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It was a day that started out as many workdays do, with the familiar comfort of routine. The making of coffee, gathering materials for work, thoughts about a meeting, a deadline, calls that had to be made. But, as the world knows, September 11 was not to be an ordinary day. It was the morning of the worst terrorist attack in U.S. history.

This tragedy not only deeply affected the citizens of New York City and Washington, D.C., but the nation and, indeed, the free and civilized world. I’m sure many of you called family and loved ones on that day and in the days following. Some of NCIS’ members had offices in the World Trade Center. We spent several days trying to find out if they were okay and thankfully, all of those people have been accounted for. It’s sad that it sometimes takes a tragedy to put our lives into perspective. And even though we need to try and move on with our lives and get back to business, may none of us ever forget the profound effect the events of September 11 had on our lives. We need to remember to tell those closest to us how much we love them every day. And we need to keep the love for our great country and the wonderful patriotic spirit that has arisen from this strong throughout our nation.

Our thoughts and prayers are with everyone who lost family, friends, and loved ones. We have already learned through the terrorist attacks of the evil that human beings can be capable of. But people’s generous and heartfelt outpourings of help throughout the nation illustrate the goodness and generosity that is our country’s greatest potential. Many of you have asked how you can help those who have been so affected by this event. If you haven’t already done so, we encourage you to give to any of the organizations listed here or to the charity of your choice. Now is the time to come together and put our differences aside. Now is the time to rise up and be strong and courageous for our country and the people who live here. God Bless America and God Bless You.

To contribute to the support and relief of the victims and families affected by the September 11 tragedy, please contact:

- United Way September 11 Fund
  Phone: 212-251-4035
  www.september11fund.org

- American Red Cross Disaster Relief Fund
  Phone: 800-HELP-NOW
  www.redcross.org

- New York Firefighter’s Memorial Fund
  Phone: 877-863-4783

- Federal Employees Education & Assistance Fund - World Trade Center/Pentagon Fund
  Phone: 800-323-4140
  www.feea.org

- Americares
  Phone: 800-486-HELP
  www.americares.org

Or visit:
www.Libertyunites.org

By Bob Parkerson, NCIS

CROP INSURANCE TODAY
Farmers face an ever-changing landscape of weather, prices, yields, government policies, global competition, and other factors that affect their financial returns and overall welfare. With the shift toward less government intervention following passage of the 1996 Farm Act came recognition of the need for a more sophisticated understanding of farm risk and risk management. Risk management strategies can help mitigate the effects of swings in supply, demand, and prices, so that farm business returns can be closer to expectations.

Risk management is, in general, finding the combination of activities most preferred by an individual farmer to achieve the desired level of return and an acceptable level of risk. Risk management strategies reduce risk within the farming operation (e.g., diversification or vertical integration), transfer a share of risk outside the farm (e.g., production contracting or hedging), or build the farm’s capacity to bear risk (e.g., maintaining cash reserves or evening out cash flow). Using risk management does not necessarily avoid risk altogether, but instead balances risk and return consistent with a farm operator’s capacity to withstand a wide range of outcomes.

Although farms vary widely with respect to enterprise mix, financial situation, and other business and household characteristics, many sources of risk are common to all farmers, ranging from price and yield risk to personal injury or poor health. But even when facing the same risks, farms vary in their ability to weather shocks. For example, in an area where drought has lowered yields, falling prices resulting from large worldwide production could have devastating consequences for local farm incomes. With such a downturn, some bankruptcies are likely to occur, and producers who are highly leveraged and have small financial reserves or lack off-farm income would be most vulnerable.

What do farmers themselves say about the risk they face? USDA’s 1996 Agricultural Resource Management Study (ARMS), conducted in the spring of 1997 (about a year after passage of the 1996 Farm Act), asked producers how concerned they were that certain types of risk could affect the viability of their farms. Three risk factors of greatest concern to farm operators were uncertainty regarding commodity prices, declines in crop yields or livestock production, and changes in government law and regulation. Issues such as prices and yield
have historically been a focus of government farm programs. But new policy areas, such as water pollution control and waste management, may well affect future legislation and regulation of agriculture and pose new challenges to operators.

ARMS data show that producers specializing in wheat, corn, soybeans, tobacco, and cotton were generally more concerned about the threat of low yield and/or low price than any other risk. Reduced government intervention in markets for program crops (wheat, corn, cotton, and other selected field crops) under the 1996 Farm Act may have heightened producers' uneasiness about price risk.

Producers of other field crops, nursery and greenhouse crops, and poultry expressed greater concern about changes in laws and regulations than about other risks. This perhaps reflects fears that changes in environmental and other policies could require costly compliance by the agricultural sector. Producers of the other field crops may be wary of changes in regulations addressing soil conservation, land use, and tillage practices, while livestock producers may be particularly concerned about regulations related to waste management and the spread of disease.

Livestock producers also expressed concern about their ability to adopt new technology, perhaps because failure to invest in new production techniques could put them at a cost disadvantage to other producers. For farm operators involved in contracts, expenditures imposed by contractors, such as modification of an existing livestock building, may add to risk.

**Price & Yield Swings Pose Primary Risk**

The possibility of lower-than-expected yield is one of the risks identified in the ARMS as a major concern to farmers. Yield variability for a given crop varies by geographic area and depends on factors such as soil type and quality, climate, and use of irrigation. Yield variability for corn, for example, tends to be lowest in the central Corn Belt, where soils are deep and rainfall is dependable, as well as in areas that are irrigated. In Nebraska, where much of the corn production is irrigated, yield variability is quite low. Yield variability is also low in

### What Steps Would Farmers Take to Manage Financial Difficulties?

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<th>Management/Financial strategy</th>
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*A annual gross sales under $250,000. **A annual gross sales $250,000 or more.

On the Cover

Crop insurance will soon become a viable risk management option for farmers in the Republic of South Africa. The background phone on the cover shows a very productive vineyard in the Western Cape Province. Read more about this in the article starting on page 16.

Will Cramer, Farmers Mutual Hail Insurance Company of Iowa, lower left-hand corner wearing the NCIS hat, was only one of the many company adjusters who served as plot leaders at the NCIS schools and field days this past summer. Read more about these educational activities beginning on page 7.

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Iowa, Illinois, and other Corn Belt states, where climate and soils provide a nearly ideal growing environment for corn production.

In areas less well suited to corn production, yield variability is generally higher, and producers must deal with the prospect of yields that can deviate significantly from planting-time expectations. Risks associated with high yield variability and the resulting income variability can be mitigated by programs such as Federal crop insurance, as well as by diversification and other tools to help spread farm-level risk.

Like yield variability, price variability differs among commodities. In 1987-96, crop prices showed relatively more variability than livestock prices, largely because crop supplies are affected by swings in crop yields while livestock supplies have been more stable—although recent variability in the hog market illustrates some exceptions exist. Crops that exhibited the highest price variability (deviations exceeding 20 percent above or below the mean) include dry edible beans, peas, lettuce, apples, rice, grapefruit, and grain sorghum. The variability of beef cattle, milk, and turkey prices was less than 10 percent, perhaps reflecting lower production risk and, in the case of milk, the existence of a Federal dairy program.

Price variability can change across time depending on year-to-year differences in crop prospects, changes in government program provisions, and shifts in world supply and demand conditions. For example, corn price variability was quite high during the 1920s and 1930s, due largely to the collapse of grain prices after World War I and very low yields in 1934 and 1936. Corn prices stabilized during the 1950s and 1960s, a period of high government support, stable yields, and consistent demand. Sizable purchases of corn by Russia early in the 1970s affected variability during that decade, while low U.S. yields in 1983 and 1988 contributed to increased corn price variability in the 1980s. Variability returned to near long-term average levels in 1990-96.

“Natural Hedge”
May Stabilize Revenues

Price and yield risks faced by a producer in a given situation, as well as the strength of the relationship between price and yield—the price-yield correlation—can influence the effectiveness of different risk management strategies. The stronger the negative correlation (i.e., yield and price moving in opposite directions), the better the “offsetting” relationship (or “natural hedge”) works to stabilize revenues.

The price-yield correlation for a commodity tends to be more strongly negative for farms in major producing areas, because yields there are more positively correlated with national yields, and crop yields among farms within a region tend to move together. For example, in a major corn-producing area such as the Corn Belt, corn yields tend to be more positively correlated with a national corn yield, and therefore more negatively correlated with the national corn price. For wheat,
A Selection of Strategies for Mitigating Risk

Farmers have many options in managing the types of risks they face. For example, producers may: 1) plant short-season crop varieties that mature earlier in the season to beat the threat of an early frost; 2) install supplemental irrigation in an area where rainfall is inadequate or unreliable; or, 3) use custom machine services or contract/hired labor to plant and harvest quickly during peak periods.

Most producers use a combination of strategies and tools, because they address different elements of risk or the same risk in a different way. Following are some of the more widely used strategies.

- **Enterprise diversification**—assumes returns from various enterprises do not move up and down in lockstep, so low returns from some activities would likely be offset by higher returns from other activities. Diversification can also even out cash flow. According to USDA data, cotton farmers are among the most diversified in the U.S., while poultry farms, with poultry and poultry products accounting for 96 percent of the value, on average, of their production, are the least diversified.

- **Vertical integration**—generally decreases risk associated with the quantity and quality of inputs (or outputs) because the vertically integrated firm retains ownership control of a commodity across two or more levels of activity. Vertical integration also diversifies profit sources across two or more production processes. In farming, vertical integration is most common for turkeys, eggs, and certain specialty crops.

- **Production contracts**—guarantee market access, improve efficiency across the production process. On the downside, production contracting can limit the entrepreneurial capacity of growers, and contracts can be terminated on short notice.

- **Marketing contracts**—set a price (or pricing mechanism), quality requirements, and delivery date for a commodity before harvest or before the commodity is ready to be marketed. The grower generally retains ownership of the commodity until delivery and makes management decisions. Farmers generally are advised to forward price less than 100 percent of their expected crop until yields are well assured to avoid a shortfall that would have to be made up by purchases in the open market.

- **Futures contracts**—shift risk from a party that desires less risk (the hedger) to one who is willing to accept risk in exchange for an expected profit (the speculator). Farmers who hedge must pay commissions and forego interest or higher earning potential on money placed in margin deposits. Generally, the effectiveness of hedging in reducing risk diminishes as yield variability increases and the relationship (correlation) between prices and yields becomes more negative. Hedging can reduce, but never completely eliminate, income risk.

- **Futures options contracts**—give the holder the right, but not the obligation, to take a futures position at a specified price before a specified date. The value of an option reflects the expected return from exercising this right before it expires and disposing of the futures position obtained. Options provide protection against adverse price movements, while allowing the option holder to gain from favorable movements in the cash price. In this sense, options provide protection against unfavorable events similar to that provided by insurance policies. To gain this protection, a hedger in an options contract must pay a premium, as one would pay for insurance.

- **Liquidity**—involves the farmer’s ability to generate cash quickly and efficiently in order to meet financial obligations. Some of the methods that farmers use to manage liquidity, and hence financial risk, include: managing the pace of investment (which may involve postponing machinery purchases, selling assets (particularly in crisis situations), and holding liquid credit reserves (such as access to additional capital from lenders through an open line of credit).

- **Crop yield insurance**—provides payments to crop producers when realized yield falls below the producer’s insured yield level. Coverage may be through private hail insurance or federally subsidized multiple peril crop insurance. Risk protection is greatest when crop insurance (yield risk protection) is combined with forward pricing or hedging (price risk protection).

