of the Central United States in 2014 produced record-high production of corn and soybeans as well as production increases for many other crops (Figure 8). Following on the heels of the sharp rebound in global production in 2013, the large crops in 2014 continued the downward trend in crop prices initiated a year earlier.

Global grain and oilseed production increased by a whopping 10 percent in 2013, compared with a robust increase in global domestic use estimated at over five percent. That imbalance started the accumulation of global carryover stocks. In 2014, production was up a slight 1.5 percent, but still sufficient to exceed total use, which is expected to grow by 2.6 percent, about the long-term average. As a result, global carryover stocks are expected to be up estimated 10 percent by the end of the 2014/15 marketing year. Global wheat production increased modestly in 2014, led by an increase in EU production, and exceeded global use, resulting in a small expected increase in global wheat stocks. Similarly, global coarse grain stocks are estimated to increase again as global production exceeds last year's high level, as production decreases in Brazil, Australia, Argentina and Canada are offset by the record U.S. coarse grain production. The most prominent imbalance between global production and use is in oilseeds markets, where the large 2014 U.S. and Brazilian soybean crops are expected to cause a 35 percent increase in global soybean stocks. The story of

Figure 8. World Grain & Oilseeds Production, Use & Stocks



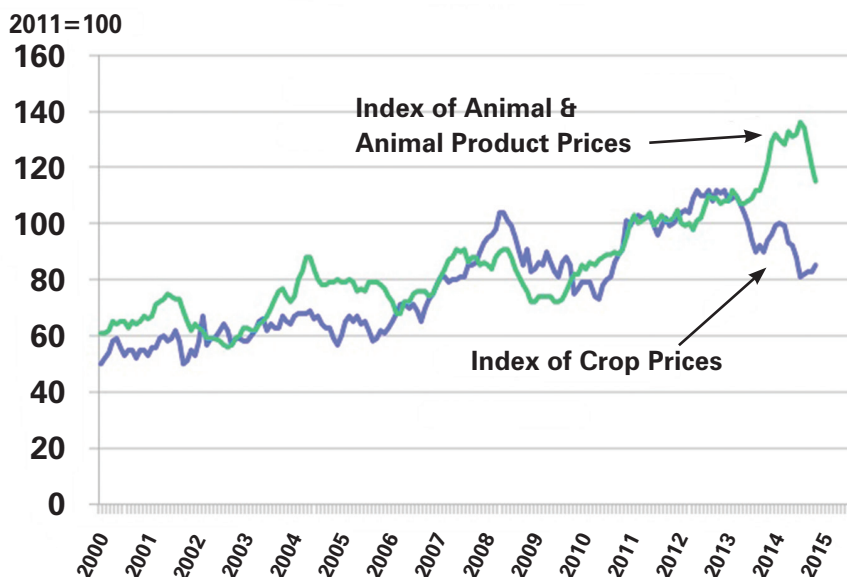
another year of stock increases in 2014/15 is also playing out in the world cotton market. Despite the large boost in U.S. production, global cotton production is down slightly, as a number of countries all experienced small declines. Still, global production remains above expected use and stocks are expected to increase eight percent to 110 million bales, with China continuing to shape the market, as it is expected to hold over 65 million bales, nearly 60 percent of the world total.

To put the 2014 grain and oilseed market in perspective, the 2000-2013 average global stocks-to-use ratio is 20.5 percent. The estimated level at the end of 2014/15 is estimated at 21.5 percent. Thus while carryover as a share of use is the highest since the 2009/10 season, the buildup is not wildly excessive and is more a return to normalcy after the rare drought-affected 2012 year. The steady carryover rise over the past two years in the face of somewhat slow consumer demand sets the stage for a price environment that may lie between the past few years and the lower levels of the earlier 2000s.

Figure 9 depicts the overall movements for the aggregate indices of prices received by U.S. farmers for crops and for animals and animal products on a monthly basis since 2000. As global crop production rebounded in 2013 and 2014 following the 2012 U.S. drought, and global economic growth proved sluggish, crop prices declined sharply. Meanwhile, livestock prices had been in the doldrums in the mid to later 2000s as feed price increases, driven by ethanol growth and Southern Plains dryness, led to reduced herds and larger meat supplies. These herd reductions then tightened production capacity, reducing meat production in 2012-14 which boosted prices. With feed prices falling, farmers began holding back animals to expand production, and livestock prices continued to stay strong, although starting to decline in late 2014 and early 2015. Animal number expansion is likely to help build a demand base for feed grains over the next few years as ethanol-driven demand stagnates.

The supply and demand situation for corn and soybeans is illustrated in Figure 10. With record production, the increase in expected U.S. carryover stocks is clearly much larger than for the world. The increase for soybeans is especially dramatic, particularly when

Figure 9. U.S. Farm Prices for Crops & Livestock



compared with the 2013/14 carryover, which turned out to be a historically low 2.6 percent of use. The tight supply prevented soybean prices from falling as much as corn during 2013/14 and was an important factor in explaining the shift in 2014 planted acres from corn to soybeans. For 2014/15, USDA forecasts soybean stocks will jump to 10 percent of total use, and prices will average \$10.10 per bushel, down 22 percent from the year earlier. Corn carryover is forecast to rise from 9.2 percent to 13.4 percent of use with 2014/15 corn farm prices averaging \$3.70 per bushel, down

17 percent from the year earlier and a bit less than the drop in soybean prices. Wheat exports are expected to drop in 2014/15 as EU competition heats up and the value of the dollar increases, leading to a moderate increase in carryover stocks with prices expected to average about \$6.00 per bushel, down about 12 percent from the year earlier. Soaring U.S. cotton production in 2014 is forecast to raise cotton carryover by 80 percent in 2014/15 and reduce average farm prices to 60 cents per lb, compared with 77.9 cents averaged during 2013/14. Sitting on enormous stocks, China,

