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# A Year in Review

By Harun Bulut, Keith Collins, Frank Schnapp, and Tom Zacharias, NCIS

## Overview

Now that the 2009 crop year is behind us and we are well into the 2010 crop season, the final actuarial and statistical results for 2009 are now reasonably certain and the results for the year can be brought into focus. The crop year began with a sharp drop in winter wheat plantings in the autumn of 2008 due to falling wheat prices and late row crop harvests. Cool and wet spring weather delayed corn and soybean planting and crop progress, just as it did in

2008. However, with drier conditions returning, soybean plantings reached the highest on record and corn plantings, the second highest. Good moisture and lack of heat stress produced record-large soybean crops, raising supplies and continuing the decline in prices that began in the second half of 2008. Meanwhile, hot and dry weather in the Southern Plains and Mid-South, including historic drought in Texas, cut into wheat and cotton harvests. Overall, losses as a percent of premium were the

third lowest since 1981 when the modern crop insurance program began. Major hail storms resulted in the worst U.S. loss performance for hail insurance since 1994, while Canadian hail losses were sharply reduced from 2008.

Amid these weather and market developments, the global economic slowdown began to turn around but not before leaving the U.S. with a budget deficit in excess of \$1 trillion. Amidst the implementation of program funding cuts made in the 2008





Farm Bill, RMA announced in the fall of 2009 that the 2005 Standard Reinsurance Agreement (SRA) would be terminated. In December, RMA proposed a new SRA that would reduce crop insurance funding by \$8.4 billion over 10 years, stunning the industry and setting in motion intense negotiations in 2010. The events of 2009 will continue to resonate through the crop insurance industry for years to come.

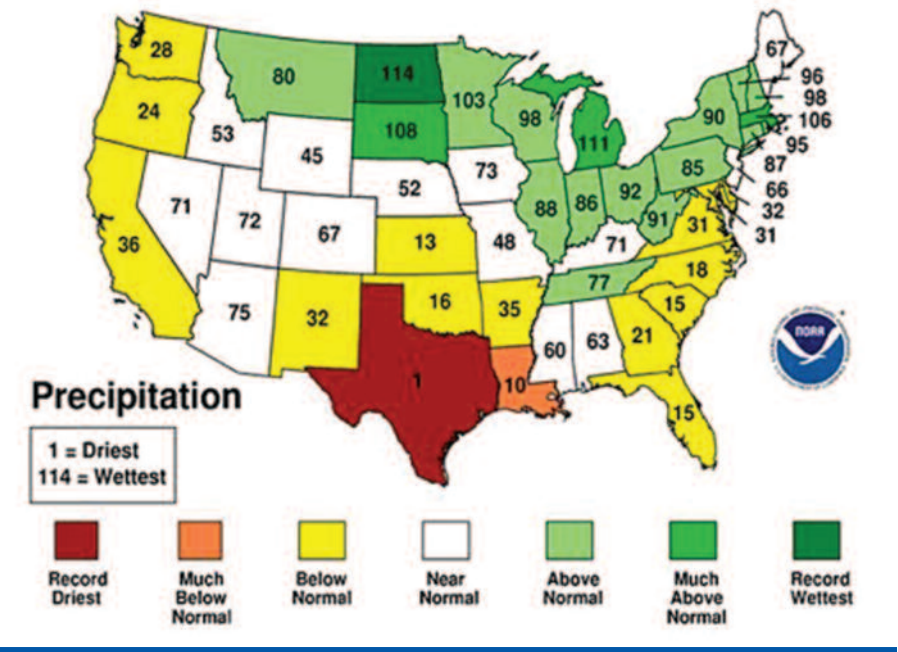
With this general perspective, the purpose of this article is to review the 2009 crop insurance season and highlight the more dramatic events that shaped the year. We will begin with a discussion of weather conditions and their impact on production for the winter and spring crops. That will be followed by a discussion of commodity market prices throughout the year. Crop-hail experience for both the U.S. and Canada will be reviewed. Next will be a discussion of the results for the federal crop insurance program. And lastly, no review of 2009 would be complete without a summary of the realized cuts of 2008 Farm Bill and the beginning of SRA negotiations and their anticipated economic impacts on the crop insurance industry.

## Weather and Production

The 2009 crops began with seeding in the fall of 2008, which got off to a slow start. Winter wheat, which began planting in August 2008, was behind the previous five-year average seeding rate until mid-November due to wet weather and delayed harvesting of the 2008 spring-seeded crops. It was not until the start of December that winter wheat planting was nearly complete. Due to the delayed row crop harvest and less attractive wheat prices, winter wheat planted area was 6.5 percent below the year earlier. The winter wheat crop condition at the start of December was rated 65 percent good-to-excellent compared with 44 percent the previous year. The spring wheat crop also got off to a late start due to wet weather in the Northern Plains.

