The 2016 year saw a return to generally favorable growing conditions and record yields for corn and soybeans, accompanied by fewer losses and more positive returns. Only seven states had loss ratios greater than 1.0. Total indemnities for these states added up to $556 million, 16 percent of the total payout. This reflects a welcomed change from recent years where drought and other extreme weather events drove up indemnities to historic highs. The year-over-year variability of the returns is a reminder of the risk assumed by crop insurance providers in delivering this essential safety net for American farmers.

While the winter began with mostly wet and warm conditions, there were some extreme cold weather events as well. A late December blizzard on the southern High Plains was responsible for a catastrophic loss of livestock, and a late January blizzard raged across the Mid-Atlantic States with snowfall reaching the interior of the Southeast. A February warming trend was followed by a warm, wet spring covering much of the country, but there were some exceptions, with cold weather resulting in some losses among fruit and ornamental crop production in the Northeastern and Mid-Atlantic States. Other exceptions included dry conditions that occurred in the Northeast, the Pacific Northwest and the interior Southeast. The Midwest was free of drought at the end of May, but also saw a late-spring drying trend in many areas. On the West Coast, the northern part of California experienced heavy precipitation during the first half of March, further easing long-term drought. Conversely, the southern part of the state remained mostly dry.

Favorable conditions signaled the start of early-season corn planting. By April 17, 13 percent of the nation’s corn crop was planted, six percent ahead of 2015 and five percent above the five-year average. Cotton crop plantings got off to a slow start, soybean plantings progressed slower than 2015, and 2016 spring wheat plantings started out three percent ahead of the five-year average.

The USDA Crop Production 2016 Summary reported 319.3 million acres planted to principal crops, up slightly from 2015. Lower input prices provided support for corn relative to other crops. Increased corn acreage and lower price expectations helped keep soybean acres in check, nevertheless, 2016 remains the highest number of soybean acres planted in the United States. Plantings of other oilseeds were mostly down from last year with decreases in area planted to canola, sunflower, flaxseed, and safflower.

Other crops experienced an increase in planted acreage. Peanuts acres continued to trend upward, as did the area planted to rice up 22 percent from 2015. The area planted to cotton rebounded to 10.1 million acres.

During the summer most of the mid-section of the country experienced warm, wet conditions through August. In the eastern and western parts of the United States, drier than normal and hot temperatures prevailed. In the Midwest, favorable summer weather characterized by showers and lack of extreme heat provided excellent growing conditions for corn and soybeans.

In the South, excessive rainfall created flooding and crop damage in parts of Louisiana and quality issues for some crops (sorghum, rice, and soybeans) in other Southern states. At the same time the worst drought in over ten years, along with above average temperatures, plagued parts of the Northeast and the interior Southeast states. In the West, while the drought faced by Califor-
nia continued, the rest of the Western coastal states had begun to recover, as did the Southwest.

The United States experienced a record warm fall season, however, the fall was one of extreme contrast in terms of precipitation. Drought conditions worsened in much of the Southeast. Continued hot and dry conditions resulted in late November wildfires, meanwhile Hurricane Matthew and tropical rainfall plagued the Atlantic region and resulted in record flooding in North Carolina.

Harvest was completed in the Midwest with intermittent rain delays. The Northeast received moderate precipitation providing some relief from the region’s severe drought conditions. In the Pacific Northwest and northern California, rains in October provided much-needed moisture to the area. Unfortunately, Southern California continued to struggle with a five-year drought, with little relief from occasional fall rains.

The fall harvest progressed nicely with 98 percent of the spring wheat out of the fields by September 18. By October 2, farmers had harvested 26 percent of the soybean crop and 24 percent of the corn crop. By the end of October, 75 percent of the corn crop had been harvested and 87 percent of the soybean crop. By the end of November, the harvest was winding down as the December winter weather approached. Overall 97 percent of the nation’s soybean crop had been harvested by November 13; 97 percent of the corn crop by November 20; and 77 percent of the cotton crop by November 27.

An increase in acres planted to corn, combined with a record yield of 174.6 bushels per acre, resulted in U.S. corn production increasing by 11.4 percent in 2016. While corn acreage increased, the area planted to other feed grains such as barley and grain sorghum declined resulting in a corresponding decrease in production of those crops.

Soybeans had another record year in 2016 with production reaching 4.307 billion bushels, 9.7 percent greater than last year. The record crop was the result of a combination of a record level of planted acres, 83.4 million, and a record yield of 52 bushels per acre. Other oil seed acreages were down, but yields were up resulting in an overall production increase. Spring wheat production declined, upland cotton production increased substantially from 2015, the production of all dry hay decreased, rice production increased, and the production of dry edible beans declined.

U.S. production of principal fresh vegetables was reported to be about the same as 2015 at 400 million cwt. for 2016. The value of the 24 principle fresh vegetables reported by NASS in an annual summary report was estimated from individual statistics to be down seven percent. And continuing a downward trend, utilized citrus production for the 2015-16 season was down six percent from the previous year.

The increase in production of major crops continued to drive high carryover stocks and lower prices. With the increase in stocks, 2016
corn, soybeans, wheat, and cotton base prices dropped below the base prices for any year from 2010 through 2015. Base prices in 2017 continued to decline for winter wheat and rice, but have increased for corn, soybeans, spring wheat, and cotton. The drop in base prices, combined with lower 2016 volatility factors for all major crops (which are used to set premium rates), contributed to a five percent drop in total program premiums.

Loss ratios by state were generally favorable nationwide, with only seven states having loss ratios greater than 1.0. And these states were mostly low volume states in the Northeast. Conversely, the states with the lowest loss ratios tended to be high volume states in the Midwest.

Corn and soybeans continued to be the top premium crops, accounting for two-thirds of U.S. premiums in 2015, with wheat coming in third. Texas had the highest amount of indemnities among all states, and North Dakota and California were second and third in claims. Excess moisture was the most significant cause of loss in all three states. Other major contributors were hail and heat in Texas, hail in North Dakota, and failure of irrigation supply in California.

U.S. Weather and Production of Major Crops

**Winter 2015/16.** The widely discussed El Niño did not disappoint during the winter of 2015/16. The Lower 48 States experienced the wettest winter (Figure 1) since the record-setting El Niño of 1997-98. In addition, the warm atmosphere in the central and eastern equatorial Pacific Ocean contributed to the warmest December-February period on record for the United States. However, El Niño’s impacts did not correspond to previous experiences. There were wetter conditions in the Pacific Northwest and drier weather in the Southwest, wet conditions in the Midwest, and the normally cooler conditions in the South during an El Niño occurred only in periods of January and February.