- **Crop revenue insurance**—pays indemnities to farmers based on revenue shortfalls instead of yield or price shortfalls. Three revenue insurance programs, Crop Revenue Coverage, Income Protection, and Revenue Assurance, are offered to producers in selected locations. All three are subsidized and reinsured by USDA’s Risk Management Agency.

- **Household off-farm employment**—may provide a stream of income to the farm operator household that is more reliable and steady than returns from farming. In essence, household members working off the farm is a form of diversification. In 1996, according to USDA’s RUR data, 82 percent of all farm households reported off-farm income exceeding farm income in every sales class (including very large farms), at least 28 percent of the associated farm households had off-farm income greater than farm income.
RISK MANAGEMENT

where production is more dispersed and U.S. production is a smaller share of the world’s crop, the natural hedge is weaker, making incomes more variable for most wheat growers.

When other factors are held constant, the magnitude of a producer’s natural hedge has important implications for the effectiveness of various risk-reducing tools. A weaker natural hedge (where low prices more often accompany low yields), for example, implies that forward contracting or hedging in futures is more effective in reducing income risk than when a strong natural hedge exists. In this situation, locking in a sales price for part of the expected crop works to establish one component of the farm’s revenue, reducing the likelihood of simultaneously low price and low yield. As a result, hedging can sometimes be an effective risk management strategy for farms outside major producing regions.

Deciding how much to hedge is more complicated than just assessing price-yield correlation. Income risk is also a function of price variability and yield variability. Hedging effectiveness declines as yield variability increases, and corn yields are typically more variable outside the Corn Belt. Since yield variability tends to outweigh the impact of price-yield correlation, hedging is generally not as effective in less consistent production areas as in the Corn Belt.

No Single Approach Suits All Farms

While factors such as yield variability, price variability, and price-yield correlation can be used to gauge the likely effectiveness of various risk management strategies, producers’ attitudes toward risk are also determinants in selecting strategies. Some farmers are less risk averse than others, and, for example, might feel more comfortable in a highly leveraged situation (e.g., carrying a large mortgage) than would others. Similarly, producers may differ in their preferences for risk management tools, some perhaps feeling more at home with forward contracting with a local elevator while others may turn to hedging to manage their risks.

Because farmers face different degrees of variability and differ in their attitudes toward risk, there can be no single approach to suit all farms. Overall, farmers appear to be relying increasingly on forward contracting and other risk management tools to reduce their farm-level risks, due in part to the recent trend toward reduced government intervention in farming. Even so, the 1996 ARMS indicates that keeping cash (or liquid assets) on hand for handling emergencies and for taking advantage of good business opportunities was the number-one strategy used by farms of every size, every commodity specialty, and in every region.

Farm size apparently plays a role in choice of risk management strategy. The ARMS found that operators with annual gross sales of $250,000 or more were more likely than smaller operators to use hedging, forward contracting, and virtually all other types of risk management strategies. In contrast, operators with sales under $50,000 were less likely to use forward contracting or hedging, and fewer reported using enterprise diversification to reduce risk.

The ARMS data also indicated that producers in the Corn Belt and Northern Plains were somewhat more likely to use risk management strategies than those in the Southern Plains, Northeast, and Appalachia. About 40 percent of producers in the Corn Belt and Northern Plains regions used forward contracting in 1996 and about 25 percent used hedging in futures or options.

Farm legislation also affects adoption of risk management strategies. About one-third of producers nationwide reported receiving direct government commodity payments in 1996. Of these, between five and eight percent (one to three percent of all U.S. farmers) indicated they had added or increased use of at least one risk management strategy or tool (forward contracting, hedging, insurance, or other strategy) in 1996 in response to provisions of the 1996 Farm Act.

A period of financial stress may induce an operator to shift risk management strategies. The 1996 ARMS questioned farmers about production, marketing, and financial activities they might undertake if faced with financial difficulty. Producers with sales of $50,000 or more indicated they would adjust costs, improve marketing skills, restructure debt, and spend more time on management decisions.

Producers with sales under $50,000 (who generally receive a substantial share of household income from off-farm sources) also responded that they would adjust costs when faced with financial difficulties. But small-farm operators would be more likely than larger operators to sell farm assets or scale back their operations. Further, small-scale producers were much less likely to spend more time on management or on improving their marketing skills.

When individual efforts to deal with financial stress fail and large numbers of farms face significant financial loss, the Federal government has often stepped in with assistance to agriculture in the form of direct payments, loans, and other types of aid. Such assistance is undoubtedly critical for producers who are facing financial difficulty. However, it raises questions as to how the potential for direct payments in times of disaster affects producers’ decision making with regard to tools and strategies that can help them manage risk and perhaps avoid financial stress. Linking receipt of government assistance to adoption of a risk management strategy, namely the purchase of crop insurance, encourages producers to gain experience with a program that can provide protection in crisis years in the future. Understanding the risks faced in farming and the use of different tools by producers can lead to new strategies and educational approaches to cut risk and can perhaps help reduce the incidence of farm financial stress.

Editor’s Note: This article first appeared in Agricultural Outlook. It is reprinted here with permission.
During the months of April through November, NCIS conducts many educational activities for crop insurance adjusters and supervisors. So, what makes a loss adjuster school successful? Several different approaches to schools work. However, regardless of the format, some key elements seem to create successful schools. The earlier a school is planned, involvement of all companies in an area, choosing a mix of new and established crops and the use of university and extension resources help increase the chances of success. Nonetheless, the single most important element of a successful school is the involvement of knowledgeable and enthusiastic instructors. NCIS would like to thank ALL of our members for supporting the schools and each of the schools’ chairmen and instructors for their work and dedication in making our industry’s continuing education a success. We could not do these schools without you. Below is a recap of some of the schools and field days held this year.

**Soybean Loss Adjustment School**

A mes, Iowa

August 1, 2001

“Schedule it and they will come” should have been the buzzwords as over 115 brave souls gathered to endure the extremely high heat and humidity of a not-so-typical August day in central Iowa. Not a field of dreams by movie standards, but truly a noteworthy educational place to spend the day. The setting for the 2001 NCIS soybean loss adjustment school was the Iowa State University Field Extension Education Laboratory in A mes.

The day started with a welcome and introduction by school coordinator, Dr. Dale Farnham. The morning session was filled with information by Dr. Lance Gibson on soybean growth and development; Dr. Keith Whigham on soybean management; Dr. Bob Hartzler on weed management; Dr. X.B. Yang on disease management; and was completed with soybean loss adjustment procedures, taught by some of the most experienced adjusters from the great state of Iowa.

After a catered lunch, the real work began. The group migrated to the test plots, which had been prepared and hailed on by the Iowa Regional/State...
Committee members that helped to plan the school, to assess the damage done to the soybeans. A dusting was done in 12 groups, and all groups looked at soybeans in both the reproductive and vegetative stages of growth and at several degrees of damage.

With the field exercise over, the group had the privilege to listen to a presentation by noted climatology expert, Dr. Elwynn Taylor. His vast knowledge of climate, weather and agriculture, combined with his own razor sharp wit, not only informed but entertained the crowd for what turned out to be an extremely enjoyable hour. With the learning accomplished, the group then tested their knowledge of the material covered during the school. The tests were reviewed, the questions were answered and the school was officially over for another year.

Hats off to Dr. Farnham and his associates, and to Curt Linneman, Farmers Mutual Hail Insurance Co. of Iowa, school chairman, for another fine educational experience for the crop insurance industry. Thank you for your time and energy on a job well done.

Crop-Hail and MPCI Corn and Soybean School/Field Day Centerville, South Dakota August 7-8, 2001

With virtually nothing to cast a shadow, a shade tree became a premium commodity at the 2001 NCIS Corn and Soybean School held at the Southeast South Dakota Experiment Farm near Centerville. Although the heat and humidity, combined with the lack of a breeze, were almost unbearable, it didn’t dampen the enthusiasm of about 120 claims adjusters as they gathered to learn new skills and share thoughts and ideas with others.

The annual school, which is a two-day event, was broken down into two sections. The first day of the school was reserved for new adjusters and their time was devoted to basic hands-on instruction in crop loss adjustment with classroom training and field instruction. Bin and wagon measurement started the session and the group was then broken down into smaller units for more one-on-one time with the seasoned instructors. They listened to the procedures and then went to the field to practice the newly learned skills in corn and soybean loss adjustment. The second day of the school dawned hot from the start, but it didn’t keep learning from taking place. After the morning welcome, the crowd was informed as well as entertained by the knowledge and humor of Dr. Leon Wadge, renowned agriculture specialist from South Dakota State University. His three-hour farm tour, which took us to the corn and soybean fields, was so filled with facts and fun that the unpleasantness of the heat was almost forgotten.

Adjusters measure a wagon at the school in Centerville, South Dakota.

Aafter a catered lunch of brats and burgers, the crowd eagerly embraced the work at hand. Forage alfalfa was added to the already present corn and soybean procedure schedule for this second day. The group was broken down into three groups and the proper loss adjustment procedures for the R stage in soybeans, ear damage in corn and alfalfa forage were taught and practiced.

In spite of the heat, the school was a great success and thanks are due to school chairman, Darrel Guthmiller; The Hartford, and all of the sponsors for the many hours that were donated to keep education on the forefront of our industry.


With rain threatening on the Western skyline, the 55 crop adjusters at this NCIS crop-hail loss adjustment school were forced to gather their samples of wheat and barley and head for the safety of the machine shed at the University of Missouri Bradford Research Center located in Columbia. Rain, although always welcome, was not a stranger to the area this year, as the spring in central Missouri had been the wettest in many years.

The first afternoon of the two-day school was headlined with presentations by Dr. Laura Sweets on plant disease; Dr. Wayne Bailey on insect damage; and, Dr. Bill Johnson on chemical damage. The speakers related to the current problems and possible solutions of crop production techniques that would have a significant impact on the crop insurance industry. The second segment of the afternoon included classroom instruction on the adjustment procedures for wheat and barley and was reinforced with actual hands-on adjustment and practice in the field. A farm tour was scheduled, but the weather once again forced us to seek shelter. The end to an extremely informative day was culminated with a terrific barbecue dinner and time to relax and socialize.

School resumed at 7:30 the following morning with classroom instruction on the loss adjustment procedures for oats and soybeans. This exercise was followed by once again going into the field to get some good practical experience in adjust-
ing. One unique feature of this school was dividing the attendees into groups that utilized the experience of the “seasoned” adjusters as teachers for the new or less-experienced adjusters.

Once again the quality of the education proved why this is one of the premiere schools in the industry. Kudos and praise and a big thank you to Charlie Boster, school chairman, and all of those who worked so hard to ensure this school’s success.

**Crop-Hail Corn and Soybean School/Field Day**

Champaign, Illinois

**August 14-15, 2001**

Because of the mid-August date for this school, extremely warm weather is usually the norm that everybody has to endure. The 2001 school was a welcome exception to this trend. On both days the weather was absolutely beautiful with temperatures in the low to mid 70s.

This year in Champaign, 110 adjusters attended the Crop-Hail School at the University of Illinois Research Farm Site. Field instruction was provided on crop-hail procedures for corn and soybeans. Several different plots were provided for each crop. Each plot was designed to give the student experience in adjusting corn and soybeans at a growth stage that varies from the stage of growth of the other plots. Most of the time involved in the one-and-one-half day school was spent in small groups (approximately five per group) with an experienced plot leader, completing loss evaluations for the various plots being evaluated.

Dr. Gary Pepper, Dr. Emerson Naafzer, and Dr. Aaron Hager acted as guides for a tour of the research farm on Tuesday afternoon. Upon the completion of this tour, the groups resumed their evaluations in the various plots.

Alan Anselm with Agri-Serve, chairman for the school, indicated that most of the companies contacted to provide help with this school provided personnel to assist with the instruction process. The Illinois/Wisconsin Regional/State Chairman, Ed Longman, indicated that a preliminary look at the evaluation forms indicated a high degree of satisfaction with the school and that the attendees liked the small groups and felt the company plot leaders did an excellent job.

**New Adjuster and Crop-Hail Corn and Soybean School**

Lamberton, Minnesota

**July 18-19, 2001**

Over 115 people from twelve crop insurance companies attended the Crop-Hail New Adjuster Corn and Soybean School, held in Lamberton. The school was held at the University of Minnesota Southwest Experiment Station. Corn plots were provided so that adjusters could experience staging various size plants. Blocks of plants smaller than the 10-leaf stage, as well as blocks of corn plants larger than the 10-leaf stage, were provided so that adjustments for stand reduction and defoliation could be addressed on plants of both sizes. Blocks of soybean plants were also provided to allow for the staging and adjustment for stand reduction and defoliation damage for both “V” and “R” stage soybeans.

The first day of the school was devoted to new adjusters. The entire half-day was spent in the field in groups rotating between plots of corn, soybeans, and small grains. Emphasis was given to staging of corn, soybeans, and small grains with the basic adjusting procedures being introduced for each of the three crops.

Steve Quering, from the Experiment Farm, conducted a tour of the facilities and gave a demonstration of the hail machine that was used to defoliate corn and soybean plants. Dr. Dale Hicks provided a presentation on optimum soybean populations; Dr. Jeff Gunsolus discussed herbicide and hail considerations; and, Dr. Neal Eash presented a growing season update.

NCIS Minnesota Regional/State Chairman, Harold “Gabby” Pierce, indicated that Dennis Langehaug from Rain and Hail L.L.C. and Harold Olson from Farmers Mutual Hail Insurance Company of Iowa, co-chairmen of the school committee, were instrumental in organizing this year’s school. Gabby also indicated that the school was highly supported by members of the Minnesota Regional/State Committee and that evaluations completed at the conclusion of the school indicated the general response to the two days of activities was very favorable.

**MPCI Potato Grading and Loss Adjustment School**

Lansing, Michigan

**June 6-7, 2001**

On June 6 and 7, the second ever MPCI Potato Grading School was held in Lansing, Michigan. This year’s school was again co-sponsored by the Indiana/Ohio/Michigan Regional/State Committee. The meeting was well attended with 49 adjusters and company personnel representing nine companies and 11 states.
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Both the Northern Potato and the Central & Southern Potato Loss Handbooks mandate that for an adjuster to be eligible to grade potatoes he must have attended and passed a USDA or state potato grading class and the insurance provider has authorized the adjuster to grade potatoes. In addition to instructions on the grading of potatoes, this year’s school included instructions on policy procedures, individual policy endorsements, weight method appraisal procedures and loss forms completion.

We wish to extend a special thanks to Michael Moore, Field Supervisor for USDA, AMS Fruits & Vegetable Division and Don Lawrence, Middle Region Supervisor for the Michigan Department of Agriculture, for their excellent instructions on potato grading.

Crop-Hail Rice Loss Adjustment School
Stuttgart, Arkansas
August 1-2, 2001

Historically, rice is one crop that generally has very few hail losses each year. However, this does not mean that adjusters should not be trained on how to properly adjust rice. The Gulf States co-sponsored the Crop-Hail Rice Loss Adjustment School at the University of Arkansas Research and Extension Center in Stuttgart (rice and duck capital of the world). The meeting was well attended with 37 adjusters and company personnel representing five companies.

Those in attendance were instructed on the various rice diseases, insects and their identification. Drs. Lee and Barnhardt, for their knowledge and instructions; Larry Johnson and Larry Catt, Great American Ins. Co., for their help in organizing the school; and, to the number of plot leaders for their instructions on proper loss adjusting of rice in the field.

MPCI Onion School
Vidalia, Georgia
April 24, 2001

Fifty-three adjusters and field supervisors, representing nine companies and RMA, attended the MPCI Onion School held in Vidalia. Onions have been insurable in selected Georgia counties since 1998 and approximately 14,000 acres were insurable during the 2000 crop year. School chairman, Billy Moore, Rain and Hail L.L.C., reviewed the crop provisions and loss adjustment handbook with the group and Reid Torrance, Tattnall County Extension Agent, gave a presentation about onion diseases, pests and cultural practices. After the classroom session the group traveled to a nearby packing shed and was able to observe the process followed after onions are harvested. School attendees were then able to spend some time in the field applying the appraisal methods reviewed earlier in the day.

MPCI Clam School
Cape Charles, Virginia
June 20-21, 2001

“Be prepared for water waist-deep” was the added caution in the bulletin for the MPCI Clam School held June 20-21, 2001. Twenty-seven adjusters and supervisors braved the warning and gathered in Cape Charles for a two-day school to study the pilot program that was established for the 2000 crop year. The school began with Clif Parker, RMA Raleigh Regional Office, reviewing the clam crop provisions followed by school chairman, Charlie Fox, Rural Community Insurance Services, covering the clam loss adjustment procedure and forms.

Participants then loaded up in three boats and headed out to the clam beds of RCIS adjuster Hank Jones, who earlier in the day shared his knowledge about the cultural practices of growing clams and the clam industry in general. He explained to
Hank Jones, adjuster for RCIS, shared his knowledge of adjusting clams with the group.

Clam beds and showed the group how clams are seeded, cared for and harvested. Participants were able to see some of the predators of clams and observe how samples are taken for appraisal purposes. A group social followed the fieldtrip where everyone enjoyed steamed clams and fellowship. The second morning was spent working through loss exercises to gain a better understanding of the claims process and paperwork.

MPCI Fresh Market Tomatoes and Peppers
Clinton, North Carolina
June 28, 2001
Tomatoes and peppers, two crops grown and insured in many areas throughout the East and Southeast regions, were the focus of the Fresh Market Tomatoes and Peppers School held in Clinton on June 28, 2001. The school was well attended by fifty-eight people representing eight companies and RMA. Gerry Wessing, Rain and Hail L.L.C., reviewed the fresh market tomato policy terms and loss adjustment procedures for both tomatoes and peppers. Loretta Sobba, NCIS, reviewed the pepper policy terms. Allan Thornton, Sampson County agricultural extension agent, provided some very useful information about the cultural practices and the importance of both crops to the economy in Sampson County. Following the classroom portion of the school, participants traveled to a nearby pepper field where they were able to make some counts and see some typical damage that adjusters may encounter. The group then loaded up and traveled to a tomato field for a first-hand look at practices common to tomato production. Thank you to Gerry Wessing for his work in organizing this school.

MPCI Loss Adjustment Manual School
Tifton, Georgia
August 15, 2001
This year the Southeast and East Regional/State Committees wanted to emphasize information found in the MPCI Loss Adjustment Manual so a school was organized for August 15, 2001, in Tifton, GA. Seventy-one people from eight companies and RMA gathered at the Rural Development Center in Tifton for a one-day review of selected portions of the LAM. Terry Young, Great American, reviewed adjuster verification responsibilities, inspection/certification requirements, and unreported acreage/units; Ted Waller, American Agrisurance, covered the topics of establishing/verifying production and special claims procedure; and Charles Goode, Rain and Hail L.L.C., reviewed the irrigation guidelines followed by a presentation on quality adjustment of grain crops, focusing on changes in the county actuarial documents for 2001. Before the day ended, the group had a chance to apply quality adjustment procedures to corn, soybean and wheat examples. This provided time to answer questions and increase everyone’s understanding. Thank you to school chairman, Terry Young, for another successful school.

Two adjusters at the Montana Wheat School discuss the finer points of small grains appraisals.

Gene Todd, RCIS, provided instruction for obtaining moisture content for forage production at the school in Lewistown, Montana.

MPCI Adjusted Gross Revenue
Scranton, Pennsylvania
August 28-29, 2001
Forty people gathered in Scranton, PA on August 28-29, 2001 to review the AGR policy terms, forms and loss calculations. School chairman, Dennis Chapman, Rain and Hail L.L.C., who has worked with the AGR program since it was first introduced in the Northeast in 1999, provided first-hand knowledge about the program and gave a presentation of the AGR policy terms and standards handbook. Mike O’Connor, NCIS, reviewed the loss
calculations and the forms necessary to work claims. During the morning session of the second day, class participants were able to put a pencil to paper and work through some examples and gain tips as to where errors are common. Everyone agreed the school was a very good learning experience and left with a good initiation to the AGR program. The efforts of the instructors were greatly appreciated.

**Loss Adjuster School/Field Day**

**Lewistown, Montana**

**June 25-26, 2001**

The annual Montana Loss Adjuster School/Field Day was held at the Research Center in Moccasin. Adjusters were provided basic adjusting knowledge for corn, safflower, forage production, peas/beans, sunflowers, and wheat.

The second day of the school was classroom study. Topics covered were malt barley, revenue products, irrigation, fraud, waste and abuse, prevented planting, and quality adjustment. With the prevailing dry conditions in Montana, the irrigation session commanded a great deal of attention. Thanks to Pat Flanagan for the way he handled a difficult topic. Approximately 91 industry people were in attendance for the two-day session. We would like to thank Mark Masters, North Central Crop Insurance, for his work in organizing the school.

**MPCI Wheat School**

**Pratt, Kansas**

**March 29, 2001**

The Kansas/Oklahoma Regional/State Committee experienced continued success in sponsoring timely instruction to company adjusters. Pratt was the sight of the first of three schools to be sponsored by the Committee. This school focused on post-tillage wheat adjustments. The session began with classroom study followed up with actual in-field instruction. This year’s schools focused on providing instruction to new adjusters that would be of immediate benefit to them in the field. Approximately 63 people were in attendance. Thank you to Bryant Tjeerdsma, Farmers Mutual Hail Insurance Company of Iowa, for his work in planning this school and the schools in Dodge City, Kansas.

**MPCI & Crop-Hail Corn & Soybean School**

**Dodge City, Kansas**

**July 10-11 and September 17-18, 2001**

The second school of the year sponsored by the Kansas/Oklahoma Regional/State Committee, held in Dodge City, began with an evening classroom review of staking the crop, determining sample size, and completion of paperwork. A actual hail damaged sooybeans and corn plots were utilized to provide real hands-on experience the following morning.

The focus of the school was to identify when to defer a claim. The soybean plot had cutoffs in excess of 65 percent and some bruising, while the corn plot had cripples and tie-ins. Ninety-three people attended the July school. The September 17-18 school followed the same format beginning with an evening session to review procedure and discuss the actual adjustment process to be used in the field the following morning. Fieldwork consisted of pod and bean counts for soybeans and weight method for corn. Fifty-two people attended the September school; many of whom had also attended the July school.

**Adjusted Gross Revenue School**

**Spokane, Washington**

**June 28, 2001**

The Northwest Regional/State Committee sponsored an Adjusted Gross Revenue (AGR) adjuster training school that was attended by 46 people. The school was a departure from typical MPCI adjuster schools because actual determination of plant damage was not an element of the school. To create an understanding of the policy and paperwork involved with the program, Mike O’Connor of the NCIS Training Department presented the NCIS AGR Training Manual. Mike’s presentation included actual exercises in coverage amount determination and paperwork completion. Once the classroom study was completed, representatives from each company participated in a videoconference with Dennis Chapman from Raleigh, N.C. Dennis provided the group with an actual claim scenario to help better illustrate exactly what documentation and determinations are involved with the process. The videoconference was deemed as “the next best thing to being there.” A big thank you to Peter Seiler, North Central Crop Insurance, for his work as chairman of the school.
We’ve had excellent feedback from agents who receive their MPCI actuarial documents in electronic format, on CD-ROM. They like the convenience and portability that documents on CD offer. Documents on CD eliminate the time required for filing and greatly reduce retrieval time. If a paper copy is ever needed, it can always be printed from the CD.

Even though electronic documents are popular with agents now receiving them, roughly two thirds of all agents served by NCIS are still getting MPCI actuarial documents on paper. We’d like to change that.

If you’re an agent receiving paper documents, we encourage you to consider the electronic format. To help you evaluate electronic documents, we’ll be including a sample CD in the package of paper you’ll receive with the 2002 Spring crops mailing. When you find the sample CD in your package, please read the notice that comes with it. The notice has the following important bits of information:

- The files on the CD are samples only—they do not take the place of the paper documents in your package.
- They are probably not the same counties you receive on paper (every paper agent is receiving the same sample CD).
- They contain actuarial documents current only thru the 10/31/01 filing (in order to prepare thousands of sample CDs, we had to begin production several weeks in advance of the Spring crops release).
- Most of the files on the CD are “Portable Document Format” (PDF) files. To view PDF files, you need to have the Adobe Acrobat Reader program on your computer. If you don’t have this free program installed, you can install it from the CD.
- If you like what you see, and would like to switch from paper to CD, simply fill out and return the white, postage-paid postcard that also came in your package.
- If you have any problems, call 913-685-5456 for assistance or send an email to webmaster@ag-risk.org.

When you insert the CD into your computer’s CD drive, an “auto-run” program will start, and you should see a screen just like the one in the illustration above. If you don’t see the startup screen, chances are that the auto-run feature of your CD drive has been disabled. In this case, use the Windows Explorer program and navigate to your CD drive. Look for “autorun.exe” in the root of the CD. Double-click the autorun.exe program, and you’ll see the startup screen. The following is a brief description of each of the options you’ll see on the startup screen.

**Comprehensive Instructions**

In an effort to eliminate as much paper as possible, we’ve put the instructions for accessing the data that is contained on the CD right on the CD, in the form of a PDF file.

**Adobe Acrobat Reader**

If you read the notice that came with the CD, you know that the PDF files on the CD require the Adobe Acrobat Reader program to be installed on your computer. This is a free program that you can install by clicking this option.
How to View your Actuarial Documents
This option takes you to another screen that explains how to find your files on the CD. It also explains that there is a PDF version of your packing slip on the CD.

Open Crop Insurance Handbook
Agents who receive their actuarial documents on CD also have the option of receiving a PDF version of the Crop Insurance Handbook. The PDF Crop Insurance Handbook is identical to the paper version, and includes a hyperlinked table of contents and can be searched for key words or word combinations.

Browse NCIS Forms
Your CD contains a complete set of MPCI policy forms. These are included for reference only, and should not be substituted for forms your company has asked you to use.

FCIC Extra Information
In addition to the MPCI actuarial documents, the PDF Crop Insurance Handbook, and the NCIS forms library, your CD contains the following FCIC documents:
- Eligible Plant List and Price Schedule for the 2001 and 2002 Nursery crop insurance program
- "T" Yield tables
- Premium calculation work sheets
- Producer premium percentage tables
- A complete set of state and county code numbers

Visit NCIS Web Site
If you are connected to the Internet, this option will take you to the NCIS home page.

Sign up for On-Line Viewing
NCIS has recently developed a utility that allows agents to open and view their actuarial documents on-line, via the Internet. You can sign up for this service (currently free of charge to NCIS members and their agents) to supplement your paper and/or CD service, or to replace them.

Send us an E-Mail
If you're connected to the Internet and would like to contact the NCIS Webmaster, just click this option and it will initiate your email service. We welcome your questions and comments.

As you can see, there is much more to these CDs than just electronic actuarial documents. Furthermore, our intention is that they should be completely self-contained. Each CD you receive is complete as of the day it was created. When new or revised documents are issued, you will receive a new CD that contains everything. When you receive an updated CD, you can usually throw the previous one away (or use it as a coaster).

Actually, because the CD contains all documents released during the year, you will need to save the last CD you receive that includes documents released through the 12/31 filing. This final CD of the year becomes your archive. Documents released after the first of the year begin a new series of CDs, each one replacing the one that preceded it during the calendar year.

We hope you'll try the CD and consider switching from paper to electronic documents. If you open your package and there's no sample CD inside, please contact us and we'll be happy to mail one to you.
With development of new government programs and the constant change within the insurance industry itself, crop agents need to know that these changes will not effect the valued relationship they have with their clients. The United Crop Insurance Agents Association provides a voice for the growing concerns of our member crop agents. We not only address their concerns, we provide them with benefits that range from errors and omissions insurance and risk management tools to a monthly newsletter edited for us by the Doanes Agricultural Service. The United Crop Insurance Agents Association has been developed with the Crop Agent in mind and will continue to develop and support new programs that we believe best serve the interest of Crop Insurance Agents.

Crop Agent E&O Programs
The following is a list of E&O programs available to Crop Insurance Agents. If you have any questions, give us a call at 1-800-371-2333.

**Crop Insurance E&O:**

1. $250,000/$500,000 with $5,000/$7,500 Deductible.........First Agent $1,075 each additional Agent $975.
2. $500,000/$1,000,000 with $5,000/$7,500 Deductible......First Agent $1,275 each additional Agent $1,175.
3. $1,000,000/$2,000,000 with $5,000/$7,500 Deductible...First Agent $1,475 each additional Agent $1,375.

**Crop Insurance E&O with Property and Casualty included:**

4. $250,000/$500,000 with $5,000/$7,500 Deductible........First Agent $1,275 each additional Agent $1,175.
5. $500,000/$1,000,000 with $5,000/$7,500 Deductible......First Agent $1,575 each additional Agent $1,475.
6. $1,000,000/$2,000,000 with $5,000/$7,500 Deductible...First Agent $1,775 each additional Agent $1,675.

The Errors & Omissions program provides coverage for your negligent act, error or omission regardless of the company represented for Multi-Peril and Crop Hail policies. The program provides an automatic extended reporting period of Thirty Days (30) and legal expenses are included. The E&O Policy is written on a claims made basis.

**UNITED CROP INSURANCE AGENTS ASSOCIATION**

PO Box 533279, Harlingen, Texas 78553  Toll Free: 1-800-371-2333  Fax: 956-425-9350
South African agriculture is experiencing an important transition. This transition is being driven by the desire of the South African government to be fully integrated into the global markets, and to ensure a healthy domestic agricultural sector. South African leaders seek to actively include their entire farming population in the world economy through membership in the World Trade Organization (WTO). To achieve this, domestic farm programs such as risk protection and disaster relief need to comply with WTO guidelines.

A project funded by USDA, and directed by NCIS, has advised the South African Agriculture Department as they develop a risk management strategy that will protect their farmers and meet WTO conditions. NCIS’ involvement has been to provide leadership and the professional advice necessary to evaluate which types of crop insurance will meet their risk management needs, and could be successfully implemented. This project also included preparing draft legislation necessary to establish a multiple peril crop insurance program, tailored to their specific needs and conditions, for introduction on a pilot basis in South Africa.

The agriculture industry in South Africa is very volatile because of unpredictable weather conditions. Rainfall is typically unreliable and unpredictable; drought and floods are recurring problems. Large fluctuations in the average amount of rainfall are the rule rather than the exception in most areas. Years where rainfall is below average are more common than years with an above-average rainfall.

Furthermore, South Africa has an average annual rainfall of only 464 millimeters (mm), compared to the world average of 857 mm. In total, 65 percent of the country has an annual rainfall of less than 500 mm—usually regarded as the absolute minimum for successful dryland farming.

As is the case in other countries in similar latitudes, South Africa is periodically afflicted by drastic and prolonged droughts, which often end in severe floods. Drought is also a major contributing factor to the danger of fire damaging crop production and destroying farm improvements such as fences, irrigation equipment, buildings, stored commodities, and feed for livestock.

To accomplish the goal of providing effective and affordable protection to farmers against the potential financially devastating impact of adverse weather events, and stay within WTO parameters, the government is moving forward with the development of an agricultural risk management strategy that includes crop insurance as a major tool in managing crop production risk.

The development of this insurance-based agricultural risk management strategy has included a wide array of professionals in government, private industry, farm organizations, and academia. The development team traveled extensively across the country and sought the input and advice from a wide range of farmers. These technical specialists have worked together to assess crops and geographical locations where there is the greatest potential for developing a workable model, and to identify possible existing infrastructure, which might assist in ensuring a successful program.

Insurance is viewed as an important risk management tool because of the benefits to both individual producers and the general economy as a whole. By using insurance to protect against uncertain losses, the private sector becomes more involved in risk sharing and the burden on the public sector of shouldering the risk of uncertain events is reduced.

In general, crop insurance is an effective tool for managing the risks inherent in the production of agricultural commodities.
Effectively managing these production risks stabilizes farm operations and provides greater access to capital and increases financial stability. As individual producers become more economically stable, rural communities and associated agricultural businesses become stronger, leading to increased national economic health.

Perhaps the greatest benefit of a planned, insurance-based, risk management program for individual farmers is the potential for improving access to credit, particularly for crops with high initial investments. This is also particularly true for the South African government as it restructures its agricultural subsidy system to conform to requirements of the WTO and to coincide with other government priorities. As more and more production risk is transferred to individual farmers, there is also a cumulative affect, which serves to transfer additional risk to financial institutions that invest bank capital into the agricultural sector.

Currently, crop insurance, which is primarily limited to hail insurance and associated property and casualty risk, is available in South Africa on major agricultural crops. However, universal availability of crop insurance is non-existent and crop coverage is limited to selected...
The diversity in South Africa’s agricultural infrastructure requires unique approaches to meet the risk management needs of its farmers, whose operations range from highly developed commercial farms to small cooperative farms. The number of small cooperative farms is much larger than the number of commercial farms, but commercial farms are the major source of agricultural production. In terms of human capacity development, the use of insurance can be expected to be of particular value to small cooperative farmers. However, delivery of insurance to these small cooperative farmers presents the greatest challenge, while delivery to commercial farmers will be less difficult. Regardless of the degree of challenge, both sectors will be important to the building of a risk management insurance system since the inclusion of both will aid in the spreading of risk.

For an insurance program to be successful in the long-term, it must be actuarially sound. The building blocks of actuarial soundness are verifiable production records. Consequently, the pilot program is designed to provide the greatest protection to those producers who maintain adequate farm level production records. Those who engage in poor farming practices and lack the necessary historical production records that are key to the design of a successful risk management multiple peril crop insurance program, would qualify only for a lower level of protection.