Figure 1 illustrates precipitation conditions during winter 2008/2009. For winter crops, the winter weather started mostly favorably. As the season progressed, Texas experienced its driest winter since records were kept and North Dakota its wettest winter. Due to dry weather in Oklahoma and Texas, together with a major spring

Figure 1  
**Winter 2008/2009**  
 National Climatic Data Center/NESDIS/NOAA



freeze in early April in parts of Kansas and Oklahoma which resulted in abandoned acreage, winter wheat crop conditions fell sharply. With lower acreage and reduced yields, the final winter wheat production was 1.5 billion bushels, 18 percent below the 2008 crop. Even though spring wheat production was up seven percent from 2008, due to favorable harvest weather and

high yields, total wheat production, at 2.5 billion bushels, came down 11 percent from 2008.

Figure 2 represents 2009 planting progress for major spring-seeded crops in terms of the percentage points behind the preceding five-year average for 2004-2008. Planting progress lagged the preceding five-year average for corn and soybeans,



Figure 2

## Planting Progress for Major Spring Field Crops for 2009

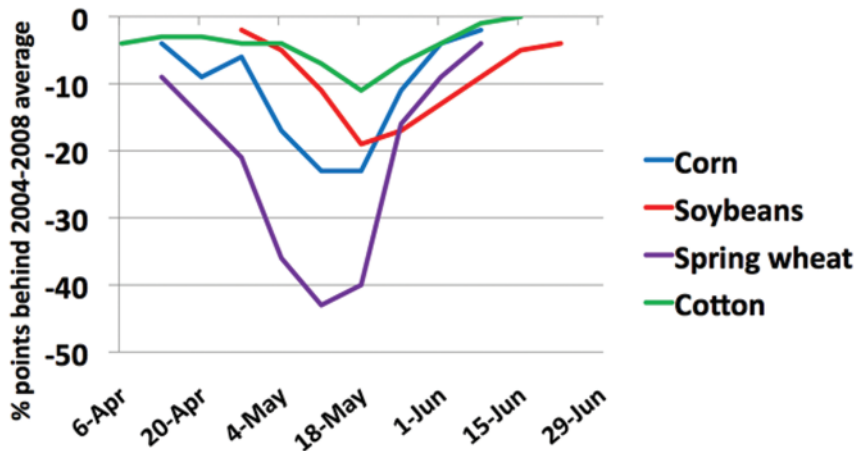


Figure 3

## Spring 2009 National Climatic Data Center/NESDIS/NOAA

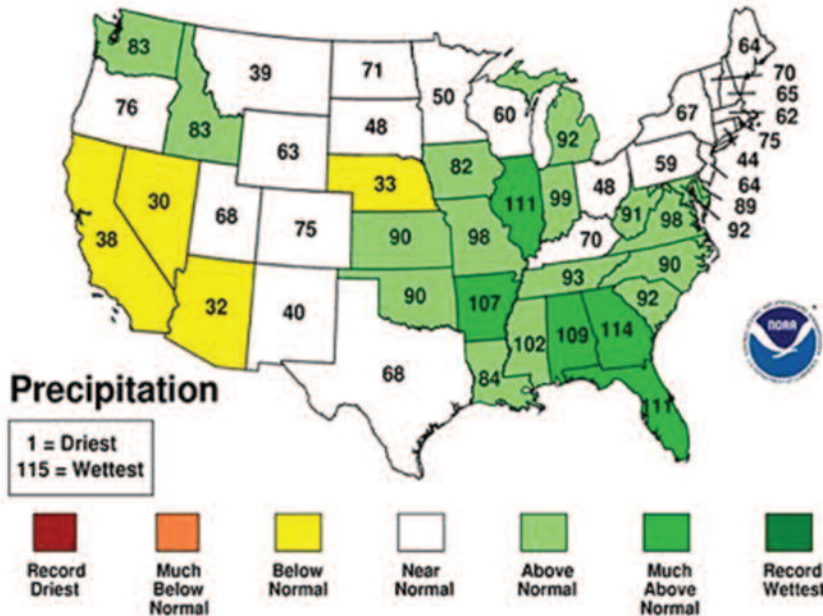
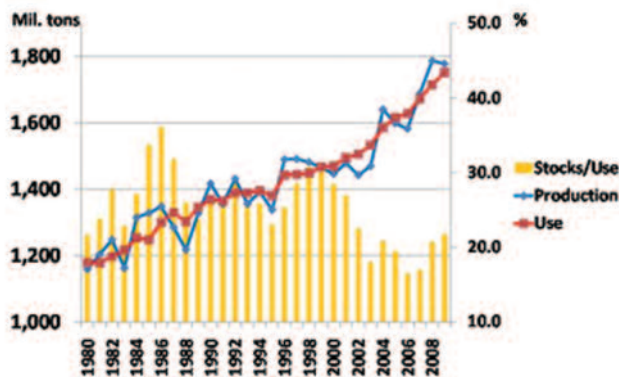


Figure 4

## World Grain Production and Use



took a little longer, catching up by mid-June. Cotton planting lagged initially and followed a pattern similar to 2008 for the rest of the season. However, spring wheat planting progress in 2009 differed markedly from the prior year. Wet weather, particularly in North Dakota and Minnesota, resulted in a much bigger delay in planting as compared to the five-year average, and remained behind for the rest of planting season.

