



**NATIONAL SORGHUM PRODUCERS
CROP INSURANCE TESTIMONY**

Presented to:

**House Agriculture Subcommittee on
General Farm Commodities and Risk Management**

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Introduction

On behalf of the National Sorghum Producers, I would like to thank the House Committee on Agriculture and this subcommittee for the opportunity to discuss federal crop insurance and its impact on the grain sorghum industry and my farm.

My name is Jarrod Spillman, and I farm near Hoxie in Sheridan County in Kansas. I raise sorghum, wheat, corn, soybeans and sunflowers in a diversified operation that also includes cow-calf pairs, custom manure hauling and custom farming.

NSP represents U.S. sorghum producers nationwide and our mission is to increase the profitability of sorghum producers through legislative and regulatory representation.

NSP supports the work put forth by this subcommittee in passing the 2008 Farm Bill. We support the current farm bill, but I wish to convey specific concerns about the crop insurance programs for grain sorghum. Crop insurance is a major component of the farm safety net for grain sorghum. Sorghum is a crop grown predominately in the semi-arid Great Plains, where weather volatility (lack of rain) is the major determinant in year-to-year yield variation. This testimony will focus on four areas of crop insurance as they relate to grain sorghum: price elections, premium ratings, expected county yields, and transitional yields. But first, we need to examine the current situation that sorghum producers are encountering.

Industry Overview

The Great Plains states produce the largest volume of grain sorghum, but the crop is grown from Georgia to California and South Texas to South Dakota. According to the National Agricultural Statistics Service, last year sorghum was produced in many of the states that you represent. This includes Kansas, Georgia, Mississippi, Colorado, South Dakota, Missouri, Texas, Iowa, Indiana, Oregon, North Carolina, Illinois, North Dakota and Ohio.

Over the past fifteen years, grain sorghum acreage has ranged from a high of 13.1 million acres in 1996 to a low of 6.5 million acres planted in 2005. Annual production from the last fifteen years has ranged from 795 million bushels to 277 million bushels, with an approximate value of 1.2 billion dollars annually.

The creation of the Conservation Reserve Program in the 1985 farm bill had a significant impact on the sorghum industry. Poor risk management programs have played a role also.

Today's sorghum acreage is one-third of its levels prior to the 1985 farm bill. It is a goal of the industry to increase producers' profitability and to bring acres back toward the pre-1985 farm bill

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level. NSP expects that returning acreage to that level will help ensure necessary infrastructure to supply the needs of the ethanol industry, livestock industry and export markets.

In addition, forage sorghum utilized as silage, hay and direct grazing represents approximately an additional 5 million acres of production. The USDA reported that in 2008, 408,000 acres of sorghum were harvested for silage, producing approximately 5.6 million tons of silage.

The U.S. is the world's chief exporter of grain sorghum, and the crop ranks fifth in size as a U.S. crop behind corn, soybeans, wheat, and cotton.

Grain sorghum is typically exported to three main markets: Mexico, Japan, and the European Union (EU). While Mexico is typically the largest annual importer, last year the EU imported the most sorghum due to a drought in the areas than normally produce feed wheat and the EU ban on transgenic products. Sorghum is a non-transgenic crop. According to the April 9, 2009 World Agricultural Supply and Demand Estimate (WASDE), U.S. exports will account for 28 percent of this year's sorghum use.

The most important new market for grain sorghum is the ethanol industry. According to the latest WASDE report, ethanol production will account for one third of domestic grain sorghum usage. This is triple the amount of the 2007-08 crop year. This market has even more potential with the classification of grain sorghum as an advanced biofuels feedstock in the 2007 Energy Bill and 2008 Farm Bill.

In addition, the U.S. dominates world sorghum seed production with a 200 million dollar seed industry focused on 200,000 acres primarily in the Texas Panhandle.

Sorghum is a unique, drought tolerant crop that is a vital component in cropping rotations for many U.S. farmers.