Figure 10. U.S. Prices & Carryover Stocks as a Share of Total Use

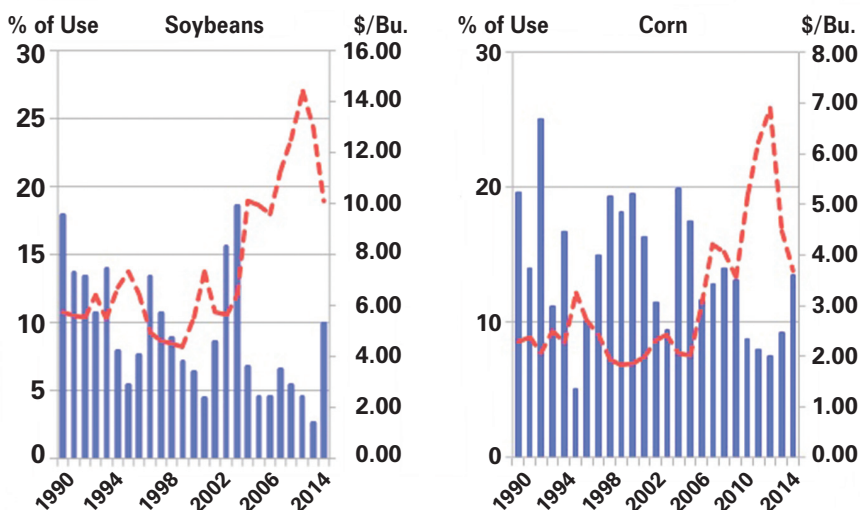


Table 2. Major Revenue Policy Base Prices¹

	2008	2009	2010	2011	2012	2013	2014	2015	% CHANGE	
									2013-14	2014-15
Wheat, Winter (\$/bu) (KS)	5.88	8.77	5.42	7.14	8.62	8.78	7.02	6.3	-20.0	-10.3
Wheat, Spring (\$/bu) (ND)	11.11	6.20	5.43	9.89	7.84	8.44	6.51	5.85	-22.9	-10.1
Corn (\$/bu) (IL)	5.40	4.04	3.99	6.01	5.68	5.65	4.62	4.15	-18.2	-10.2
Soybeans (\$/bu) (IL)	13.36	8.80	9.23	13.49	12.55	12.87	11.36	9.37	-11.7	-14.3
Upland Cotton (\$/lb) (MS)	0.77	0.55	0.72	1.15	0.94	0.81	0.78	0.63	-3.7	-19.2
RICE (\$/cwt) (AR, 2011-15, Long Grain)	14.40	13.10	14.00	16.10	14.70	15.70	13.90	²	-11.5	-11.5

¹Revenue Protection for 2011-15 and Revenue Assurance for prior years.

²Due to insufficient futures price data, revenue insurance is not available in 2015.

Source: Various RMA Manager's Bulletins

the largest U.S. market, has reduced imports from 20 million bales in 2012, to 14 million in 2013, to about 7 million expected in 2014.

Projected prices for revenue policies, known as base prices, are shown in Table 2. Base prices are futures prices averaged during a discovery month that precedes the sales closing date. Thus, they are heavily influenced by market conditions in both the crop year of the discovery month and the upcoming crop year. Declining wheat farm prices in 2013 and 2014 and rising carryover contributed to lower winter and spring wheat base prices in 2014 and 2015. Corn and soybean base prices in 2014 and 2015 reflect the back-to-back years of rising production and stocks following the 2012 drought, and these 2015 base prices are at 5-year lows. For cotton, the large drop in production and stocks in 2013 strengthened farm prices for 2013/14 and helped maintain the base price for 2014. However, the very

large U.S. cotton crop in 2014, partly due to a surge in harvested relative to planted acres as a result of very low abandonment, drove the 2015 farm and base prices down. The rice base price in 2014 reflected the early-season expectation of a large increase in long-grain rice production in the mid-South. That increase did occur, with 2014 long-grain production rising 23 percent, while medium/short grain production was about unchanged. Large production is expected to raise long-grain rice carryover at the end of 2014/15 by nearly a third, and that has reduced USDA's expected farm price for long-grain rice by 20 percent to \$12.30 per cwt in 2014/15. However, futures price data in early 2015 was insufficient to establish a base price for 2015, thus revenue insurance is not available. The projected price used for yield policies was set at \$11.20 per cwt for Arkansas long grain rice.

Figure 11 shows the futures price for corn

over the last year of the contract for December delivery. Corn is frequently tracked as an indicator of general conditions, as it heavily influences the prices of other crops and livestock, and corn has the highest crop insurance liability and premium among all crops. During 2010, corn yield was below trend, exports were very strong and stocks were falling sharply, pushing futures price to a high of near \$6.00 per bushel in the second half of the year. That increase led to the record-high base price of \$6.01 per bushel for the 2011 corn crop. Weather concerns led to another below-trend yield in 2011 and further supply tightening, which continued to push futures to near \$8.00 per bushel in late summer 2011. After that, prices tailed off as a more normal crop was anticipated in 2012 with the expectation of much larger planted acreage, and the 2012 base price settled at \$5.68 per bushel. However, after a good start, the 2012 drought set in and futures prices soared to a peak of \$8.49 by early August. Prices declined in the second half of 2012 as demand contracted under the high prices and foreign grain production was strong. Prices still finished 2012 near \$7.00 per bushel. Futures prices trended down in early 2013 resulting in \$5.65 base price but then fell sharply as a near-trend corn yield of 159 bushels per acre with 95 million planted acres resulted in record-high production and higher stocks. For 2014, USDA projected another record-high crop of nearly 14 billion bushels and another drop in farm prices. That sentiment led to the 2014 base price of \$4.62 per bushel. Production turned out to be 14.2 billion and farm prices are expected to average \$3.70 for the 2014 crop year.

The volatility factor is used to estimate premium rates for revenue plans of insurance. The volatility factor is derived from the futures market's forward-looking measure of

Figure 11. Weekly Corn Futures Prices Last Year of the December Contract, 2010-2014

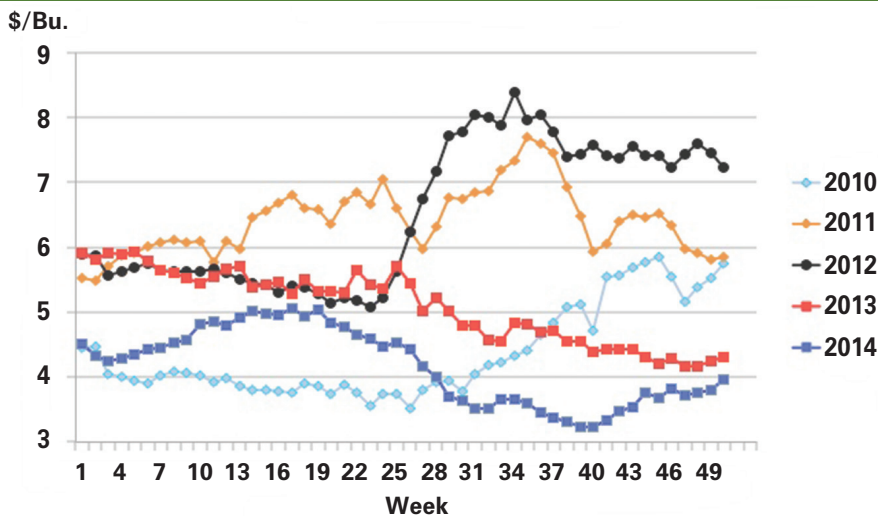


Table 3. Volatility Factors

	Historical Price Volatility ¹	Volatility Factor ²										
		1968-2013	2008	2009	2010	2011	2012	2013	2014	2015	% CHANGE	
											2012-13	2013-14
Wheat, Winter (\$/bu)	0.20	0.24	0.33	0.27	0.33	0.26	0.24	0.19	0.17	-20.8	-10.5	
Wheat, Spring (\$/bu)	0.23	0.33	0.25	0.24	0.25	0.19	0.15	0.14	0.15	-6.7	7.1	
Corn (\$/bu)	0.21	0.30	0.37	0.28	0.29	0.22	0.20	0.19	0.21	-5.0	10.5	
Soybeans (\$/bu)	0.18	0.31	0.31	0.20	0.23	0.18	0.17	0.13	0.16	-23.5	23.1	
Cotton (\$/lb)	0.24	0.20	0.27	0.21	0.40	0.19	0.17	0.15	0.16	-11.8	6.7	
RICE	0.23	0.15	0.22	0.19	0.22	0.14	0.11	0.10	³	-9.1	³	

¹Historical volatility values are obtained by fitting log-normal distribution to the time series of the ratio of the harvest price to the base price from 1968 to 2014. For each year in that time period, the harvest and base prices are calculated by using relevant futures prices in that year. Source: Barchart.com

²Revenue Protection for 2011-15 and Revenue Assurance for prior years.

