

INSECT CONTROL

(WARM-SEASON)

Patricia Cobb, Ph.D., Auburn University

WARM-SEASON*	LATE WINTER (Mar.)	SPRING (Apr.-May)	SUMMER (June-Aug.)	FALL (Sept.-Oct.)
(SOUTHERN) CHINCH BUGS	In southern Fla. where resistance is a problem, use Pydrin, Pounce or Baygon a labeled for Fla. Replace susceptible turf with resistant or non-host varieties to provide natural control. In other areas, overwintered adults can be treated if they become active in March with diazinon (4 lbs. Al/acre), Dursban (1 lb. Al/acre) or Ofatolol (2 lbs. Al/acre).	Application to prevent population build-up should be made by mid-April. Diazinon (4 lbs. Al/acre), Dursban (1 lb. Al/acre) or Ofatolol (1-2 lb. Al/acre) provide control.	Control existing populations with Dursban (1 lb. Al/acre), diazinon (4 lbs. Al/acre) or Ofatolol (1-2 lb. Al/acre) when damage signs appear. Southern chinch bugs are not as severe a problem in well irrigated turf.	Late summer applications usually make fall treatments unnecessary.
BILLBUGS	Treatment at this time can be done if adults are numerous and active. Use diazinon (4 lbs. Al/acre), Dursban (1 lb. Al/acre) or Ofatolol (1-2 lb. Al/acre).	Treat when adults are active to prevent population build-up. Diazinon (4 lbs. Al/acre), Dursban (1 lb. Al/acre) provide control.	Treat billbug grubs with Ofatolol (2 lbs. Al/acre) if not used in spring; diazinon (5 lbs. Al/acre), Turcam (2 lbs. Al/acre), Triumph 4E (restricted—home lawns only, not on sandy soils—2 lbs. Al/acre/season). Irrigate following application; also before if drought exists.	If necessary, treat with diazinon, Turcam, Ofatolol or Dylox/Proxol as in summer.
GRUBS	Control with insecticides usually does not extend to new generation in July and August.	Infestations can be controlled during early April by spot or general treatment with Turcam (2 lbs. Al/acre), Proxol/Dylox (8 lbs. Al/acre) or diazinon (5 lbs. Al/acre). Mocap granules (5 lbs. Al/acre) can be used on golf courses and sod farms. Triumph 4E on home lawns only, not on "sandy" soils (restricted use, up to 2 lbs. Al/acre/season) Sevin (1.5-2 lbs. Al/acre) or Orthene 755 (1.5-2 lbs. Al/acre, unirrigated after treatment) is effective on green June beetle grubs. Sevin (8 lbs. Al/acre) against other grubs. Irrigate after treatment. Milky spore can be applied in early April for Japanese beetle control in areas where the grubs are numerous.	New generation grubs present in late July or mid-August can be controlled with Proxol/Dylox (8 lbs. Al/acre), Turcam (2 lbs. Al/acre), Ofatolol (2 lbs. Al/acre), diazinon (5 lbs. Al/acre), or Mocap granules (commercial turf only at 5 lbs. Al/acre). Triumph 4E (restricted use, home lawns, not on "sandy" soils, up to 2 lbs. Al/acre/season). Sevin SL (8 lbs. Al/acre) is effective against most grubs; Sevin SL (1.5-2 lbs. Al/acre) or Orthene 755 (1.5-2 lbs. Al/acre, unirrigated after treatment) is effective against green June beetle grubs. Water immediately after treatment, also before treatment during dry summers.	Treatments are effective as late as mid-October. Irrigate first if soil is dry, then again after treatment.
SOD WEBWORMS	Treatment is not appropriate at this time.	Use diazinon (4 lbs. Al/acre), Dylox/Proxol (3.5 lbs. Al/acre), Dursban (1 lb. Al/acre) or Sevin (6-8 lbs. Al/acre) in April when larvae are present. Warm season grasses outgrow moderate damage, so treatments can be delayed until summer.	Make application to infested turf when larvae are present or two weeks after peak moth flight. Use diazinon (4 lbs. Al/acre), Dursban (1 lb. Al/acre), Dylox/Proxol (3.5 lbs. Al/acre) or Sevin (6-8 lbs. Al/acre).	Treatment in early September may reduce population for next season.
CUTWORMS	Treatment usually is not appropriate at this time.	Use Dursban (1 lb. Al/acre), Dylox/Proxol (3-8 lbs. Al/acre) or Sevin (2-4 lbs. Al/acre). Apply late in the afternoon. Do not irrigate unless specified on label.	Although cutworms in the South are usually a spring problem, if summer infestations occur, treat as directed for spring.	Treatment usually is not necessary at this time.