Background on sorghum farmers' crop insurance use

Grain sorghum is the least insured of the five main row crops. For 2007, excluding CAT coverage, grain sorghum was only insured on 73 percent of its planted acres compared to 80 percent for corn and 92 percent for cotton. For 2008, grain sorghum was only insured on 59 percent of its planted acres compared to 74 percent for corn and 76 percent for cotton. Closer to home, grain sorghum was insured on only 73 percent of its planted acres in Kansas for 2008 compared to 83 percent of corn acres and 84 percent of wheat acres. (Exhibit 1.)

Part of the reason for low sorghum participation is that yields have dropped significantly because of the recent drought. Certain parts of the Sorghum Belt received the third lowest rain fall since the beginning of modern record keeping. Yields are so low in fact, that there is almost no yield

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left to insure. Producers are very hesitant to purchase a policy that has limited coverage when they are already growing such a drought tolerant crop.

More importantly, producers plant sorghum because it is a self-insurance crop, meaning it takes less water and fewer inputs to produce a crop so it has less risk exposure. The plant goes dormant during periods of no rain, rather than dying as other crops do. I find it ironic that our crop's risk management policies are essentially discounted, when compared to other crops that are more risky to grow in the semi-arid Sorghum Belt.

Price Elections

Grain sorghum is not traded on a futures market, so Risk Management Agency (RMA) determines price elections. Crop insurance price elections are determined by a ratio of grain sorghum prices to corn prices. RMA currently uses two different time frames to determine this ratio. The first is for Actual Production History (APH) policies. The second is for revenue policies such as Crop Revenue Coverage (CRC) and Group Risk Income Protection (GRIP). Although the ratios may vary between the APH and revenue policies, they are fairly close and are based on RMA's use of Economic Research Service (ERS) models.

In the 2008 Farm Bill, RMA was instructed to work with five independent reviewers to establish a new methodology for implementing price elections for the 2010 crop year. This methodology was required to be transparent and replicable. As part of the Farm Bill language, RMA was required to supply the data used to compute price elections. RMA did not, in fact, supply the required information. Instead, information supplied to the independent reviewers simply referenced the fact that RMA receives its pricing data from ERS. This lack of information continues a "black box" mentality by RMA, under which prices are neither transparent nor replicable. RMA did not provide any of the models used by ERS to arrive at the current price elections for grain sorghum.

This might be overlooked if ERS had a proven track record of predicting grain sorghum prices. However, an analysis of grain sorghum price elections, as a ratio to corn price elections, from 1990 to 2009 shows that RMA using ERS models almost never accurately predicts the price ratio between corn and grain sorghum. An R-squared (R^2) value is used to measure how effective a model is at predicting an outcome. A value of *one* means the model is 100 percent accurate. Using ERS models, RMA only has an R-squared of 3/10,000 (that's three ten-thousandths or .03% correct) compared to the final price ratio as published by WASDE. An R-squared that low is, in reality, a zero, meaning that ERS models do not function appropriately with grain sorghum and have no ability to predict the price ratio between corn and grain sorghum.

Grain sorghum and confectionary sunflowers are the only crops that have price elections for revenue insurance products determined by a basis number. For example, the price used to

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determine the CRC, RA, and GRIP price elections for corn is strictly the futures price of the applicable month based on the location of the policyholder. It does not take into account any basis (with basis being defined as the difference between cash and futures prices). The ERS model used by RMA incorporates basis for sorghum while no basis impact is used in price elections for futures-traded crops. The elimination of the basis in the price election is necessary for two reasons.