As currently envisioned, the program will be constructed to offer protection to three classifications of producers based upon the quantity and quality of their production records and value of the commodity produced. The three groups of producers and types of coverage are:

- **Individual coverage:** This group includes those producers with sufficient historical records to ensure a statistically predictable level of production and a high cumulative value of commodities marketed.
- **Area coverage:** This coverage is for those producers with only one year of farm level data and a moderate cumulative value of commodities marketed.
- **Limited coverage:** This coverage is for those small-scale producers with no records and a small cumulative value of commodities marketed.

The first group (those with adequate records) would have insurance options available to them that would cover their unavoidable individual production risks. To be eligible for this individual coverage, farm producers must have several years of production records for the commodity being insured.

The second group would have insurance options available to them for widespread catastrophic risks only. Without individual historical records, these producers can only be protected against widespread losses that are felt across a larger area than just their individual farms. Over time, as these
producers maintain individual production records they can qualify for individual coverage. Rather than be eligible for conventional insurance coverage, producers with no records, or who grow small amounts of insurable commodities, would be protected through credit guarantees, triggered by area economic conditions. Specifically, loan guarantees are provided to village banks, such that, as economic conditions deteriorate in a given area, the financial stability of the village banks will not be impaired. This financial assistance program is designed to be transitory in nature. Individual producers will be provided the education and technical assistance necessary so that, over time, they can qualify to receive the full benefits of crop insurance.
RISK MANAGEMENT

Also, over time as more individuals producers are taught how, and encouraged to keep verifiable records, program strength and effectiveness will increase. This actuarial soundness will ensure long-term health and viability of the program. A strong crop insurance program will help ensure a strong agricultural sector.

The government is dedicated to the goal of seeing South Africa fully integrated into the world economy, where their farmers can reap the full benefits of participation in the global marketplace. Using crop insurance to provide effective and affordable risk protection to farmers is an important step in reaching that goal.

The National Department of Agriculture is committed to implementing agricultural risk management strategies that will successfully meet the needs of all farmers. Working together in a public-private partnership, all stakeholders—government, farmers, financial institutions, agribusinesses, and private insurance providers—can participate in creating a workable program; the benefits of which will insure healthier and more prosperous communities across all of South Africa.
You know the tune. You’ve heard it a million times, if you’ve heard it once... “Everything’s up-to-date in Kansas City. We’ve gone about as far as we can go.” Isn’t it amazing how far the crop insurance industry has come in the last 15 years? It’s true that we are up-to-date with current technology, but have we gone as far as we can go?

Ahh, remember the days of hard-copy abundant Master Marketing and heavily underwritten reports that came back with error, after error, after error. Days were spent hand calculating production, acreage, and loss reports and keying them into the computer system. Then there was a check and a re-check of the hand calculation and the 10-key-punch processing, and finally a Risk Management Agency (RMA) error report. As any current, or once-upon-a-company-designed software to key in acreage and production reports and transmit the information to the company. We referred to it as a “paperless society.” It took the company underwriters and supervisors a year or two of close regulation of the “paperless society” to be convinced that it would work, and indeed it did. In fact, it flourished, giving the company underwriters and 10-key-punch processors the opportunity to evolve into problem solvers. Problems that were now being faced head on by the agents. Problems related to the company software glitches, and very specific and difficult underwriting challenges. All in all, it worked out very well for everyone.

What could possibly be next? Well, the most recent evolution of the process of processing crop insurance promises to bequeath some of the duties to the insured producer. Yep, that’s right. From their kitchen table, the producer will be able to logon to the company’s web site and file his own reports right over the Internet. It’s not much different than buying a Martha Stewart cookie cutter set. Everything is secure, confidential and protected from unauthorized persons. All the producer has to do is login and call up his policy information. The recently RMA approved “e-signature” allows the producer to update his own APH and acreage reports without hard copy signatures. No more producers running to town to sit down with the agent to fill out the forms, unless the producer prefers to do so. Agents will no longer have to mail hard-copy reports to the producer to fill out and return. Save money, save time, and save energy. The agent will continue to fulfill his or her current role of being the producer contact and complete all of the duties that entails. However, instead of working off of a hard cop, the agent will access the producer’s information online. The agent’s e-signature is required on most of these e-transactions, so companies will most likely rely on their agents to audit the producer reported information before e-signing off on them and forwarding the information to the company. The agents will retain his or her current role and it will most likely only modify their current responsibilities.

From hard-copy paper abundant to e-signatures and e-business. Everything’s up to date with crop insurance. We’ve gone about as far as we can go today. However, tomorrow defines a new limit.
"As with any business, crop insurance has certain behaviors that could fall outside of the accepted boundaries of program compliance. Through education we can ascertain a proactive approach, which will help us to perceive potential problems and hopefully detect and/or deter fraudulent situations. This in turn will help maintain the integrity of the crop insurance program."

Late in the summer of 2000, Congress enacted the Agriculture Risk Protection Act, part of which addressed the fact that fraud, waste and abuse occur in the crop insurance program. Part of this Act’s language, directed the federal government’s Risk Management Agency (RMA) and Farm Service Agency (FSA) and the private crop insurance companies to combine forces to undertake a series of training, education and quality assurance programs that would work to prevent, as well as uncover, fraud and abuse.

For the last year there has been a combined effort by the government and the private insurance providers to deter fraudulent acts in the crop insurance industry. Together, they have developed a master plan to implement more stringent safeguards in the crop insurance program and, as a result, we are seeing more RMA, FSA interaction with the private sector.

As we examine the above mission statement, four key words or phrases seem to say it all: education, proactive approach, deter and integrity. Let’s take a closer look at them and see how they aid in successful program compliance.

**Education**

Crop insurance, as we know it today, had its beginnings with the Agriculture Adjustment Act of 1938. But still, after that amount of time, many American farmers are still not familiar enough with the legal language to fully comprehend all of the major implications of their crop insurance policy. By understanding the farmer’s plight, the industry as a whole, private and government sectors included, has been able to start a basic education process that is designed to eliminate this stumbling block.

In the 1980’s some of the responsibility for educating the ag consumer was shifted to the private sector of the crop insurance industry. Crop insurance companies were required to train the agents and adjusters and they in turn...
would pass their newfound knowledge along to the insured’s. This process worked fine as long as we only had one product to sell. But with the advent of all of the new crop insurance products introduced in the last two decades, the task has become endless and we have again, created innumerable gray areas of interpretation.

To combat this, stringent education requirements, which are spelled out in the government-issued Manual 14 (Guidelines and Expectations for Delivery of the Federal Crop Insurance Program), were established. New agents must participate in at least 12 hours of approved training and at the end of the training session must pass a basic competency test. Experienced sales personnel must, on an annual basis, complete at least three hours of training and also pass a competency test every three years.

Loss adjusters must also participate in annual training. New adjusters are required to participate in a minimum of 60 hours of training, which includes 24 classroom hours, and are also required to pass a competency test at the end of this training. Experienced adjusters are required to annually complete 18 hours of training, which includes at least six hours of classroom training. They are required to pass a competency test every three years.

National Crop Insurance Services (NCIS) and the crop insurance companies conduct training activities for crop insurance company adjusters and supervisors each year. These sessions are held nationwide and cover a large variety of crops. In 2001, NCIS alone will sponsor 25 loss adjustment schools. This training will supplement each individual company’s efforts, which results in the training of approximately 4,000 company and independent crop adjusters.

NCIS also sponsors three national educational conferences each year. Approximately 150 company personnel attend each conference, and they, in turn, conduct training throughout the industry. This results in training for about 15,000 agents and 4,000 adjusters that are directly involved in the sales and servicing of crop insurance.

Private insurance providers hold some 1,350 agent training schools throughout the nation, providing about 6,700 curriculum hours of training. These schools involve approximately 15,000 insurance agents, which results in an estimated 70,000 hours of training.

The voice of teaching has been taken to the farms and fields, the main streets of our small towns, to the heart of the big cities and to the very core of our govern-
CROP INSURANCE TODAY

ment. In doing so, the real intent and implications of crop insurance have been demonstrated and with this information consumers at all levels now become active participants in the success of the program.

The end result of all of this education: farmers have protection for their business; the cost of food stays reasonable and the American taxpayer has to put less in the collection plate.

Proactive Approach

By definition of the word proactive, we are told that if all parties involved in a decision-making process know the same facts and figures about what has happened in the past, then they, collectively, will have the intellect necessary to make decisions about the handling of future events. In essence, life is not about whose fault things are, but what can we do to correct the past mistakes and have we learned enough to avoid making the mistake again. One way of finding out how things have happened in the past is to review past information using a process called “data mining.”

Data mining involves providing a central collection point for all key information. In the Multiple Peril Crop Insurance (MPCI) program, RMA has been selected to be the managing agency and all of the data involved in the sales and service of crop insurance will be sent to one unified collection point. It will be sorted into categories and the information gathered will be used to determine the validity and success of each individual crop policy and eventually the entire program.

If irregularities or fraud indicators (actions that merely suggest the fraudulent activities could be taking place) are spotted, then mandatory reviews will take place. Reviews are broken down into four categories: agent and adjuster reviews; compliance contract reviews; underwriting reviews; and, claim reviews. Typically about ten percent of all claims are reviewed and any claim over $100,000 will have an automatic review. This process, called Validation, is the system’s checks and balances tool. By reviewing claims, either randomly or in this manner, the industry is instituting quality assurance and maintaining continuity.

Another key to the success of this program is to have continuity in the Information Technology systems. This means that the government has to choose an IT system and the companies are going to have to re-tool to have the same computer programs and information transfer systems. There has been a concerted push to achieve this and success is close at hand.

NCIS is also striving to be a forerunner in this category. Little cost has been spared to provide electronic information on a timely and accurate basis. Electronic actuarial information is currently being sent to over 4,500 agents across the United States. Not only is this a savings in postage and paper but also a tremendous savings in time and manpower. Time has become the new universal currency.

Such is the proactive approach to solving the problems of crop insurance. We have to determine what has happened, decide how we are going to fix it and then educate all of the interested parties to the point that the problem will never happen again.

Deter

One thing, just as sure as death and taxes, is that fraud is illegal! A base on the other hand, which is used to circumvent the intent of the program, is not. Laws are established to protect the innocent people and in a Democracy are enacted to serve the needs of the greatest number of people.

To help combat crop insurance fraud, NCIS and the crop insurance industry is conducting a public awareness campaign regarding fraud and abuse. Articles on fraud and abuse have been distributed nationwide to over 1,200 newspapers and 2,000 radio stations. In the past year Crop Insurance TODAY, the NCIS crop insurance trade magazine has carried a series of articles designed to reflect the feelings and intent of the government and crop insurance providers in regard to crop insurance fraud. (See “Combating Fraud, Waste and Abuse in the Crop Insurance Program,” Crop Insurance TODAY. Vol. 34, No. 1, February 2001, pp: 2-5).

Ethics manuals, special investigative units, forensic weather data and poster campaigns are also means of combating fraud. NCIS designed and promoted a poster campaign to promote the USDA’s Fraud Hotline. The poster insert, which was a centerfold of the of the November 2000 TODAY magazine, was a reminder that when your neighbor cheats on his crop insurance, he is indeed “picking your pocket.” The government fraud hotline number was included and it was
suggested that we could deter future fraudulent activity if fraud indicators were spotted and reported. The fraud hotline gives the honest person a way to report suspicious actions in an anonymous manner.

