

Pest Scouting - Growing Degree-day Ranges						Starting (0-25 GDD50)	
CROP TYPE	Common name	Scientific name	GGD50 Range		GGD50 Reference	Developmental / Target Stage	Extension & Industry Resources
			MIN <i>min: 50 °F</i>	MAX <i>max: 95 °F</i>			
Conifer	Conifer rust mites	<i>Eriophyidae</i>	7	22	4	Overwintering eggs hatch	https://www.canr.msu.edu/news/start_scouting_conifers_for_mites https://content.ces.ncsu.edu/rust-mites-in-christmas-trees https://extension.psu.edu/eriphid-rust-and-sheath-mites https://plant-pest-advisory.nitgers.edu/primer-on-landscape-dormant-oil-applications-target-pests/
Pomes, Stone fruit	European red mite	<i>Panonychus ulmi</i>	7	58	2	1st adults active	https://content.ces.ncsu.edu/european-red-mite-1 https://extension.psu.edu/tree-fruit-mite-pest-european-red-mite
Conifer	White pine weevil	<i>Pissodes strobi</i>	7	58	RU	Overwintering adults become active / prevent egg laying	https://extension.psu.edu/white-pine-weevil
Deciduous	Oystershell scale	<i>Lepidosaphes ulmi</i>	7	91	2	Spring control of overwintering stage	https://extension.psu.edu/oystershell-scale https://extension.colostate.edu/docs/pubs/insect/05513.pdf
Deciduous, Yew	Cottony camellia / taxus scale	<i>Pulvinaria floccifera</i>	7	91	5	Spring control of overwintering stage	https://extension.umd.edu/hic/tronics/cottony-camellia-scale-shrubs https://lanwhadbooks.org/insect/hort/landscape/hosts-pests-landscape-plants/camellia-camellia-cottony-camellia-scale
Many	Southern red mite	<i>Oligonychus ilicis</i>	7	91	5	Overwintering eggs hatch	https://plant-pest-advisory.nitgers.edu/cool-season-mites-wax-as-the-warm-season-mites-wane/ https://entomology.ces.ncsu.edu/2019/05/southern-red-mites-active-on-ornamentals/
Conifer	Taxus mealybug	<i>Dysmicoccus wistariae</i>	7	91	2	Spring control of overwintering stage	https://www.bartlett.com/resources/mealybug-on-taxus.pdf
Oaks	Kermes oak scales	<i>Kermes spp.</i>	7	91	2	Spring control of overwintering stage	https://hw.k-state.edu/extension/info-center/common-pest-problems/common-pest-problem-new/Kermes%20Oak%20Scale.pdf
Conifer	Elongate hemlock scale	<i>Fiorinia externa</i>	7	120	2	Spring control of overwintering stage	https://extension.psu.edu/elongate-hemlock-scale https://content.ces.ncsu.edu/elongate-hemlock-scale
Many	Aphids	<i>Aphidoidea</i>	7	120	2	Spring control of overwintering stage	https://plant-pest-advisory.nitgers.edu/a-primer-on-dormant-oil-applications/
Conifer	Spruce spider mite	<i>Oligonychus ununguis</i>	7	121	RU	Overwintering eggs hatch	https://extension.psu.edu/spruce-spider-mites https://plant-pest-advisory.nitgers.edu/cool-season-mites-wax-as-the-warm-season-mites-wane/ https://plant-pest-advisory.nitgers.edu/a-primer-on-dormant-oil-applications/
Oaks	Golden oak scale	<i>Asterolecanium variolosum</i>	7	121	5	Spring control of overwintering stage	http://ipm.ucanr.edu/PMG/PESTNOTES/pn7470.html https://www.bartlett.com/resources/common-oak-scales.pdf https://extension.entm.purdue.edu/publications/E-29/E-29.html
Conifer	Pales weevil	<i>Hylobius pales</i>	7	121	RU	Overwintering adults become active / prevent egg laying	https://extension.psu.edu/pales-weevil https://www.sites.edv.vt.edu/departments/entomology/factsheets/paleswee.html https://www.forestpests.org/vd/265.html https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fstbdev2_043737.pdf
