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Projected GDD50 accumulation as of 8/1/2021						
Region	Location	1-Aug	1-Sep	1-Oct	1-Nov	-
Southern	Upper Deerfield (NJ50)	2145	2931	3477	3682	-
Central	Howell / Freehold (NJ10)	1896	2630	3109	3249	-
Northern	High Point (NJ59)	1490	2045	2352	2384	-
Forecast: NOAA NCEP Coupled Forecast System model version 2 (CFSv2) forecast system (3.5 months) (USPEST.ORG)						

Pest Scouting Guide: (1600-3000 GDD_{50})

The information provided here gives **scouting ranges** for insect pests as well as forecasting of **GDD_{50} accumulation *predictions*** to help time scouting and treatment efforts. This document supports scouting, *it does **not** replace it*. Keeping good notes on pest development will help dial in scouting and treatment efforts at your local level.

Location specific GDD_{50} models

USPEST.org/dd/model_app and http://newa.cornell.edu/

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Pest Scouting - Growing Degree-day Ranges						(1600-3000 GDD50)
CROP TYPE	**Common Name**	**Scientific Name**	**GDD Min (50F)**	**GDD Max (95F)**	**Reference**	**Developmental / Target Stage**
Many	**Redheaded flea beetle**	*Systena frontalis*	1570	1860	Udel.	2nd generation egg hatch
Many	**Two-banded Japanese weevil**	*Pseudocneorhinus bifasciatus*	1644	2271	RU	Adults
Willow	**Willow twig aphids**	*Lachnus spp.*	1644	2271	5	Typical treatment window
Conifer	**Juniper webworm**	*Dichomeris marginella*	1645	1917	RU	Larvae Treatment
Euonymus	**Euonymus Scale**	*Unaspis euonymil*	1700	-	RU	Prophylactic 2nd generation treatments
Conifer	**Cryptomeria scale**	*Aspidiotus cryptomeriae*	1750	2130	RU, 4	Crawlers emerge (2nd generation)
Many	**Obscure scale**	*Melanaspis obscura*	1774	-	6	Egg hatch / crawler
Oaks	**Oak skeletonizer**	*Bucculatrix ainsliella*	1798	2155	RU	Larvae
Conifer	**Arborvitae leafminer**	*Argyresthia thuiella*	1800	2200	RU	Larvae Treatment (3rd generation)
Mimosa, Honeylocust	**Mimosa webworm**	*Homadaula anisocentra*	1800	2100	RU	Larvae (2nd generation)
Conifer	**Cooley spruce gall adelgid**	*Adelges cooleyi*	1850	1950	RU	Galls open (Spruce)
Many	**Redheaded flea beetle**	*Systena frontalis*	1878	2318	Udel.	2nd generation Adults feeding
Turf	**Hairy chinch bug**	*Blissus leucopterus*	1903	2160	RU	Second generation- 50%- 2nd instars
Tulip	**Tuliptree aphid**	*Illinoia liriodendri*	1917	2033	RU	Nymphs
Conifer	**Zimmerman pine moth**	*Dioryctria zimmermani*	1917	2154	5	Treatment window (adult flight-1700 GDD)
Mainly Oaks	**Orangestriped oakworm**	*Anisota senatoria*	1917	-	6	Egg hatch - early instars
Conifer	**White pine aphid**	*Cinara strobi*	1991	2271	RU	Adults
Rhododendron	**Azalea whitefly**	*Pealius azaleae*	2032	2150	5	Adults/nymphs (3rd generation)
Maple	**Sugar maple borer**	*Glycobius speciosus*	2032	2375	5	Typical treatment window
Conifer	**Maskell scale**	*lepidosaphes pallia*	2035	-	6	Egg hatch / crawler (2nd generation)
Mainly Tulip	**Tulip tree scale**	*Toumeyella liriodendri*	2037	2629	RU	Crawlers (1st generation)
Mainly Magnolia	**Magnolia scale**	*Neolecanium cornuparvum*	2155	2800	RU	Crawlers (1st generation)
Euonymus	**Euonymus Scale**	*Unaspis euonymil*	2235	-	6	Egg hatch / crawler (2nd generation)
Locust	**Locust borer**	*Magacyllene robiniae*	2271	2805	5	Typical treatment window
Poplar and Willow	**Poplar and willow borer**	*Crytorhynchus lapathi*	2271	2806	5	Typical treatment window
Conifer	**Spruce spider mite**	*Oligonychus ununguis*	2375	2806	5	Typical treatment window - fall activity
Many	**Southern red mite**	*Oligonychus ilicis*	2500	2700	5	Typical treatment window
Maple	**Japanese maple scale**	*Lopholeucaspis japonica*	2508	-	6	Egg hatch / crawler (2nd generation)
Yew, many conifers	**Fletcher Scale (Yew)**	*Parthenolecanium fletcheri*	2515	2800	RU	Fall control of overwintering stage
Conifer	**Elongate hemlock scale**	*Fiorinia externa*	2515	2625	RU	Typical treatment window - fall activity
Hardwoods	**Fall webworm**	*Hyphantria cunea*	2793	-	6	Egg hatch / crawler (2nd generation)
Conifer	**Cooley spruce gall adelgid**	*Adelges cooleyi*	2800	3000	3	Fall control of overwintering stage
Conifer	**Eastern spruce gall adelgid**	*Adelges abietis*	2800	3000	3	Fall control of overwintering stage

Note: Growing degree-day values utilize daily average air temperatures with a minimum temperature threshold (a.k.a. 'base') of 50F = GDD50 (max. temp. threshold set at 95F). These values are accumulated from a biofix date, such as January or March 1st in the NE USA. Provided GDD50 are scouting ranges and should be truthed.

Daily GDD50 =
(Max + Min temp.) / 2 - 50 *(min temp. threshold)*

References

RU	Rutgers Cooperative Extension - Landscape IPM Notes
2	http://ccetompkins.org/resources/using-growing-degree-days-for-insect-management
3	https://extension.psu.edu/ipm-basics-for-christmas-trees#section-2
4	https://www.canr.msu.edu/ipm/agriculture/christmas_trees/gdd_of_conifer_insects
5	https://www.agriculture.nh.gov/publications-forms/documents/landscape-pests.pdf
6	https://extension.umd.edu/ipm/pest-predictive-calendar-landscapenursery
7	https://www.canr.msu.edu/ipm/agriculture/christmas_trees/gdd_of_landscape_insects
Unv. Del.	Coorespondance with Dr. Kunkel (University of Delaware)-*evolving GDD ranges*

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