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 Juab 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 Juab County designed to aid producers in risk management decisions.

### Table 1. 2007 Crop Insurance for Juab County

<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>Forage Production</td>
<td>9</td>
<td>85</td>
<td>$13,624</td>
<td>$1,081</td>
<td>$421</td>
<td>$3,875</td>
<td>3.58</td>
</tr>
<tr>
<td>Wheat</td>
<td>8</td>
<td>1622</td>
<td>$45,920</td>
<td>$13,472</td>
<td>$3,324</td>
<td>$10,661</td>
<td>0.79</td>
</tr>
<tr>
<td>Barley</td>
<td>4</td>
<td>230</td>
<td>$12,450</td>
<td>$1,576</td>
<td>$376</td>
<td>$0</td>
<td>0.00</td>
</tr>
<tr>
<td>Corn</td>
<td>2</td>
<td>531</td>
<td>$251,535</td>
<td>$24,081</td>
<td>$10,395</td>
<td>$0</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
<td><strong>2468</strong></td>
<td><strong>$323,529</strong></td>
<td><strong>$40,210</strong></td>
<td><strong>$14,516</strong></td>
<td><strong>$14,536</strong></td>
<td><strong>0.36</strong></td>
</tr>
</tbody>
</table>
Table 1 provides information specific to each crop including the number of policies purchased by farmers and the total premiums paid. 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 forage production 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 forage production, indemnity payments were higher than premiums paid by farmers for forage production and wheat in 2007. The discussion below considers these and other factors relating to risk management for specific commodities grown in Juab County.

**Forage Production**

Forage production insurance policies accounted for nearly 40% of total crop insurance policies sold, but only about 3% of total premiums and 27% of total indemnity payments in Juab County in 2007. Insured acres decreased dramatically in Juab County, falling over 93% relative to 2006 and the number of policies sold decreased by 31%.

Over half of the policies purchased in 2007 were APH policies at the 50% coverage level. Few policies were purchased at the 60%-65% coverage range, and no policies were purchased at higher levels. With the decrease in policies and insured acreage, liabilities and premiums also decreased in 2007, both over 90%. Total indemnity payments decreased, as shown in Figure 1, but by a lower margin than the decrease in premiums. The loss ratio actually increased significantly in 2007 when compared to the previous year, reaching a high of 3.58. Similarly, indemnity payments exceeded premiums paid by farmers in 2007 as well as in 2006. These indemnity payments are partly due to an increase in the general coverage level above 50% for those years suggesting lower risk of losing over 50% of a forage production crop, but higher risk of losing a lower percentage of the crop.

**Wheat**

Wheat policies accounted for 35% of crop policies sold in Juab County, 34% of the total premiums and over 73% of the total indemnity payments made in 2007. 1,622 wheat acres were insured last year, decreased from 2006 by nearly 18%. Despite the decrease in insured acres, however, the number of policies sold remained unchanged.

Half of the policies purchased were at the 50% coverage level, while the rest were insured at the 65%, 70% and 75% coverage levels. The total
decrease in insured acres was spread among all coverage levels except the 70% level which actually increased slightly. Liabilities and premiums decreased along with the decrease in insured acreage. Indemnity payments also decreased in 2007, as shown in Figure 2, and the loss ratio declined. Indemnity payments have, however, remained above premiums paid by farmers for six of the past eight years. Similarly, loss ratios have been high for those six years, with a high of 6.8 in 2001. Indemnity payments and loss ratios for 2003 and 2005, however, were zero and cannot be explained by significantly lower coverage levels or insured acres. This volatility coupled with generally high indemnity payments and loss ratios suggests the risk associated with wheat production in Juab County is high and crop insurance policies should be considered to mitigate some of that risk.

**Barley**

17% of crop insurance policies sold in Juab County in 2007 were for barley, accounting for almost 4% of total premiums and 0% of total indemnities last year. The number of barley policies purchased declined slightly from the previous year, but insured acres more than doubled relative to 2006.

All of the policies purchased for barley were at the 50% coverage level. The decrease in policy numbers stemmed from a decrease at the 65% coverage level, thus lower the overall coverage level. Despite the decline in coverage level, liabilities and premiums increased, largely due to the increase in insured acres. No indemnity payments were made in 2007, continuing the three-year trend depicted in Figure 3. Higher indemnity payments and loss ratios in earlier years suggest fairly high risk associated with the production of barley in Juab County, but the pattern for the past three years would suggest that risk has lowered somewhat for barley producers.

**Corn**

Corn policies accounted for almost 9% of total policies sold, but nearly 72% of total premiums, and 0% of total indemnity payments in 2007. The number of corn policies purchased last year remained unchanged from the previous year, but insured acres increased almost 47%.

One policy was purchased at the 50% and one was purchased at the 75% coverage level. The increase in insured acres came entirely from an increase at the 50% level, while insured acres at the 75% level actually decreased slightly.
Given the increase in insured acres, liabilities and premiums increased. No indemnity payments were made in 2007, however. Figure 4 shows that indemnity payments have remained at zero five of the past seven years and loss ratios have been below 1.0 all years but one. Such low indemnity payments suggest that the risk associated with the few acres of corn grown in Juan County is relatively low.

The information provided in this publication is general information for Juab County. It is intended to provide Juab 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 Juab 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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