³Due to insufficient futures price data, revenue insurance is not available in 2015

Source: Various RMA Manger's Bulletins

the riskiness of prices expected for the coming crop year. The factor is estimated using the Black-Sholes model of implied volatility, which is based on observed prices for futures market options contracts. RMA uses the volatility factor to derive an expected price distribution for the crop. That distribution is then used to simulate price risk and establish the component of the premium rate for revenue plans that reflects the price risk. The volatility factor is shown in Table 3. When base prices decline, as they did in 2013 and 2014, insured liability declines, provided other factors affecting liability are unchanged, and total premium declines. If volatility factors also decline, as they did for 2014 and 2015, premium rates decline which adds to the drop in total premium caused by the lower base prices. For 2014, the volatility factors for major crops all declined, with a notable 24 percent drop for soybeans. The options market was signaling that price risk may be lower in 2014. However, prices dropped considerably for major crops, as noted in Figure 11 for corn, and price declines were a contributing cause of loss on many policies.

The changes in futures prices during 2014 from the time base prices were established to the harvest period are shown in Figure 12. The harvest prices shown are the average daily prices in the harvest month for the futures contract used to establish the base prices. These prices are used to calculate revenue to count to establish the level of indemnity for an RP policy. A second consecutive year of record corn production in 2014 explains the decline in harvest price to \$3.49 per bushel, a 24 percent drop from the base price. Such a drop was enough to trigger indemnities on policies

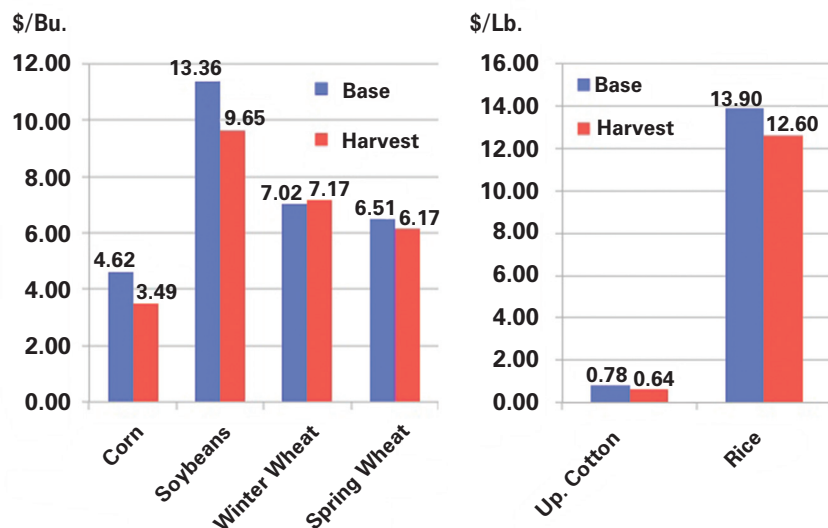
with 15 percent and 20 percent deductibles for producers whose yields were about equal to their actual production history. Rising supplies were also the story behind the soybean, cotton, rice and spring wheat harvest price declines. The winter wheat harvest price was established before the large 2014 outturn was known for other grains and oilseeds, and its increase relative to its base price reflects the 11 percent decline in the 2014 winter wheat crop.

[Information sources for this section include: USDA, Foreign Agricultural Service, P,Se&D data base; USDA, Office of the Chief Economist, World Agricultural Supply and Demand Estimates Report (WASDE), various issues; USDA, NASS Quick Stats; RMA Manager's Bulletins and the Price Discovery Application.]

Federal Crop Insurance Program Experience

Reflecting the improved weather and large harvests, the actuarial performance of the Federal Crop Insurance Program improved moderately in 2014. After back-to-back years of gross underwriting losses (defined as gross indemnities exceeding gross premiums) in 2012 and 2013, the program had a gross underwriting gain (gross premiums exceeding gross indemnities) in 2014. The sharp decline in farm and base prices and volatility factors, as described in the prior section, reduced the total insured liability to about \$110 billion in 2014, \$14 billion lower than the record high set in 2013. Accordingly, gross premium was \$10.1 billion in 2014, down \$1.7 billion from the prior year. Although lower prices reduced insured production values and premiums,

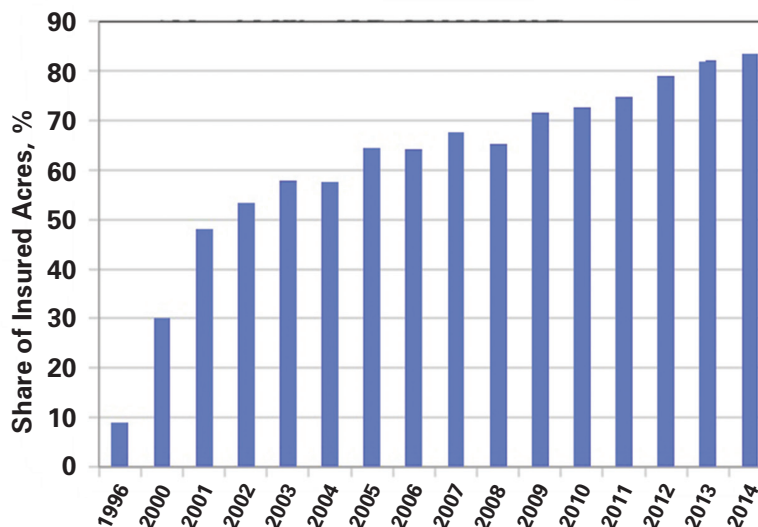
Figure 12. Prices for 2014 RP and RP-HPE Plans of Insurance



294.6 million acres were insured, slightly below the record-high 296.1 million set in 2013. Lower prices and less corn acreage probably accounted for the decline, however, total acreage planted to principal crops increased in 2014, limiting the decline in insured acres. Despite the decline in insured acres, producers continued to buy higher coverage levels in 2014, with the share of acres covered at 70 percent or higher rising from 82.1 percent in 2013 to 83.5 percent in 2014 (Figure 13). The program loss ratio on April 20, 2015 stood at 0.89, the fourth highest in the last decade.

Table 4 provides the standard measures used to comprehend the scope and performance of the crop insurance program. The generally smaller sizes of the program components measured in dollars in 2014 are driven mainly by the reduced prices for major field crops. Gross underwriting gains and losses of the program are shared between FCIC and the insurance companies, as determined by the provisions of the Standard Reinsurance Agreement (SRA). For 2014, the gross underwriting gain for the business recorded to date is \$1.14 billion and would be the first gain in three years. The final estimated gross underwriting gain is expected to result in an underwriting gain that is about 12 percent of retained premium of the companies. While this rate would be an improvement over the past couple of years, company underwriting gains as a percent of retained premium during the 2011-2014 life of the current SRA would average in the range of five to six percent, remaining well below the level expected when the SRA was negotiated. Furthermore, underwriting gains are not profits but a component of the companies' pre-tax revenues.

