<table>
<thead>
<tr>
<th></th>
<th>Apple</th>
<th>Pear</th>
<th>Peach</th>
<th>Cherry</th>
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<td>PNW</td>
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<tr>
<td>Utah</td>
<td>11</td>
<td>8</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>
Fire Blight: a disease in UT
Survey of Diseases we are not sure are in Utah
Virus diseases, many not currently in UT
High Temps = **BLIGHT RISK**

Watch forecast **MODERATE RISK**

**NO WORRIES**
FB Model - Cougarblight

- stigma tips viable for 4 days

- “degree hours” are calculated over 4-day period

- must know:
  - are trees in bloom
    - WATCH for “secondary” bloom
  - was fire blight present last year and where

- is there moisture?
  - 0.01 inches (minimum)
  - 2 hours wetting (minimum)
The mission of the Utah Climate Center (UCC) is to facilitate access to climate data and information, and to use expertise in atmospheric science to interpret climate information in an accurate and innovative fashion for the public. The mission includes the design of new products to meet present and future needs of agriculture, natural resources, government, industry, tourism, and educational organizations in Utah and the intermountain region.

As the site develops, functionality will be expanded beyond products available in the past to include interpretative and visualization tools that will benefit both the specialist...
Utah TRAPs (Timing Resource and Alert for Pests)

Utah TRAPs is a degree-day calculator, insect phenology, and management tool for agriculture and landscape locations in northern Utah. The Utah TRAPs Web site is evolving, and more locations and pests will be added in the future.

Using degree days and insect phenology is a key feature of Integrated Pest Management. (Click here for USU Fact Sheet on degree days.) Degree days predict an insect's emergence or life stage, and provides the optimal treatment timing. Note that degree days and insect development information provided in the TRAPs tool pertains to Utah pest only. Several pest models (peach twig borer, codling moth, and western cherry fruit fly) have been validated for Utah, and others are currently being tested. See help file for instructions on using Utah TRAPs. Please email Marion Murray (marion.murray@usu.edu) for comments, feedback, or questions of this new service.
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Station: Perry

<table>
<thead>
<tr>
<th>Pest</th>
<th>Biofix Date</th>
<th>End Date</th>
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<tbody>
<tr>
<td>Fire Blight</td>
<td>05-01-2009</td>
<td>05-10-2009</td>
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</tbody>
</table>

Currently in Logan, UT

February 21, Record

<table>
<thead>
<tr>
<th>High Temp</th>
<th>Low Temp</th>
<th>Daily Precip</th>
</tr>
</thead>
<tbody>
<tr>
<td>51°F</td>
<td>26°F</td>
<td>0.37&quot;</td>
</tr>
</tbody>
</table>

February 21, Normal

<table>
<thead>
<tr>
<th>High Temp</th>
<th>Low Temp</th>
<th>Monthly Precip</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.9°F</td>
<td>10.0°F</td>
<td>1.38&quot;</td>
</tr>
</tbody>
</table>

Exposure Time Before Frostbite: > 30 Minutes

Current Moon Phase:

Related Links

Go to Station Feed

Search
Utah TRAPs Search Results


Check your orchard for flowers, including the secondary flowers that develop in May on apples, or into June on pears. If there are no flowers, this model does not apply.

Select your Blight history:
- Fire Blight occurred last year in surrounding orchards
- No Fire Blight in your orchard or surrounding orchards
- Fire Blight occurred last year in surrounding orchards
- Fire Blight is active within your orchard

<table>
<thead>
<tr>
<th>Date</th>
<th>Degree Hours</th>
<th>4 Day Accum Degree Hours</th>
<th>Min °F</th>
<th>Max °F</th>
<th>Blight Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/05/09</td>
<td>49.78</td>
<td>49.78</td>
<td>52</td>
<td>71</td>
<td>LOW</td>
</tr>
<tr>
<td>05/06/09</td>
<td>72.27</td>
<td>122.05</td>
<td>47</td>
<td>71</td>
<td>LOW</td>
</tr>
<tr>
<td>05/07/09</td>
<td>11.93</td>
<td>133.98</td>
<td>47</td>
<td>66</td>
<td>LOW</td>
</tr>
<tr>
<td>05/08/09</td>
<td>0</td>
<td>133.98</td>
<td>37</td>
<td>68</td>
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<td>5.26</td>
<td>89.46</td>
<td>36</td>
<td>63</td>
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<td>05/10/09</td>
<td>21.98</td>
<td>139.17</td>
<td>38</td>
<td>66</td>
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<tr>
<td>05/11/09</td>
<td>104.09</td>
<td>131.33</td>
<td>41</td>
<td>73</td>
<td>LOW</td>
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<tr>
<td>05/12/09</td>
<td>37.04</td>
<td>168.37</td>
<td>46</td>
<td>69</td>
<td>CAUTION</td>
</tr>
<tr>
<td>05/13/09</td>
<td>0</td>
<td>163.11</td>
<td>36</td>
<td>58</td>
<td>CAUTION</td>
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<tr>
<td>05/14/09</td>
<td>28.3</td>
<td>169.43</td>
<td>44</td>
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<td>CAUTION</td>
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* Missing data from USU weather station replaced by nearest cooperator site

Check your orchard for flowers, including the secondary flowers that develop in May on apples, or into June on pears. If there are no flowers, this model does not apply.

