RISK MANAGEMENT AND THE ROLE OF THE FEDERAL GOVERNMENT

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Regional Research Project NC-221 Conference
“Financing Agriculture and Rural America: Issues of Policy, Structure and Technical Change”
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Risk Management and the Role of the Federal Government

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McLean, Virginia
October 1, 2001

Crop insurance versus disaster assistance

- Debate in late 1970s over best way to provide catastrophic protection: crop insurance or disaster programs
- Disaster assistance was criticized
  - costly (averaged over $500 million/year)
  - encouraged production on marginal lands
  - encouraged moral hazard
  - preventive planting provisions encouraged adverse selection
Federal Crop Insurance Act of 1980

- Established crop insurance as primary vehicle for disaster protection
- Replaced disaster payments program
- To be run on actuarially sound basis
- Created role for private sector to deliver
- Goal: 50% participation by end of decade

Program growth, 1981-2000
Acres

Premiums and Indemnities
Net Federal outlays on crop insurance

Crop insurance participation
### Premium subsidy rate--MPCI

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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>55/100</td>
<td>30.0</td>
<td>46.1</td>
<td>62.3</td>
<td>64.0</td>
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<tr>
<td>65/100</td>
<td>30.0</td>
<td>41.7</td>
<td>59.2</td>
<td>59.0</td>
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<tr>
<td>75/100</td>
<td>16.9</td>
<td>23.5</td>
<td>46.4</td>
<td>55.0</td>
</tr>
<tr>
<td>85/100</td>
<td>---</td>
<td>13.0</td>
<td>39.1</td>
<td>38.0</td>
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</tbody>
</table>

### Effects of the 1999 subsidies on participation

![Bar Chart]

- Policies
- Acres
- Liability
- Total premium
Effect on Coverage Levels

Marginal per-acre cost of increasing participation

<table>
<thead>
<tr>
<th>Target participation rate</th>
<th>Demand elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.6</td>
</tr>
<tr>
<td>60 %</td>
<td>$19.65</td>
</tr>
<tr>
<td>65 %</td>
<td>$20.65</td>
</tr>
<tr>
<td>75%</td>
<td>$22.66</td>
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Delivery costs

![Bar chart showing delivery costs from 1981 to 1999.]

Delivery costs as percent of total premium and outlays

![Line chart showing delivery costs as a percentage of total premium and outlays from 1980 to 2000.]

- A&O
- Underwriting gains

- Total premium
- Total outlays
Crop disaster payments

Effects on production

- High per-acre subsidies bias crop selection (Wu)?
- Added land provisions encourage expansion of crops (Long et al.; Young et al.; Goodwin and Vandevree)?
- Anecdotal evidence (CRC durum, cotton, watermelons)
- Empirical evidence mixed (< 1 million acres to 30+ million)
- Effects on yield (Smith and Goodwin; Babeock and Hennessey; Horowitz and Lichtenberg)
Dollars of Premium Subsidy Varies

Total Premium = Premium Rate x Liability

Excludes counties with less than 1,000 acres insured.

Effect on corn price due to crop insurance subsidies

<table>
<thead>
<tr>
<th>Production increase (percent)</th>
<th>Demand elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.3</td>
</tr>
<tr>
<td>0.28 (Orden-low)</td>
<td>-0.02</td>
</tr>
<tr>
<td>2.2 (G&amp;V-low)</td>
<td>-0.13</td>
</tr>
<tr>
<td>3.3 (G&amp;V-high)</td>
<td>-0.20</td>
</tr>
<tr>
<td>4.1 (Orden-high)</td>
<td>-0.25</td>
</tr>
</tbody>
</table>
Conclusions

- Is the debate over crop insurance versus disaster assistance finally resolved?
- Will crop insurance be revisited in the next farm bill?
  - How does crop insurance fit in with other farm programs?
- Do high levels of subsidies distort payments?
- Role of the private sector.