Figure 13. Share of Insured Acres Covered at 70% or Higher



Accounting for all revenues and costs leaves company pretax net income close to zero over 2011-2014.

The public cost of the crop insurance program can be calculated using program outlays and revenues and are equal to: gross indemnities less farmer-paid premiums, plus administrative and operating expense (A&O) payments made on the producers' behalf to the companies, plus company underwriting gains. For the 2014 crop year thus far, net indemnities of \$5.1 billion plus A&O payments of about \$1.4 billion bring these two components of program cost to \$6.5 billion. Adding estimated company underwriting gains would put the program cost in a range of \$7.6 billion. This figure compares favorably with costs of \$9.7 billion in 2013 and the record-high \$13.5 billion resulting from the historic 2012 drought. Final costs for 2014 will depend on

final figures for indemnities, farmer-paid premiums and company underwriting gains, but the total cost is likely to wind up a bit less than the expected long-run level of \$7.9 billion shown in the January 2015 projections of the Congressional Budget Office (CBO) for the life of the 2014 Farm Bill.

The changes in insured acres of major crops for 2014 are shown in Table 5. The changes in insured acres mainly reflect the shifts in planted acres. While planted acres of principal crops increased by 1.9 million in 2014, insured acres fell by 1.5 million. Part of this discrepancy in direction is explained by the 5.9-million-acre drop in corn insured acres which exceeded the 4.8-million-acre decline in corn planted acres. Also, soybean plantings were up by 6.9 million acres while insured acres grew by a lesser 6.3 million. The 1.5-million-acre decline in insured acres of

Table 4. Federal Crop Insurance Program Performance, Gross Basis¹

CROP YEAR	POLICIES WITH PREMIUM	UNITS WITH PREMIUM	LIABILITY	PREMIUM	FARM-PAID PREMIUM	INDEMNITY	GROSS UNDERWRITING GAIN	INSURED ACRES	LOSS RATIO
	Number	Million Dollars							
2005	1,191	3,022	44,259	3,949	1,612	2,367	1,582	246	0.60
2006	1,148	2,942	49,919	4,580	1,898	3,504	1,076	242	0.77
2007	1,138	2,966	67,340	6,562	2,739	3,548	3,015	272	0.54
2008	1,149	3,023	89,897	9,851	4,160	8,680	1,171	272	0.88
2009	1,172	2,729	79,548	8,951	3,524	5,222	3,729	265	0.58
2010	1,140	2,572	78,085	7,595	2,883	4,254	3,341	256	0.56
2011	1,152	3,321	114,197	11,971	4,508	10,867	1,104	266	0.91
2012	1,174	3,444	117,129	11,113	4,136	17,438	-6,325	283	1.57
2013	1,224	3,580	123,770	11,804	4,510	12,071	-266	296	1.02
2014	1,207	3,575	109,814	10,061	3,853	8,925	1,135	294	0.89

¹Data as of 4/20/2015
Source: RMA Summary of Business

Table 5. Insured Acres by Major Crop¹

CROP	2012	2013	2014	CHANGE	% CHANGE
Wheat	46,566	48,646	47,918	-728	-1.5
Corn	81,449	84,879	78,973	-5,906	-7.0
Sorghum	4,682	5,805	5,300	-505	-8.7
Soybeans	65,193	67,494	73,809	6,315	9.4
Upland Cotton	11,430	9,909	10,359	450	4.5
Pasture, Range and Forage	48,259	54,278	52,778	-1,500	-2.8
Total of above crops	257,579	271,011	269,137	-1,874	-0.7
Total of all crops	282,678	296,088	294,590	-1,498	0.5

¹Data as of 4/20/2015
Source: RMA Summary of Business

pasture, range and forage was also notable, as that plan of insurance has attracted increasing participation in recent years. Perhaps the better weather in 2013 and lower prices and farm incomes in 2013 and 2014 motivated the slight reduction in insured acres. Even though lower prices and price volatilities reduced premiums, the fact that the lower crop prices reduced U.S. farm cash receipts by 16 percent between 2012 and 2014, may have caused some producers to find further ways to trim their production expenses.

Iowa was the number one state in indemnities in 2014, which were nearly double their total premiums (Table 6). Minnesota was number two, and its claims were more than

double premiums. Losses in these two states were mainly due to excess moisture and declines in prices. Texas, Kansas and North Dakota rounded out the top five states in total claims. Among crops, corn led with \$3.8 billion in indemnities, exceeding its level of premiums. Wheat, soybeans, cotton and PRF followed corn in total claims. Rice, ELS cotton and peanuts made it into the top 10 in claims, which is unusual. Rice was stressed in Mississippi in 2014 but losses in California accounted for the bulk of the problems. ELS cotton losses were also mainly in California and the 2014 dry weather in Georgia accounted for the large peanut claims.

The map in Figure 14 shows the state loss

ratios as of April 13, identified by their level and similarity. Nevada had the highest loss ratio but premium was only \$8 million. Minnesota, which was second in claims had the second highest loss ratio at 2.11, with the top five rounded out by Oklahoma, 1.90; Iowa, 1.86; and New Mexico, 1.08. The data show nine states with loss ratios over 1.0. Total indemnities in these nine states were \$4.3 billion, 49 percent of the total U.S. payout. The five lowest loss ratio states were, in order, Delaware, 0.11; Maine, 0.21; Maryland, 0.21; South Dakota, 0.25; and Missouri, 0.27. By crop, the highest loss ratios were for ELS cotton, 2.66; olives, 2.47; macadamia nuts, 2.40; burley tobacco, 2.08, followed by pistachios and cul-

Figure 15. California Drought Crop Insurance Experience

State Insured Crops & Area, 2014

Crops	Acres, Mil.	Premium Mil. \$	Loss Ratio
Fruits/Trees/Nuts	2.00	276	0.78
Vegetables	0.36	19	0.59
Field Crops/Other	4.39	94	2.01
Total	6.75	389	1.06

Data as of 4/20/2015

Figure 14. 2014 MPCI Premium and Loss Ratios All Plans Combined, as of April 13, 2015

