Assessing Late Blight Risk Under Polythene Covers in Jersey

Howard Hinds Crop Consultancy
Background

- Jersey Royal (Potato Marketing)
- 1800 ha Jersey Royal potatoes
- Maritime climate – high blight risk
- Most crop covered by polythene
- Potatoes after potatoes
- A1 still main strain, but seed/volunteers a problem
- Plant-Plus model since 2000
- 4 weather stations on the island
- Blight mapping
West Station

North Station

Central Station

South East Station

15 km
Why Assess Risk Under Poly?

- Test the assumption that blight risk under polythene is always high.
- Compare risk calculated from under polythene data against open ground weather conditions
- Produce improved DSS for blight protection of early crops by improved timing of polythene removal
2006 polythene removal
April 10th
South East Blight Risk 2006 – a late season

Poly station

Emergence 22/02/06

Open field station

Poly removal 10/04/06

24/3 3/4
South East Blight Risk 2007 – an early season

Poly station

Crop Emergence 02/02/06

Poly removal 03/03/06

Open field station
## Temperature & Humidity Comparison

<table>
<thead>
<tr>
<th>Year</th>
<th>System</th>
<th>T-Av</th>
<th>T-Max</th>
<th>T-Min</th>
<th>RH-Av</th>
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</thead>
<tbody>
<tr>
<td>2006</td>
<td>Poly</td>
<td>7.8</td>
<td>26.6</td>
<td>-0.5</td>
<td>94</td>
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<tr>
<td></td>
<td>Open</td>
<td>5.9</td>
<td>12.2</td>
<td>0.3</td>
<td>81</td>
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<tr>
<td>2007</td>
<td>Poly</td>
<td>8.3</td>
<td>13</td>
<td>2.5</td>
<td>88</td>
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<tr>
<td></td>
<td>Open</td>
<td>8.6</td>
<td>11.9</td>
<td>2.8</td>
<td>86</td>
</tr>
</tbody>
</table>
Question

Who are the fittest people in Jersey?

Answer

Blight spray operators
Summary

• Blight risk under polythene is not always high. Low risk above the crop relates to low below polythene (sometimes it is lower under poly!)

• Lower minimum temperatures recorded under polythene.

• In 2006 & 2007 differences between open and poly stations blight risk were not as great as expected

• Both systems can be used as an indicator of infection risk under polythene – A DSS tool for polythene removal or spraying over fleece

• Further assessments required with other varieties and fleece
Thanks for your attention

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