Update on Diseases of Coastal Vegetables

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CA / AZ: Proliferation of new spinach DM races

Spinach downy mildew races: 1990

R2 R3 R4 R5 R6 R7 R9 R10 R11 R12 R13 R14

‘08 ‘09 ’10 ’12
2013-2014 Summary

• Races 10, 11, 12, 13, 14, and UA4712 (R 15)
  – All present and detected
  – Greater diversity than seen in previous years
  – More mixtures (multiple races in field)

• Main deviating isolates
  – UA4712 (R 15), UA2213, UA1312, UA1012
Frequency of DM Pathotypes: 2003-2006

- **2003**: N=51
- **2004**: N=13
- **2005**: N=52
- **2006**: N=36

**2014 New race: CA IX?**
Lettuce: systemic downy mildew

Lettuce: physiological disorder
Broccoli:
systemic downy mildew
Iris yellow spot virus
Fusarium wilt of cilantro
New parsley diseases

Bacterial leaf spot

Stemphylium leaf spot
Verticillium wilt
### Coastal CA Verticillium Diseases

<table>
<thead>
<tr>
<th>V. source</th>
<th>lettuce</th>
<th>strawb</th>
<th>pepper</th>
<th>cauliflower</th>
</tr>
</thead>
<tbody>
<tr>
<td>lettuce</td>
<td>++++</td>
<td>+++</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>strawberry</td>
<td>+++</td>
<td>++++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>pepper</td>
<td>+</td>
<td>+</td>
<td>++++</td>
<td>+</td>
</tr>
<tr>
<td>cauliflower</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>++++</td>
</tr>
</tbody>
</table>

+++/+++++ = severe disease  
+ = minimal symptoms  
0 = no disease

Note: This is not a host range table.
Verticillium wilt