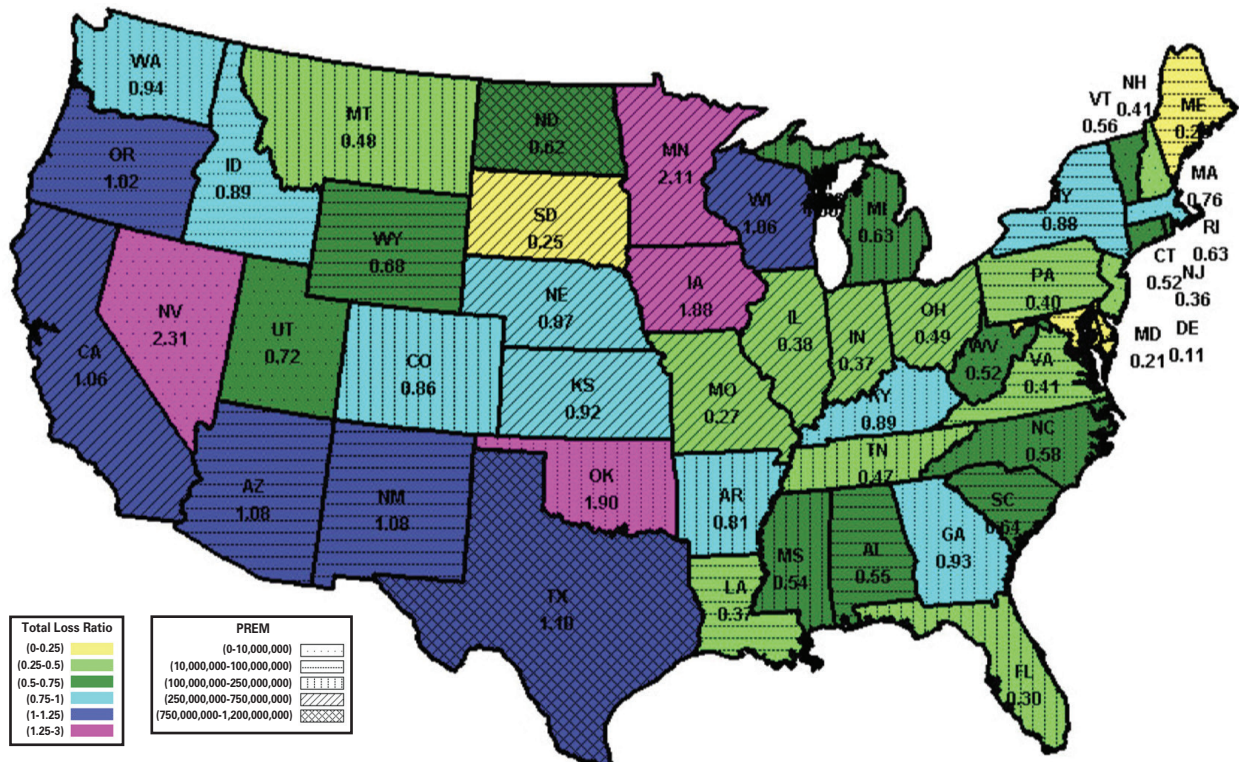


Table 6. Top 10: Premiums & Indemnities by State and Crop, 2014¹

STATE	PREMIUMS	STATE	INDEMNITIES	CROP	PREMIUMS	CROP	INDEMNITIES
	MIL.\$		MIL.\$		MIL.\$		MIL.\$
TX	979.8	IA	1,390.5	Corn	3,647.4	Corn	3,783.1
ND	913.9	MN	1,386.6	Soybean	2,259.2	Wheat	1,627.8
LA	738.16	TX	1,076.3	Wheat	1,452.0	Soybean	1,211.5
SD	717.20	KS	613.4	Cotton	722.7	Cotton	719.0
IL	679.0	ND	569.0	Grain Sorg.	210.1	PRF	178.7
KS	668.6	NE	502.5	PRF	199.2	Grain Sorg.	126.5
MN	656.8	CA	414.1	Apples	101.4	Rice	138.8
NE	576.2	OK	379.5	Potatoes	98.2	ELS	89.1
CA	389.4	WI	268.1	Rice	93.6	Peanuts	73.6
MO	380.0	IL	261.3	Dry Beans	84.9	Flue-Cured Tobacco	71.1
Total	6,699.1	Total	6,861.3	Total	8,868.7	Total	8,019.2
U.S. Share	67%	U.S. Share	94%	U.S. Share	88%	U.S. Share	90%

¹Data as of 4/20/2015
Source: RMA Summary of Business

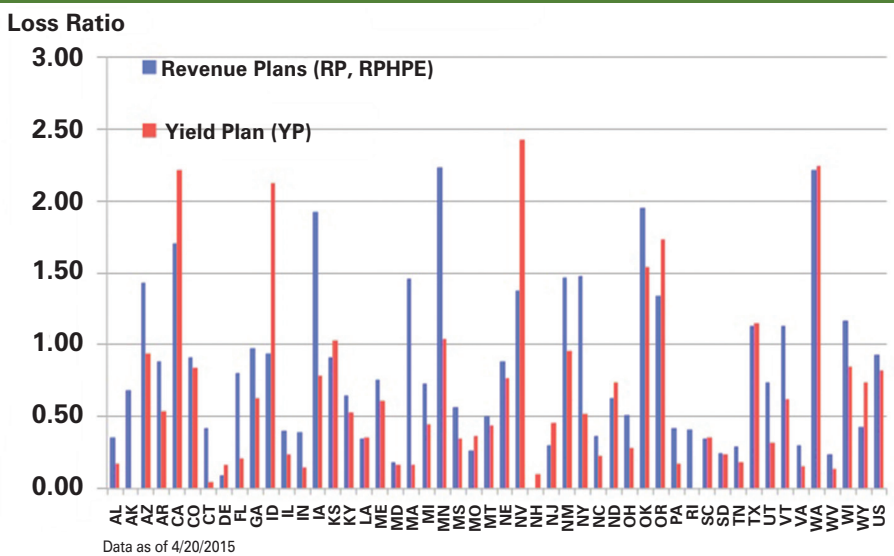
tivated wild rice each at 1.75. The macadamia nut losses were in Hawaii and the remaining four crop losses were in California.

California's crop insurance (Figure 15) experience during the drought in 2014 reflects both how producers reallocated water to higher value crops and the susceptibility of crops to reductions in irrigation water allocations. Areas where field crops are prevalent, such as the San Joaquin Valley, use irrigation project water and ground water. With drastic cutbacks in water project allocations, water has been shifted to higher value crops, reducing acreage of, and raising claims for, field crops. While the loss ratio for crops like cotton, wheat, rice, hay, pasture and forage was over 2.0, the loss ratios on vegetables, fruits, fruit trees and nuts was well below 1.0. Many

of these fruits and vegetables are grown in regions that rely on surface water and pumped ground water rather than allocations from irrigation projects.

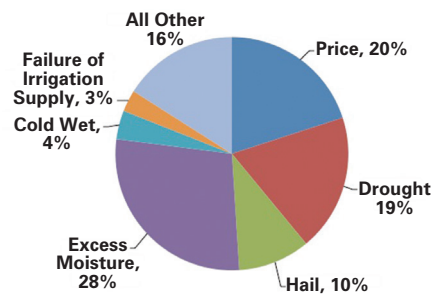
Figure 16 shows loss ratios by state for the revenue plans, RP and RPHPE, and the yield plan, YP. In most states the loss ratios are comparable, although there are a few notable standouts. In the larger premium states of California, Illinois and North Carolina, YP loss ratios exceeded those for the revenue plans by quite a bit. Alternatively, the revenue plan loss ratio in the larger premium state of Minnesota was far above that for YP. Overall, the loss ratios were 0.93 for RP, 1.37 for RPHPE and 0.82 for YP. The declines in prices with generally good yields resulted in a loss ratio of 0.41 for the Area Revenue Protection (ARP)

Figure 16. State Loss Ratio for 2014



Data as of 4/20/2015

Figure 17. 2014 Causes of Loss



plan, while the Area Revenue Protection with Harvest Price Exclusion (ARP-HPE) experienced a loss ratio of 0.97 and the Area Yield Protection (AYP) plan had a loss ratio of zero. The highest loss ratios among plans were 1.41 for the Aquaculture Dollar Amount of Insurance, 1.37 for RP-HPE and 1.36 for the Actual Revenue History Plan of Insurance.