Magnoliaceae	Tuliptree scale	<i>Toumeyella liriiodendri</i>	12	121	2	Spring control of overwintering stage	https://plant-pest-advisory.nitgers.edu/magnolia-and-tuliptree-scales-two-exceptions-to-the-rule/ https://content.ces.ncsu.edu/tuliptree-scale-insect https://entomology.ca.uky.edu/ef435 http://entnemdept.ufl.edu/creatures/cm/scales/tuliptree_scale.htm
Rhododendron, Azalea	Azalea lacebug	<i>Stephanitis pyrioides</i>	18	372	RU	Spring control of overwintering stage	http://oregonstate.edu/dept/nurspest/Azalea_lacebug.pdf https://hpic.demson.edu/azalea-lace-bugs/ http://extension.msstate.edu/content/azalea-lace-bugs https://content.ces.ncsu.edu/azalea-lace-bug
White and Scotch Pine	White pine aphid	<i>Cinara strobi</i>	22	91	RU	Spring control of overwintering stage	http://cues.cfans.umn.edu/old/Web/217WhitePineAphid.pdf https://content.ces.ncsu.edu/white-pine-aphid
Conifer	Pine bark adelgid	<i>Pineus strobi</i>	22	58	2	Spring control of overwintering stage	https://content.ces.ncsu.edu/pine-bark-adelgid-1 https://extension.psu.edu/pine-bark-adelgid http://crenassau.org/resources/pine-bark-adelgid https://hort.extension.wisc.edu/articles/magnolia-scale/
Magnoliaceae	Magnolia scale	<i>Neolecanium cornuparvum</i>	22	91	2	Spring control of overwintering stage	https://entomology.ca.uky.edu/ef431 https://extension.psu.edu/magnolia-scale https://content.ces.ncsu.edu/magnolia-scale
Conifer	Spruce bud scale	<i>Physokermes piceae</i>	22	120	2	Spring control of overwintering stage	https://www.canr.msu.edu/news/soft_scales_of_spruce_and_pine https://www.bartlett.com/resources/spruce-bud-scale-technical-report.pdf
Conifer	Juniper scale	<i>Carulaspis juniperi</i>	22	148	2	Spring control of overwintering stage	https://content.ces.ncsu.edu/juniper-scale-insect https://extension.psu.edu/juniper-scale https://entomology.ca.uky.edu/ef429
Conifer	Eastern spruce gall adelgid	<i>Adelges abietis</i>	25	100	3	spring control of overwintering stage	https://extension.psu.edu/eastern-spruce-gall-adelgid https://ag.umass.edu/landscape/fact-sheets/eastern-spruce-gall-adelgid https://barron.extension.wisc.edu/files/2011/08/Microsoft-Word-spruce-gall-fact-sheet-Ohio-State-University-Extension.pdf
Conifer	Zimmerman pine moth	<i>Dioryctria zimmermani</i>	25	100	3	1st larvae	https://extension.colostate.edu/toxic-areas/insects/zimmerman-pine-moth-5-591/ https://extension.psu.edu/zimmerman-pine-moth https://hort.extension.wisc.edu/articles/zimmerman-pine-moth/
Conifer	Cooley spruce gall adelgid	<i>Adelges cooleyi</i>	25	120	3	Spring control of overwintering stage	https://extension.colostate.edu/toxic-areas/insects/cooley-spruce-galls-5-534/ https://web.extension.illinois.edu/focus/index.cfm?problem=spruce-gall-adeleids
References						RU	Rutgers Cooperative Extension - IPM Notes
						2	http://csetompkins.org/resources/using-growing-degree-days-for-insect-management
						3	https://www.canr.msu.edu/ipm/agriculture/christmas_trees/gdd_of_conifer_insects
						4	https://extension.psu.edu/ipm-basics-for-christmas-trees#section-2
						5	https://www.agriculture.nh.gov/publications-forms/documents/landscape-pests.pdf