

# WEATHER REFERENCE

## Using threat temperatures for IPM Planning

Threat temperatures are rough guidelines that we have proposed to try to predict when pests are likely to first begin causing damage on golf course turf. Once a threat temperature is reached, some type of action is usually triggered. In the case of curatively controlled pests, that action is usually monitoring for symptoms (control procedures should take place only after evidence of the pest or its symptoms has been confirmed). In the case of preventively controlled pests, a preventive action such as pesticide application or cultural practice is usually called for. These threat temperatures were developed based on our knowledge of turf pest biology, as well as by mining the scientific literature for temperature data on insect, disease, weed and nematode pests of turf.

### Threat temperatures for curative insect control

Insect	Threat * temperature		Monitoring (begin at threat temp. unless otherwise noted)	Control Measure
	F	C		
Annual bluegrass weevil	>55	>13	Monitor for adult weevils, starting at avg air temp >55F (13C). Peak activity @68F	If adult weevils detected, apply contact product against adults, 2 wks after adults 1 <sup>st</sup> appear
Ants (nuisance)	>65	>18	Monitor for foraging ants.	If detected, apply labeled ant product at entrance to mounds
Armyworms	>60	>16	Monitor for caterpillars w/soap drench	Apply contact product when larval numbers are high enough for concern
Bermudagrass scale	>65	>18	Monitor for eggs & crawlers in damaged patches of turf.	If detected scale, fertilize and irrigate to promote recovery. No effective products are labeled
Billbugs (bluegrass)	>60	>16	Monitor for adults on paved areas, starting at avg. air temp>62F (17C)	If adult billbugs detected, apply contact product against adults, 2 wks after adults 1 <sup>st</sup> appear
Cicada killers & tarantula hawk wasps	>65	>18	Monitor for flying wasps	Treat burrows with contact product, but only if completely necessary; these are usually beneficial insects!
Chinch bug, hairy (cool season turf)	>60	>16	Monitor for chinch bugs (all stages)	Apply contact product when numbers are high enough for concern
Chinch bug, southern (warm season turf)	>55	>13	Monitor for chinch bugs (all stages)	Spot treat w/contact product when numbers are high enough for concern
Crane flies	>45	>7	Monitor for larvae w/cup cutter	Apply contact product when larval numbers are high enough for concern
Cutworms	>55	>13	Monitor for caterpillars w/soap drench	Apply contact product when larval numbers are high enough for concern
Fall armyworms	>65	>18	Monitor for caterpillars w/soap drench	Apply contact product when larval numbers are high enough for concern
Fire ants	All year		Monitor for foraging ants, starting when average air temp>65F (18C)	When detected, broadcast a bait formulation Follow several days later with a contact insecticide applied broadcast (in heavily trafficked areas) or to individual mounds (in areas of lower use)
Ground pearls	All year		Monitor roots of damaged turf, starting when avg air temp>75F (24C)	If ground pearls detected, fertilize and irrigate to promote recovery.
Mole crickets	>75	>24	Monitor w/soap flush, starting when avg air temp >75F(24C)	If present, target small nymphs (<1/2" or <1.2 cm) w/contact product; or large nymphs & adults w/ beneficial nematodes
Sod webworms (cool season turf)	>70	>21	Monitor for caterpillars w/soap drench	Apply contact product when larval numbers are high enough for concern
Sod webworms (warm season turf)	>75	>24	Monitor for caterpillars w/soap drench	Apply contact product when larval numbers are high enough for concern

\*average daily air temperature unless otherwise noted

**NOTE: Most contact (curative) products require 1 or more follow-up applications, within 1-2 weeks of application**