Figure 17 shows the major causes of crop losses for 2014. As is typical, moisture, either too much and/or the lack thereof, accounted for 54 percent of all losses. Excess moisture was the primary cause, being responsible for 27.7 percent of all losses, whereas drought was responsible for only 19 percent of all losses nationally. Price caused one-fifth of all claims reflecting not only the large drop in grain prices in 2014 but also the growth of revenue products and their increased importance in helping to protect risk. Hail, which is discussed in greater detail in a subsequent portion of this article was the cause of 10 percent of losses.

[The primary information source for this section was the RMA Summary of Business.]

Program and Policy Developments

Implementation of the 2014 Farm Bill led the list of program and policy developments in 2014. The new Farm Bill was signed into law on February 7, 2014 and features many new products and changes for crop insurance. The new law met its budget reduction requirements which resulted in reducing projected outlays on the farm safety net (farm programs plus crop insurance). Projected spending was reallocated away from traditional farm programs, which were cut by \$14.3 billion over 10 years mainly due to elimination of Direct Payments, and toward crop insurance. Projected

funding for crop insurance was increased by \$5.7 billion, primarily due to the addition of two new supplemental revenue programs, the Stacked Income Protection Plan, or STAX, and the Supplemental Coverage Option, or SCO. The new Farm Bill is another major evolutionary step toward cementing crop insurance as the key mechanism for public support of U.S. production agriculture. (For a discussion of 2014 Farm Bill implementation, see: "Finally a Farm Bill . . . So What's Next," *Crop Insurance TODAY*, September 2014, pp. 26-30.)

STAX and SCO enable a producer to buy two policies on the same insurance unit, with the idea being to provide greater protection for smaller losses that are often not covered due to the policy's deductible. STAX is an area plan for upland cotton acreage only that begins in selected counties in the 2015 crop year and covers revenue losses of not less than 10 percent and not more than 30 percent. STAX may be purchased alone or on top of a traditional MPCPI plan. Because cotton was excluded from farm programs, except for the marketing assistance loan program, STAX may be a popular option for many producers.

SCO is an area plan for other crop producers. SCO is being offered for sale in selected counties in the 2015 crop year for corn, cotton, grain sorghum, rice, soybeans, spring barley, spring wheat, and winter wheat. SCO may be purchased on top of an underlying individual policy allowing indemnities to be equal to part of the deductible of the underlying policy. SCO indemnities are triggered if losses in the area exceed 14 percent of expected revenue or yield, with SCO coverage not to exceed the difference between 86 percent and the coverage level selected by the producer for the underlying policy. SCO coverage is not available for acreage covered by STAX or for crops enrolled in the Agriculture Risk Coverage program (ARC), a supplemental revenue farm program also created by the Farm Bill. Thus, the farmer's choice of enrolling in ARC affects the demand for SCO. As of this writing the only data available for SCO sales is for 2015 winter wheat and SCO sales were limited, accounting for five percent of the winter wheat policies sold, one percent of the insured liability and three percent of the premium.

RMA's implementation of these provisions was admirable, as communication with in-

dustry and producer organizations was ample and timely. RMA provided detailed provisions on SCO and STAX by July and August 2014, respectively, which were implemented under existing regulatory authority. RMA had earlier issued interim regulations for most of the other provisions by July 1, 2014.

The Farm Bill also authorized many new studies; provisions; crop insurance products, including for specific crops, such as peanut revenue; and concepts, such as margin insurance and whole farm insurance. Readers are referred to the 2014 Farm Bill page on RMA's website as well as to an excellent summary of the provisions prepared by the Congressional Research Service (CRS) (see Shields, D., "Crop Insurance Provisions in the 2014 Farm Bill (P.L. 113-79)", CRS, 7-5700, April 22, 2014 and available at <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43494.pdf>).

An emerging Farm Bill issue in late 2014 was the implementation of the provision that allows producers to exclude any year from their insurable production (APH), if the county's yield per planted acre for the crop in that year is at least 50 percent below the previous consecutive 10-year average of the yield per planted acre for the crop in the county. This provision, known as APH Exclusion, also applies to contiguous counties and allows for the separation of irrigated and non-irrigated acres. The motivation for the provision was to avoid penalizing producers whose APH is reduced by an atypical low-yield year, thus providing them with an APH that may more accurately reflect their expected output. However, there already exist limitations on APH annual reductions, including a maximum annual reduction (cup), a minimum level (floor) and a substitute for any low yield (plug).

The concerns with APH exclusion are that it may result in excessively high levels of coverage in high risk areas triggering larger and more frequent indemnities. Also, the rating method may not accurately reflect the risk, since there is no historical data on which to base rates for very high levels of coverage. These factors mean an increase in risk of loss for the program. Another issue is that the increase in coverage for high-risk producers and areas may result in smaller sales of STAX and SCO, as producers opt to cover more of their deductible by using higher individual

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coverage with APH Exclusion rather than using STAX or SCO. NCIS provided RMA with a review of its concerns about the rating and program impacts of APH Exclusion in early 2015. RMA was conducting an ongoing peer review of the rating method in early 2015.

Another rating issue that emerged in 2014 was the use of the volatility factor to establish the rate for the price risk covered by revenue plans of insurance. RMA released a contracted actuarial review by Sumaria Systems, dated August 8, 2014, of the use of the volatility factor. The factor is an estimate of the variability of futures prices for the upcoming growing season and is estimated using options premiums of put and call options and the Black-Scholes Model (BSM). The review recommended continuation of the current procedure with a minor change that had earlier been recommended by NCIS. NCIS submitted a comment on the review, concluding that the current method to estimate the volatility factor produces a factor that has done a poor job of predicting actual changes in prices over time and appears to understate the risk of large price changes. As described earlier, the volatility factor declined for all major crops for 2014 which, combined with price declines, sharply reduced premium. RMA continues to assess the role of volatility in premium rating.

A continuing issue has been the procedures for acreage that is prevented from being planted. A USDA Office of Inspector General report in 2013 called for changes in the procedures. Consequently, RMA contracted for an independent evaluation during 2014 of the prevented planting policy procedures and payment factors. The contractor's report reviewed production costs for crops eligible for prevented planting coverage and compared costs with coverage levels. The report recommended certain changes to the prevented planting coverage levels. RMA decided that no changes would be implemented for the 2015 crop year and sought public comments on the report's results by the end of the first quarter of 2015.