Despite the late planting described above, the growing season was mostly ideal for the major crops as shown in the spring 2009 precipitation map illustrated in figure 3. Record cool temperatures for the Midwest and Corn Belt during the summer contributed to a record-high corn yield (164.9 bushels per acre) and production (13.1 billion bushels, up nine percent from 2008). Soybeans also had record-high yields (44 bushels per acre) and production (3.36 billion bushels, up 13 percent from 2008). Cotton production saw dry growing conditions in south Texas and wet harvest conditions in the Mid-South. Nationally, cotton planted area and yields were down and production declined three percent from 2008, even though harvested area was up two percent from a year ago.

*Information for this section of the article was obtained from the publication of the National Climatic Data Center at the National Oceanic and Atmospheric Administration "State of the Climate National Overview Annual 2009," and USDA's publications, including "Global Crop Production Review, 2009," "Weekly Weather and Crop Bulletin," "Prospective Plantings March 2009," "Crop Production 2009 Summary," and, "World Agricultural Supply and Demand Estimates Report."*

## Commodity Prices

The increased uncertainty following the global financial collapse in the fall of 2008 prevailed into much of 2009. Record and near-record crop production both in the U.S. and the rest of the world in 2008 and 2009 has increased global stocks and further reduced price prospects for grains and oilseeds. These developments are illustrated in figure 4 for world production, use, and carryover stocks of wheat and coarse grains. Even with the higher production of the past two years and the rising carryover





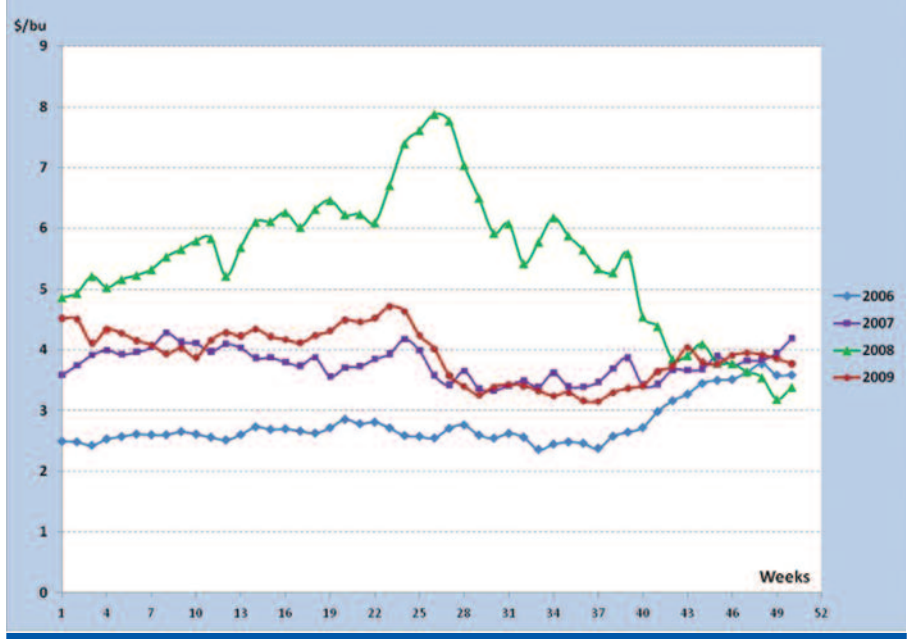
stocks as a percent of total use, strong domestic and foreign demand has kept carryover levels from returning to the excessive levels of the late 1990s. The generally strong demand helped keep crop prices high relative to historical levels despite their recent declines.

Compared to the rollercoaster ride a year ago, crop prices moved much more steadily in 2009. Figure 5 presents the December futures contract prices for corn on a weekly basis for 2006 through 2009. In contrast to the dramatic surge in the first half of 2008 and the sharp decline during the rest of that year, corn December futures prices in 2009 remained mostly stable at levels close to 2007, yet still above the levels seen in 2006.

Regarding the impacts of price movements on revenue products, figure 6 presents the base and harvest prices for the 2009 CRC and RA plans of insurance for the major crops (corn, soybean, winter and spring wheat).