“Wetting of flowers” includes rain, 2+ hours of dew, or a light irrigation.

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<tr>
<th>Blight Potential</th>
<th>Management Actions</th>
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<tbody>
<tr>
<td>LOW</td>
<td>Wetting of flowers has not led to new flower blight infections in past years.</td>
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<tr>
<td>CAUTION</td>
<td>Wetting at this point is not likely to lead to infection, except within a few yards of an actively oozing canker. Continue to closely monitor the fire blight forecast, and consider applying biological sprays to reduce the potential build-up of blight bacteria if High risk is forecast in three or four days.</td>
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<td>HIGH</td>
<td>If unprotected flowers are wetted, infection is possible. If flowers are numerous, you may choose to protect every 2 - 3 days with biological product during the high risk period. Or, apply antibiotic within 24 hours before or after the infection (wetting) event.</td>
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Connect
- Climate DataSets
- Visualize Weather & Climate
- Plant Management Tools
- Water Rangers (CoCoRaHS UT)
- Climate Conversions
- Climate Reports

Currently in Logan, UT
Change Location

Recorded: Feb 27, 2010 01:21 am
- Temperature: 26.6°F (−3.6°C)
- Feets Like: 26.6°F (−3.6°C)
- Wind: Calm
- Pressure: 29.93" (1012 mb)
- Visibility: 3 mi
- Dewpoint: 24.6°F (−4.0°C)
- Rel. Humidity: 82.91%
- Precip. Today: 0.00" (0 mm)
- Feb. Precip: 0.43" (10.92 mm)

February 27, Record
- High Temp: 59°F / 15°C
- Low Temp: 23°F / −5°C
- Daily Precip: 0.04" / 1.38 mm

February 27, Normal
- High Temp: 42.2°F / 6°C
- Low Temp: 25.9°F / −3°C
- Monthly Precip: 1.38"

Exposure Time Before Frostbite:
- > 36 Minutes

Current Moon Phase:
- Go to Station Feed

Related Links
Utah TRAPs Search Results


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Select your Blight history: **Fire Blight is active within your orchard**

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Prune out cankers in winter (6-8 inches beyond)

Copper
- apply at ¼-inch green stage

Biologicals

Antibiotics

Apogee

Summer pruning
- if severe – wait and prune in winter
- light – cut 12” beyond
  - don’t need to disinfect tools
  - can drop on ground in hot dry weather (don’t need to burn)
Biologicals

Bloomtime, Blightban, Serenade, Blossom Protect

- ineffective alone
- must be applied before infection
- apply at 30-40% open flowers once on cool day
- use high water volume
- must wait at least 2 days before antibiotic application
Antibiotics

- **Streptomycin (Agri-Mycin, Ferti-Lome FB Spray)**
  - slight systemic activity

- **Oxytetracycline (Mycoshield, FlameOut)**
  - not systemic
  - does not KILL bacteria, but slows it down
  - works best when on plants before infection (up to 24 hours before wetting)
Stone Fruit Disease Survey

- bacterial canker (*Pseudomonas syringae*)
- cytospora canker
- brown rot
Survey

- sample selected orchards throughout the season
- sample large batches of fruit at harvest
- distribute a flier to ag agents in fruit producing counties describing diseases and to watch for symptoms
  - send samples to Marion, or
  - record location for site visit
Brown Rot

- *Monilinia fructicola*
- All stone fruits susceptible
- Favored by humid weather at the time that fruit are ripening
- Entire crop can be lost within a few days
- Disease can develop on harvested fruit
Virus – General Symptoms

- Foliar discoloration or deformity
- Fruit deformation
- Change in growth habit
- Change in maturity timeline
- Lack of vigor; decline
Plum Pox Virus

- affects all stone fruit
- 100 million trees infected in Europe
- affected trees must be removed
- vectored by aphids
- carried long distance via spread of infected nursery stock
introduced into PA in 1999
also found in Nova Scotia and Ontario, Canada
in 2006, found in NY on peach and plum and in MI
Cherry Rasp Leaf Virus

- occurs in most western states
- sweet cherry, peach, and apple
- distributed by grafting and by dagger nematodes
- survives on alternate weed hosts (dandelion)
- projections on undersides of leaves
- poor bud survival and tree growth
- tree eventually weakens and dies
Other Viruses

Prunus Necrotic Ringspot Virus

Prune Dwarf Virus

Healthy

PDV Infected
Cherry Leaf Roll Virus

Healthy

Diseased

Diseased
Cherry Mottle Leaf Virus

Cherry Twisted Leaf Virus