* See accompanying text for details; always follow label directions.

continued

(WARM-SEASON, CONT.)

WARM-SEASON*	LATE WINTER (Mar.)	SPRING (Apr.-May)	SUMMER (June-Aug.)	FALL (Sept.-Oct.)
MOLE CRICKETS	Timing of treatments is critical and varies in different areas. In years when activity of overwintered mole crickets resumes early, treatment with Orthene 755 (3.5 Al/acre) or Turcam (2 lbs. Al/acre) is sometimes effective. Extensive treatment should be delayed until young nymphs are present. Rolling, fertilizing and irrigating warm-season grasses helps tunnelled turf to recover.	Monitor infested turf weekly with soap flushes to determine presence and number of young nymphs. For short-residual treatment of overwintered crickets in April use Turcam (2 lbs. Al/acre, irrigate after treatment), or Orthene 755 (2-3 lbs. Al/acre) on wet turf, unirrigated after late afternoon treatment, provides quick knockdown. Baits are effective in central Florida in May when young nymphs are present. Begin monitoring damaged areas for newly-hatched nymphs.	For residual control, use OflatoI (2 lbs. Al/acre) or Mocap granules (10 lbs.) or Turcam (2.5 G, 2 lbs. Al/acre) on young nymphs. Irrigate immediately. Baits are effective from central Florida northward during summer. Baits available are Baygon 2% (1/4 lb./1000 sq. ft.), 5% Dursban (150 lbs./acre or two applications of 75 lbs./acre three weeks apart), malathion 2% (100 lbs./acre or two applications of 50 lbs./acre three weeks apart). Irrigate several hours before bait applications, and do not irrigate afterwards. Orthene 755 (2-3 lbs. Al/acre) can be used during summer, applied on irrigated turf late in the day and unwatered overnight. Triumph 4E (home lawns only, up to 2 lbs. Al/acre/season) can not be used on "sandy soils.	Sprays of Turcam (2 lbs. Al/acre) or Orthene 755 can be used in areas where outbreaks occur and may have to be repeated several times. Mocap granules (10 lbs. Al/acre, commercial turf only) may be used, but don't use either more than once per season. Do not expect excellent late-season control if earlier measures have not been taken.
TWO-LINED SPITTLEBUG	Treatment is not appropriate at this time.	Treatment usually not necessary at this time. Dethatching turf when appropriate may reduce populations.	Mow, irrigate several hours of the day before treating infested turf. Spray with diazinon (4 lbs. Al/acre) or in less thatchy turf with Dursban (1 lb. Al/acre). Use at least 10 gal. water/1000 sq. ft.	Re-treatment is usually unnecessary. Treat in pested areas in September if necessary as described for summer.
FALL ARMYWORM	Treatment is not appropriate at this time.	Populations usually do not develop until summer.	Treatments are most effective in early morning or late afternoon. Use diazinon (4 lbs. Al/acre), Dursban (1 lb. Al/acre), or Proxol/Dylox (1-3 lbs. Al/acre).	Apply as directed for summer. Fall armyworms may be a greater problem in Sept.-Oct. than earlier.
FIRE ANTS	Treatments are less effective when soil temperatures are low.	Area treatments when new mounds being established in heavily infested areas with Amdro bait (1.5 lbs. bait/acre), Pro-Drone bait (36 lb. bait/acre), Logic bait (1-1.5 lbs. bait/acre) Afirm bait (1 lb. bait/acre) or Dittanol (.05 lb. Al/1000 sq. ft.) are effective.	Treat mounds as they appear with various formulations of diazinon or Dursban. Orthene 755 dust (2 tsp./mound) or MC-96 (2 oz./mound).	Apply controls to mounds or areas early in the morning or late in the day, as described for spring and summer. Area treatments with baits may be done in heavily-infested areas. Irrigate dry areas or wait until rain before treating if drought conditions exist.
		Ive. Mound treatments in less infested areas include various diazinon or Dursban formulations; Orthene 755 dust (2 tsp./mound); or MC-96 mound fumigant (2 ft. oz./mound).		
SCALE INSECTS	Treatment is not effective.	Chemical control for gound pearls is not effective at any time of year. Proper fertilization, disease controls and adequate irrigation is the best defense.	To control Rhodegrass scale, apply diazinon (5 fl. oz./1000 sq. ft./25 gal. plus wetting agent). Retreatment is usually necessary.	Treat as directed with diazinon for summer.

* See accompanying text for details; always follow label directions.