Consistent with the preceding discussion of corn prices, the declines between base and harvest prices for corn are much less (eight percent for CRC and three percent for RA plans) in 2009 compared to

**Figure 5**  
**Weekly Corn Futures Prices**  
 Life of the Dec. Contracts 2006-09



the declines in 2008 (24 percent for CRC and 31 percent for RA plans). Despite late planting and wet conditions at harvest, ideal growing conditions led to record-high U.S. corn production. However, corn prices remained firm as the increase in demand nearly matched the increase in

production. Feed use and ethanol demand for corn account for 75 percent of total corn use and are estimated to be up 13 percent for the 2009 crop. Meanwhile, sluggish economic recovery and large foreign supplies have slowed corn exports.

In 2008, winter wheat prices at harvest had been higher than base prices (up nearly 33 percent for CRC and 41 percent for RA), whereas spring wheat prices at harvest fell below base prices (18 percent for CRC and 19 percent for RA). The base price for winter wheat had been set before the general commodity price run-up, which pushed the harvest price up higher in 2008. In 2009, both winter and spring wheat harvest prices in the CRC and RA plans were lower than base prices. The corresponding price declines were 38 percent for RA and 28 percent for CRC for 2009 winter wheat (38 percent for CRC in some states; not shown in figure 6), and 10 percent for both RA and CRC plans for 2009 spring wheat (36 percent for CRC in some states; not shown in figure 6). World wheat supplies rebounded in 2009, which reduced export opportunities for U.S. producers, and led to a large increase in U.S. carryover stocks of wheat.

Furthermore, spring wheat base prices were higher than winter wheat base prices in 2008, which is usually the case due to higher protein content in spring wheat. In contrast, 2009 winter wheat base prices were much higher than spring wheat base prices (see figure 5). This was due to lagging effects of the commodity price run-up on winter wheat base prices and the sharp increase in wheat ending stocks, which reduced spring wheat base prices in 2009.

In 2008, soybean prices decreased between planting and harvest (23 percent for CRC and 31 percent for RA). In comparison, 2009 soybean prices increased at harvest nearly 10 percent for both CRC and RA plans. The record-high U.S. soybean production in 2009 was outweighed by an increase in U.S. exports due to production losses in Argentina and Brazil in 2008. China's soybean imports continued to be main driver of global demand in 2009.

*Information for this section of the article was obtained from the Risk Management Agency, National Agricultural Statistics Service, the World Agricultural Outlook Board, and the Economic Research Service of USDA, and Barchart.com.*

## U.S. Crop-Hail Experience

For the U.S., crop-hail insurance generally refers to policies in which direct damage by 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 non-member companies not included in NCIS' *Annual Statistical Summary* reports.

Premium for 2009 was about \$620 million (down a bit from 2008), providing more than \$25 billion in privately insured crop-hail insurance coverage for U.S. farmers. From a profitability standpoint, 2009 was a difficult year for the industry, similar to 2008. Losses of approximately \$566 million exceeded the amount paid in 2008, and were more than twice the amount paid in 2007. The country-wide loss ratio of 0.91 (paid losses divided by premium written) was the highest the industry has experienced since 1992, when the loss ratio was also 1.11. Industry-wide loss ratios have exceeded 0.91 in only in one other year since 1948, 1980, which had a loss ratio of 1.01. A summary of country-wide crop-hail experience over the past six years is provided in Table 1.

Large storms contributed their share of losses for the year. The largest one-day storm in 2009 occurred in Iowa on August 9, resulting in more than \$37 million dollars paid out to farmers. The top 10 storm events for the year, measured in terms of losses, occurred in Nebraska, Iowa, Illinois, Kansas and Wisconsin, with over \$173 million being paid out in these states. Of the top 50 most damaging storms, 23 occurred in the month of July, 19 in June, and eight in August.

On a county by county basis, the largest payouts were \$17.8 million in Lafayette County, Wisconsin; \$15.7 million in Hall County, Nebraska (which also had \$8.7 mil-

