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 Utah 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.

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

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Policies</th>
<th>Insured Acres</th>
<th>Liabilities</th>
<th>Total Premiums</th>
<th>Premiums paid by Farmers</th>
<th>Indemnity Loss</th>
<th>Loss Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>17</td>
<td>691</td>
<td>$1,541,372</td>
<td>$185,975</td>
<td>$72,060</td>
<td>$86,380</td>
<td>0.46</td>
</tr>
<tr>
<td>Cherries</td>
<td>6</td>
<td>164</td>
<td>$183,681</td>
<td>$20,393</td>
<td>$8,381</td>
<td>$11,278</td>
<td>0.55</td>
</tr>
<tr>
<td>Forage Production</td>
<td>2</td>
<td>128</td>
<td>$23,419</td>
<td>$1,348</td>
<td>$445</td>
<td>$9,814</td>
<td>7.28</td>
</tr>
<tr>
<td>Fresh Freestone Peaches</td>
<td>11</td>
<td>228</td>
<td>$309,508</td>
<td>$60,243</td>
<td>$19,866</td>
<td>$5,888</td>
<td>0.10</td>
</tr>
<tr>
<td>Nursery</td>
<td>1</td>
<td>0</td>
<td>$292,894</td>
<td>$3,187</td>
<td>$50</td>
<td>$0</td>
<td>0.00</td>
</tr>
<tr>
<td>Oats</td>
<td>1</td>
<td>5</td>
<td>$743</td>
<td>$52</td>
<td>$21</td>
<td>$0</td>
<td>0.00</td>
</tr>
<tr>
<td>Safflower</td>
<td>8</td>
<td>19</td>
<td>$1,070</td>
<td>$69</td>
<td>$23</td>
<td>$0</td>
<td>0.00</td>
</tr>
<tr>
<td>Wheat</td>
<td>15</td>
<td>13,078</td>
<td>$362,857</td>
<td>$75,039</td>
<td>$19,759</td>
<td>$181,705</td>
<td>2.46</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64</strong></td>
<td><strong>14,313</strong></td>
<td><strong>$2,715,544</strong></td>
<td><strong>$346,306</strong></td>
<td><strong>$120,555</strong></td>
<td><strong>$295,065</strong></td>
<td><strong>0.85</strong></td>
</tr>
</tbody>
</table>

Sarah Drollette and E. Bruce Godfrey, Department of Applied Economics
risk from buying a crop insurance policy. The following consists of information concerning crop insurance policies for Utah 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 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 ratios for forage production and wheat were 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 indemnity payments were higher than premiums paid by farmers for forage production and wheat as well as cherries and apples. The discussion below considers these and other factors relating to risk management for specific commodities grown in Utah County.

**Apples**

The number of crop insurance policies purchased for apples has decreased over the past several years. Similarly, insured acres and liabilities have dropped over the past three years. Of the 17 policies purchased by producers last year, seven received indemnity payments compensating for losses totaling $86,380. While the loss ratio dropped below 1.00 in 2007, indicating that indemnity payments were lower than total paid premiums that year, total indemnity payments have consistently exceeded the total premiums paid by farmers for the past eight years, as depicted in the graph. This suggests that indemnity payment rendered to the average farmer have been greater each year than the cost to the farmer for the crop insurance premiums.

**Wheat**

The number of insurance policies for wheat has declined over the past four years, but insured acres and liabilities increased in 2007 from the previous year. Five of the 15 policies purchased by producers last year received indemnity payments. Unlike
apples, the loss ratio for wheat increased significantly last year and indemnity payments have been markedly higher than premiums paid by farmers for six of the eight years outlined in the graph. The relatively high loss ratios and indemnity payments over the past eight years, with the exception of 2005, suggest there is a fair amount of risk associated with the production of wheat in Utah County.

**Peaches**
The number of policies purchased for peaches was unchanged in 2007 from the previous year, and insured acres and liabilities both increased by slightly over 2%. Of the 11 policies purchased last year, only two suffered losses mitigated by an indemnity payment and total indemnity payments have been lower than the total premiums paid by farmers since 2005. Unlike apples and wheat, this indicates that the cost to farmers for the insurance policies has been greater than the losses suffered for the past three years. The relatively low indemnity payments and loss ratios for these years suggest that the risk in producing peaches may be declining in Utah County.

**Cherries**
The number of policies purchased for cherries has varied little over the past eight years. Insured acres decreased in 2007, but liabilities increased slightly, implying higher coverage levels overall. While premiums paid by farmers have changed little since 2000, indemnity payments have swung from a low of $0 received in 2000 and 2004 to a high of $116,167 received in 2002. Last year, one of the six policies purchased received an indemnity payment of $11,278 to compensate loss. Such volatility suggests that losses are highly unpredictable, heightening the level of risk associated with producing cherries.

**Forage Production**
Insurance policies for forage production have been purchased since 2005 and have declined by one unit each subsequent year. While no indemnity payments were made in 2005 or 2006, the indemnity payment made last year was over 22 times the cost producers paid in premiums for the insurance. A continuation of this trend would suggest increased risk associated with forage production.

**Safflower, Oats, Nursery, Corn, Barley**
Other crops for which insurance policies have been purchased over the past eight years include safflower, oats, nursery, corn and barley. Insurance policies
have been purchased each year since 2000 for safflower and oats. An average of four acres have been insured under oat policies over the past eight years with relatively low premiums paid by farmers ($6-$21) and no indemnity payments made in any year. This suggests little risk associated with the small production of oats. More acres have been insured under safflower policies—an average of 557 over the past eight years—but no indemnity payments since 2002 would also imply relatively low risk associated with safflower production in Utah County.

Insurance policies for nursery have been purchased the past two years and have been 100% subsidized each year. No indemnity payments have been made, again suggesting relatively lower risk. However, since the premium cost to farmers was nothing, risk is mitigated at a very low cost to the producer. Other crops for which insurance policies have been completely subsidized include corn and barley. Corn policies, purchased from 2000-2003, received no indemnity payments and barley policies, purchased each year since 2000, only received an indemnity payment in 2003.

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