(COOL-SEASON)

Harry D. Niemczyk, Ph.D., Ohio Agricultural Research & Development Center

COOL SEASON*	LATE WINTER (March)	SPRING (April-May)	SUMMER (June-Aug.)	FALL (Sept.-Oct.)
CHINCH BUGS	When summer damage is expected preventative application of liquid or granular Dursban (1 lb. Al/acre) Triumph ¹ (1 lb. Al/acre) or Ottanol (2 lb. Al/acre) may be used as soon as the insects become active.	Preventative applications of insecticides should be completed by the first week in May.	Treat before injury is severe with Dursban (1 lb. Al/acre), diazinon (2.5-5.5 lb. Al/acre), Triumph ¹ (1 lb. Al/acre), Sevin (6-8 lbs. Al/acre) or other labeled insecticides.	Treat if necessary, but generally, infestation levels are not high enough to warrant using insecticides.
BILLBUGS	Same as for chinch bugs.	Same as for chinch bugs.	Treat infestations at same rates as grubs with diazinon, Turcam, Proxol or Sevin. Irrigate following application.	Treatment is usually not appropriate at this time.
GRUBS	Application of Ottanol (2 lb. Al/acre) during March may provide control of overwintered grubs. This may not provide control into late summer.	A single application of Ottanol (2 lb. Al/acre) made in April may control overwintered grubs. Can also be controlled in May by spot or general treatment with Triumph ¹ (2 lb. Al/acre) Turcam (4 lb. Al/acre) or Sevin (8 lb. Al/acre). Golf course superintendents can use Mocap (5 lb. Al/acre) or Sevin (5-8 lb. Al/acre) to control green June beetle. Irrigate with application.	Existing infestations found in July or Aug. may be treated with Triumph ¹ , Proxol, Turcam, Ottanol, Sevin or Mocap (commercial turf only) at rates used in spring. Treat green June beetle with Sevin (6-8 lb. Al/acre).	Treatment can be made as late as mid-September. Irrigate first if thatch or soil is dry.
SOD WEBWORMS	Treatment is not appropriate at this time.	When necessary, apply diazinon (5 lb. Al/acre) Triumph ¹ (1 lb. Al/acre) or Proxol (6-8 lb. Al/acre).	Make application when larvae are present or two weeks after peak moth flight. Use Dursban (1 lb. Al/acre), Triumph ¹ (1 lb. Al/acre), diazinon (5 lbs. Al/acre), Sevin (6-8 lbs. Al/acre) or Proxol (6-8 lb. Al/acre).	Larvae are small and cause little damage at this time. Treatment in September reduces population for next spring.
GREENBUGS	Treatment is not appropriate at this time.	Aphid numbers are too low to detect.	Use Orthene (1 lb. Al/acre) or Dursban (1 lb. Al/acre) or diazinon (2.5 lb. Al/acre).	Severe infestations may occur as late as December. Use the same insecticides as in the summer.
BLACK TURFGRASS ATAENIUS	An application of Ottanol (2 lb. Al/acre) in March may prevent summer infestations of larvae, but it's best to wait until April.	Application of Ottanol (2 lbs. Al/acre) during April or May prevents larval infestations during summer. Diazinon (5-6 lbs. Al/acre) applied to fairways in April also prevents infestations.	If preventative applications were not made, spot or generally treat with Proxol (8 lbs. Al/acre), Turcam (2-4 lbs. Al/acre), Sevin (8 lbs. Al/acre) or Mocap (5 lbs. Al/acre), as needed.	Undeveloped larvae die with frost.
CUTWORMS	Treatment is not appropriate at this time.	The insecticides effective against sod webworm are also effective against cutworms. Apply late in the afternoon. Do not irrigate following liquid applications unless specified on label.	Use Dursban (1 lb. Al/acre), Triumph ¹ (1 lb. Al/acre), Proxol (8 lbs. Al/acre) or Sevin (6-8 lbs. Al/acre). Do not irrigate following liquid applications unless specified on label.	Same as for summer.
COVER MITES	Treatment is not appropriate at this time.	Liquid diazinon (2.5 lb. Al/acre) or Dursban (1 lb. Al/acre) may be used.	Treatment usually is not necessary.	Treat as needed with liquid diazinon (2.5 lbs. Al/acre) or Dursban (1 lb. Al/acre).
WINTER GRAIN MITE	If needed, use spring treatment.	If treatment is necessary, use liquid diazinon (2-3 lbs. Al/acre) or Dursban (1 lb. Al/acre). Avoid repeated use of Sevin.	Treatment is not appropriate, since mite is in egg stage.	Treatment is not appropriate since mite is in egg stage.

* For use only by commercial lawn pest control personnel. A maximum of one application per year is permitted for the 2 lb. Al/acre rate. A maximum of two applications per year at least 60 days apart is permitted for the 1 lb. Al/acre rate.

¹ See accompanying text for details; always follow label directions.