Figure 6  
World Grain Production and Use

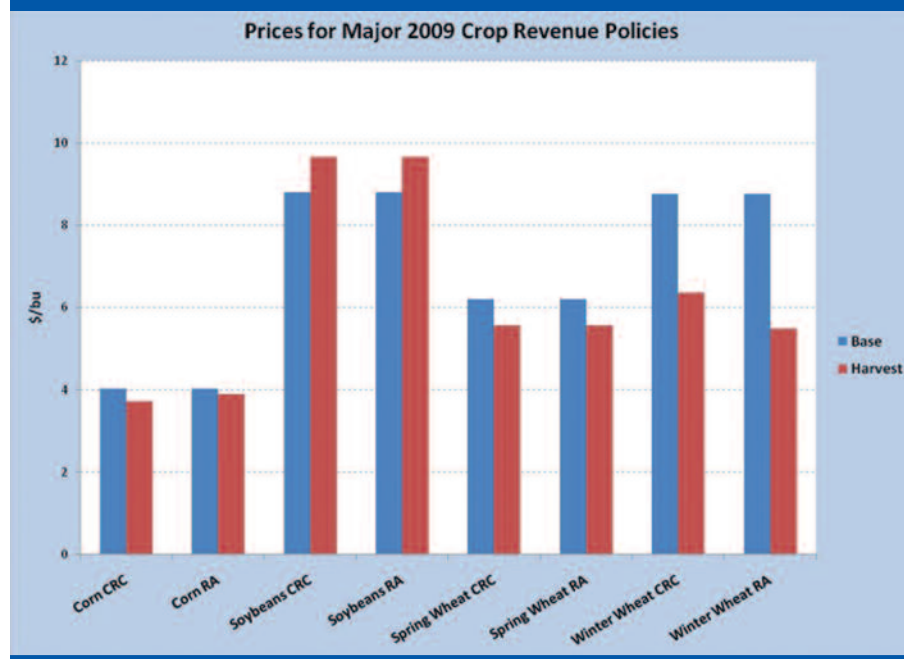


Table 1  
U.S. Crop-Hail Results, all Perils  
Amounts in \$Millions

Crop Year	Liability	Premium	Losses	Loss Ratio
2004	\$13,942	\$414.0	\$241.9	0.58
2005	13,879	412.2	183.7	0.45
2006	15,529	403.8	202.0	0.50
2007	19,373	487.8	234.9	0.48
2008	27,525	668.0	554.6	0.83
2009	25,476	619.6	564.9	0.91



lion damage in 2008); \$13.4 million in Chase County, Nebraska; \$12.7 million in Delaware County Iowa; and, \$11.7 million Bingham County, Idaho. The top five losses on a county basis in 2009 were almost twice as much as those in 2008.

Crop-hail loss ratios by state are shown in figure 7. Colors identify states with similar loss ratios and shading is used to identify states with similar premium volume. In terms of industry results on a statewide basis, crop-hail insurance was written in 45 states in 2009. Of these, 19 states had a loss ratio in excess of 0.70. Wisconsin and Idaho, with premiums over \$11 million each, had loss ratios of 2.42 and 1.83, respectively. Iowa, a major hail writing state in the Corn Belt, had a loss ratio of 1.72. Among the major hail writing states in the central plains, Nebraska led the way with a 1.45 loss ratio, Kansas followed with 1.05, and South Dakota was 0.92. A second cluster of states with high loss ratios ran through Colorado, New Mexico, Texas and Wyoming, with loss ratios of 1.31, 1.12, 0.89 and 0.74, respectively. Towards the Southeast, Kentucky, Virginia, and Tennessee had loss ratios in excess of 0.75. An additional four states with high loss ratios are found along the east coast, but these have less than \$1 million premium each.

*Information for this section was obtained from NCIS' Insured Crop Summary and claim files.*

## Canadian Hail Results

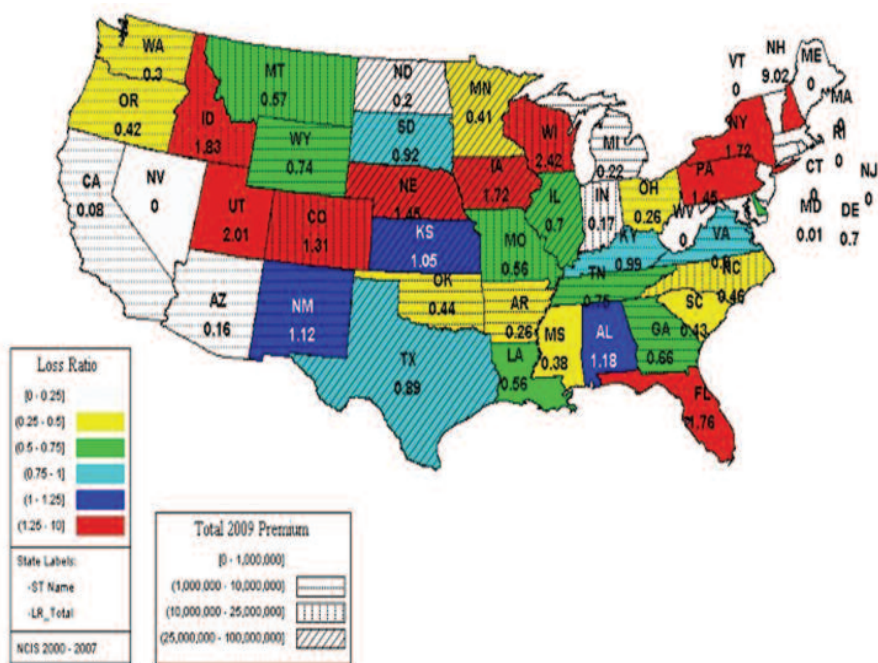
Unlike the U.S., 2009 was an excellent year for Canadian crop-hail writers. Crop-hail business in Canada is primarily written in the prairie provinces of Alberta, Manitoba and Saskatchewan. Total premium for 2009 for all three provinces was nearly C\$264 million (Canadian), down from C\$289 million in 2009. With payouts of just over C\$76 million, the loss ratio for the year was 0.29, a significant improvement over the severe loss ratio of 1.18 experienced in 2008.