Some large fraud cases were uncovered, investigated, prosecuted and punished in 2001. New technology, including satellite imagery, was used to detect and prove that fraudulent activities were taking place. In prosecuted cases, people are going to spend time in jail and lost monies were recovered. The main point however, is that the message has to be loud and clear that law enforcement will use any legal means possible to catch and punish breakers of the law and they will be punished to the fullest extent.

This sometimes takes the effort of not only the law enforcement agencies, but also people that honestly and morally use the product to protect and provide for their livelihoods, businesses and families.

**Integrity**

This single word might be one of the strongest in the English language. It is closely associated with honesty and the two make a powerful pair. But what does the American public see of the two words in our Industry?

While the total extent of insurance fraud is very difficult to measure, The Coalition Against Insurance Fraud estimates that fraud in the entire insurance industry in the United States amounts to an annual cost of over $79 billion per year. That figure, which is indeed a hidden tax, equates to over $900 per family. These estimates suggest that insurance fraud is the second largest economic crime in America, only exceeded by income tax evasion.

Even though we are not sure exactly what percentage of the $79 billion is from crop insurance fraud, it is a fact that the Government and the Crop Insurance Industry have in the past and are presently taking steps to curb the action.

The actions of a few are reflected in the success or failure of anything that we do.

When you buy an insurance policy, what is its value? Usually you just get a piece of paper, a handshake, a smile, and reassuring words that you will be taken care of if something happens. You take that same bit of reassurance to the lender and tell him that his interest is protected and that makes him happy. You go to the elevator and tell them that you want to forward contract a certain number of bushels of grain and that makes them happy.

So far all that we have traded is the assurance that all of the above things are going to happen. Wow, do we trust each other or what? Well, that is what integrity is all about. Integrity is all about giving a person your word and doing everything within your power to make sure that it happens. The old saying goes "There is no honor amongst thieves," but in this business, on most days, honor and integrity are the only things that you can take to the bank.

The American farmer and the agriculture business have always been the backbone of America. In 1766, when George Washington suggested to Congress that they form a National Board of Agriculture, it was done with the intent to create a preservation device for American agriculture. As a growing nation, food was to be one resource that we would always have plenty of and it would be priced in such a manner that every American could afford to eat.

Therefore, integrity is crucial to the ongoing success of the program. A nytime one person "steals" from the program, they are in essence picking the pocket of their neighbor. Every American eventually pays for the crime.

**Conclusion**

In the past year, NCIS, the private Crop Insurance Industry, RMA., and FSA have dedicated a portion of their educational training and staff to help combat fraud, waste and abuse in the crop insurance industry.

Through intensified education programs, the industry will have a better-informed consumer base to work with and they in turn will know what the rules are and who is ignoring the rules. This is important because anytime one person breaks the rules, they are in fact taking from the person that really needs the help and is willing to play fairly.

By knowing what has happened in the past, we can take a proactive approach and better guide the direction of tomorrow. Not all of the programs in pilot status are going to work the first time out. We need to be flexible enough to adjust them to fit the needs of the greatest number of people again, but we have to realize that the Industry is trying to make it work for everyone.

All in all, the entire Crop Insurance Industry has taken a good look at what the crop insurance program is, what it is supposed to do and for whom it was designed. A concerted education program has been implemented for the benefit of all American consumers and hopefully if everyone understands the rules and the consequences, it will make people think twice before taking a chance on cheating. OFFENDERS DO GET CAUGHT! More importantly, education in our Industry will create a sense of honesty and integrity that will allow the program to grow and prosper.
This is the last article in a series discussing application of the nation’s antitrust laws to the crop insurance industry. The four prior articles discussed the antitrust laws in general, applied them to the business of National Crop Insurance Services, addressed potential agent liability, and concluded with discussion of potential adjuster liability.

NCIS has received several questions about particular situations. The high quality of the questions received and the importance of complying with the antitrust laws prompted publication of this fifth article. As the wrap-up to the series, four questions are addressed in this article. Readers who raised questions that are not discussed here, or readers who in the future have questions, should contact NCIS directly. Every effort will be made to integrate discussion of timely questions of general application in the training programs that NCIS conducts.

To place the questions in context, this article initially reminds readers of the basic concepts discussed earlier.

First, the portion of the antitrust laws that most directly impacts participants in the crop insurance industry is Section 1 of the Sherman Act. It renders illegal contracts, combinations, and conspiracies which unreasonably restrain trade. This type of conduct necessarily requires two or more participants, and courts treat most harshly conduct that amounts to price fixing, tying the purchase of one product or service to another, division/allocation of customers and territories, and boycotts.

Second, the McCarran-Ferguson Act provides a limited exemption from application of federal antitrust laws. To qualify for an exemption, the activity involved must constitute the business of insurance, it must be regulated by state authorities, and it must not amount to a boycott, intimidation, or coercive activity.

Now let's turn to the questions.

**Question No. 1**

Is it permissible for regional or state committees, or their subcommittees, to address problems with adjusters? In brief, this type of discussion or activity should be avoided.

Unfortunately, companies and their representatives may experience situations where the performance of one or more adjusters is not acceptable. Each company concerned should address any such situation individually. The ultimate problem, and therefore the risk, of discussing this issue in the context of a regional or state committee meeting is that any adjuster against whom an action is taken (such as termination or other limitation on income-producing activities) can treat any financial loss as resulting from the collective conduct of two or more companies or their representatives, thereby potentially triggering the boycott exception to the McCarran-Ferguson Act.

**Question No. 2**

Is it permissible for a group of insurance agents, whether formally or informally, to establish requirements by or under which they will act on behalf of insurance carriers? The short answer to this question is, "No."

This question presents another potential boycott situation. For example, some questions that groups of agents may pose to multiple insurers risk exposure to a Sherman Act Section 1 claim. Such conduct probably enjoys no McCarran-Ferguson antitrust exemption for two reasons: It is not regulated by state law, and a serious boycott question exists. The individual who submitted this question indicated that some groups of agents seek such information as per bushel incentives that some carriers may offer, strive to determine whether policies are marketed only through independent agencies or through other sources, and ask about companies’ efforts to recruit new agents. Each of these questions poses an issue of potentially restricting competition. The underlying problem is that a “wrong” answer to one or more questions (in agents’ eyes) may serve to disqualify a company from effectively competing, or otherwise limit its business oppor-
tunities, in a particular geographic area. This restrictive practice could be found to violate federal antitrust law.

In reading the foregoing comments, please keep in mind, once again, that what is appropriate for an individual agent to ask in determining whether he or she will act on behalf of a particular carrier can cross the line into impropriety, and potential illegality, when done in a collective environment. Also, the foregoing comments are not intended to restrict access to information about terms and conditions of coverage. Publicly available information, such as the existence of new multi-peril products, is fair game.

Question No. 3

Is it permissible to discuss agents’ commissions at regional and state committee meetings, or meetings of any subcommittees? Emphatically, the answer is an unqualified, “No!”

First, quite apart from the impact of the antitrust laws, the Bylaws of NCIS and its Manual for the operation of regional and state committees bar discussion of agents’ commissions. What any one company pays its agents is a matter solely for negotiation between each company and its agents.

Second, discussion of agents’ compensation risks a claim that the antitrust laws have been violated. Discussion of this topic, from the perspective of an insurance company, can be viewed as an effort by agents to limit its business opportunities in a particular geographic area. Discussion of this topic, from an agent’s perspective, can be viewed as an effort by companies to fix compensation levels for agents in a particular geographic area. From either perspective, there is a potential risk of violating the antitrust laws.

Question No. 4

Is it permissible for all regional and state committees to discuss premium rates and changes in premium rates? The answer to this question is quite complex, and the safest approach is to avoid this topic.

At first blush, since premium rates are at the heart of the insured-insurer relationship and obviously, thus, constitute the business of insurance, discussion of this price component of coverage arguably is exempt from the antitrust laws under the McCarran-Ferguson Act. The answer, unfortunately, is not that easy. It certainly is not very difficult to build a case that discussion of premium rates is exempt from federal antitrust laws because of the McCarran-Ferguson Act exemption. The tricky part of this reader’s question arises because of the use of the word “all.” This makes it necessary to include in the analysis state antitrust laws. Two of the country’s most important agricultural states, California and Texas, make the business of insurance subject to their state’s antitrust laws. As an earlier article noted, many state laws parallel federal law. Thus, discussing rates in California and Texas necessarily involves a meeting among actual or potential competitors (or their employees) concerning the price component of insurance coverage.

The question is further complicated by the fact that regional and state committees discuss both the federal crop insurance program and privately developed and underwritten crop-hail policies. Because of the federal preemptive power of state and local laws under the federal crop insurance program, an argument can be built that rates can be discussed by regional and state committees in California and Texas. Because crop-hail is not a federal product, however, the same sort of preemption would not apply to rates for that category of policies.

Here is a very practical way to look at this reader’s question. Instead of trying to keep track of discussions based on where they occur geographi-
A COUSTICS
THE NEWEST FORM
OF REMOTE SENSING

Checking for damaging termites in New Orleans.

We have had the chance to view many different types of new technology that have and will be affecting the way that producers go about working in agriculture. These have included things such as biotechnology, use of polymer coatings for seeds, and site specific farming. These things would not of been thought about even 10 to 15 years ago, but now are being accepted and used by producers.

The use of site-specific farming uses many different types and means of gathering the information. We often think of the yield monitors and satellite images as part of the package of remote sensing tools. Today we will look at a new area of remote sensing—the use of acoustics.

What is Acoustics?

Due to my musical background, when I think of acoustics I think of the science or study of sound in a building or a concert hall. This is definitely part of acoustics, but a broader definition of acoustics would be “the science of sound, including its production, propagation, and effects.” There are various branches of acoustics including bioacoustics, physiological acoustics, ultrasonics, and architectural acoustics. The area of architectural acoustics would be the area that would be concerned with the sound in a building or concert hall. Probably the best known use of acoustics, besides stereos and CD players is the use of ultrasound for medical use.

Research has actually been going on for a number of years into the use of acoustics to determine if it might be possible to detect hidden pests in wood, stored products and other areas. One of the things about the use of sound is that it requires a medium to travel through, unlike the light or spectral energy that we use in remote sensing from satellites.

There are many instances where it is difficult, or nearly impossible, to determine if a pest is present without destroying the object that you are concerned with. This makes it very difficult to maintain the integrity of a house or tree or crop. Some of the first research that has been done has been to use acoustics to determine the presence of termites in structures. The use of small accelerometers can be used to attach to the surface...
of the wood and then the transmitted sounds can be recorded. The actual sounds are often a series of scrapes or clicks that fit into a particular rhythm or particular frequency (pitch) of sound. Once the sounds have been determined to belong to a specific insect, they can be digitized and placed on a computer for comparison and used to develop software, which can more easily identify the presence at a later time. Things that need to be considered are the type of medium that you are getting the sounds from, the temperature of the material, the ambient or background noise and other external forces that may influence the structure or medium.

