

| Pest Scouting - Growing Degree-day Ranges |                                  |                                   |                   |                   |                 | (25-60 GDD50)                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|----------------------------------|-----------------------------------|-------------------|-------------------|-----------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                      | Common name                      | Scientific name                   | GGD50 Range       |                   | GDD50 Reference | Developmental / Target Stage          | Extension & Industry Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           |                                  |                                   | MIN<br>min: 50 °F | MAX<br>max: 95 °F |                 |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Conifer                                   | Eastern spruce gall adelgid      | <i>Adelges abietis</i>            | 25                | 100               | 3               | spring control of overwintering stage | <a href="https://extension.psu.edu/eastern-spruce-gall-adelgid">https://extension.psu.edu/eastern-spruce-gall-adelgid</a><br><a href="https://ag.umass.edu/landscape/fact-sheets/eastern-spruce-gall-adelgid">https://ag.umass.edu/landscape/fact-sheets/eastern-spruce-gall-adelgid</a><br><a href="https://barron.extension.wisc.edu/files/2011/08/Microsoft-Word-spruce-gall-fact-sheet-Ohio-State-University-Extension.pdf">https://barron.extension.wisc.edu/files/2011/08/Microsoft-Word-spruce-gall-fact-sheet-Ohio-State-University-Extension.pdf</a><br><a href="https://extension.unh.edu/resource/spruce-gall-adelgids-fact-sheet">https://extension.unh.edu/resource/spruce-gall-adelgids-fact-sheet</a>                                                                                                                                                                                                                                                   |
| Conifer                                   | Northern pine weevil             | <i>Pissodes approximatus</i>      | 25                | 100               | 4               | 1st adults active                     | <a href="https://web.extension.illinois.edu/hortanswers/detailProblem.cfm?PathogenID=71">https://web.extension.illinois.edu/hortanswers/detailProblem.cfm?PathogenID=71</a><br><a href="https://tidf.nrcan.gc.ca/en/insects/factsheet/1837">https://tidf.nrcan.gc.ca/en/insects/factsheet/1837</a><br><a href="https://www.canr.msu.edu/ipm/agriculture/christmas_trees/edd_of_conifer_insects">https://www.canr.msu.edu/ipm/agriculture/christmas_trees/edd_of_conifer_insects</a><br><a href="https://extension.entm.purdue.edu/publications/E-256/E-256.pdf">https://extension.entm.purdue.edu/publications/E-256/E-256.pdf</a>                                                                                                                                                                                                                                                                                                                                     |
| Conifer                                   | Zimmerman pine moth              | <i>Dioryctria zimmermani</i>      | 25                | 100               | 3               | 1st larvae active                     | <a href="https://extension.colostate.edu/topic-areas/insects/zimmerman-pine-moth-5-591/">https://extension.colostate.edu/topic-areas/insects/zimmerman-pine-moth-5-591/</a><br><a href="https://extension.psu.edu/zimmerman-pine-moth">https://extension.psu.edu/zimmerman-pine-moth</a><br><a href="https://hort.extension.wisc.edu/articles/zimmerman-pine-moth/">https://hort.extension.wisc.edu/articles/zimmerman-pine-moth/</a><br><a href="https://extension.entm.purdue.edu/publications/E-40/E-40.html">https://extension.entm.purdue.edu/publications/E-40/E-40.html</a>                                                                                                                                                                                                                                                                                                                                                                                     |
| Conifer                                   | Cooley spruce gall adelgid       | <i>Adelges cooleyi</i>            | 25                | 120               | 3               | Spring control of overwintering stage | <a href="https://extension.colostate.edu/topic-areas/insects/cooley-spruce-gallis-5-534/">https://extension.colostate.edu/topic-areas/insects/cooley-spruce-gallis-5-534/</a><br><a href="https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd5187372.pdf">https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd5187372.pdf</a><br><a href="https://web.extension.illinois.edu/focus/index.cfm?problem=spruce-gall-adelgids">https://web.extension.illinois.edu/focus/index.cfm?problem=spruce-gall-adelgids</a><br><a href="https://ag.umass.edu/landscape/fact-sheets/cooley-spruce-gall-adelgid">https://ag.umass.edu/landscape/fact-sheets/cooley-spruce-gall-adelgid</a>                                                                                                                                                                                                                                                                                       |