The effort to improve crop insurance coverage for specialty crops continued in 2014. The availability of the Whole-Farm Revenue Protection plan of insurance (WFRP) was announced in November 2014. WFRP combines the Adjusted Gross Revenue (AGR) and Adjusted Gross Revenue-Lite (AGR-Lite) pi-

Table 7. U.S. Crop-Hail Results, All Perils

CROP YEAR	LIABILITY	PREMIUM	LOSSES	LOSS RATIO
	<i>Mil. \$</i>	<i>Mil. \$</i>	<i>Mil. \$</i>	
2005	15,017	424.8	186.8	0.44
2006	15,545	405.2	203.2	0.50
2007	19,392	489.6	235.2	0.48
2008	27,540	669.4	555.1	0.83
2009	25,493	621.3	656.9	0.91
2010	27,170	682.2	460.4	0.67
2011	36,691	843.2	974.5	1.16
2012	39,407	955.8	701.3	0.74
2013	39,773	953.2	646.2	0.68
2014	39,652	991.9	1,182.9	1.19

Data for 2014 are as of March 18, 2015
Source: Adjusted Verified Totals for NCIS member companies combined with the data from non-members.

lot programs and provides additional features including a range of coverage levels, coverage for replanting, coverage for expanding operations, a higher maximum amount of coverage than earlier whole farm plans, and coverage for market readiness costs. The plan will cover up to \$8.5 million in insured revenue, including farms with specialty or organic commodities (both crops and livestock), or those marketing to local, regional, farm-identity preserved, specialty, or direct markets. Also, beginning with the 2014 crop year, a new contract price option was made available for producers who grow 11 organic crops under guaranteed contracts, allowing them to use prices established in those contracts as their "price elections" in place of the RMA-issued prices. RMA is evaluating making this option available for conventional and transitional crops that are grown under contract in future crop years, as appropriate.

In addition to the introduction of the new whole farm plan, which although mandated by the Farm Bill had already been under development by RMA, other crop insurance product changes during 2014 included the introduction of the Peanut Revenue plan through the Federal Crop Insurance Corporation's (FCIC) 508(h) process (a product also mandated by the Farm Bill). The FCIC Board also terminated the Group Revenue Plan for sugarcane and cultivated clam coverage in Florida (although the coverage was made permanent in other states). In addition, the Livestock Risk Protection plan of lamb was amended to use a new pricing model.

RMA also implemented a new process in 2014 for estimating the improper payment rate in the crop insurance program, as re-

quired by the Improper Payments Elimination and Recovery Act. The Office of Management and Budget determined the estimation process that had been used was not producing statistically valid estimates, and working with the industry, RMA developed a new estimation procedure that was being put into effect in early 2015.

[The information source for this section was the RMA Summary of Business, various RMA press releases, Managers Bulletins, Informational Memorandums, minutes of FCIC Board meetings, CBO 2014 Farm Bill cost estimates and NCIS analyses.]

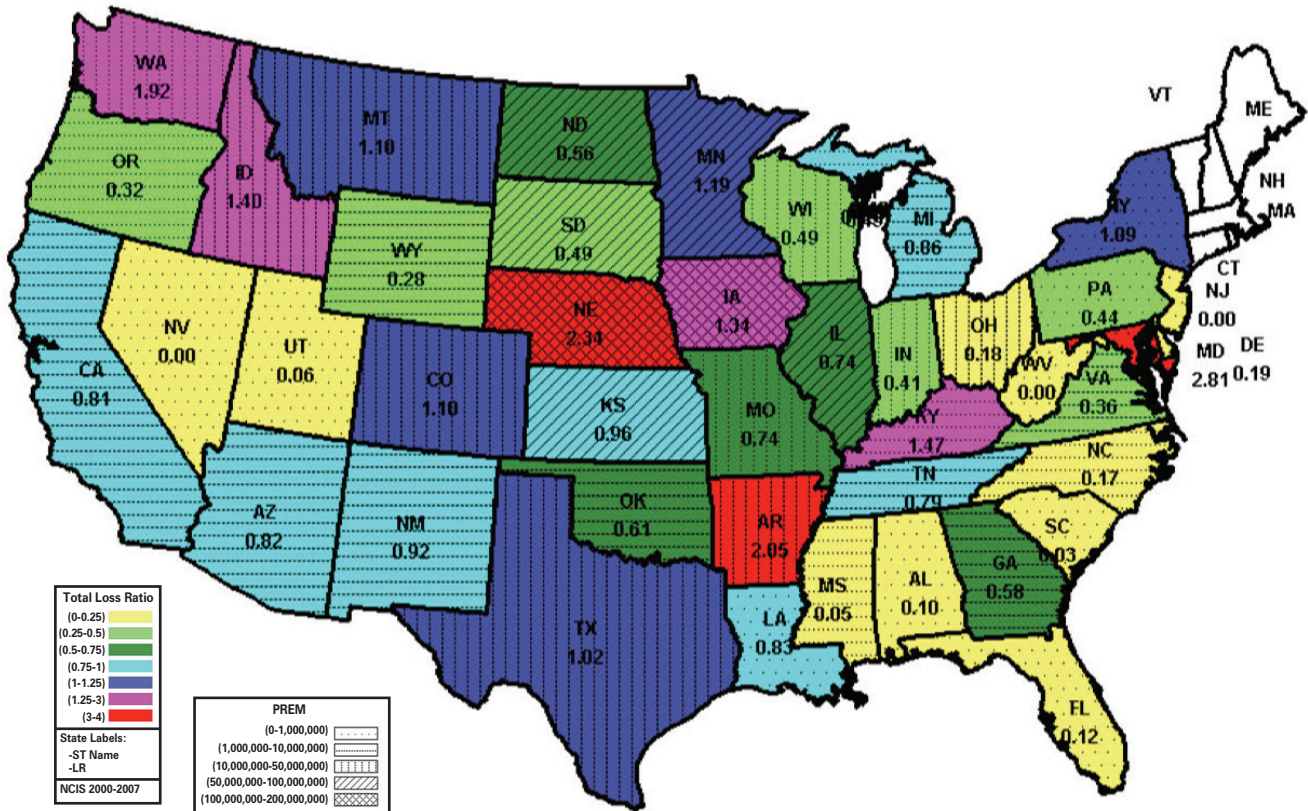
U.S. Crop-Hail Experience

For the United States, crop-hail insurance generally refers to private policies in which direct damage from hail is the primary cause of loss. In addition to hail damage, many policy forms carry endorsements for additional perils. For the most part, the added perils include wind and fire, although there are exceptions. For the purpose of this article, results will be reported for all losses on hail policies, including the experience of NCIS non-member companies not included in NCIS' *Annual Statistical Summary* reports.

Premium for 2014 as currently reported to NCIS was \$991.9 million, up from \$953.2 million in 2013, the largest in the history of the program. The premium amount in crop-hail has been steadily increasing since 2009. Crop hail provided \$39.7 billion in privately insured crop-hail insurance protection to U.S. farmers in 2014. This coverage proved valuable in 2014 as it paid out \$1.2 billion in losses (Table 7).

The program had the largest hail losses in

Figure 18. 2014 Crop Hail Premium and Loss Ratios
All Crops, Perils, Plans Combined, as of March 18, 2015



its history in 2014 (influenced by extensive hail as well as losses in production plans), and 2014 became only the third year since 1948 in which the countrywide loss ratio, defined as paid losses divided by premium written, exceeded 1.00. In 2012 and 2013, the program loss ratio reverted back to below 1.00 and is estimated at 0.74 and 0.68, respectively. The loss ratio for production plans was 0.88 in 2012, 0.85 in 2013 and 1.78 in 2014, with levels exceeding each year's overall loss ratio.