The month of December (Figure 1) reflects the unusual winter conditions, ranking first all-time for both United States warmth and wetness. The wet conditions in late December resulted in record flooding in parts of the middle Mississippi Valley. To put the wet winter in perspective, the United States Drought Monitor recorded drought covering 34.8 percent of the contiguous States on October 20, 2015, but declined to 14.3 percent by March 1, 2016.

While wet and warm conditions dominated the story of the winter, there were some extreme cold weather events as well. A late December blizzard on the southern High Plains was responsible for a catastrophic loss of livestock. In addition, a late January blizzard raged across the Mid-Atlantic States with snow fall reaching the interior of the Southeast. A February warming trend provided a winding down of the stormy winter season.

**Spring 2016.** During much of the spring, warm, wet conditions covered much of the country (Figure 2). The entire contiguous United States experienced temperatures that fell inside the warmest one-quarter of the historical temperature distribution. As always there were some exceptions, with cold weather in some areas. Notably, despite a warm March, freezes in the beginning of April resulted in some losses among fruit and ornamental crop production in the Northeast and Mid-Atlantic States.

Other exceptions included dry conditions that occurred in the Northeast, where a lack of moisture and the April freezes resulted in a late spring greening. An area of short-term dryness also developed in several other areas, including the Pacific Northwest and the interior Southeast. The Midwest was free of drought at the end of May, according to the U.S. Drought Monitor, but also saw a late-spring drying trend in many areas.

On the West Coast, the northern part of California experienced heavy precipitation during the first half of March, further easing long-term drought. Conversely, the southern part of the state remained mostly dry, although there was enough moisture to signal the end of a fifth consecutive year (2011-12 to 2015-16) of drought. While some areas of the Southwest remained in long-term drought, overall, by mid-March, drought conditions in the lower 48 states reached 12.4 percent, a 5½-year minimum. Following dry period conditions early on, spring rains resulted in a 12.7 percent drought coverage by the end of May.

Crop Planting Progress and Crop Conditions

Much like 2015, April was warm across most of the country except for the Great Lakes Region and the Northeast where below normal temperatures prevailed. Widespread rains fell in the Central Plains and Southeast, there was above normal moisture in parts of the Great Plains and the Delta, and the Northwest and Northeast recorded drier than normal conditions. Favorable conditions signaled the start of early-season corn planting. As of April 17, 13 percent of the nation’s corn crop was planted, six percent ahead of last year and five percent above the five-year average (Figure 3). By May 1 farmers had planted 45 percent of the corn crop, equal to 2015’s early planting rate but well ahead of the five-year average at

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1Source: National Agricultural Statistics Service, ISSN: 1057-7823, Crop Production 2016 Summary, January 2017

www.nass.usda.gov/Publications/State_Crop_Progress_and_Condition/
www.nass.usda.gov/Publications/National_Crop_Progress/
www.nass.usda.gov/Quick_Stats/Lite/index.php

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15 percent. While the pace of planting slowed a bit, 94 percent of the crop had been planted by May 29, equal to 2015 but still two percent ahead of the five-year average.

Cotton crop plantings got off to a slow start and by April 3 farmers had only planted three percent of the crop, running two percent behind the five-year average but slightly beyond 2015. Plantings continued a similar pace continuing to lag the historical average by two percent, but slightly ahead of 2015, with 16 percent of the cotton crop in the ground by May 1. More rain fell in May in the southern Great Plains slowing cotton plantings and by May 29 farmers had only planted 59 percent of the nation’s cotton crop, a full 10 percent behind the five-year average, but still ahead of 2015 by two percent.

Soybean plantings progressed slower than 2015 by two percent, but were still ahead of the five-year average by two percent, with eight percent of the crop in the ground by May 1. The planting rate picked up nationwide during the month and by May 29 73 percent of the nation’s soybean crop was planted, running ahead of 2015 by five percent and seven percent ahead of the five-year average. However, wet conditions in some areas of Kansas at the end of May, slowed planting, much like 2015. Planting in Kansas was 27 percent behind the five-year average while Nebraska was nine percent behind.

The 2016 spring wheat crop plantings started out three percent ahead of the five-year average and only one percent behind last year, with 13 percent of the crop in the ground by April 10. By April 24 the pace of plantings was well ahead of the five-year average with 42 percent of the crop planted versus 28 percent the previous year. However, planting continued until May with plantings well ahead of the five-year average but still lagging 2015’s pace by eight percent. The trend continued in May with plantings well ahead of the five-year average but still lagging 2015’s pace. By May 22, 95 percent of the spring wheat crop had been planted, equal to 2015 and 18 percent ahead of the five-year average.

The USDA Crop Production 2016 Summary reported 319.3 million acres planted to principal crops, up slightly from 2015. Lower input prices provided support for corn relative to other crops and contributed to increased plantings of just over 94 million acres, up seven percent from 2015. This is the third most acres planted to corn since 2000, exceeded by 2012 and 2013 with 97.3 and 95.4 million acres respectively. Increased corn acreage and lower price expectations helped keep soybean acres in check. The area planted increased only slightly from 2015 to 83.4 million acres. Nevertheless, 2016 remains the highest number of soybean acres planted in the United States, continuing a trend of soybean planted acres above 80 million that began in 2014.

The plantings of other oilseeds were mostly down from last year with decreases in area planted to canola, sunflower, flaxseed, and safflower. Planted acres for peanuts continued to trend upward with a slight increase in from 2015.

Other crops experienced an increase in planted acreage. For example, the area planted to rice was up 22 percent from 2015 to 3.15 million acres. Rice acreage expansion was fueled mostly by increased long grain plantings in Arkansas. The area planted to cotton rebounded to 10.1 million acres from what was the lowest recorded since 1983, in 2015 at 8.6 million acres. Relative prices for other crops helped boost upland cotton planted acreage by 17 percent, mostly from increases in plantings in Texas. American acreage increased to 194,500, up 23 percent from 2015, driven by increased plantings in California.

**Summer 2016.** The El Niño experience began to give way to more average conditions during the summer and most of the mid-section of the country experienced warm, wet conditions through August. In the eastern and western parts of the United States, drier than normal and hot temperatures prevailed (Figure 4). In the Midwest, favorable summer weather characterized by showers and lack of extreme heat provided excellent growing conditions for corn and soybeans. However, some areas of the corn belt (South Dakota, Michigan, and Ohio) experienced drought conditions.