First, low basis areas for grain sorghum in the Texas and Oklahoma Panhandles, the center of the Sorghum Belt, may have greater cash grain sorghum prices than low corn basis areas in central Iowa, the center of the Corn Belt. Second, when comparing the revenue insurance price elections of corn, soybeans, and wheat with cash prices paid to farmers, all three crops significantly benefited by not being subject to a basis effect in their respective price elections. In 2006, 90 percent of soybean production, 86 percent of corn production, and 70 percent of winter wheat production were grown in states with negative basis for the crops. By having a price election above the cash price, these crops received an artificially high revenue guarantee. Using local elevator bids as of the week ending October 19, 2007, the third-largest county in corn production for 2006 (Kossuth, IA) had corn bids at \$0.54 per bushel **below** the CBOT current month. Of the top 10 producing counties in 2006, the average corn basis was \$0.37 per bushel below the CBOT current month.

From 2000 to 2006, the average October NASS corn price was \$0.21 per bushel **below** the CRC harvest price for corn, and the average October NASS soybean price was \$0.24 per bushel **below** the CRC harvest price for soybeans. During this same time frame, however, the October NASS sorghum price was only \$0.07 per bushel below the CRC harvest price for sorghum. Even more telling is the comparison of NASS final marketing year prices compared to the CRC harvest price for corn and sorghum. From 2000 to 2006, corn averaged \$0.05 per bushel **below** the CRC harvest price while sorghum averaged \$0.06 per bushel **above** the CRC harvest price.

Currently there is no transparency in methods, no accuracy in basis, and a general crop insurance bias against planting sorghum. While RMA has shown a propensity to widen the ratio between corn and grain sorghum, sometimes with sorghum as low as 72 percent of the value of corn, RMA has never published a price election with sorghum over 96 percent of the value of corn.

This is not a new problem. In 1990, RMA “missed” the price election by 21 percent (93 percent at the end of the year compared to a price election of 72 percent). In 2006, RMA’s published price election for grain sorghum was 90 percent of the value of corn while the marketing year closed with sorghum at 108 percent of the value of corn. Our request is that this committee consider the great benefits of sorghum to the water table, to the environment and to producers and in turn, hold RMA – specifically ERS – accountable to their promise to increase transparency in setting sorghum price elections.

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Premium Ratings

The second key reason producers do not purchase grain sorghum crop insurance policies is the bias in premium ratings. I want to use some very specific examples from my home county in Kansas, Sheridan County. I think this will best illustrate the bias that exists in the current RMA premium ratings system against grain sorghum. A new producer in Sheridan County would receive a transitional yield (T-yield) of 65 bushels per acre for corn and 62 bushels per acre for sorghum. This means that the producer would use these yields to determine his insurance coverage for the year. Thus, a 65 bushels per acre yield with a 65 percent CRC insurance policy would have 42.3 bushels per acre of coverage ($65 \text{ bu/ac} \times 0.65$). Now, when this producer purchases his crop insurance, his corn 65 percent CRC policy would cost him 6.9 percent. The same sorghum 65 percent CRC policy, however, would cost him 8.2 percent. If the losses of sorghum justified this higher premium rate, then the insurance should certainly cost more. However, they do not.

Using the last five crop years (2004 – 2008) from RMA published statistics, the loss ratio in Sheridan County for corn has averaged 1.35 (meaning for every \$1 in premium received, \$1.35 in losses was paid out). Grain sorghum, on the other hand, had only a loss ratio of 1.19. The standard deviation of the loss ratios is also smaller for grain sorghum (1.22) compared to corn (1.38). In fact, the largest loss ratio in the five years belongs to corn in 2006 with a loss ratio of 3.47. The average loss ratio for sorghum is only 12 percent lower than corn, even with sorghum's risk-averse nature. When conditions are particularly dry, farmers tend to plant sorghum instead of corn. Because sorghum needs fewer inputs, planting sorghum helps protect cash flow and corn yield history.

Remember, that the effective premium numbers are for new producers. If you are a producer with some loss history, your grain sorghum premiums will likely be even higher. This steers you even more toward insuring a higher water use crop when sorghum is more drought tolerant, and in effect, more risk averse.