Applications

Research on various uses of acoustics is ongoing at this time; however, certain applications seem to be coming out of this that may impact producers and agricultural companies in the future. Possibly the first commercially important application, besides the use for termite inspections, may be the use in stored grains. Stored grains are often a haven for small, hard-to-detect insects that can greatly affect the length of time and quality of the grain stored. The most common method for inspecting stored grains for insects is by the use of sieves. This has often been supplemented by fairly expensive x-ray radiography as a means to augment the sieving process. The use of acoustic technology and digital signal processing may help provide a means that will help automate a monitoring system for stored grain. Research suggests that the acoustic technology, in conjunction with the digital signal processing, may be sensitive enough to not only determine that insects may be present, but also the type and number present. This would provide an easy way to monitor and apply control measures. Research is continuing in this area to be able to determine the differences between the various types of stored grain (corn, wheat, rice, soybeans, etc.) because of the impact of the size and density of the various grains involved. The use of computers and digital signal processing also allows the elimination of extraneous background sounds (wind, settling, etc.) that may hamper the detection of the insects.

The applications are not only limited to structures such as grain elevators, storage bins, or homes. Research has also been used to try and detect insects that may be hidden in plants or soil. This has been used to determine infestations of insects in container-grown nursery material to a very fine degree. They have again been able to determine the difference between approximately ten different insects that were found in pots. The recordings help differentiate between those insects that were actually doing damage to the crop, as well as to those that were not doing damage to the plant. Similar research has been done trying to localize insects in the soil that may actually be feeding on the roots of citrus trees. Under field conditions they found that the ability to gather the sound information was affected by the type of soil (sand, silt, or clay) as well as density and soil water content.

The speed with which the changes are being made in this area suggest that it won’t be too long before we are depending on acoustic technology as a means to do many different types of scouting. We may be able to use the sounds of insects in the field to determine the number and type of the different pest species and then base our control measures on this information. We may also be able to determine the number of beneficial insects and how successful they are in finding their prey – the pests that we are interested in controlling. Ultrasound technology may be used to determine the interior quality problems with various vegetables and fruits as part of the packaging and handling methods. In many ways, we are just beginning to see the benefits and uses of acoustic technology in the area of agriculture. It should be an exciting next couple of years to see how far we can go with this technology.
ARMtech Unveils AgriNet Power Suite. AgriNet Crop and AgriNet Imaging are the first in a group of software products designed to give the ARMtech Agency Force a competitive advantage in the marketplace. AgriNet greatly reduces the complexities and time it takes to process and manage all aspects of a MPCI policy. Its real-time platform gives ARMtech agents instant access to the most current rates, data and quoting programs.

AgriNet Power Suite sets the benchmark in next-generation e-business systems for crop insurance.

- **AgriNet Crop**
  - Multi-Tier, Internet Based
  - Centralized Database
  - Real-Time, Instant Access

- **AgriNet Imaging**
  - Integrated Document Imaging
  - Immediate Access to all Policy Folder Documents
  - All Claims Documents Accessible to Agents

- **AgriNet Maplink**
  - Policy Link from Acreage Lines to Map Data
  - Establishes Information Link for Data Exchange
  - Integrated Map-Based Reporting Capabilities
Each year NCIS sponsors research projects on a variety of crops. The purpose for the research varies, but some of the reasons are to study new crops, changes in crop varieties/practices, verify accuracy of loss charts and procedures and develop improved loss instructions. University experiment stations and agricultural colleges conduct the research, often at more than one location across the United States. The results of the 2000 research program are summarized below.

**Apples—Washington**

This study was conducted at Wenatchee to determine the influence of two different training systems on the impact of hail damage on Fuji apples. The two training systems tested were the three-wire and the V-trellis. Each trellis training system was subjected to 21 pounds of ice through a hail machine for approximately 45 seconds. A random sample of 80 fruits was harvested the day after being subjected to the simulated hail and analyzed for damage. The damage was measured by the amount of skin breaks occurring after the hail. In the three-wire system, 70 percent of the fruit had skin breaks, the V-trellis had 54 percent skin breaks, and the control had nine percent skin breaks. The three-wire system had 39 percent bruised apples, 18 percent bruised apples, and the control had 10 percent bruising.

**Cauliflower—South Carolina**

Conducted at the Clemson Coastal Research Center at Charleston, this study was done to determine the impact of defoliation at different stages of cauliflower development on...
yield and quality. The plants were defoli­ated 10 days after transplanting, at mid­season (just prior to head initiation), and when heads were approximately one to two inches in diameter at levels of 25, 50, and 75 percent defo­liation. The effects of early and mid­season defoliation were considered negligible and tolerable for this cauliflower culti­var. Late season defoliation, in which 75 percent or more of the foliage is lost, reduced individual head weight and therefore yield on a weight per acre basis. However, a marketable head of caul­iflower does not have an individual weight requirement. The heads from this study were still marketable and had a diameter of six inches.

**Chile Peppers—New Mexico**

This trial was conducted at Las Cruces to determine the impact of stand reduction on chile pepper production. The stand reductions were done twice; limb formation and first flower/pod production at levels of 25 and 50 percent. The trial looked at three different varieties of chile peppers: Big Jim, cayenne, and jalapeno. The 2000 growing season was an ideal year for growing chile. Mature pods were harvested by hand from July 18 through October 4. There was no significant yield difference between the control and the stand reduction treatments even though there were numerical differences.

**Corn Silage—Pennsylvania**

This study was one of three done on corn silage in Pennsylvania and Wisconsin. This part of the trial, done at State College, was to determine the affect of defoliation on corn silage production. The treatments for the three trials were the same: 100 percent defoliation at V7, 50; 100 percent defoliation at V10, 25, 50; 100 percent defoliation at silking; and, 25, 50, and 100 percent defoliation at soft dough. The variety for this and the Arlington, WI, sites were the same: Pioneer hybrid. The vegetative leaf stages were defined using the collar method, which results in about two fewer leaves than the typical staging system used by hail adjusters.

Forage yield losses due to defoliation were comparable to the predicted grain yield losses. When averaging all treatments, the forage yield losses were 26.7 percent, as compared to an average predicted grain loss of 27.3 percent. The actual forage yield differences at the different growth stages and defoliation amounts ended up varying widely from the predicted grain loss amounts, even though the average amount of loss was the same.

**Cotton—Arizona**

The purpose of the project at Marana, AZ was to compare effects of damage and recoverability of some of the new trans­genic types of cotton in relation to current loss charts and procedures. This was the third year of study where defoliation treat­ments were applied at the early vegetative stages as well as at early and late repro­ductive stages. Non-replicated tests were applied to Round-up Ready, Bt and tradi­tional varieties of cotton. When compar­ing the percent of loss determined using the current loss procedures to actual loss using harvested production, in most cases the loss determined by the loss instruc­tions was equal to or greater than the actual loss. The difference in percent of loss determined by the loss procedures compared to the actual loss was greater on the plots damaged at the early reproductive stages than then plots damaged at the early vegetative stages. In two instances, the harvested production was greater from the damaged plots than the control plots.

**Cotton—Kansas**

The range of cotton production in the southern Great Plains has expanded to include the south-central portion of Kansas. Limited research has been done in this area on the impact of planting dates on cotton production. This trial
looked at planting dates from early May to mid-July to determine how they compare with the recommended date of approximately May 15. Two different locations (Wellington and Hutchinson) were used. Planting dates ranged from May 2 through July 13 with approximately two weeks between each planting. Cotton yields were 32 and 84 percent higher from the early May seeding date than the suggested seeding date. Yields were lower from plantings after the suggested seeding date.

Cotton—early May

Cotton—South Carolina

The purpose of the project at Florence was to determine the impact of simulated hail on ultra-narrow row cotton. The trial looked at using two different cultivars (one traditional and one with Bollgardi and Roundup Ready technologies) and their response to simulated hail when grown in 7.5-inch rows. A hail machine was used to apply ice when the plants were at approximately the four-leaf stage to obtain zero, 25, 50, 75, and 100 percent defoliation. The lint yield of the cotton showed no significant differences in response to the severity of hail or to cultivars. The amount of seed cotton yield and gin turnout also did not differ due to the amount of defoliation or cultivar.

Cotton—Texas

The purpose of the project at College Station was to determine the impact of stand reduction on cotton grown in traditional (30-inch), narrow (15-inch) and ultra-narrow (7.5-inch) rows. Stands were reduced at the four-leaf stage to 100, 75, 50, or 25 percent of the original stand. There was no difference in the total seed cotton, gin out percent or lint cotton between the three different row spacings. There was also no difference in overall seed cotton yield, gin out percent or lint cotton yield from the various stand reduction treatments even though there was a difference in the maturity of the cotton. The treatments that had 25 and 50 percent of the original stand remaining tended to have the cotton mature at a later time than for the check or 75 percent of original stand remaining treatments.

Dry Field Peas—North Dakota

A field study was conducted to evaluate the influence of growth stage and cutoff level on the yield of dry field peas. Plant cutoff occurred at developmental stages: four-leaf (V4), eight-leaf (V8), twelve-leaf (V12), first bud (R1), and second flower cluster open (R2). Cutoff levels were zero, 33, 66, and 100 percent of the plants in the stand. Plants were cut off below the uppermost stem node for vegetative stages (V4, V8, and V12) and reproductive stages (R1 and R2). The first flower node generally occurs between the 15th and 18th node depending on variety and growing conditions.

Plant cutoff treatments (zero, 33, 66, and 100 percent) had little effect on yield when applied at stages V4, V8 and R2. Stages V12 and R1 appear to be critical developmental stages for plant cut-off. Yield reductions occurred at these stages for cut-off level 100 percent at stage V12, and at cutoff levels 66 percent and 100 percent at stage R1. Compared to the control, yield was reduced 12 percent at the 100 percent cutoff level for stage V12. At stage R1, yield was reduced nine percent and 31 percent for cutoff levels of 66 and 100 percent, respectively, when compared to the control.

Grapes—Colorado

This study was conducted to evaluate the damage from simulated hail to Chardonnay grapes. Simulated hail, using a machine, was applied to obtain moderate and severe damage to the grape vines at two different stages of grape development. The first application was when the grapes were approximately 1⁄4 inch in diameter while the second application was at approximately three weeks prior to harvest (grape size of approximately one inch in diameter). The moderate damage treatment had minimal fruit skin rupture and some leaves were holed while the severe damage treatment had some fruit skin ruptured and the leaves were badly shredded. Yields were reduced with the application of the simulated hail, though they were found not to be significantly different.
Flower Seeds—Colorado

This was the first year of a trial at Rocky Ford to determine the effect of stand reduction on zinnia seed production. The stand reduction treatments were applied at four different growth stages—pre-bloom (plant has one unopened bud), early bloom (plant has three to five unopened buds and one open flower), mid-bloom (plant has four to seven unopened buds and one open flower), and late bloom (plant has four to seven unopened buds and six to nine open flowers; some of the older heads are drying down). Stand reduction was done to remove zero, 25, 50, and 75 percent of the original stand. Seed yields were reduced at each of the stages of plant growth due to the reduction of stand. The greatest reduction in yield (52 percent) came about with 75 percent reduction at the late bloom stage.

Soybeans—Minnesota

This study was established to determine the effect of plant populations on soybean production grown in both narrow and wide rows. Row spacings used in this trial were 10 and 30 inches. Plant populations studied ranged from 75,000 to 200,000 plants per acre for two different soybean cultivars. Yields averaged two bushels per acre lower for the 75,000 population compared with all other populations of 100,000 to 250,000 plants per acre. Averaged over all treatments, years and locations, yields were higher by 3.6 bushels per acre for the 10-inch spaced rows over 30-inch spaced rows. Yields were usually higher in 10-inch rows for each specific treatment (variety and plant population combination). These results support the agronomic recommendation that soybean yields are not affected with plant populations ranging from 125,000 to 200,000 in both wide and narrow rows.

Spinach—Colorado

Rocky Ford was the site of this research to determine the yield response of spinach to simulated hail damage during different periods of plant growth. The defoliation treatments were initiated May 3. Spinach leaves were damaged using a gasoline-powered weed trimmer. Two levels of damage were inflicted, a moderate (33 percent) and a severe (67 percent) defoliation. The entire process was repeated on other plots 10 and 20 days later. At each defoliation date, leaf number and leaf area were recorded. The spinach leaves were harvested on June 1. Losses in yield were most pronounced when damage came later in the season, with the greatest reduction in yield (52 percent) due to the higher level of damage (67 percent). Spinach leaves continued to grow after the defoliation event; however, given the constraints of the short growing season, total recovery was not realized.

Wheat—Kansas

This study was conducted at Garden City to determine the impact of simulated hail on Hard Red Winter Wheat (HRWW) as compared with the new class of Hard White Winter Wheat (HWW). A HWW variety, "Betty" and a HRWW variety, "Jagger" of similar pedigree were established in September 1999. Plants were defoliated with a gas-powered weed eater by removing zero, 33, 66, and 100 percent of the foliate at the early boot stage of growth. Wheat defoliation treatments caused similar and equal losses to the white and red-seeded wheat. The 100 percent defoliation treatment allowed only 30 percent of grain production whereas the 66 percent defoliation treatment allowed 53 percent grain production and the 33 percent defoliation treatment allowed 87 percent of grain production when compared to the check treatment.
Dr. Greg Roth is an associate professor in the Department of Crop and Soil Sciences at the Pennsylvania State University in University Park, in central Pennsylvania. He develops extension programs in corn and sorghum management and conducts applied research in this area as well. He tries to develop research projects that support the corn and sorghum production issues that farmers encounter in the dairy and livestock agriculture in Pennsylvania.

In 2000, Dr. Roth began a project with Dr. Joe Lauer and Dan Wiersma from the University of Wisconsin and National Crop Insurance Services to study the impact of hail damage on the yield and quality of corn for silage. About 35 percent of the corn grown in Pennsylvania is grown for silage. Corn grown for silage generally has a higher value than corn grown for grain. Forage quality is an increasingly important part...
of the value of corn for silage, especially if it's being fed to high producing dairy cows. When silage corn is damaged in a hailstorm, good data is needed to support the basis for insurance claims.

This research project compares the yield and forage quality from nine different defoliation treatments to a control treatment. The defoliation treatments that are evaluated include complete defoliation at the seven-leaf, 10-leaf stage, silking or early dent; 50 percent defoliation at the 10-leaf, silking or early dent; and, 25 percent defoliation at the 10-leaf, silking or early dent stages. Data from the project will allow them to compare yield losses for silage compared to those that have been well documented for grain.

Also being studied is the effect of hail damage on forage quality—specifically, the in vitro digestibility and the fiber digestibility of the forage, as well as the crude protein, starch, ash and oil content. Researchers at the University of Wisconsin have recently introduced an Excel spreadsheet called Milk 2000 that can be used to estimate the value of different combinations of yield and forage quality for milk production. Using the yield and forage quality data, researchers will be able to predict the potential milk per ton and milk per acre for each treatment.

This project is in its second year of data collection in the field and Dr. Roth hopes to continue the project for another year. This will allow them to compare the treatments over nine different environments to get a good idea of how much the impact of the damage varies across locations.

The yield data from the first year in Pennsylvania generally followed the trends as expected with the most serious yield losses occurring with the 100 percent defoliation treatments at silking, then early dent and then at the V-10 stage. In some instances, yield losses were slightly less than those predicted by the standard grain charts, since the stalk and ear were still available for silage use. The forage quality data has not yet been evaluated but plans are to begin assessing that this winter.

The hail damage study is only one of a number of projects that Dr. Roth is currently involved in. He is conducting other studies in the use of corn for silage, especially focusing on the impact of management practices on the yield and forage quality. Several factors that he has evaluated include row spacing, plant populations and planting date.

Studies have generally shown about a five percent increase in silage yield with 15- or 20-inch rows compared to the standard 30-inch rows. He has also found that the optimum plant population seems to be in the 30,000 to 32,000 range. As plant populations increase above that point, yields either increase or level off but the digestibility of the forage tends to decline. Other researchers have found similar trends, but with the frequent heat and drought stress in Pennsylvania as compared to other areas the research has shown the need to be a bit more conservative on the use of higher plant populations.

Research has also shown that later planted corn will often yield less, as you might expect, but also has lower forage quality. This is important for the state because corn grown for silage is often double cropped following hay or barley.

Another interesting and related subject Dr. Roth is working on is to use whole farm computer simulation models to evaluate some of the research recommendations. It’s difficult to estimate the impact of something like double cropping on a complex dairy operation. A model like the USDA’s DAFOSYM model helps to predict crop yields over a 30-year period and estimates the impacts of yield and feed quality differences on the profitability of the dairy. His experience with the modeling approach so far confirms one of his previous suspicions: optimum management recommendations are frequently dependent on the specifics of the farm.

Dr. Roth works with many of his colleagues on multidisciplinary projects that involve corn. In one study with an entomologist and plant pathologist, they are evaluating the potential of Bt corn hybrids to improve yields and reduce mycotoxins in their region.

In another study, Dr. Roth and a colleague in soil fertility are evaluating the need for phosphorus in starter fertilizers. With the extensive livestock industry in Pennsylvania many of the soils have high P levels and probably don’t need the traditional high P starter fertilizers many growers use.

Dr. Roth and the university dairy science department are studying the role of corn silage in improving the effective fiber in dairy cow rations. Many large dairies are moving to rations with corn silage as the main forage source and it is important to understand how the particle size of this forage should be managed to maintain adequate rumen function.

In his extension program, he works with many local agents to support their educational programs and participates in many meetings around the state covering topics like GMOs, management of corn for silage, and updates on the research program. He works closely with the state’s corn growers association and helps them address timely issues. Recently, Dr. Roth participated in a Crop Insurance Task Force sponsored by the Pennsylvania Department of Agriculture that led to a lot of changes in the state’s crop insurance program and helped increase farmer participation in crop insurance.

As you might expect, his job keeps him busy, but he says it is exciting to be working on many new issues with a variety of bright folks that includes producers, industry colleagues, and other researchers.
Chicory (Cichorium intybus) is a blue-flowered perennial plant of the family Asteraceae. It is native to Europe and has been cultivated extensively in the Netherlands, Belgium, France and Germany. Chicory was brought to the United States in the late 19th century and was grown extensively in some areas in the past. Actually, chicory has naturalized over much of the U.S. where it is a common weed pest and may be recognized by its bright blue flowers growing along roadsides or in fields. Chicory may also be called succory, blue sailors, blue daisy, coffee weed, blueweed or bunk.

The chicory plant may be used in several ways. The green leaves of seedlings may be eaten as a fresh vegetable or salad. The thick parsnip-like roots may be dug, roasted, ground and then used as a flavoring additive in coffee or sometimes as a coffee substitute. The ground chicory roots provide additional color, body and bitterness to coffee. This is a popular practice in the southern United States, especially in New Orleans. In some areas, chicory is also grown as a fodder or herbage crop for cattle.

Chicory may also be grown for witloof (white leaf) chicory, also known as Belgian endive, a specialty crop that requires considerable expense and labor. Witloof chicory is the product of the second year’s growth of the plant. The root is harvested after it has reached the proper stage of maturity, is put into cold storage and after an adequate period of time is then forced by placing it in an environment that favors the growth of the primary bud. The primary bud is kept compact by controlling conditions and procedures. The market-mature compact bud, called a chicon, is harvested when it is four to six inches in length.

Another more recent use of chicory has been in the processed food industry. Chicory roots are rich in inulin which enhances desirable bacterial in the digestive system. Liquid fructose can be processed from inulin and is used in the sweetener industry. Inulin is also being used in the dog food industry for its digestive benefits.

Chicory is an erect herb, with long slender fleshy roots that resemble parsnips. Chicory has a long, fleshy taproot, a rigid, branching hairy stem that grows to a height of about three to five feet, and lobed, toothed leaves, similar in appearance to dandelion leaves, around the base. In fact young plants resemble dandelions but later the flower stem becomes bristly and bears rigid branches. The flowers are dandelion-like, sky blue, 1-1½” wide and close by mid-day.

For commercial production of roots to be dried, chicory is planted in rows 18 inches apart. If grown for witloof chicory, the crop is seeded in 15-inch rows. For forage use, seed may be either drilled or broadcast; however, drilling is preferred because it provides a more uniform depth of planting. A planting depth of ½ to ⅛ inch is recommended. Chicory seed is very small with approximately 25,000 seeds per ounce.

Harvesting chicory roots is similar to lifting sugar beets. The roots are dug and topped in the same way as for sugarbeets. The chicory roots are shipped to a processing plant where they are washed, cut up into one-inch cubes and dried. The dried product is then shipped to factories where it is roasted and ground. TODAY
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3636 Executive Center Dr.
Suite 150
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Omer V. “Spike” Tomlinson, 76, of Sun City West, AZ, passed away September 20, 2001. Spike retired from Great American Insurance Group in 1990, after having served with the company for 34 years in positions of increasing responsibility. When he retired, Spike was Vice President of Great American’s Farm/Crop Division.

Spike was born in Macon, IL, and following graduation from high school in 1943, joined the Marine Corp. He served in the South Pacific during World War II and was awarded the Purple Heart for wounds received in action at Okinawa.

After the service, he attended Milliken University where he received a Bachelor of Science Degree in Vocational Education. He taught high school industrial arts and coached basketball in Farmer City, IL, from 1954 until 1956 and adjusted crop claims for Great American during the summers.

Spike joined Great American full time in 1956 as a company fieldman traveling Illinois and Indiana. He was promoted to assistant manager (1965) and manager (1973) of the Crop-Hail Department. He became assistant vice president in 1975 and vice president in 1980 when he became responsible for Crop-Hail, MPCI and Farm Insurance Operations. He was named president when the farm/crop operation became a separate division in 1989.

He served on numerous committees with the Crop-Hail Insurance Actuarial Association (CHIAA), the National Crop Insurance Association (NCIA), the American Association of Crop Insurers (AACI) and the National Crop Insurance Services (NCIS), including leadership positions as president of CHIAA, president of NCIA and director of AACI. Several of Spike’s competitors referred to him at retirement time as one who always had the best interest of the industry in mind as he made his voice heard and voted on the many issues during his terms on the various boards.

His wife, Marian; two sons, Dan and Dave; and, a daughter, Beth, survive Spike.
The NCIS Education and Training Department has developed a new video titled, “Integrated Risk Management,” that describes how crop insurance can be used to strengthen marketing and financial risk management plans. It is available on both VHS tape and CD.

The purpose of this video is to make it easy for individuals who provide risk management education (RME) to farm audiences to include accurate information on crop insurance. With the increased emphasis on risk management education there was a need for accurate educational materials describing how crop insurance can be used in conjunction with other risk management tools. This video is approximately 15 minutes long and will be especially beneficial to those who provide RME, but who personally have a limited understanding of crop insurance.

The primary audience of this video is farm producers. Additionally, all others involved in production agriculture and agricultural risk management but who are not intimately involved in crop insurance, will find this video useful and educational.

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