In the South, excessive rainfall created flooding and crop damage in parts of Louisiana and quality issues for some crops (sorghum, rice, and soybeans) in other Southern states. At the same time the worst drought in over ten years, along with above average temperatures, plagued parts of the Northeast and the interior Southeast states. In the West parts of the coastal states continued to experience drought issues while active rainfall patterns provide some relief in the Southwest (New Mexico and Arizona).

Figure 5 provides a snapshot of general weather conditions at the end of summer 2015 and 2016. The Drought Monitor indicates that, while the drought faced by California continued, the rest of the Western coastal states had begun to recover. In addition, the drought conditions in the interior Southerwestern and Northeastern states had clearly become more extreme.

Most of the corn and soybean farmers experienced a favorable growing season in 2016. These crops had high crop condition ratings of “good” to “excellent” throughout the summer and into the fall (Figure 6). The corn and soybean crop conditions were on par with those of the 2014 crop and consistently better than 2015. The cotton crop looked promising early on with
more than 50 percent of the crop with “good” to “excellent” condition ratings. But wet conditions in the later months created stress for some areas damaged by Hurricane Matthew. However, relative to cotton crops of the past four years, the 2016 crop was overall consistently better from July to September. Most of the spring wheat crop was ranked “good” to “excellent” throughout the growing season. Early season conditions were some of the best seen since 2010, while late season rankings in the high 60 percent range were consistent with the 10-year average.

Fall 2016. Once again, the United States experienced a record warm fall season. The near record El Niño continued to influence the weather as a weak La Niña developed. The 2016 temperatures exceeded those of 2015, which were the warmest on record for the fall dating back to 1963.

The fall was one of extreme contrast in terms of precipitation (Figure 7). Drought conditions worsened in much of the Southeast. Continued hot and dry conditions resulted in late November wildfires with the worst being in the Smoky Mountains. Meanwhile Hurricane Matthew and tropical rainfall plagued the Atlantic region and resulted in record flooding in North Carolina.

Harvest was completed in the Midwest with intermittent rain delays. The Northeast received moderate precipitation providing some relief from the region’s severe drought conditions. In the Pacific Northwest and northern California, rains in October provided much-needed moisture to the area. Unfortunately, Southern California continued to struggle with a five-year drought, with little relief from occasional fall rains.

The fall harvest progressed nicely with 98 percent of the spring wheat out of the fields by September 18. By October 2, farmers had harvested 26 percent of the soybean crop and 24 percent of the corn crop. By the end of October, 75 percent of the corn crop had been harvested and 87 percent of the soybean crop. By the end of November, the harvest was winding down as the December winter weather approached. Overall 97 percent of the nation’s soybean crop had been harvested by November 13; 97 percent of the corn crop by November 20; and 77 percent of the cotton crop by November 27.

The fall was also marked by the beginning of the next production season with the seeding of the 2017 winter wheat crop, which was 43 percent planted by October 2, two percent behind the five-year average. The winter wheat planting advanced in the warm October temperatures with 86 percent of the crop in the ground by October 30, slightly behind 2015 and two percent behind the five-year average. At the same time, 57 percent of the crop was reported to be in “good” to “excellent” condition. By November 20, 97 percent of the 2017 winter wheat crop had

Source: National Agricultural Statistics Service (NASS), Crop Progress Report https://quickstats.nass.usda.gov/results/REFT/7E00-23559-0863-AD35-CB5EA195ED7A

Figure 5 U.S. Drought Monitor, August 27, 2015/September 1, 2016

Figure 6 U.S. Crop Conditions, 2016: Share of Crop Rated Good or Excellent
been planted. The crop was progressing well with 58 percent rated “good” or “excellent” by November 27, three percent better than last year.

Planted winter wheat acreage was reported to be 36.8 million, down sharply from 2015. Planted acreage by class was reported to be 26.6 million acres of Hard Red Winter down nine percent from 2015; 6.02 million acres of Soft Red Winter, down more than 15 percent; and 4.2 million acres of White Winter, roughly the same as the previous year.

2016 Crop Production Summary

Table 1 indicates 2016 production totals for major crops based on the annual end-of-year estimates reported by USDA’s National Agricultural Statistics Service (NASS). An increase in acres planted to corn, combined with a record yield of 174.6 bushels per acre, resulted in U.S. corn production increasing by 11.4 percent in 2016. While corn acreage increased, the area planted to other feed grains declined resulting in a corresponding decrease in production. Barley producers seeded 3.05 million acres, down 16 percent from 2015. As a result, despite the highest yields ever recorded—77.9 bushels per acre—production declined by 8.72 percent. Grain sorghum acreage also decreased, down 21 percent from 2015 to 6.69 million acres. Combined with another record for the average yield—78 bushels per acre—production declined by almost 20 percent from 2015.

Table 1: Crop Yields and Production

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<tr>
<td>Corn</td>
<td>168.4</td>
<td>174.6</td>
<td>13,602</td>
<td>15,148</td>
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<td>Barley</td>
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<td>4,307</td>
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<tr>
<td>All Wheat</td>
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<td>52.6</td>
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<td>2,310</td>
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<td>Winter Wheat</td>
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<td>1,672</td>
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<td>Other Spring</td>
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<td>47.2</td>
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<td>534</td>
<td>-11.4</td>
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<tr>
<td>Lbs./Harv. Ac.</td>
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<td>855</td>
<td>12,888</td>
<td>16,959</td>
<td>31.6</td>
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<tr>
<td>Rice</td>
<td>7,472</td>
<td>7,237</td>
<td>193,148</td>
<td>224,145</td>
<td>16.0</td>
</tr>
</tbody>
</table>

Source: NASS Crop Production 2016 Summary, January 2017

Soybeans had another record year in 2016 with production reaching 4.307 billion bushels, 9.7 percent greater than last year. The record crop was the result of a combination of a record level of planted acres, 83.4 million, and a record yield of 52 bushels per acre. The area planted to canola was down four percent from 2015’s record level to 1.71 million acres. However, record yields of 1,824 pounds per acre, up 144 pounds from 2015, resulted in U.S. canola production increasing by seven percent from 2015 to a record 3.08 billion pounds. Oil-type sunflower production remained at about 2015’s level, totaling 2.37 billion pounds. While the planted area declined in 2016, down eight percent from last year, record yields of 1,731 pounds per acre prevailed. An increase in acreage planted to peanuts, up three percent from 2015 to 1.67 million acres, was not enough to overcome lower yields resulting in a decrease in production of five percent to 5.68 billion pounds.

