Phytosanitary Irradiation
Tomorrow
Can we reach utopia?
In a regulatory world...

• 1 kGy limit
• Labeling
• International approvals
• MAP packaging
• Generic doses
• Fruit quality
• Other pests
Regulatory issues

1 kGy limit

• Throwback to concerns 50 years ago
• Food irradiation classified as an additive rather than a process
• Immediately should raise to 1.5 kGy
• Ultimately, raise to 10 kGy
• Fruit quality should dictate upper limits
Regulatory issues
Labeling

• Irradiation not an additive
• To start, be more flexible and descriptive - “Treated with x-rays to protect agriculture”
• No labeling requirement – consumer should decide
Regulatory issues
International approvals

• Biggest impediment to future expansion
• Phytosanitary irradiation not approved in many countries
• EU, Japan, Taiwan, Korea, Canada
• “Imagine there’s no countries, it’s easy if you try...” (John Lennon)
Regulatory issues
MAP restrictions

• USA - <18% O\textsubscript{2} prohibited, IPPC no MAP
• USDA 18% down to 10%
• Studies do not support restrictions
• MAP restriction <1%
• No MAP restriction
## Comprehensive Generic Doses (proposed)

<table>
<thead>
<tr>
<th>Fruit flies</th>
<th>Beetles</th>
<th>Ants</th>
<th>Surface pests</th>
<th>Moths</th>
<th>Mites</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>250</td>
<td></td>
<td>400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Fruit flies
- Weevils
- Ants
- Snails
- Mealybugs
- Scales
- Psyllids
- Thrips
- Spiders
- Moths
- Mites
Technical challenges

• Fruit quality
  • Pre- and post harvest factors
  • Mitigation measures
  • Molecular basis
• New equipment
  • X-ray and e-beam technology
  • In-line equipment