All agricultural producers face recurring risks, significant among them being production risk. Many factors contribute to production risk, including adverse weather conditions such as drought or floods, fires, insects or pests, and disease. These events can devastate a crop, significantly reducing yield and revenue. Since the only way to completely avoid all production risks is to stop producing, successful farmers will seek for ways to mitigate these risks through various management techniques. One risk management tool available to crop producers is the purchase of crop insurance.

Crop insurance policies may be purchased from USDA’s Farm Service Agency (NAP policies) or from a commercial firm. A list of sales representatives and policy information is found on the Utah State University Agribusiness webpage (http://extension.usu.edu). NAP policies are not available for crops that are insured by a commercial insurance company. This publication provides an evaluation of commercial policies sold in San Juan County.

Crop insurance programs allow farmers to mitigate some of their production risk by shifting it to a third party, the crop insurer. In effect, crop insurance relieves the farmer of total responsibility if he suffers a production loss. In the event of a loss, the producer would receive an indemnity payment from the insurer based upon the type and level of crop insurance coverage. It is important to understand that crop insurance is a risk management tool, not an investment. Indemnity payments are not designed to always “pay,” and they only occur when something bad happens. When large losses occur, indemnity payments are made to lower the magnitude of the loss to farmers.

Details about past crop policies in a specific area can help producers in that area better understand the level of the risks they face. For example, if indemnity payments were relatively high for a certain crop in the past, this would suggest the risk associated with growing that crop was high. Past information can also help farmers decide if the cost of the premium is worth the lowered risk from buying a crop insurance policy. The following consists of information concerning crop insurance policies for San Juan County designed to aid producers in risk management decisions.

Table 1 provides information specific to each crop including the number of policies purchased by farmers and the total premiums paid. The

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Policies Sold</th>
<th>Insured Acres</th>
<th>Liabilities</th>
<th>Total Premium</th>
<th>Premium paid by Farmers</th>
<th>Indemnity</th>
<th>Loss Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>107</td>
<td>31632</td>
<td>$1,090,853</td>
<td>$346,769</td>
<td>$108,960</td>
<td>$224,872</td>
<td>0.65</td>
</tr>
<tr>
<td>Dry Beans</td>
<td>46</td>
<td>1626</td>
<td>$80,841</td>
<td>$16,065</td>
<td>$6,484</td>
<td>$23,155</td>
<td>1.44</td>
</tr>
<tr>
<td>Safflower</td>
<td>45</td>
<td>1831</td>
<td>$78,522</td>
<td>$18,654</td>
<td>$4,725</td>
<td>$15,180</td>
<td>0.80</td>
</tr>
<tr>
<td>Forage Production</td>
<td>1</td>
<td>14</td>
<td>$2,352</td>
<td>$242</td>
<td>$100</td>
<td>$0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>35103</td>
<td>$1,252,568</td>
<td>$381,730</td>
<td>$120,269</td>
<td>$263,207</td>
<td>0.69</td>
</tr>
</tbody>
</table>
The federal government has numerous subsidy programs to help agricultural producers, including for the purchase of crop insurance. The amount a policy is subsidized depends on the type and level of coverage. Of particular interest is the loss ratio. It represents the value of the loss, or the indemnity payment value, compared to the total premium value. Ratios above 1.0 indicate that the value of indemnity payments made to farmers exceeded the total value of premiums paid for crop insurance. As outlined in Table 1, the loss ratio for dry beans was greater than 1.0 in 2007, but lower for all other commodities. Another important relationship is that between indemnity payments and the portion of premiums paid by farmers. A comparison of these two factors shows that while the loss ratio was only above 1.0 for dry beans, indemnity payments were higher than premiums paid by farmers for wheat and safflower as well in 2007. The discussion below considers these and other factors relating to risk management for specific commodities grown in San Juan County.

**Wheat**

Wheat is the most widely insured crop in San Juan County, accounting for about 52% of policies sold, over 90% of the total premiums and over 85% of the total indemnity payments made in 2007. 31,632 wheat acres were insured last year, a 19.6% increase in insured acres relative to 2006. Policy numbers, however, declined by almost 4% in 2007.