Spring wheat production declined in 2016 to 534 million bushels, 11.4 percent below 2015’s total. Higher yields, up by one bushel per acre to a record 47.2 bushels per acre, did not offset the decrease in planted acreage, down 13 percent from 2015. Upland cotton production in 2016 increased substantially from 2015, up almost 32 percent to around 17 million bales. The increased production resulted from a combination of increased planted acres, 9.88 million, up 17 percent from 2015, along with increased yields of 855 pounds per acre, up 89 pounds from 2015. Reduced plantings and slightly lower yields resulted in a decrease in the production of all dry hay by four percent from last year to a total of 134 million tons for 2015.

Rice production increased in 2016, up 16 percent from 2015 to 224 million cwt. Increased production resulted from a 20 percent increase in planted area, to 3.15 million acres, as average yields fell below 2015 by 235 pounds per acre to 7,237. The production of dry edible beans declined by four percent in 2016 to 28.7 million cwt. resulting from a decrease in planted acres. Production of dry edible peas continued an upward trend, increasing to 27.7 million cwt. with increased planted acreage, up 21 percent, and increasing yields, up 89 pounds, from 2015.

U.S. production of principal fresh vegetables was reported to be about the same as 2015 at 400 million cwt. for 2016. The value of the 24 principle fresh vegetables previously reported by NASS in an annual summary report was estimated from individual statistics to be down seven percent to
$11.1 billion, from $11.9 billion in 2015. The value of six categories of fresh vegetables account for more than 62 percent to the total value (bell peppers, onions, carrots, broccoli, lettuce, and tomatoes). Production of eight selected vegetables utilized for processing was up slightly from 2015 at 20.3 million tons. The value of the eight selected vegetables for processing previously reported in the NASS summary was estimated from individual reports to be down about 18 percent from 2015 to $1.8 billion. Snap beans, sweet corn, and tomatoes account for about 82 percent of the total value of the selected processed vegetables.

Utilized citrus production for the 2015-16 season totaled 8.56 million tons, down six percent from the previous year. Continuing a downward trend from record-high production of 17.8 million tons in the 1997-98 season. Citrus for processing, grown mostly in Florida continued to face challenges from persistent pest and periodic weather related impacts. Florida’s orange production and grapefruit utilization was down 16 percent from 2014-15 to 8.6 million boxes and 10.8 million boxes respectively. Bearing citrus acreage in Florida declined 23,800 from last season to 435,300 acres. California orange production, primarily for the fresh market, increased 12 percent from 2014-15 to 54.2 million boxes. Greater emphasis on tangerines and mandarin production in California has resulted in a 16 percent increase in production, 21.7 million boxes in 2015-16. The value of fresh production and processed citrus was slightly lower than 2014-15 at $3.34 billion (packing house door equivalent).²


Commodity Market Developments

Global commodity markets are expected to see a four percent increase in ending stocks for the 2016/17 market year. Global grain and oilseed production increased by almost six percent following a decline in production in 2015. Total production remained above total consumption resulting in a continuation of a five-year trend of increases in the volume of ending stocks. Increasing global consumption helped keep the ratio of world use to ending stocks at 23 percent, the same as 2015 (Figure 8).

Global wheat production continued its four-year upward trend in 2016, up 15.8 million tons, just over two percent, to a record high 751.3 million tons. The increase results primarily from excellent weather in Australia, leading to the largest wheat crop in the country’s history, 33 million tons. Modest increases in wheat production were also recorded in China, the European Union, and Brazil. However, increases in consumption fail to keep...
pace with increased global production resulting in another increase in global ending wheat stocks.

Global coarse grain ending stocks are estimated to increase again in 2016 as overall global production exceeds consumption and a rebound in the South African crop. Reduced corn production in China contributed to a draw down in their large ending stocks that have weighed on the market. Increased soybean production help offset increased global oilseed use resulting in an expected increase in ending stocks of just over 10 percent.

Global cotton production is projected to increase this year to 105.7 million bales, up by nine percent from 2015, driven mostly by the increase in U.S. cotton production. In the top producing countries production is also expected to increase in 2016/17 despite a crop that is below the five-year average in India and a continued decline in cotton area in China. Global production of cotton continues to exceed consumption; however, reduction in stock holdings in China are expected to lead to a reduction in ending stocks to 90.5 million bales, the lowest in five years.

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 monthly since 2000. Global crop production increases, coupled with sluggish demand growth, have led to crop prices following a downward path. USDA NASS reports cattle and calf inventories continue to increase for the third consecutive year in 2016, up two percent by the start of the 2017 at 93.6 million head.

As the total herd size increased, total commercial cattle slaughter increased. Cattle prices continued to run well below those in the 2012 -2014 period. A run-up in live cattle futures prices during the final months of 2016 is not expected to continue into 2017. Prices for poultry and eggs also lagged previous years, despite increasing in the latter part of 2016. Dairy prices rebounded in the latter part of 2016, with the December price index up eight percent from the same period in 2015.

The supply and demand situation for corn and soybeans is illustrated in Figure 10. The growth in U.S. carryover stocks continues. The overall use of U.S. soybeans, forecasted to increase by four percent, failed to keep pace with production. U.S. soybean production in 2016 was forecast to reach a record, 4.533 billion bushels, up almost 10 percent from 2015. With beginning stocks of 197 million bushels already on hand, soybean ending stocks would climb to 420 million bushels, more than double last year’s level. For 2016/17, USDA forecasts soybean ending stocks at a little under 10 percent. Despite increased carryover, prices are expected to average between $9.00 and $10.00, up from last year’s average of $8.95, but remain well below the marketing year average price of $13.00 per bushel just three years ago. Corn production also increased in 2016, up 11 percent from 2015 to 15.1 billion bushels. Increased forecast for industrial use and exports put total use for 2016 at 14.620 billion bushels resulting in an increase in ending stocks to use ratio to almost 16 percent, up three percent from 2015. Increasing carryover stocks are reflected in lower expectations for the season average price in the $3.25 to $3.55 range.

The picture for U.S wheat farmers is similar. Wheat ending stocks for 2016/17 are forecast to continue their upward trend at 1.159 billion bushels, up almost 18 percent from last year. The implied 52 percent stocks to use ratio will continue to weigh on the market, depressing price expectations.