Results were very favorable in Manitoba as well, with C\$42.6 million in premium and payouts of C\$12.2 million, for a loss ratio of less than 0.29. About 2,650 claims were filed, near the normal level of recent years.

In Alberta, a single large storm in August was responsible for most of the year's losses. A total of 2,032 claims were

Figure 7

## 2009 U.S. Crop-Hail Premium and Loss Ratios – All Crops, Losses, Plans Combined



reported, less than half the level of the prior year. Total indemnities were C\$40.6 million with premium of about C\$49 million, for a loss ratio of 0.83.

Saskatchewan, the largest province in terms of hail business, generated C\$172 million in premium for the year, slightly down from C\$176 million in 2008. The 2009 loss ratio for Saskatchewan was remarkable, less than 0.14. Total indemnities for the year were only C\$23.4 million, roughly a tenth of the payouts in 2008. The number of claims dropped to 4,075 from 21,000 in the prior year.

*Information for this section of the article was taken from The Hail Report, a publication written by Kevin Hursch and sponsored by the Canadian Crop Hail Association. The Hail Report is produced every two weeks during the hail season.*

## Federal Crop Insurance Program

Following the 2008 loss ratio of 0.88 (the highest during 2004 to 2009), the 2009 loss ratio came down to 0.58. This continued the string of profitable years for the federal crop insurance program, as shown for the most recent six years in Table 2. On a year-over-year basis, the liability, premium written, and indemnity paid in 2009

were below the levels seen in 2008, but were still above those of 2004 to 2007. The acres insured were also a bit lower than those in 2007 and 2008, but remained higher than those in earlier years.

Results differed widely for the various insurance plans. The country-wide loss ratio for individual farmer revenue protection (including the CRC, RA, IP and IIP plans of insurance) was 0.54. Group Risk Income Protection (GRIP), an area-based plan that provides protection based on county average revenues rather than individual farmer revenue, was even less, with a loss ratio of 0.14. Area plans other than GRIP (consisting of the GRP, RI and VI plans of insurance) had a 0.38 loss ratio, while yield-based protection (including all remaining plans of insurance) had an overall loss ratio of 0.80.

The better experience on revenue plans in 2009, as compared to yield-based plans, is in sharp contrast to the pattern observed in 2008. This is due to relatively stable prices in 2009 as compared to the sharp price declines seen at the end of the 2008 crop season. Stable prices were also responsible for the low loss ratios on the GRIP program in 2009. Yield-based plans also had good results in 2009 but not as favorable as in 2008 due to more difficult growing conditions.

Figure 8 illustrates how loss ratios for revenue, GRIP and yield-based plans of insurance varied across states. Loss ratios for the revenue-based plans in the majority of states (30 out of 47) fell in the range from

0.25 to 1.25. Loss ratios for yield plans tended to run somewhat higher, with the majority of states (29 of 50) having loss ratios in the range from 0.50 to 1.50. The overwhelming majority of GRIP loss ratios (22

out of 31) fell in the range of 0 to 0.25. Of these states, nine had a zero loss ratio and less than \$260,000 in premium. Mississippi, Alabama and Texas were the only states with loss ratios exceeding 1.0 (1.10, 1.46, and 2.59, respectively) for GRIP.

Figure 9 takes the comparison of the three types of insurance plans a step further by highlighting differences within states. Of the 50 states, a majority (31) had a higher loss ratio for yield plans than revenue plans. Nevertheless, a few states saw much higher loss ratios for revenue plans than yield plans: the ratios of revenue plan to yield plan loss ratios were 9.4 in Oregon, 5.1 in Idaho, 4.4 in Rhode Island, 3.3 in Washington, and 1.9 in California. Except for Rhode Island, wheat is the major crop in these states. The large decrease in winter wheat prices at harvest was the main reason for the higher losses in revenue products for these states. GRIP loss ratios greatly exceeded those for the other plans in a few states, including Alabama and Texas. Alabama had much above normal wet conditions in the spring and Texas had record dry conditions.

Another perspective on the 2009 results is provided by figure 10. Gross losses exceeded the statutory target (a loss ratio of 1.00) in the states shaded blue or red. This group includes Texas, with a premium volume of nearly \$662 million. The remaining high volume states had much lower loss ratios: less than 0.25 for Minnesota and Iowa, 0.28 for Nebraska, 0.30 for Illinois, 0.39 for South Dakota, and 0.40 for Kansas.