Expected County Yields

Expected county yields are used in the area-wide insurance policies now offered by RMA – Group Risk Plan (GRP) and Group Risk Income Protection (GRIP). While, in 2006, only three percent of sorghum's insured acres were covered by these policies, the producers using the policies find them to be the only affordable insurance they can purchase due to decimated yield histories from prolonged drought. RMA, however, uses short-term weather fluctuations to vastly change expected county yields from year to year. The expected county yield is a 30-year weighted trend yield that is used to calculate losses for each county in determining indemnities for area-wide policies. While farming technology and seed genetics has improved vastly in the

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last 30 years, RMA determines expected county yields based upon short-term weather patterns and not long-term trends.

As noted in Exhibit 1, Sheridan County, Kansas has increasing trend yields calculated using a variety of methods except for the short-term dominated method used by RMA. This type of “X-pattern” between RMA’s expected county yields and other yield trend methods demonstrates that RMA is not using a true long-term trend for yields. This then runs counter to the whole philosophy of area-wide coverage – using long-term trends for insurance coverage.

In reference to Map 1, RMA cannot justify increasing an expected yield by 3 percent in one county and then decreasing the expected yield by over 30 percent in an adjoining county. Long-term weather patterns, farming technology, and genetics span across county and state lines. Producers who have had their yield histories destroyed by a short-term drought now have their long-term area-wide coverage decreased dramatically for the same reason. These large variations make the use of GRIP and GRP very variable over the Sorghum Belt and do not reflect the true nature of the insurance policy. GRIP and GRP are used to insure county-wide variability. That variability will include weather, but that weather should not be the reason for large changes in expected county yields. The expected county yields should be based upon a log function that accounts for increased yield due to technology and genetics. University researchers have developed such a function that may be further simplified as research is conducted on trend yields.

Transitional Yields

Because transitional yields, better known as T-yields, are used in lieu of actual yield history, they typically affect new producers of a crop and large producers who add land to their operation. RMA must utilize a more transparent system of assigning T-yields. A new system should not penalize one crop against another.

Kay County, Oklahoma, is a good example of RMA’s lack of transparency in assigning T-yields. In Kay County in 2006, actual corn yield decreased from a high of 106.8 bushels per acre in 2003 to 34.5 bushels per acre in 2006. Based upon their history of reacting to short-term yield patterns, RMA should have decreased the T-yield for Kay County. However, RMA increased the T-yield by 48 percent from 52 bushels per acre in 2006 to 77 bushels per acre in 2007. Meanwhile, sorghum yields remained flat and RMA did not adjust T-yields for sorghum between 2006 and 2007, reflecting the flat-yield trend from 2003 to 2006.

Corn yield decreased, but RMA increased the T-yield, while holding the sorghum yield flat. T-yields are influencing the planting of higher water use crops when the data doesn’t support such a decision. Again, RMA’s methodology is biased against sorghum.

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Conclusion

Crop insurance is a critical part of the safety net for sorghum producers. However, with only 59 percent of sorghum acreage covered in 2008 by a USDA risk management product, I ask this Committee to seriously discuss why this situation exists and implement policy to improve RMA's management of sorghum products. NSP believes that increasing the acreage covered by a USDA risk management product is good, sound water and energy policy. USDA's risk management products can and should be improved for sorghum. As addressed in my comments, sorghum must be insured equitably by addressing the issues of price elections, premium ratings, expected county yields, and transitional yields.

I would like to thank the Subcommittee for the chance to testify, but also to thank them for the work in the 2008 Farm Bill on enterprise units. The increase in the subsidy of enterprise units, which meant a decrease in farmer premiums, has made that an attractive option for many producers who are willing to take on a little more risk. Again, thank you for the opportunity to testify today.

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Exhibit 1.
**Percent of 2008 Planted Acres Covered by Crop Insurance
Excluding CAT Coverage**

State	Corn	Cotton	Sorghum	Soybeans	Wheat
Alabama	66%	91%	16%	68%	38%
Alaska	#N/A	#N/A	#N/A	#N/A	#N/A
Arizona	9%	64%	5%	#N/A	22%
Arkansas	25%	6%	25%	29%	25%
California	2%	23%	#N/A	#N/A	18%
Colorado	85%	#N/A	72%	#N/A	82%
Connecticut	41%	#N/A	#N/A	#N/A	#N/A
Delaware	63%	#N/A	#N/A	64%	30%
Florida	13%	81%	#N/A	54%	34%
Georgia	43%	78%	13%	48%	39%
Idaho	4%	#N/A	#N/A	#N/A	51%
Illinois	74%	#N/A	33%	66%	39%
Indiana	66%	#N/A	#N/A	63%	25%
Iowa	85%	#N/A	#N/A	86%	17%
Kansas	83%	82%	73%	71%	84%
Kentucky	60%	#N/A	31%	65%	40%
Louisiana	51%	42%	59%	57%	45%
Maine	10%	#N/A	#N/A	#N/A	#N/A
Maryland	60%	#N/A	#N/A	60%	26%
Massachusetts	30%	#N/A	#N/A	#N/A	#N/A
Michigan	50%	#N/A	#N/A	56%	42%
Minnesota	87%	#N/A	#N/A	91%	86%
Mississippi	40%	36%	72%	55%	36%
Missouri	67%	16%	28%	55%	29%
Montana	33%	#N/A	#N/A	#N/A	84%
Nebraska	87%	#N/A	55%	87%	86%
Nevada	#N/A	#N/A	#N/A	#N/A	9%
New Hampshire	25%	#N/A	#N/A	#N/A	#N/A
New Jersey	48%	#N/A	#N/A	44%	18%
New Mexico	28%	82%	45%	#N/A	53%
New York	20%	#N/A	#N/A	31%	30%
North Carolina	70%	86%	13%	65%	51%
North Dakota	94%	#N/A	#N/A	97%	94%
Ohio	67%	#N/A	#N/A	64%	33%
Oklahoma	64%	78%	55%	38%	64%
Oregon	8%	#N/A	#N/A	#N/A	68%
Pennsylvania	38%	#N/A	2%	47%	21%
Rhode Island	6%	#N/A	#N/A	#N/A	#N/A
South Carolina	65%	81%	13%	59%	57%
South Dakota	96%	#N/A	47%	96%	90%
Tennessee	58%	51%	27%	64%	25%
Texas	69%	93%	55%	58%	60%
Utah	5%	#N/A	#N/A	#N/A	45%
Vermont	50%	#N/A	#N/A	#N/A	#N/A
Virginia	60%	86%	#N/A	76%	46%
Washington	4%	#N/A	#N/A	#N/A	68%
West Virginia	53%	#N/A	#N/A	64%	14%
Wisconsin	59%	#N/A	#N/A	67%	41%
Wyoming	53%	#N/A	#N/A	#N/A	79%
United States	74%	76%	59%	72%	70%

Sheridan County, Kansas (Planted) 30 Year Moving Linear County Trend; USA Trend Adjusted Expected Yield; 30 Year Simple Average & % Adjusted Simple Average vs. RMA Expected Yield

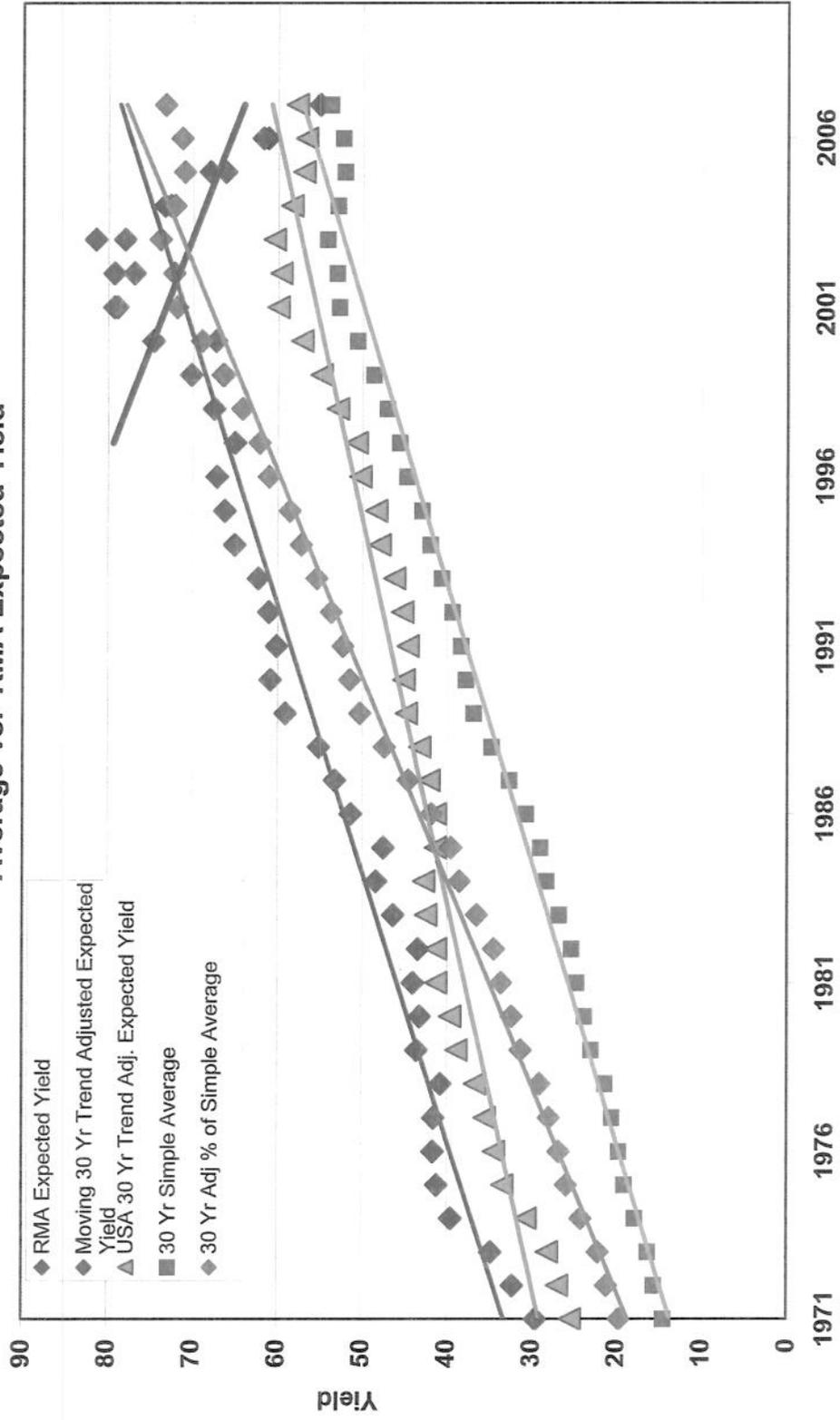
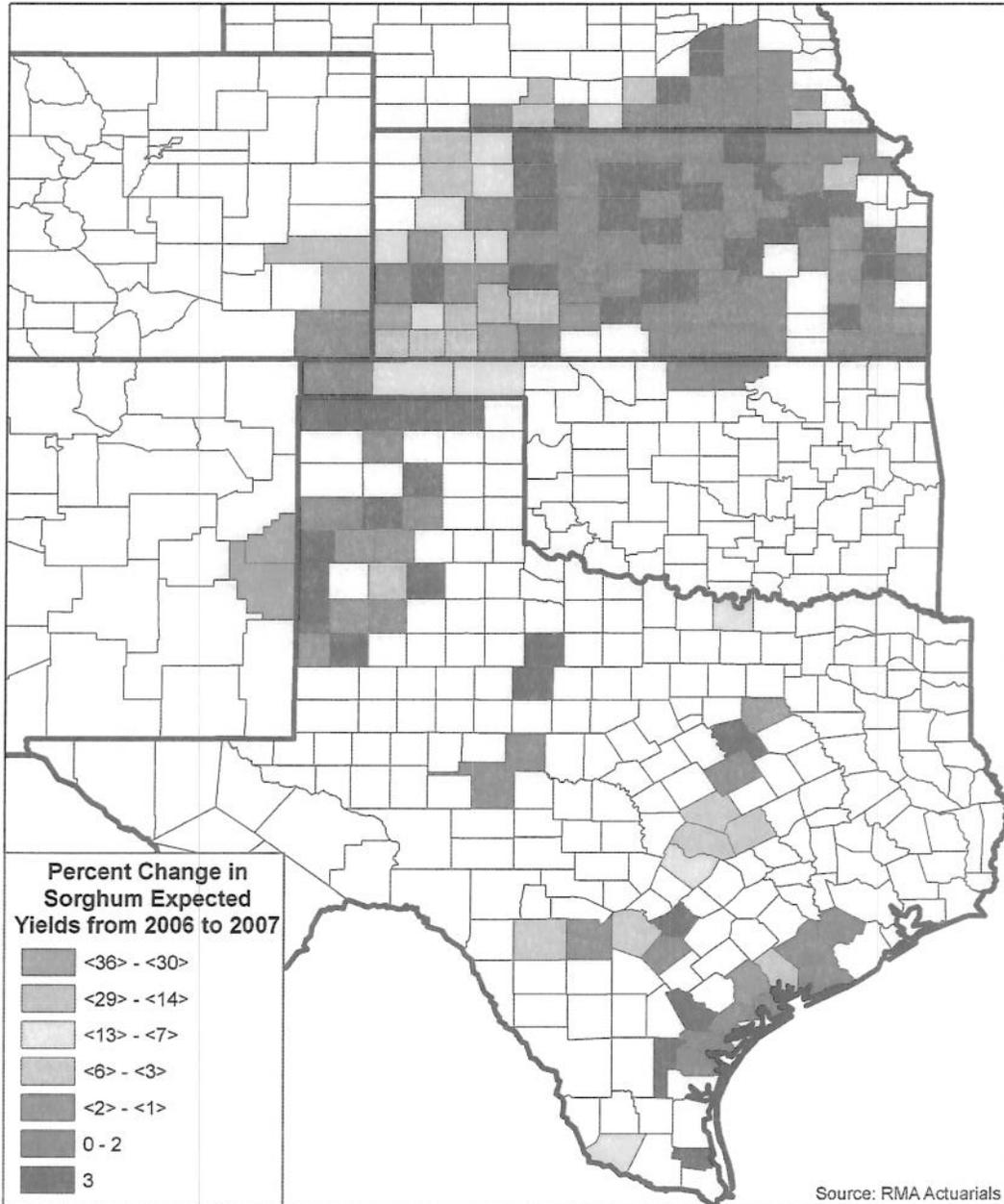


Exhibit 2.

Map 1

Percent Change in Expected Yields



**Committee on Agriculture
U.S. House of Representatives
Information Required From Non-governmental Witnesses**

House Rules* require nongovernmental witnesses to provide their resume or biographical sketch prior to testifying.

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Jarrold Spillman Biography

Jarrold Spillman farms in western Kansas near Hoxie in Sheridan County. After earning his B.S. in Agriculture Business from Fort Hays State University, he returned to the family farm as a XXth generation farmer. His operation includes sorghum, wheat, corn, soybeans and sunflowers as well as cow-calf pairs, a custom manure hauling business and custom farming. Jarrold was a first place winner in the National Sorghum Producers Yield and Management Contest in 2008 in the No-Till, Non-Irrigated category. Jarrold and his wife Denise have two young children.