Large storms contributed importantly to losses for the year. In terms of statewide losses from storms on a particular day (for hail and wind perils), Nebraska took the top spot with \$144.9 million on June 3. That was followed by Nebraska with \$63.3 million on June 14 and Iowa with \$43.1 million losses on June 30. The losses from the top ten storm days at a state level amounted to \$420.2 million, which is much more severe than those in the previous six years (2013 at \$158.0 million, 2012 at \$120.2 million, 2011 at \$259.9 million, 2010 at \$78.2 million, 2009 at \$174.2 million and 2008 at \$89.2 million). Regarding county level

losses in 2014 from major storm events on a particular day (also for hail and wind perils), Holt County in Nebraska took the top spot, which occurred on June 3, resulting in \$20.8 million paid out to farmers. The second highest one-day storm in 2014 occurred on July 23 in Whitman County, Washington, resulting in \$15.4 million paid out to farmers. The third highest one-day storm in 2014 occurred on June 3 in Cuming County, Nebraska, resulting in \$11.7 million paid out to farmers. The next two largest county losses occurred

in Minnesota and Iowa. The total of the top five county losses amounted to \$70.8 million, which was above those in 2013 by 83 percent, in 2012 by 189 percent, in 2011 by 35 percent and in 2010 by 252 percent. The next five largest county losses all occurred in Nebraska on either June 3 or June 14. Of the top 50 most damaging storms at the county level, 36 occurred in the month of June, eight in July, two in August, two in September, one in May and one in October.

Crop-hail loss ratios by state are shown in

Table 8. Canadian Crop-Hail Results, All Perils

CROP YEAR	PREMIUM	LOSSES	NUMBER OF CLAIMS	LOSS RATIO ¹
	Mil. C\$	Mil. C\$		
2008	289	341	29,000	1.18
2009	262	76	4,075	0.29
2010 ²	263	155	16,000	0.59
2011 ²	269	164	15,000	0.61
2012	341	280	21,600	0.82
2013	344	172	13,321	0.50
2014	317	265	13,741	0.84

¹Loss ratios do not reflect loss adjustment costs.

²Number of claims exceeded value indicated.

Source: *The Hail Report*, a publication sponsored by The Canadian Hail Association, which represents companies that sell crop-hail insurance in Western Canada including subsequent updates.

Figure 18. Colors identify states with similar loss ratios, and shading is used to identify states with similar premium volume. Crop-hail insurance was written in 42 states in 2014. Of these states, 12 had a loss ratio in excess of 1.00; they are shown in dark blue, light purple and red in the map. Maryland had the highest loss ratio of 2.81, albeit with a small premium of under \$80,000. Nebraska, with premium of \$180.9 million, had the second highest loss ratio of 2.34. Arkansas, with \$14.4 million in premium, had a loss ratio of 2.05, while Washington, with \$16.5 million in premium, had a loss ratio of 1.92. Of the 42 states, 18 had loss ratios of 0.50 or less, shown in yellow and light green on the map, including South Dakota with \$61 million in premium, Wisconsin with \$18.4 million in premium, Indiana with \$25.8 million in premium and Ohio with \$11.7 million in premium.

[Information sources for this section include: NCIS' Insured Crop Summary and claim files.]

Canadian Crop-Hail Experience

Crop-hail business in Canada is primarily written in the prairie provinces of Alberta, Manitoba and Saskatchewan. Denoting Canadian dollars with C\$, Table 8 presents the grand totals. Overall, the 2014 loss experience was significantly worse than 2013. The 2014 loss ratio was 0.84, as compared to the 2013 loss ratio of 0.50. Not only were losses higher in 2014, but the premiums were lower. In 2014, \$265 million were paid out to farmers compared to \$172 million in 2013. Crop hail premiums in 2014 were \$317 million compared to \$344 million in 2013. The number of claims increased from 13,221 in 2013 to 13,741 in 2014.

Payouts per acre and per acre insurance limits have increased steadily, keeping pace with the growing size of grain farms on the Prairies. The amount of loss per claim is impacted by the severity and timing of storms. In 2014, there was an increase in the number and violence of storms in many areas, with several areas getting damaging hail more than once during the growing season. The average claim in 2014 was \$19,283, up from \$13,061 in 2013.

Saskatchewan had \$182 million in premi-

um in 2014, 57 percent of the total; Alberta had \$93 million, 29 percent; and Manitoba had \$42 million, 13 percent. Compared with premiums in 2013, Alberta saw an increase of 9 percent; Manitoba saw a decrease of 14 percent and Saskatchewan saw a decrease of 13 percent.

Total payouts in Alberta were reported at \$113 million, well ahead of the \$61 million paid out in 2013. Premiums also increased slightly to \$93 million, up from \$85 million a year ago, while number of policies fell from 8,923 to 8,516. The loss ratio for Alberta was 121.6 per cent, up from 71.9 per cent reported in 2013. A number of severe weather events in late July and well into August caused serious damage.

The total number of claims in Manitoba was down significantly over 2013 and the loss ratio percentage was the lowest since 2011. Total payouts were also much lower in 2014 than in 2013. The three worst storms in terms of damage sustained were on July 5, August 17 and September 2. On a reported 6,984 policies written, premiums totaled just under \$42 million. Payouts of just under \$18 million over 1,644 claims resulted in a loss ratio of 42.1 per cent, down significantly from the 61.9 per cent loss ratio recorded for Manitoba in 2013.

In Saskatchewan payouts of \$134 million over 8,411 claims resulted in a 74 per cent loss ratio, up from 38.6 per cent in 2013. Number of policies and premium dropped a bit from 2013 but remain within the five-year average. The loss ratio, however, is higher than the five-year and 10-year average, attributed to the severity of the storms this year. A much higher than normal percentage of crop was written off at a 100 per cent loss.

Early July began fairly quietly but saw many violent storms later in the month and well into August, when crops were very vulnerable. The majority of the hail fell in north-west and southwest regions of the province. The three storms of greatest significance were on July 17, July 24 and August 8. The July storms had the highest damage on a per claim basis while the largest number of claims was filed as a result of the August 8 storm.

Overall, this has been a particularly challenging year for many areas fighting excess moisture and flood conditions. Late crops and weather-related delays have resulted in a very

slow harvest across much of Western Canada, making things difficult for both farmers and insurers.

[The information source for this section was The Hail Report, a publication sponsored by the Canadian Crop Hail Association, including subsequent updates. The Hail Report is produced every two weeks during the hail season.]

Conclusion

Again in 2014, crop insurance helped farmers deal with the year's weather and market risks. Crop insurance was singled out by legislators during the development of the new Farm Bill as the primary program supporting production agriculture and was heralded as indispensable for successful farming today. The implementation of the provisions of the Farm Bill have been an important part of the work RMA and the AIP's were engaged in during the latter part of 2014.

The public-private partnership worked as envisioned in 2014. Farmers shared in the cost of the program by paying premiums of \$3.9 billion and incurring losses through deductibles before any claims were paid. Insurance companies effectively sold and serviced over 1.2 million policies, accurately determined losses and paid claims on over 441,000 policies, although experiencing another year of reduced returns. The Federal government provided premium support to ensure widespread coverage sufficient to avoid Congress needing to enact ad hoc disaster assistance.

Looking to the future, the American public is assured that crop insurance will be in place to provide financial stability for the many small, family farms that comprise the core of U.S. production agriculture. Crop insurance will ensure that when the repeated disasters of recent years strike again, as they most assuredly will, U.S. farmers will be able to bounce back to produce again at high levels the food, feed, fiber and energy crops on which the U.S. and world population have come to expect and depend.