The U.S. cotton market has had a somewhat more positive experience. Global stocks are expected to fall to 91 million bales, down six percent from 2015’s 102.2 million bales. If correct, it will mark the second year of declining world stocks after increasing for five years. China was responsible for the global stock build up and is the engine behind the draw down with reduced support for domestic production and disposal of some government stocks. U.S. cotton production in 2016/17 is forecast to be 16.4 million bales,
up almost 34 percent from 12.5 million bales in 2015/16. Increased exports are expected to absorb the additional production and result in ending stocks remaining about the same level as last year, at 3.6 million bales, about 22 percent stocks-to-use ratio, down eight percent from last year.

The more favorable supply and demand fundamentals have given some support to the season average price expectations being forecast in the 67 to 69 cents per pound range with May 2017 futures prices currently in the mid-70 cent range.

The projected base prices used to establish the value of the crop and the insured liability for the Revenue Protection and Yield Protection forms of insurance are shown in Table 2, starting from 2010 and ending with the 2017 crop. Projected base prices are the average of futures prices during the discovery month that precedes the sales closing date for the policy.

Base prices are influenced by various factors, including remaining stocks for the crop, planting intentions in the United States, increasing yields, changes in demand for the crop, the availability of alternatives, and growing conditions in other countries. For example, coarse grain, soybean, and wheat stocks have continued to expand in recent years as production has exceeded use, which has increased pressure within the commodity markets to reduce prices to improve the balance between supply and demand. With the increase in stocks, 2016 corn, soybeans, wheat, and cotton base prices dropped below the base prices for any year from 2010 through 2015. Base prices in 2017 continued to decline for winter wheat and rice, but have increased for corn, soybeans, spring wheat, and cotton.

Corn is responsible for roughly one-third of the value of all crop production and the price for corn has a strong influence on the prices of other crops. Corn has the highest insurance liability and premium and is often seen as an indicator of overall industry conditions. Figure 11 provides corn futures prices for the contract for December delivery for each crop season starting with 2011 and continuing through 2016. In 2011, weather, below trend yields, and strong demand led to a surge in corn futures prices in the $7.70 per bushel range by late summer before retreating to less than $6.00 by the end of the contract. The 2011 base price of $6.01 per bushel for corn continues to be the highest in the history of the program. The base price of $5.68 per bushel for 2012 reflected the decline in price at the end of 2011 and expectations of increased production in the coming year. As the 2012 drought set in, prices ran up to more than $8.00 per bushel by late August. With the decline in demand at the higher price level, in combination with an increase in foreign production, prices began to moderate, ending the year above $7.00. Corn prices started out the 2013 year sharply lower due to an end to the drought and an expectation for a recovery in corn production, resulting in a base price of $5.65. Prices continued to fall throughout 2013, ending the year at around $4.25. The slide in prices continued into 2014, with futures prices finishing the year at $3.96 per bushel. With no support on the demand side and accumulating stocks, the 2015 futures price hovered above the $4.00 level before retreating toward the end of the year. Futures prices remained weak in the early part of 2016 and, other than a brief surge in June, weakened further throughout the remainder of the year.

The implied volatility factor (IV) derived from futures market information serves as a measure of riskiness of expected prices. Each year, the Risk Management Agency (RMA) calculates the implied volatility factor for an insured commodity by averaging the implied volatility of near-the-money options for a selected futures contract over the final five trading days of the discovery period for that crop. For example, implied volatilities...
over the final five trading days in February on the futures contract for December delivery are used in the determination of the IV factor in the major corn producing states. The IV factor is used by RMA to simulate the expected price distribution for the crop. This distribution is used to simulate price risk and establish the price risk component of the premium rate for revenue plans for the crop. A high IV indicates a greater likelihood for large price movements while a low IV implies a more stable market with futures prices expected to move within a smaller range. Other things being equal, higher IV values result in higher premiums on policies insuring the farmer’s revenue.

Historical values for IVs for selected major crops are shown in Table 3. In 2016, the IV values for corn, soybeans, and cotton dropped sharply, indicating that the market was expecting more stable prices. This expectation was met for corn prices, which traded within a narrow band throughout the year as indicated in Figure 11. Stable prices provided an important contribution to the positive gross underwriting gain for the year.

Figure 12 shows the change between the base prices established early in 2016 to the harvest prices established close to the end of the growing season. The harvest prices shown are the average daily prices for the harvest month for the same futures contract used to establish the base price earlier in the year. Harvest prices are important in that they are used to calculate the producer’s actual revenue, which is used to establish the amount of indemnity for Revenue Protection (RP) policies. Harvest prices for soybeans rose to $9.75 from a base price of $8.85 at the start of the year. As previously observed in Figure 11, corn prices declined over the course of the year. Prices also declined for winter wheat, spring wheat, and rice, while cotton prices rose from $0.62 to $0.69 per pound.

Federal Crop Insurance Program Experience

The financial performance of the Federal Crop Insurance Program continued the recovery that began in 2015 thanks to another year of excellent growing conditions and relatively stable crop prices. Declines in base prices for corn, soybeans, wheat, and cotton in 2016 led to a small reduction in the total insured liability to about $100 billion in 2016, about $2 billion below the prior year and $23 billion below the record set in 2013. This, in combination with reductions in price volatility factors for corn, soybeans, and cotton, led to a decline in gross premium to $9.3 billion in 2016, down $0.4 billion from the previous year. Insured acres of 291 million were also down from the record level of 300 million set in 2015. Farmers continued to buy higher coverage levels in 2016, with the share of acres covered at 70 percent or higher rising from 80.9 percent in 2015 to 81.4 percent in 2016 (Figure 13).

Table 4 provides the standard measures used to comprehend the scope and performance of the crop insurance program. The volume of business insured in 2016, as measured by policy counts, unit counts, liability, premium, and acres, are all below the corresponding amounts from 2015. The observed reduction in liability and premium is consistent with the reduced prices for major field crops. Indemnities for the year are much

---

Table 3 Volatility Factors

<table>
<thead>
<tr>
<th>CROPS</th>
<th>Historical Price Volatility¹</th>
<th>Volatility Factor²</th>
<th>% CHANGE 2015-16</th>
<th>% CHANGE 2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat, Winter ($/bu)</td>
<td>0.19</td>
<td>0.19</td>
<td>29.4</td>
<td>-18.2</td>
</tr>
<tr>
<td>Wheat, Spring ($/bu)</td>
<td>0.23</td>
<td>0.23</td>
<td>23.3</td>
<td>-13.3</td>
</tr>
<tr>
<td>Corn ($/bu)</td>
<td>0.20</td>
<td>0.20</td>
<td>23.3</td>
<td>-13.3</td>
</tr>
<tr>
<td>Soybeans ($/bu)</td>
<td>0.18</td>
<td>0.18</td>
<td>23.3</td>
<td>-13.3</td>
</tr>
<tr>
<td>Upland Cotton ($/lb)</td>
<td>0.24</td>
<td>0.24</td>
<td>23.3</td>
<td>-13.3</td>
</tr>
<tr>
<td>RICE ($/cwt)</td>
<td>0.23</td>
<td>0.23</td>
<td>23.3</td>
<td>-13.3</td>
</tr>
</tbody>
</table>

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 2016. 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 as of April 15, 2017.