*Information for this section of the article was obtained from Summary of Business reports released by the Risk Management Agency.*

## SRA Negotiations

Beginning in the spring of 2009, NCIS began preparations for a new Standard Reinsurance Agreement (SRA) by organizing industry working groups that met during the summer to assess the components of the 2005 SRA and recommend improvements. In September 2009, RMA announced its intention to terminate the 2005 SRA and negotiate a new SRA for the 2011 reinsurance year. At that time, RMA also released the results of two studies that analyzed a reasonable rate of return for crop insurance companies and estimated historical rates of return. In October 2009,

Table 2  
Federal Crop Insurance Program  
Gross Basis (Amounts in Millions)

Crop Year	Liability	Premium	Losses	Acres	Loss Ratio
2004	\$46,602	\$4,186	\$3,210	221	0.77
2005	44,259	3,949	2,367	246	0.60
2006	49,912	4,579	3,504	242	0.77
2007	67,344	6,562	3,545	272	0.54
2008	89,910	9,852	8,625	272	0.88
2009	79,501	8,946	5,164	265	0.58

Source: RMA Summary of Business Reports, July 5, 2010

Figure 8  
2009 MPCJ Loss Ratio  
Number of States with Loss Ratios in the Indicated Range

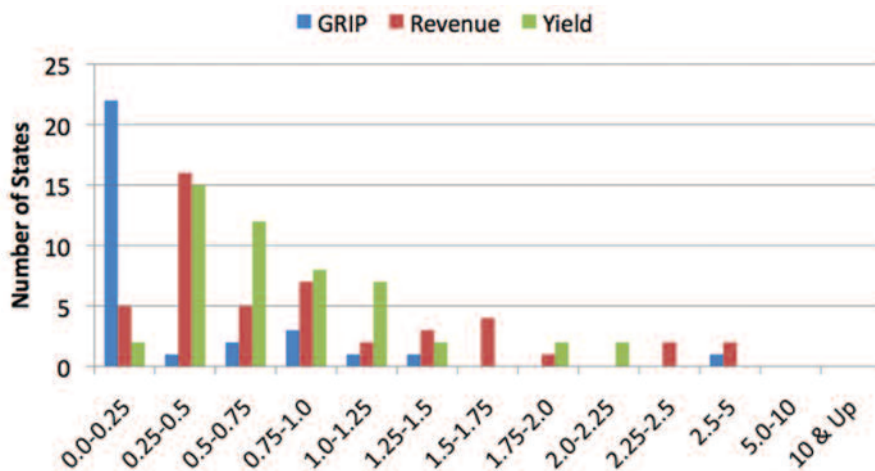
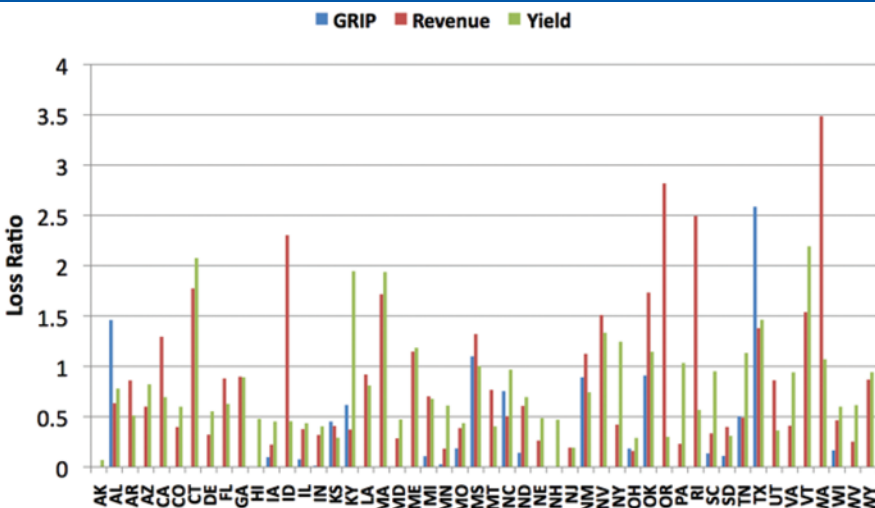


Figure 9  
GRIP, Revenue and Yield Plans Loss Ratios for 2009





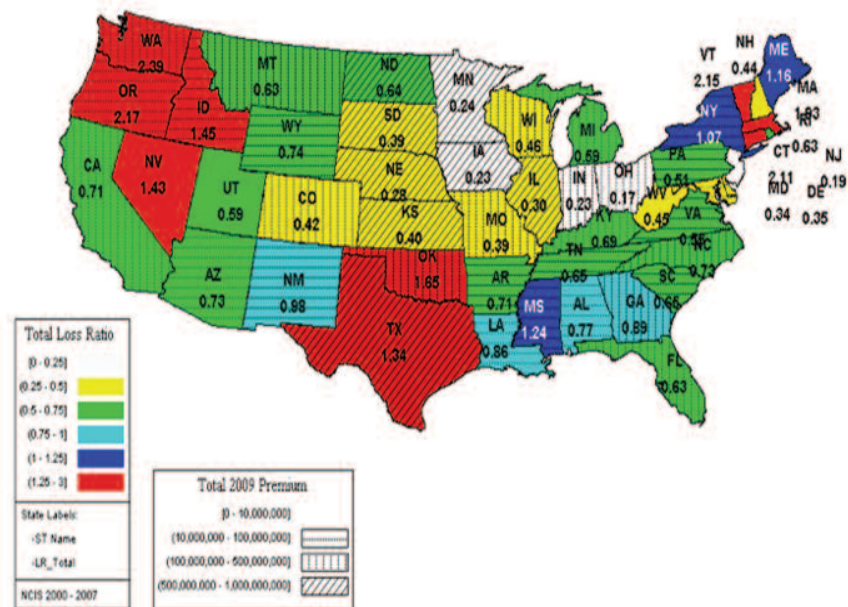
on behalf of the companies, NCIS submitted to RMA the industry working groups' recommendations for the 2011 SRA. In December 2009, RMA released the first draft of the 2011 SRA.

The financial provisions of the first RMA draft called for program funding reductions of \$8.4 billion over 10 years, which would be in addition to the \$6.4 billion in cuts being implemented as a result of the 2008 Farm Bill. Arguing that high commodity prices had driven A&O payments to the companies to excessive levels, RMA proposed changing the determination of A&O payments by using "reference prices" to adjust the premium used to calculate payments. Reference prices, defined as 1999-2008 average prices, were substantially below policy prices and would have reduced A&O by two to three times more than the A&O cuts imposed by the 2008 Farm Bill.

The December SRA proposal also proposed major changes in reinsurance funds. It called for one Commercial Fund for each state and a Residual Fund for high risk business that would be a single national fund for all companies combined to replace the Assigned Risk Fund. States were divided into four groups, with different gain/loss provisions for each group, in an attempt to "rebalance" profitability across states. The reinsurance terms for the Commercial Fund would have reduced the potential losses somewhat for companies in years with underwriting losses but would have sharply reduced potential gains in years with underwriting gains. The initial draft SRA also increased net book quota share from five percent in the 2005 SRA to 10 percent, with the possibility of returning part or all of the increase to the companies. The upshot of these proposals would have been a sharp reduction in underwriting gains compared with historic program returns.

The industry responded to these proposals by arguing that the A&O concepts were flawed, the reinsurance proposals would not achieve intended rebalancing objectives and would unnecessarily increase public sector risk, and the overall funding reductions were so excessive as to cause serious harm to the companies, agents, and farmers. After two subsequent drafts and technical corrections, SRA negotiations were completed in mid-2010, and the 2011 SRA was signed by all 16 companies. The final ver-

Figure 10  
2009 MPCI Premium and Loss Ratios –  
All Plans Combined



sion has two rather than four state groups for reinsurance terms, and the terms improve potential underwriting gains compared with the initial draft. The Assigned Risk Fund was retained and the net book quota share is set at 6.5 percent, with 1.5 points returned to the companies operating in underserved states. The reference price concept was eliminated, replaced by a cap on A&O payments and a cap on agent commissions. In addition, several of the industry's recommendations for the SRA Appendices were adopted. Nevertheless, the final funding reductions in the 2011 SRA are estimated by RMA at \$6 billion over 10 years, an unprecedented level that will certainly necessitate company and agent adjustments over the next several years.

## Conclusion

The crop insurance industry continued to effectively deliver expected benefits and services to farmers on a timely basis in 2009, despite excess moisture, drought, and freezes in various parts of the country. Farmer participation in the program remains high and the companies providing coverage are financially sound. The Crop-hail program, critical for providing security against localized damages that might otherwise fall within farmers' deductibles under the Federal program, provided essential protection to producers during 2009, one of the

highest loss years in program history. The Federal Crop Insurance Program continues to perform successfully as envisioned by Congress and is the preeminent risk management option for producers to safeguard the sustainability of their farm business. In addition to protecting against natural disasters, producers increasingly select revenue insurance to protect against price risks caused by economic and other factors. Revenue insurance is indispensable for most farmers today, ensuring access to credit, enabling forward contracting, and protecting against damaging price declines.

The 2008 Farm Bill and the 2011 SRA will be major financial tests for the companies and the agent workforce in coming years. As agriculture looks toward Congressional budget challenges in 2011 and another farm bill in 2012, the funding reductions now being taken by the crop insurance industry must be understood and recognized. Crop insurance, a public-private partnership that involves farmers who pay a premium and make conscious risk management choices, is now foremost among the portfolio of farm programs that help producers survive in a risky world. The next step in the program's evolution should be to make it even stronger by increasing protection and coverage with the use of improved crop insurance tools that address the unmet needs of producers.