Both Actual Production History (APH) and Crop Revenue Coverage (CRC) policies were purchased in 2007, but the majority were APH policies (65%). Table 2 shows the number of policies purchased and the acres insured under each policy type and coverage level, along with the percent change relative to 2006. As the table outlines, the decline in total policies sold stems mainly from declines in the purchase of CRC policies at the 50% coverage level. APH and CRC policies at the 65% coverage level also declined, while policy numbers increased for APH policies at the 50% CAT and 70% coverage levels. The increase in acres insured was largely due to increases in APH policies at the 50% CAT, 65%, and 70% coverage levels, with smaller increases and some decreases under other coverage levels, as shown in Table 2.

With an increase in insured acres, it is not surprising that liabilities have increased as well as premiums...
and indemnity payments for both policy types. Figures 1 and 2 show the total premiums, premiums paid by farmers and indemnity payments for APH and CRC wheat policies, respectively, since 2000. As expected, each variable increased in 2007 relative to 2006, comparable to the greater number of insured acres. Perhaps more important to note is that total indemnity payments have exceeded total premiums paid by farmers since 2000 for both APH and CRC policies with the exception of 2004 and 2005. In addition, loss ratios have been fairly volatile for wheat over the past eight years, swinging from a high of 3.02 for APH policies in 2003 to a low of .09 in 2004. The volatility of loss ratios and generally high indemnity payments suggest that there are fairly high risks associated with the production of wheat in San Juan County and that those risks can be mitigated with the purchase of a crop insurance policy.

**Dry Beans**

About 22% of crop insurance policies sold in 2007 were for dry beans, accounting for 4% of total premiums and almost 9% of total indemnities last year. The number of dry beans policies purchased declined 8% from the previous year and insured acreage dropped over 43%.

Most dry beans policies purchased in 2007 were APH policies at the 65% coverage level, with a few policies at the 50% CAT and 70% coverage levels. Policy numbers and insured acres decreased at all coverage levels relative to 2006, along with total premiums, liabilities and indemnity payments. Despite these declines, indemnity payments have, with the exception of 2005 when no indemnity payments were made, consistently exceeded the amount farmers have paid for insurance premiums. Figure 3 depicts this relationship. While dry beans farming and insured acreage have declined over the past eight years in San Juan County, loss ratios have remained high (above one) for six of those eight years, suggesting continued high levels of risk associated with dry beans production.

**Safflower**

Safflower insurance policies made up almost 22% of total crop policies sold, 5% of total premiums paid, and nearly 6% of total indemnity payments in San Juan County during 2007. The number of safflower policies and acres insured both declined about 8% from 2006.

Of the safflower insurance policies purchased last year, over 75% were purchased at the 50% or 65% coverage level. The decrease in total policies sold
comes largely from a decline at the higher coverage levels, 70% and 75%. The decrease in insured acres at the 65% and 75% levels account for most of the total decrease in insured acreage. As expected, liabilities and premiums also decreased in 2007, as well as indemnity payments as outlined in Figure 4. Part of the lower indemnity payment level in 2007 can be explained by the lower coverage levels of policies purchased last year. Indeed, those years with higher average coverage levels correspond to higher overall indemnity payments. Indemnity payments have, however, exceeded premiums paid by farmers seven of the past eight years and loss ratios have been higher in general, reaching up to 5.90. This historical behavior of indemnity payments suggests that the risk for yield loss associated with safflower production in San Juan County is high.

Forage Production

One forage production insurance policy was purchased last year, accounting for less than 1% of total premiums in San Juan County during 2007. 14 acres were insured and no indemnity payments were received. However, while the loss ratio was zero for San Juan County, high loss ratios and indemnity payments across the state suggest high risk associated with forage production and farmers in San Juan County could benefit from better use of crop insurance policies to mitigate those risks.

The information provided in this publication is general information specific to San Juan County. It is intended to provide San Juan County crop producers with general indicators concerning risk and the use of crop insurance to mitigate risk in the area. To better evaluate individual levels of risk and need for crop insurance, each producer should also consider personal experience with crop loss, ability to bear risk, and risk aversion.

All Utah and San Juan County crop insurance information presented in this publication is taken or developed from Risk Management Agency crop insurance data available through their website: www.rma.usda.gov.

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