| Conifer                                   | White pine weevil                | <i>Pissodes strobi</i>            | 25                | 220               | 4               | 1st adults active                     | <a href="https://extension.osu.edu/white-pine-weevil">https://extension.osu.edu/white-pine-weevil</a><br><a href="https://www.extension.uidaho.edu/publishing/pdf/cis/cis1133.pdf">https://www.extension.uidaho.edu/publishing/pdf/cis/cis1133.pdf</a><br><a href="https://extension.umaine.edu/ipm/ipdd/publications/5042e/">https://extension.umaine.edu/ipm/ipdd/publications/5042e/</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Shade trees                               | European fruit lecanium          | <i>Parthenolecanium corni</i>     | 35                | 145               | 2               | Spring control of overwintering stage | <a href="https://extension.osu.edu/european-fruit-lecanium">https://extension.osu.edu/european-fruit-lecanium</a><br><a href="http://treefruit.wsu.edu/crop-protection/oom/european-fruit-lecanium/">http://treefruit.wsu.edu/crop-protection/oom/european-fruit-lecanium/</a><br><a href="https://www2.ipm.ucanr.edu/agriculture/Almond/European-Fruit-Lecanium/">https://www2.ipm.ucanr.edu/agriculture/Almond/European-Fruit-Lecanium/</a><br><a href="https://extension.tennessee.edu/publications/Documents/W289-K.pdf">https://extension.tennessee.edu/publications/Documents/W289-K.pdf</a>                                                                                                                                                                                                                                                                                                                                                                     |
| Evergreens                                | Euonymus scale                   | <i>Unaspis euonymi</i>            | 35                | 120               | 2               | Spring control of overwintering stage | <a href="https://extension.umd.edu/helic/topics/euonymus-scale-shrubs">https://extension.umd.edu/helic/topics/euonymus-scale-shrubs</a><br><a href="https://extension.osu.edu/euonymus-scale">https://extension.osu.edu/euonymus-scale</a><br><a href="https://content.ces.ncsu.edu/euonymus-scale">https://content.ces.ncsu.edu/euonymus-scale</a><br><a href="https://cdn.extension.udel.edu/wp-content/uploads/2015/10/12143536/Euonymus-Scale-Fact-Sheet.pdf">https://cdn.extension.udel.edu/wp-content/uploads/2015/10/12143536/Euonymus-Scale-Fact-Sheet.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                 |
| Conifer                                   | European pine sawfly             | <i>Neodiprion sertifer</i>        | 35                | 145               | 1               | Hatched larvae                        | <a href="https://extension.psu.edu/european-pine-sawfly">https://extension.psu.edu/european-pine-sawfly</a><br><a href="https://hr.k-state.edu/extension/info-center/common-pest-problems/common-pest-problem-new/European%20Pine%20Sawfly.pdf">https://hr.k-state.edu/extension/info-center/common-pest-problems/common-pest-problem-new/European%20Pine%20Sawfly.pdf</a><br><a href="https://web.extension.illinois.edu/hortanswers/detailProblem.cfm?PathogenID=79">https://web.extension.illinois.edu/hortanswers/detailProblem.cfm?PathogenID=79</a><br><a href="https://entomology.ca.uky.edu/ef410">https://entomology.ca.uky.edu/ef410</a>                                                                                                                                                                                                                                                                                                                     |
| Conifer                                   | Fletcher scale                   | <i>Parthenolecanium fletcheri</i> | 35                | 148               | 2               | Spring control of overwintering stage | <a href="https://extension.osu.edu/fletcher-scale">https://extension.osu.edu/fletcher-scale</a><br><a href="https://extension.wisc.edu/pests/ipm/ornamental-pest-guide/ArborealScales/fletcher-scale">https://extension.wisc.edu/pests/ipm/ornamental-pest-guide/ArborealScales/fletcher-scale</a><br><a href="https://extension.unh.edu/resources/files/Resource001818_Rep0173.pdf">https://extension.unh.edu/resources/files/Resource001818_Rep0173.pdf</a><br><a href="https://extension.unh.edu/resource/fact-sheets/fletcher-scale">https://extension.unh.edu/resource/fact-sheets/fletcher-scale</a>                                                                                                                                                                                                                                                                                                                                                             |
| Conifer                                   | European pine shoot moth / borer | <i>Rhyacionia buoiana</i>         | 50                | 220               | 4               | 1st larvae active                     | <a href="https://extension.psu.edu/european-pine-shoot-moth">https://extension.psu.edu/european-pine-shoot-moth</a><br><a href="https://www.mortonarb.org/trees-plants/tree-and-plant-advice/help-pests/pine-moths">https://www.mortonarb.org/trees-plants/tree-and-plant-advice/help-pests/pine-moths</a><br><a href="https://entomology.unl.edu/scilite/Kelsey%20arsens%20tella%20literwaal%20European%20Pine%20Shoot%20Moth.pdf">https://entomology.unl.edu/scilite/Kelsey%20arsens%20tella%20literwaal%20European%20Pine%20Shoot%20Moth.