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

Source: Various RMA Manager’s Bulletins
lower than in other recent years. Gross underwriting gains are defined as the difference between premiums and indemnities. For 2016, the gross underwriting gain recorded to date is $5.75 billion prior to significantly more than the $3.46 billion earned in 2015. Any gross underwriting gains (or losses) of the program are shared between the Federal Crop Insurance Corporation (FCIC) and the participating insurance companies as established under the provisions of the Standard Reinsurance Agreement (SRA).

Having two consecutive years with solid underwriting gains was a relief to the industry, and partially compensated for the poor program performance in earlier years. Over the 2011-2016 life of the current SRA, company underwriting gains have averaged 12.5 percent of retained premium, below the level expected when the SRA was negotiated. Furthermore, company underwriting gains are only one component of their pre-tax income. After accounting for all revenues and costs, company pretax net income is estimated to have averaged only slightly more than four percent of retained premium over 2011-2016.

The public cost of the crop insurance program can be calculated using program outlays and revenues. These are equal to gross indemnities, less farmer-paid premiums, plus administrative and operating expense (A&O) payments made on the farmer’s behalf to the companies, plus company underwriting gains. While final costs for 2016 are still uncertain, the total cost is estimated to be well below 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 2016 are shown in Table 5. The decline in insured acres for wheat and the increase in insured acres for corn and cotton are consistent with the change in acres planted. Insured acres for soybeans fell in 2016, while planted acres increased slightly. Total planted acres of principal crops

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Federal Crop Insurance Program Performance, Gross Basis1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROP YEAR</td>
<td>POLICIES WITH PREMIUM</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td>Thousands</td>
</tr>
<tr>
<td>2007</td>
<td>1,138</td>
</tr>
<tr>
<td>2008</td>
<td>1,149</td>
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<tr>
<td>2009</td>
<td>1,172</td>
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<td>2010</td>
<td>1,140</td>
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<td>2011</td>
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<td>2012</td>
<td>1,174</td>
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<td>2013</td>
<td>1,229</td>
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<tr>
<td>2014</td>
<td>1,207</td>
</tr>
<tr>
<td>2015</td>
<td>1,204</td>
</tr>
<tr>
<td>2016</td>
<td>1,759</td>
</tr>
</tbody>
</table>

1Data as of April 15, 2017  
Source: RMA Summary of Business

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Insured Acres by Major Crop1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROPS</td>
<td>2014</td>
</tr>
<tr>
<td>Wheat</td>
<td>47,953</td>
</tr>
<tr>
<td>Corn</td>
<td>79,015</td>
</tr>
<tr>
<td>Sorghum</td>
<td>5,302</td>
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<tr>
<td>Soybeans</td>
<td>73,856</td>
</tr>
<tr>
<td>Upland Cotton</td>
<td>10,366</td>
</tr>
<tr>
<td>Pasture, Range and Forage</td>
<td>52,763</td>
</tr>
<tr>
<td>Total above crops</td>
<td>269,254</td>
</tr>
<tr>
<td>Total all crops</td>
<td>294,456</td>
</tr>
</tbody>
</table>

1Data as of April 15, 2017  
Source: RMA Summary of Business

Figure 14 2016 MPCI Premium and Loss Ratios All Plans Combined
were essentially unchanged for the year, while the acres insured declined by nearly three percent.

Texas contributed the largest premium of $889.1 million and recovered the largest indemnity payment of $477 million. In total, Texas had an excellent loss ratio of 54 percent (Table 6). North Dakota was second in both premium and indemnities, with an overall loss ratio of 33 percent. California, which ranked first in terms of indemnities received in 2015, fell to third on this list with indemnities of $279.8 million, less than half the amount received in the prior year. Excess moisture was the most significant cause of loss in all three states. Other major contributors were hail and heat in Texas, hail in North Dakota, and failure of irrigation supply in California. North Carolina and South Dakota rounded out the top five states in total indemnities. Among crops, corn led with $920 million in indemnities, as compared to $1.6 billion in 2015. Wheat, soybeans, cotton, and the Pasture/Rangeland/Forage program followed corn in total payments.

The map in Figure 14 shows the state loss ratios and premium volumes for 2016. Colors are used to identify states with similar loss ratios, and shading is used to identify states with similar premium volumes. Rhode Island had the highest loss ratio of 2.84, but on a premium volume of less than $100,000. New Hampshire had the second highest loss ratio at 2.12 on a premium volume of roughly $500,000, with the top five rounded out by Nevada at 1.44, North Carolina at 1.41, identical to its 2015 loss ratio, and New York at 1.31. Only seven states had loss ratios greater than 1.0. Total indemnities for these states added up to $556 million, 16 percent of the total payout. The five lowest loss ratio states were, in order, Iowa at 0.09, Wisconsin at 0.11, Kansas at 0.13, Illinois at 0.14 and Alaska at 0.16. Of the 25 crops with the largest premium volume, the highest loss ratios were for flue cured tobacco, 2.26; peanuts, 1.25; cherries, 1.22; rice, 1.13; and dry beans, 1.00.

California has finally rebounded from its poor experience during the extended drought of recent years. Acres, premium, and loss ratios for the three major crop segments are detailed in Table 7. Loss ratios for all three crop segments were below 1.00 in 2016, while the overall loss ratio of 0.58 was well below the statewide loss ratio of 1.21 reported for 2015.

Figure 15 shows loss ratios by state for the revenue plans (RP and RP-HPE combined), and the yield plan (YP). In most states the loss ratios are comparable, consistent with expectations due to the relatively stable crop prices during the year.
States with low loss ratios for the yield plan tended to have low loss ratios for revenue plans, while states with relatively high loss ratios for the yield plan also tended to have high loss ratios for revenue plans. Revenue plan loss ratios exceeded yield plan loss ratios by 0.20 points or more in Alaska, Arizona, Nevada, New York, Oregon, Vermont, and Wyoming, which cumulatively contributed only $57 million in premium to the program. Conversely, yield plan loss ratios exceeded revenue plan loss ratios by 0.20 points or more in Louisiana, Massachusetts, Minnesota, New Mexico, and Rhode Island, of which only Louisiana and Minnesota have any significant amount of premium. On a countrywide basis, the loss ratios were 0.31 for RP, 0.28 for RP-HPE, and 0.57 for YP. Actual Revenue History, at 1.22, was the only plan having a loss ratio exceeding 1.00 on a countrywide basis, with almost all the indemnities attributable to cherries. The Vegetation Index program had a loss ratio of 0.95 but on a small amount of premium, while the APH plan, with more than $900 million in premium, had a loss ratio of 0.85.

Figure 16 shows the major causes of crop losses for 2016. Excess moisture was the primary cause, responsible for 41 percent of all losses. Drought was responsible for another 15 percent, followed by hail with 11 percent. Price changes were responsible for only three percent of all losses due to the stability of crop prices throughout the year. Heat and wind contributed seven percent and three percent of all losses, respectively.

Program and Policy Developments

In 2016, the RMA continued to work on the Acreage and Crop Reporting Streamlining Initiative (ACRSI) with a goal of the development of one-stop reporting of acreage information. A limited pilot program was conducted in spring 2015 in Illinois and Iowa. The pilot program allowed farmers to complete their acreage reports with their insurance agent, their FSA county office, or a specified third party. The pilot program included seven crops and two land uses: alfalfa, corn, grass, oats, rye, soybeans, wheat, fallow land, and Conservation Reserve Program (CRP) land. The lessons learned from the pilot program were incorporated into another pilot program for crops with fall 2015 reporting dates. The fall pilot program expanded the area for the same crops by adding 13 more states. The fall pilot included all farmers in all counties in Arkansas, Delaware, Georgia, Illinois, Indiana, Iowa, Kentucky, Maryland, Montana, North Carolina, North Dakota, Pennsylvania, South Carolina, South Dakota, and Tennessee. For spring 2016, the ACRSI was expanded to all 50 states and included four additional crops: cotton, peanuts, rice, and sorghum. It is expected that the program will continue to evolve with improvements in common data reporting methodology based on lessons learned in the initial nationwide experience.

In a related matter, RMA continues to emphasize the importance of tracking the location of land enrolled in common crop insurance policies and area risk protection insurance policies. In the 2016 crop reinsurance year, all Approved Insurance Providers (AIPs) were to report 100 percent of total acreage by field location. Land locations are identified by the Farm Service Agency (FSA) serial number or common land unit (CLU) number. In the 2016 reinsurance year for cases where a CLU does not exist, RMA began working with AIPs to develop the resource land unit (RLU) data standard that identifies field locations that could be used in reporting. It is believed that the location data will improve program integrity by allowing better understanding of geographical patterns of insurance claims and associated production risk. Beginning in the 2017 reinsurance year, field locations on acreage reports will be required for CCIP and ARPI plans: yield protection, revenue protection, revenue protection with harvest price exclusion, area yield protection, area revenue protection, and area revenue protection with harvest price exclusion.

In addition, efforts to improve program integrity measures continue with refinements to the estimates of improper payment rates for the program as a whole and individual AIPs. A more comprehensive sampling methodology was developed and has been approved for use in 2017 and beyond. The improper payment rate is a standardized measure of waste and efficiency for all major federal spending programs. An improper payment occurs when funds go to the wrong recipient; when the correct recipient receives too little or too much; or when the recipient uses funds in an improper manner. Many errors are simply rooted in data entry and reporting mistakes. Crop insurance’s 2016 improper payment rate of 2.02 percent was down from 2.2 percent in 2015 and 5.58 percent in 2014. By comparison, the government-wide improper payment rate was 4.67 percent in 2016 and 4.39 percent in 2015.

Making improvements to existing programs continue to be a major focus for RMA. In some cases, additional information on a product may be needed so pilot programs may be extended. For example, the Actual Revenue History (ARH) policy pilot program used to provide coverage for Strawberry farmers in California since the 2012 crop year was extended for another two years in 2016. In other cases, pilot programs can be converted to permanent program status. For example, in 2016 the FCIC approved the conversion of the Florida Fruit Tree policy to permanent status, a move that included orange, grapefruit, lemon, lime, avocado, carambola, mango, and other citrus growers in the state. Other changes include ex-
pansion of existing coverage to new areas. In 2016, examples of expansion of permanent programs included coverage for production in additional counties for blueberries in Florida and Georgia, canola in Illinois, Indiana, North Carolina Tennessee, and Virginia, barley in New York, alfalfa seed in Montana, forage seeding in California, and wheat in Louisiana for the 2018 crop year.

In addition, sometimes situations create special conditions such as in the 2016 crop year in California that resulted in claims for prevented planting losses from areas where irrigation water is provided by the Central Valley Project (CVP). The CVP is a federal water management project under the supervision of the U.S. Bureau of Reclamation which began in 1940. The project was built primarily to protect the Central Valley from water shortages and floods. The CVP supplies water to farms, homes, and industry in California’s Central Valley counties and the San Francisco Bay Area, as well as providing most of the water for a large part of the California’s wetlands. On April 1, the Bureau announced a five percent water allocation for contractors in the southern service regions resulting in prevented plantings. This occurred despite a return to above average rainfall and close to normal snowpack in the Sierras. Some farmers had claims for losses primarily in Stanislaus, Merced, Fresno, and Kings counties that became subject to questions. After consultation with the Department of the Interior, RMA concluded that the water delivery shortage was an insurable cause. However, given the special circumstances, RMA acted to reinsure prevented planting losses paid by AIPs in accordance with the Standard Reinsurance Agreement. With drought conditions in the West beginning to ease we would expect a decline in issues related to prevented planting due to lack of irrigation water deliveries in California’s Central Valley.

RMA continued to pursue new product development for commodities not currently covered with existing programs in 2016. For example, work began on developing a contract to solicit research and development of a crop insurance product for garlic, grown primarily in California. The initiative is in response to many requests for garlic coverage, which is explicitly excluded from existing onion crop coverage. RMA also provided notification of intent to solicit research and development of a crop insurance product for vegetable and flower seed crops. This preliminary work would help determine if RMA should explore the feasibility of developing a program based on findings regarding the level of interest in a potential program and availability of yield and price data. Steps to conduct research to evaluate the existing Dollar Plan of Insurance began. This work would help determine if the program is meeting the needs of farmers or if there is a need to consider an alternative plan.

Ongoing research reports were also concluded and submitted to Congress for review for programs on poultry catastrophic disease, catastrophic swine disease loss, and poultry business interruption insurance caused by the bankruptcy of the poultry integrator. Another final report was received and in review regarding a policy to insure against a reduction in the margin between the market value of catfish and selected costs of production.

**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. This article reports the results for all losses on hail policies, including the experience of NCIS non-member companies not included in NCIS’ Annual Statistical Summary reports.

Premium for 2016 was $983.3 million, up slightly from $979.7 million in 2015. Crop-Hail premium has risen substantially over the past decade. Crop-Hail provided $36.2 billion in private insurance protection to U.S. farmers in 2016 and paid out $880 million in losses. (Table 8)

The program loss ratio, defined as paid losses divided by premium written, increased to 0.90 in 2016, up from 0.76 in 2015, but still much better than the record loss ratio of 1.22 in 2014.

Large storms were much more severe in 2016 than in 2015, with five days exceeding $25 million in losses. The worst single day occurred on July 5, when a storm caused damages of more than $36 million, primarily in the states of Minnesota and Nebraska. Later in the same week, July 9, saw total damages of almost $35 million; $28 million of which were in North Dakota and $5 million in Minnesota. July 7 had losses of more than $33 million, with more than $18 million in Nebraska in combination with substantial amounts in Missouri and Iowa. In total, the losses from the top ten storm days amounted to $240 million, more than double the $111 million paid for the top ten storm days in 2015, but well below the $420 million paid out in 2014. The period from July 4 through July 10 was especially hard hit, with total payouts of $48 million in Nebraska, $47 million in North Dakota, and $25 million in Minnesota, with just under $10 million in Iowa, and $5 million in South Dakota.

Crop-Hail loss ratios by state are shown in Figure 17. Colors identify states with similar loss ratios, and shading is used to identify states with similar premium volume. Crop-Hail insurance was purchased in 42 states in 2016. Of these, 11 had a loss ratio greater than 1.00; these are shown in purple and red on the map. Louisiana had the highest loss ratio of 3.29 on a small premium volume of less than $2 million. The top five premium volume states, Nebraska, Iowa, Minnesota, North Dakota, and Illinois, had loss ratios of 0.89, 0.48, 1.07, 1.47 and 0.40, respectively. Overall, 20 states had loss ratios of 0.50 or less, shown in pink and yellow on the map. Five additional states, shown in green, had loss ratios between 0.50 and 0.75, and the final six, shown in light blue, had loss ratios between 0.75 and 1.00.

### Table 8: U.S. Crop-Hail Results, All Perils

<table>
<thead>
<tr>
<th>CROP YEAR</th>
<th>LIABILITY</th>
<th>PREMIUM</th>
<th>LOSSES</th>
<th>LOSS RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mil. $</td>
<td>Mil. $</td>
<td>Mil. $</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>19,392</td>
<td>489.6</td>
<td>235.2</td>
<td>0.48</td>
</tr>
<tr>
<td>2008</td>
<td>27,540</td>
<td>669.4</td>
<td>555.1</td>
<td>0.83</td>
</tr>
<tr>
<td>2009</td>
<td>25,493</td>
<td>621.3</td>
<td>565.9</td>
<td>0.91</td>
</tr>
<tr>
<td>2010</td>
<td>27,170</td>
<td>682.2</td>
<td>460.4</td>
<td>0.67</td>
</tr>
<tr>
<td>2011</td>
<td>36,691</td>
<td>843.2</td>
<td>974.5</td>
<td>1.16</td>
</tr>
<tr>
<td>2012</td>
<td>39,407</td>
<td>955.8</td>
<td>704.3</td>
<td>0.74</td>
</tr>
<tr>
<td>2013</td>
<td>39,773</td>
<td>953.2</td>
<td>646.2</td>
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<tr>
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<td>991.7</td>
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</tr>
<tr>
<td>2015</td>
<td>36,805</td>
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<td>0.76</td>
</tr>
<tr>
<td>2016</td>
<td>36,178</td>
<td>983.3</td>
<td>880.1</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Data as of April 03, 2017
Source: Adjusted Verified Totals, U.S. only, for NCIS member companies combined with the data from non-members.
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 9 presents the totals by year. Overall, the 2016 loss experience deteriorated from 2015. The 2016 loss ratio was 0.85 as compared to the 2015 loss ratio of 0.61. Losses paid to farmers climbed from C$167 in 2015 to C$256 million in 2016, while the number of claims increased from 13,222 in 2015 to 19,863 in 2016. The average claim in 2016 was C$12,907, up from C$12,630 in 2015. On the positive side, Crop-Hail premiums increased from C$274 million in 2015 to C$302 million in 2016.

For the individual provinces, Saskatchewan had C$176 million in premium in 2016, 58 percent of the total; Alberta had almost C$79 million, or 26 percent; and Manitoba had just under C$47 million, or 16 percent. Premiums for the year increased by 13 percent in Saskatchewan, 5 percent in Alberta, and 12 percent in Manitoba, for an overall increase of 10 percent.

Total payouts for the year in Alberta were reported at more than C$65 million, well above the C$50 million paid in 2015, but much less than the C$99 million paid out in 2014. The 2016 loss ratio was 81.9 percent, as compared to 66.4 percent in 2015. Wet weather and standing water in certain areas resulted in delays in harvesting the crop. Yields were 25 to 30 percent above the yields reported in 2015, but crop quality has declined in certain regions.

Manitoba once again had a difficult year despite the increase in premium. Payouts were slightly below C$67 million for a loss ratio of 142.9 percent as compared to a loss ratio of 108.6 percent in 2015. Storms resulting in hail damage were reported during the Labour Day weekend, followed by other storms in the third week of September and early October.

In Saskatchewan, payouts increased to nearly C$125 million, up from C$71 million in 2015. The loss ratio increased to 70.9 percent versus a loss ratio of 45.6 percent in the prior year. The C$20 million increase in premium for the year blunted a portion of the C$54 million increase in loss payments. Most of the hail damage was from storms that occurred in July, with many producers affected by more than one storm.

[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 this year, crop insurance helped farmers deal with the year’s weather and market risks. The public-private partnership worked as envisioned in 2016. Farmers shared in the cost of the program by paying premiums of $3.5 billion and incurring losses through deductibles before any claims were paid. Insurance companies effectively sold and serviced more than 1.2 million policies, accurately determined losses and paid claims on more than 218,000 policies, experiencing a much-improved year following down years in three of the last four. The Federal government provided premium support to ensure widespread coverage and avoidance of any Congressional action in the form of 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.