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maples                                    | Maple bladder gall mite          | <i>Vasates quadripedes</i>        | 58                | 148               | 2               | Spring control of overwintering stage | <a href="https://content.ces.ncsu.edu/maple-gall-mites">https://content.ces.ncsu.edu/maple-gall-mites</a><br><a href="https://ohioonline.osu.edu/factsheet/ENT-60">https://ohioonline.osu.edu/factsheet/ENT-60</a><br><a href="https://extension.psu.edu/leaf-galls-on-maple">https://extension.psu.edu/leaf-galls-on-maple</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Honeylocust                               | Honeylocust plant bug            | <i>Diaphnocoris chlorionis</i>    | 58                | 246               | 2               | Nymphs / adults active                | <a href="https://extension.umn.edu/yard-and-garden-insects/insect-and-mite-galls">https://extension.umn.edu/yard-and-garden-insects/insect-and-mite-galls</a><br><a href="https://extension.umn.edu/yard-and-garden-insects/honeylocust-plant-bugs">https://extension.umn.edu/yard-and-garden-insects/honeylocust-plant-bugs</a><br><a href="https://extension.osu.edu/honeylocust-plant-bug">https://extension.osu.edu/honeylocust-plant-bug</a><br><a href="https://extension.umd.edu/helic/topics/plant-bugs-trees">https://extension.umd.edu/helic/topics/plant-bugs-trees</a><br><a href="https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/23018/Honeylocust-Plant-Bug.pdf?1494114152">https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/23018/Honeylocust-Plant-Bug.pdf?1494114152</a><br><a href="https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd5426971.pdf">https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd5426971.pdf</a> |
| Conifer                                   | Pine tortoise scale              | <i>Toumeyella parvicornis</i>     | 58                | 148               | 2               | Crawler activity                      | <a href="https://content.ces.ncsu.edu/pine-tortoise-scale-1">https://content.ces.ncsu.edu/pine-tortoise-scale-1</a><br><a href="https://content.ces.ncsu.edu/pine-tortoise-scale">https://content.ces.ncsu.edu/pine-tortoise-scale</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Conifer                                   | Pine bark adelgid                | <i>Pineus strobi</i>              | 58                | 618               | 2               | Spring control of overwintering stage | <a href="https://content.ces.ncsu.edu/pine-bark-adelgid-1">https://content.ces.ncsu.edu/pine-bark-adelgid-1</a><br><a href="https://extension.psu.edu/pine-bark-adelgid">https://extension.psu.edu/pine-bark-adelgid</a><br><a href="http://ecenassau.org/resources/pine-bark-adelgid">http://ecenassau.org/resources/pine-bark-adelgid</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Conifer                                   | Balsam twig aphid                | <i>Mindarus abietinus</i>         | 60                | 100               | 4               | Egg hatch                             | <a href="https://extension.osu.edu/balsam-twig-aphid">https://extension.osu.edu/balsam-twig-aphid</a><br><a href="https://content.ces.ncsu.edu/balsam-twig-aphid">https://content.ces.ncsu.edu/balsam-twig-aphid</a><br><a href="https://ag.umass.edu/landscape/fact-sheets/balsam-twig-aphid">https://ag.umass.edu/landscape/fact-sheets/balsam-twig-aphid</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| References                                |                                  |                                   |                   |                   |                 | RU                                    | Rutgers Cooperative Extension - IPM Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                           |                                  |                                   |                   |                   |                 | 2                                     | <a href="http://csetompkins.org/resources/using-growing-degree-days-for-insect-management">http://csetompkins.org/resources/using-growing-degree-days-for-insect-management</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                           |                                  |                                   |                   |                   |                 | 3                                     | <a href="https://extension.psu.edu/ipm-basics-for-christmas-trees#section-2">https://extension.psu.edu/ipm-basics-for-christmas-trees#section-2</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                           |                                  |                                   |                   |                   |                 | 4                                     | <a href="https://www.canr.msu.edu/ipm/agriculture/christmas_trees/edd_of_conifer_insects">https://www.canr.msu.edu/ipm/agriculture/christmas_trees/edd_of_conifer_insects</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           |                                  |                                   |                   |                   |                 | 5                                     | <a href="https://www.agriculture.nh.gov/publications-forms/documents/landscape-pests.pdf">https://www.agriculture.nh.gov/publications-forms/documents/landscape-pests.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           |                                  |                                   |                   |                   |                 | 6                                     | <a href="https://extension.umd.edu/ipm/pest-predictive-calendar-landscapeinsects">https://extension.umd.edu/ipm/pest-predictive-calendar-landscapeinsects</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |