SECTION:	SUBJECT:
TRAINING	**Professional Development Program Service**

PP No.: 1502 / SPP: 902
Section: Training
Subject: Professional Development Program Service
Approved By: Tony Massey
Effective Date: January 1, 2014
Last Reviewed Date: January 25, 2024
Policy Owner: Sr. Director Learning & Development

Massey Professional Development Program

Every Pest Prevention Technician, Termite Control Technician, Landscape, or Irrigation Specialist enters the Massey Professional Development Program on their first day of work. This program promotes continuous Team Member development with each step requiring verified, documented improvement in the Team Member's knowledge, skills, and ability to successfully serve our customers. As a Team Member progresses through these steps, they become more valuable to our Company, Customers and Industry.

There are four levels of certification in the Professional Development Program: Certified, Advanced, Senior, and Master. Learning & Development will evaluate Team Member eligibility. All tracking and testing associated with the program will be administered through Massey University.

Certified

Criteria for certification:

1. Completion of the Massey Services, Inc. Initial Training Program designed specifically for the Team Members Job Description.

Advanced

A Team Member will be eligible for this level the first full month one year after receiving their initial certified level. To achieve this level, the Team Member must:

1. Completion of 12 months of employment in their current Job classification.
2. Completion of Basic Training in their primary category.
3. Completion of Massey sales training in their primary category.
4. Compliance to Company Standards for skips and cancels, for the average of the three-month period prior to nomination.
5. Pass the Advanced Certification Examination.

Professional Pay Incentive –$50.00 per month

Senior

A Team Member will be eligible for this level after three years of employment. To achieve this level, the Team Member must:

1. Have earned the Advanced certification in their current job classification.
2. Compliance to Company Standards for the prior 6 months for skips, cancels, M&S use, and debit balance for the average of the six-month period prior to nomination.
3. Generating an average of three service leads or one sale per week (a sale must be valued at $200 or more) for the average of the last six-month period.
4. Completion of the reading/testing portion of a secondary Initial Training Category and attend Basic Training for that category.
5. Sales Cross-Training in a secondary category.

Primary Job	Pest	Termite	Landscape	Irrigation
Secondary Training	Termite	Pest	Irrigation	Landscape

6. Complete the Massey Services, Inc. Train-The-Trainer program.
7. Active participation in training other Team Members.
8. Pass the Senior Certification Examination.

Professional Pay Incentive – additional $50.00 a month (for a total of $100.00 per month)

Master

A Team Member will be eligible for this level after five (5) years of employment. To achieve this level, the Team Member must:

1. Have earned the Senior certification in their current job classification.
2. Compliance to company standards for skips, cancels, M&S use, debit balance and service leads, for the average of the last 12-month period.
3. Completion of all Massey Initial Training programs and all Basic Training courses.
4. State Certified Operator in one or more categories.
5. Active participation in training other Team Members.
6. Pass the Master Certification Examination.

Professional Pay Incentive – additional $100.00 per month (for a total of $200.00 per month)

Nomination Instructions

All team members will be automatically enrolled in the program. Upon successful completion of each step, the Learning and Development Department will notify Human Resources. They will submit a revised Employee Status Form (ESF) to the Regional Manager for final approval. Human Resources Department will then have the Team Member's payroll changed, update the team member's role, and issue a new ID badge reflecting the new certification level.

SECTION:	SUBJECT:
TRAINING	**Professional Development Program Sales**

PP No.: 1505
Section: Training
Subject: Professional Development Program Sales
Approved By: Tony Massey
Effective Date: January 1, 2022
Last Reviewed Date: 1/1/2022
Policy Owner: Director Learning & Development

Massey Professional Development Program- Sales

Every Inspector and Account Manager enters the Massey Professional Development Program on their first day of work. This program promotes continuous Team Member development with each step requiring verified, documented improvement in the Team Member's knowledge, skills, and ability to successfully serve our customers. As a Team Member progresses through these steps, they become more valuable to our company, customers, and industry.

There are four levels of certification in the Professional Development Program: Certified, Advanced, Senior, and Master. Learning & Development will evaluate Team Member eligibility. All tracking and testing associated with the program will be administered through Massey University.

Certified

Criteria for certification:

1. Completion of the Massey Services, Inc. Initial Training Program designed specifically for the Team Members Job Description.

Advanced

A Team Member will be eligible for this level the first full month one year after receiving their initial certified level. To achieve this level, the Team Member must:

1. Completion of 12 months of employment in their current Job classification.
2. Completion of Sales Basic Training I and II.
3. Completion of Technical Basic Training for each service type available in their service area (i.e. in FL - in pest, termite, lawn, and irrigation; in TX – pest, termite, etc.).
4. Compliance to Company Standards for sales dollars, lead closure, and lead conversion for the average of the three-month period prior to nomination.
5. Pass the Advanced Certification Examination.

Professional Pay Incentive –$50.00 per month

Senior

A Team Member will be eligible for this level after two (2) years of employment. To achieve this level, the Team Member must:

1. Have earned the Advanced certification in their current job classification.
2. Compliance to Company Standards for lead closure and lead conversion along with an average of $25,000 in sales per month for the last 12-month period.
3. Complete the Massey Services, Inc. Train-The-Trainer program.
4. Active participation in training other Team Members.
5. Pass the Senior Certification Examination.

Professional Pay Incentive – additional $50.00 a month (for a total of $100.00 per month)

Master

A Team Member will be eligible for this level after four (4) years of employment. To achieve this level, the Team Member must:

1. Have earned the Senior certification in their current job classification.
2. Compliance to company standards for lead closure and lead conversion along with an average of $27,500 in sales per month for the last 12-month period.
3. Completion of all Basic Training courses.
4. State Certified Operator in one or more categories.
5. Active participation in training other Team Members.
6. Pass the Master Certification Examination.

Professional Pay Incentive – additional $100.00 per month (for a total of $200.00 per month)

Nomination Instructions

All team members will be automatically enrolled in the program. Upon successful completion of each step, the Learning and Development Department will notify Human Resources. They will submit a revised Employee Status Form (ESF) to the Regional Manager for final approval. Human Resources Department will then have the Team Member's payroll changed, update the team member's role, and issue a new ID badge reflecting the new certification level.

[edited from UF IFAS Featured Creature article]

Lovebugs Diptera: Bibionidae: *Plecia nearctica*

Lovebugs are flies, not bugs. They are sometimes also called honeymoon bugs, airline bugs or two-headed bugs. These flies migrated from Central America into Texas, across to Louisiana in the 1920s, through Mississippi and Alabama in the 1940s, and into Florida in 1950. By 1975 they had entered South Carolina. Lovebugs are important because of their high numbers and the fact that they can accumulate in high numbers on the fronts of traveling cars. The body fluids are slightly acid; however, if the egg mass (average about 350 per female) and body parts are allowed to remain on the car for several days, bacterial action increases the acidity and etches the paint. Lovebugs are a part of nature, a nuisance but a minimal problem when compared with mosquitoes. Swarms occur from April through May and August through September. The swarms are attracted to irradiated exhaust fumes. For some reason the flies are also attracted to hot metal.

Biology

Females that mate once usually lay their eggs and die after an average of 68 hours. Females that mated twice before laying eggs lived for a mean of 86 hours. Under lab conditions adult females lived about 72 hours and adult males about 92. The eggs are deposited into cow patties and other areas of meadowland in decaying vegetation. Larvae "love" to develop within and under cow patties and in dead vegetation.

Lovebug Mating and Dispersal

Mating begins when females fly into a swarm of males usually in the morning. Larger males near the bottom of swarms have greater mating success. Up to 8 males compete for 1 female. Mating lasts up to about 12 hrs but then they remain connected for a few days. Dispersal continues for a day or two (or until smashed by a vehicle). After adults emerge, they feed on the nectar of various plants, especially sweet clover, goldenrod and brazilian pepper. Lovebug swarms are generally worse in the fall than in the spring. Although much rarer in winter, they can be found throughout the entire year in Florida.

Control

Chemical controls are ineffective as the lovebug is widespread and they continually drift onto highways from adjacent areas. The degree of natural control and the amount of annual rainfall causes fluctuation in the population.

Natural Enemies

Lovebugs are eaten by spiders, dragonflies and a number of birds, including robins and quail.

Weekly Training Topic — Lovebugs

[edited from UF IFAS Featured Creature article]

Relatives

Some dark-winged fungus gnats look like lovebugs.

There are 2 other less common love bugs in Florida: *P.americana* with a totally red thorax that has just a spring brood,

and a small solid black lovebug (*Dilophus sayi*).

Removing/Cleaning Lovebugs

Prespraying a clean bumper and grill with PAM will cause a greasy residue that may repel lovebugs but the PAM will be very difficult to remove. Also dampening a fresh "bounce" from your washroom and rubbing it over crushed flies on the hood is not as effective as the recommended method: Simply spray down all crushed flies first with water…keep the area to clean wet for 5 minutes, then wash it all off with dishwashing liquid/water and rinse, repeating this cleaning regularly during lovebug season.

Myths: The following presumptions are FALSE:

- ✓ UF researchers brought lovebugs into Florida and genetically engineered them to eat mosquitoes.
- ✓ Lovebugs are mating the entire time they are coupled.
- ✓ Bees do not visit flowers infested with lovebugs.
- ✓ UF is conducting research to control lovebugs (at this time they are only distributing one or 2 handouts).
- ✓ Lovebugs are attracted to cars and exhaust fumes.
- ✓ The body fluids of lovebugs eat away at car paint like acid.

Weekly Training Topic — Lovebugs

[edited from UF IFAS Featured Creature article]

Name:_____ Date:_____

Pre/Post Test

1. Lovebugs are really:
   a) beetles
   b) true bugs
   c) plant bugs
   d) flies

2. The best way to clean off lovebugs and maintain the paint on your car is to:
   a) use PAM
   b) use a wet "bounce" from the washroom over the crusted flies
   c) use a brillo pad
   d) wet the area for 5 minutes, clean it away with a dishwashing liquid solution, and rinse clean

3. Which statement is true?
   a) UF researchers brought lovebugs to Florida to genetically engineer them to eat mosquitoes.
   b) Bees do not like to visit flowers that have been visited by lovebugs.
   c) Lovebug larvae often breed under cow patties
   d) Snakes, lizards, cetain caterpillars and plant bugs are all common predators of lovebugs.
   e) All of the above

4. Lovebug swarms gererally occur in:
   a) March and October
   b) June and July
   c) April & May and August through September
   d) All summer long

5. Lovebug swarms are generally the largest in the:
   a) Spring
   b) Late Summer
   c) Fall
   d) Late Fall

[edited from UF IFAS Featured Creature article]

Answers: 1- d 2- d 3- c 4- c 5- b

The Georgia Dept. of Agriculture is very strict when it comes to school treatments. Fines can range into the thousands of dollars for any infractions. The actual laws are printed below for your review. Ensure ALL TEAM MEMBERS treating Georgia Schools understand the law!

A school in Georgia is defined by the GA Dept. of Agriculture as:
…**any school, public or private, or licensed child daycare center**. A school does **not** include colleges, universities, home schools, trade or adult education facilities.

Please review the law as written (Feb 2019 version below:)

Treatment of Schools

(1) Pesticide applications may be made to schools consistent with the following:

(a) All pesticide applications shall be made in a manner that minimizes the exposure of children or students to the pesticide.

(b) Pesticide application may be made to a room only if children or students are not expected to be present in the room for a minimum of three (3) hours after application. If the products label directions specify a longer reentry interval then the longer reentry interval shall apply except as specified in Rule 620-11-.01(1)(c).

(c) Insecticide baits and rodenticide baits in tamper-resistant containers or bait stations as well as botanical insecticides, insect growth regulators and insecticidal soaps may be applied at any time children or students are not present in a room. No reentry interval is required except if specified by the products label directions. These products may be applied to any open area or multi-purpose room if the area within ten (10) feet of the location is secured and no children or students are present within the secured area during the time of application.

(d) Pesticide applications may be made to outdoor school grounds if children or students are not expected to be present within twenty (20) feet of the application site at the time of application except as specified in Rule 620-11-.01(1)(e). These areas must be clearly marked to discourage entry, and secured by a fence or other similar barrier stating the reentry interval. If the application site is not secured by a fence or other similar barrier, pesticide applications may be made to an outdoor school grounds only if children or students are not expected to be in the area for a minimum of three (3) hours after application. If the products label directions specify a longer reentry interval then the longer reentry interval shall apply except as specified in Rule 620-11-.01(1)(c). Such areas shall be clearly marked to discourage entry. All signs required by this section to discourage entry shall be consistent with the requirements of Rule 620-3-.02(1)(l) 2.

(e) Insecticide baits and rodenticide baits in tamper resistant containers or bait stations as well as botanical insecticides, insect growth regulators and insecticidal soaps may be applied to outdoor school grounds anytime children or students are not present in the area. No reentry interval is required except if specified by the products label directions.

(f) All pesticide use dilutions must be prepared outside child or student occupied areas of buildings.

(g) All contracts for pest control service and all services provided must be consistent with any published pest management policy of that school system or licensed child daycare facility.

WENDY'S
MASSEY SERVICES
PEST PROGRAM GUIDELINES

October 2019

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OVERVIEW

DETAILS OF PROGRAM PROCEDURES

COMMUNICATION / RECORDS

INTRODUCTION

Wendy's Pest Elimination Program Implementation Guidelines have been developed to instruct pest elimination vendors to follow Wendy's written protocol in all facets of pest elimination. This would include:

1. Interior and exterior inspection and treatment
2. Pest baiting
3. Bait placement
4. Service
5. Reporting and communication

PURPOSE

To direct Wendy's approved Pest Elimination vendors to deliver an effective pest elimination program throughout the United States with consistent treatment, using a non-invasive low-profile approach with modern and safe treatment methods.

COCKROACH TREATMENT

The cockroach program is a proactive gel baiting program. Bait application will be pea size spots and at intervals of not less than 2 feet. All baits should be applied in a discreet fashion with no visible signs of build-up. Old bait placements are to be removed with a suitable scraper and disposed prior to placing fresh bait. **NO** roach bait shall be applied: directly ***above*** food and/or paper goods storage areas; in food preparation areas; in open food preparation equipment including storage areas for utensils, pots, pans, etc.; above the bottom shelf of prep tables and storage racks; on or near the menu board; or in customer view on the rear counter of the front service line. Additional strategies might include contact liquid residuals, Boric acid, Insect Growth Regulators, etc., applied to prevent contamination of food and food preparation surfaces as described above.

Note: Any Cockroach activity, live or dead, will result in appropriate curative and preventive service actions being taken. Any evidence of activity must be reported to the restaurant management to review the corrective action taken and cleaning of the area. Low to moderate cockroach activity will be addressed through immediate service actions followed by a 3-5 day proactive service to assure resolution. Moderate to high levels of cockroach activity require a full-prep cleanout service that will be provided in two stages: an initial cleanout, a next day proactive service and follow up treatment 5-10 days after. Heavy roach activity and includes the use of residual pesticides and aerosol injection treatments which require full preparation on the restaurant's part, see attached prep guidelines. Once a successful cleanout and follow up treatment process is complete, the service plan will revert back to the standard bait program.

Massey Services EZ Conceal Cockroach Monitors may be used to monitor for the presence of crawling insects including cockroaches. Monitors are an early warning system instead of waiting for a roach to be seen. Monitors will pick up evidence of roaches allowing early indications of the presence of roaches and resolution of the activity. Only approved EZ Conceal plastic roach monitors can be used. Roach monitors will be serviced as part of monthly service. If activity is found, the old glue board will be discarded and new glue board installed in roach monitor. Each monitor is to be bar-coded and identified as a service inspection point.

Pest vendor may use only the following Cockroach Monitor Locations:

- Front Service Counter / Pick-Up Service Counter
  - Place inside hand wash sink cabinet, side wall of cabinet or at back wall at front counter. At pick-up window, place inside drink station cabinet on side wall of unit underneath ice bin.
- Front, Menu-board Wall
  - Behind Frosty machine or Lemonade dispenser at back wall not visible to employees or guests.
- Service / Cook Line under Front Grill / Center Grill
  - Central location – underneath island under grill at back wall or side of cabinet, not visible to employees.
- Power Soak Area – Back Wall Area
  - Wall behind sink or under splash-guard back side not visible to employees.
- Water Heater Area/Room
  - On side wall at back of room or wall above base cove tile.
- Please see your approved pest vendor for pictures on Roach Monitor scope of service guidelines for location examples.

Service for all Wendy's locations (franchise & corporate managed) will be guided by following the Inspection Points described below. There are 19 common inspection points preloaded in Service Pro. Additional inspection points may be placed to track servicing of EZ Conceal monitors, pest prone areas in a specific location, or for additional equipment.

One of the requirements of Wendy's is that we provide structured services where performance can be tracked and results measured. The tracking of performance also applies to the location management as well as franchise and corporate operations management. Our observations on Conducive Conditions, Avenues of Entry and Sources of pest activity require Wendy's management action.

Wendy's regular service protocols require complete inspections of the interior, perimeter and boundary areas. Preventive material applications are made based on the potential for pests to be introduced to the that specific site. The interior of each location is divided into two areas; Front of House (FOH), and Back of House (BOH). Specific locations within these two areas are identified as Inspection Points. Each Inspection Point is to be assigned a bar-code that is scanned as the Technician inspects and provides service at that site. The Inspection Points are preset in Service Pro. See the attached list of the standard Wendy's Inspection Points. The

Technician will assign bar-codes to the Inspection Points as directed below. Massey U has a lesson covering iPad service reporting that includes instructions on placing bar-codes.

Inspection Points and bar-codes will direct the Technician through the service assuring all areas are inspected and treated as needed. Recording of Conducive Conditions, Avenues of Entry and Sources of Pest activity by Inspection Point will specifically direct local and senior Wendy's management on efforts they need to take. Rodent or insect pest activity recorded at an Inspection Point will start the escalation process required by Wendy's Company to assure pest issues are resolved and Senior Management is involved in the process. Pest activity (including the presence of rodent droppings) must be reported when it is found, and at the Inspection Point where it is fond. No exceptions. Should activity be found at IP#9 on the regular service, the Proactive Service, and a following Proactive Service the activity is recorded each time. In most cases pest activity reported in a location 3 times will require escalation to Wendy's and the franchise operations senior management.

The primary rodent in our service areas is roof rats. Understanding this, Wendy's Company requires inspections above the suspended ceilings in all locations every month. There are two Inspection Points (FOH and BOH) where these service actions are recorded. Due to the fact that HVAC system, ductwork and other building elements block the view of the area above the ceiling tiles each month the Tech is to inspect from a different location than the previous month. I suggest the bar-code for the FOH ceiling inspection be concealed above the dining room drink station, and the BOH ceiling bar-code be placed above the grill exhaust hood. The Technician should inspect a random site in the FOH or BOH area and then inspect above the ceiling tile where the bar-code sticker is. This will result in 4 inspections above the suspended ceiling. See bar-code detail and map addendum.

Wendy's Inspection Points

20 + EZ Conceal Insect Monitors

<u>Boundary</u>

1. **Parking Lot**
2. **Dumpster Rodent Station**
3. **Dumpster**

<u>Interior</u>

1. **BOH**
2. **BOH ILT**
3. **BOH Suspended Ceiling**
4. **Drive Thru**
5. **Front Counter**
6. **Dining Room**
7. **Drink Station**
8. **FOH Suspended Ceiling**
9. **FOH ILT**
10. **Logbook**
11. **Review with Manager**

<u>Perimeter</u>

1. **Receiving**
2. **Drive Thru**
3. **Store Front**
4. **Perimeter Rodent Station**

RODENT TREATMENT

The service technician will inspect the exterior of the building for rodent activity, looking for burrows and possible entry points. The service technician will also inspect the areas above the drop ceiling in the dining room, service line and back room as long as there is not exposed food below at the time of inspection and will note any sign of rodent activity, such as rodent droppings and nesting material. Wendy's will be responsible for the removal of droppings- see "escalation" addendum. A locked bait station (VM EZ Klean or Bell EVO) will be maintained on the dumpster pad. A second bait station will be required within 10 feet of the back door to measure rodent pressure (Bell Labs Circuit). The type of bait station used should look normal or natural for area of placement. In all other situations, decorative (Rodent Rock or other approved) bait stations may be used in the landscaping in high pressure areas. All bait stations will be secured and locked, and will contain date/product cards.

On the interior two tin cats will be required at the back door (one on each side of door with placement under shelves or equipment near back door area). In areas where the rodent pressure is primarily rats the tin cats are to be replaced with JT Eaton trapping stations with a Bell Labs T-Rex placed inside. Tin Cats and Trapping Stations are resale items. The service technician may install additional mechanical traps if needed and will service these traps during the regular service visit. All bait stations and traps (tin cats, trapping stations, ILT's or traps in drop ceilings) are to be documented on the equipment map maintained in the pest log book. Any mechanical traps must be out of customer view and must not obstruct the employee cleaning process. Glue boards and snap traps may only be used on the floor during mass trapping as described below.

For safety reasons service technicians, should only conduct visual inspections in electrical panels. No devices should be placed inside of the panels. Note any signs of activity on the service report as normal.

Rodent Mass Trapping

Mass trapping is to be performed when the level of rodent activity reaches poses a safety and health risk to the customers and/or employees. The determining factors will be the frequency of live sightings, damaged products, rodents caught, droppings, gnawing, etc.

For the above described situation, the service technician will place a minimum of 100 traps (combination of glue boards and snap traps) throughout the restaurant after the restaurant has closed and the crew has left the building. The traps are to be placed on the floor level and in the ceiling areas. The traps cannot be placed in areas that can be seen from exterior windows or doors. The service technician must coordinate with the restaurant management to remove the traps each morning, at least 30 minutes before the first crewmember arrives. All efforts should be made to allow the traps to be in place for a minimum of five hours overnight. Mass trapping placement and pick up will

occur daily until there is no evidence of rodent activity for three consecutive days. At that point, the restaurant will receive weekly service until there is no activity for three consecutive weeks, then monthly service can resume.

Interior Rodent Baiting

In critical rodent situations, Liquid Tox or First Strike Soft Bait Rodenticide(s) can be set up and used in the suspended ceiling areas of the restaurant. This process must be preapproved by the franchisee /operator or company Division Area Operator (DAO) (as appropriate), Wendy's QA and Massey QA Senior Director. Set up and user instructions are required and can be found on the Wendy's Liquid Tox or Rodenticide user guidelines. No other rodenticides will be used inside the restaurant at any time.

Additional Rodent Trapping Strategies

During the mass trapping escalation process, QA, franchisee / operator and approved pest vendor leadership may decide on the following actions to be taken:

- Implementation of trail cameras.
- Use of First Strike Rodenticide.
- Use of Liquid Tox.
- Reduce or increase mass trapping hours.
- Pest vendor to bring in their own QA team or Rodentologist.
- Move escalation service to the mornings if QA and pest vendor believe the rodent situation is at minimal activity and primarily in the drop ceiling areas.
- Use of E-Victor Light in the suspended ceiling area.

Roof Inspections

Roof inspections are sometimes required occasionally to address roof rat activity. These inspections are to be done safely with ladders supplied by Massey Services. Locations requiring added equipment to safely access roofs may be charged for these services.

Potential Restaurant Closure Actions

Risk to public health – Wendy's base approach* to closure is that closure of a restaurant following rodent or roach circumstances should be a collaborative decision between QA, pest vendor and franchise organization based on the following:

- Food contamination.
- Sighting of roaches or rodents by customers or crew / management, during restaurant hours or prior to open or after close.
- Large amount of activity captured over consecutive days including consistent rodent droppings or contaminated food.
- Structure of the building indicates major repairs are needed to properly seal building from rodent activity.
- Identify substandard sanitation in the restaurant that is conducive to pest activity
- Media contacts regarding alleged pest activity or sightings.

- Health department inspection and findings of rodent or roach activity, rodent droppings or contaminated food.

Closing of a restaurant for one or more of the issues listed above is a critical concern that requires the highest level of action to resolve and communication with Wendy's Corporate, franchise operations and Massey Services leadership.

*Wendy's franchise agreements permit it to immediately close any restaurant that poses an immediate threat or danger to public health or safety resulting from the operation of the Restaurant. Wendy's reserves all rights in this regard.

Restaurant Closed – Rodents (Mice)

When a decision has been made to close a restaurant for rodent issues, mass trapping will be followed / continued until results show zero catches:

- Restaurant will reopen.
- Suspended ceiling traps will remain loaded at 100 traps minimum until the escalation process has been completed.
- Service will be completed daily in the morning until three days are completed with no captures, product damage or sightings of rodents.
- Once daily service has been completed, weekly escalation service will take place for three weeks during the morning. Once three weeks of service has taken place with no captures, product damage or sightings of rodents, the restaurant will then return to regular scheduled monthly service.

FLYING INSECT PROGRAM

Large - Flies

When part of the recurring service program, each month (during active months), the service technician will apply residual materials, according to label directions, utilizing a hand or power sprayer to exterior areas where flies tend to congregate. Those areas should include but are not limited to entryways, Pick-up windows, exterior trash-cans (particularly under the lids), as well as the main dumpster area. The service technician will complete assessment of the exterior for heavy fly pressure and provide specific documentation on the service report outlining steps to be taken to resolve fly pressure. Fly bait(s) may be used in the dumpster area.

Exterior - Other Insects

Following the annual rotation chart residual applications (barrier treatments) should be made to the exterior areas where ants and other occasional invaders may originate from and potentially enter the facility. Exterior barrier treatments include the application of appropriate materials to turf and vegetation 3 to 10 feet wide around the facility. The foundation of the building may also be treated to a height of 2 to 3 feet where pests are active and may find entrance.

Interior - Large Flies (House, Bottle, Blow, Etc.)

This program will include the installation of two (Required in company and recommended in franchise restaurants) fly lights (ILT), (more may be needed in multi-level or larger facilities), which will be mounted approximately 6 feet from the floor to the top of the trap - see "building floor plan" addendum for recommended installation locations. Based on third party testing, Wendy's QA recommends using the Gilbert 2000 GT Flying Venus insect light trap (Required for company restaurants). ILT should not be mounted directly above food preparation or food storage areas. The ILT will be serviced from April – October or longer depending on the geographic location. ILT Service includes bulb replacement annually (April) and sticky board replacement monthly or as needed. The technician should also note on the report any structural, sanitation and/or air flow deficiencies that may interfere with fly control. The service technician will not be allowed to leave additional glue boards.

Interior - Small Flies (Fruit, Drain, Moth, Etc.)

If small flies are present in the restaurant, the service technician will inspect and identify the breeding source(s) and communicate directly with the store management to address the sanitation and/or structural deficiencies. The technician should also note on the report, any structural and sanitation deficiencies that may interfere with small fly control. The pest elimination company may deploy other strategies such as proprietary cleanouts that are designed specifically for small flies. This approach is typically an additional cost and therefore must be negotiated with your approved pest vendor.

TARGETED PESTS

Targeted 'zero-tolerance' pests will include cockroaches, rats and mice. In addition, the technician will treat for occasional invading pests such as ants, crickets and other crawling insects during regular service visits. Birds, pharaoh, fire and carpenter ants, brown recluse spiders and termites are excluded from the regular guarantee. Services for excluded insects and other structural pests are available on a cost-per-application basis. Additional service options will be offered for pest issues beyond this scope of service.

IN-STORE LOG BOOK

A logbook will be supplied to each store and maintained by the service technician. It will include copies of electronic service reports organized in chronological order by the month, with at least the previous 12 months on hand. The service report will detail pesticides used, where applied and target pests. Insect and rodent activity, structural and sanitation conditions with recommendations will also be included in the report.

INSPECTION PROCESS

Each service report must be reviewed with the manager on duty at the time of completion, if the service was performed after hours or a manager is not present in the restaurant, the logbook will be left on the manager's desk, opened to the page

containing the service report for that day. When there are signs of roach or rodent activity a "Critical" red sticker should be placed on the service ticket and the escalation process should start. Example of "Critical" sticker

PEST VENDOR ESCALATION PROCESS

Enables QA to act quickly to: Enhance Brand protection, protect the public health, employee safety, and comply with federal regulations

First occurrence:

- ❑ The pest elimination company notifies the franchisee, Franchise Market Director or Coordinator (FMD/FMC), Division Area Operator (DAO), Division Vice President (DVP) and Wendy's QA of any signs of roach or rodent activity and including pest sightings.
- ❑ The FMD/FMC will:
  - o Contact the franchisee to offer support.
- ❑ The pest elimination company meets with the franchisee/DAO (or designee) at the restaurant to discuss:
  - o Level of activity
  - o Associated structural and/or sanitation deficiencies, if applicable.
  - o Treatment strategy
  - o Plan of action

Second and subsequent occurrences:

- ❑ The pest elimination company notifies the franchisee, (FMD/FMC), DAO, DVP and QA of any signs of roach or rodent activity and including pest sightings.
- ❑ The pest elimination company meets with the franchisee/DAO (or designee) at the restaurant to discuss:
  - o Level of activity
  - o Associated structural and/or sanitation deficiencies, if applicable.
  - o Treatment strategy
  - o Plan of action
- ❑ The FMD / FMC will:
  - o Contact the franchisee to offer support.
  - o Get an update on the status of the activity and plan of action from the franchisee.

- QA will:
  - Contact the FMD/FMC or the DAO and the pest elimination company to get a status update and plan of action.
  - Provide the appropriate guidance and expertise to the FMD/FMC or the DAO and pest control company.

Note: Critical situations will be handled with the appropriate sense of urgency.

CONTACT INFORMATION

Franchise Contacts:

Franchise Market Director – FMD
Franchise Market Coordinator – FMC
Franchisee
Franchise Operations Manager
District Manager

Corporate Contacts:

Wendy's Quality Assurance - QA
Division Area Operator – DAO
Division Vice President – DVP
District Manager

Bar-code Addendum

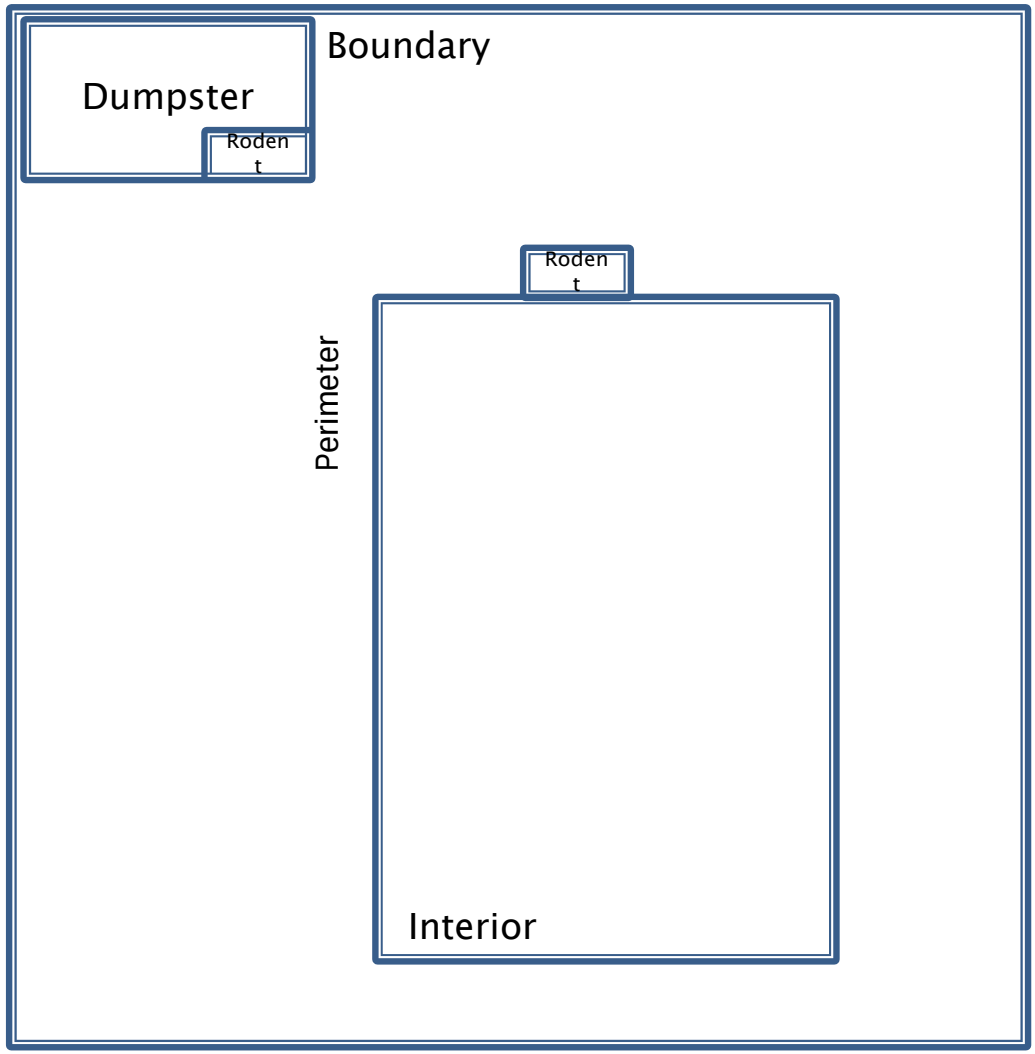
Wendy's Barcode Guide

1. Dumpster RBS – Inside dumpster rodent station
2. Dumpster Corral – Glue/hang bait station placard in dumpster corral and place barcode on placard
3. Parking Lot – Second barcode on dumpster placard
4. Perimeter RBS located by back door – Barcode on interior of station
5. Exterior Receiving – Barcode located on back door frame
6. Exterior Drive Through - Place on right side of first Drive through window frame
7. Exterior Store Front – On inside Log Book cover
8. Interior Back of House – Office Door Frame
9. Interior BOH Suspended Ceiling – On Suspended ceiling frame over Ice Machine
10. BOH ILT #1 – On Unit
11. BOH ILT #2 – On Unit
12. Log Book Review – On inside cover of Log Book
13. Interior Drive Through – under drive through window, on wall
14. Front Counter – on wall under counter, under right side register
15. Drink Station – On side of drink dispenser
16. Dining Area – Place on door frame of dining room maintenance closet
17. Suspended Ceiling FOH – Place on door frame of dining room maintenance closet
18. FOH ILT – on unit
19. Endzone if applicable – In Log book Cover
20. EZ Conceal monitors -underside of the removable portion of the monitor

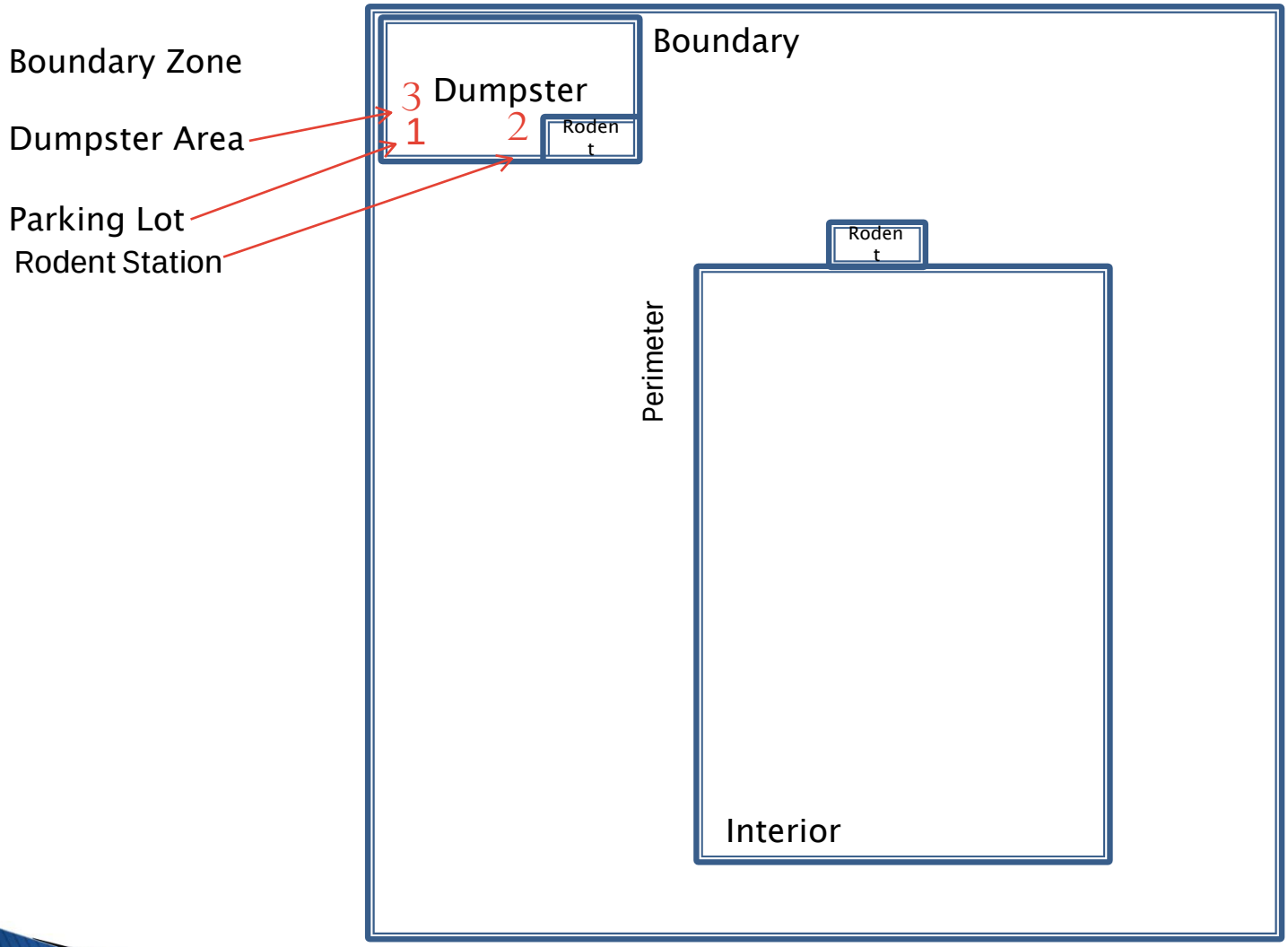
Three Service Zones
Interior

Exterior

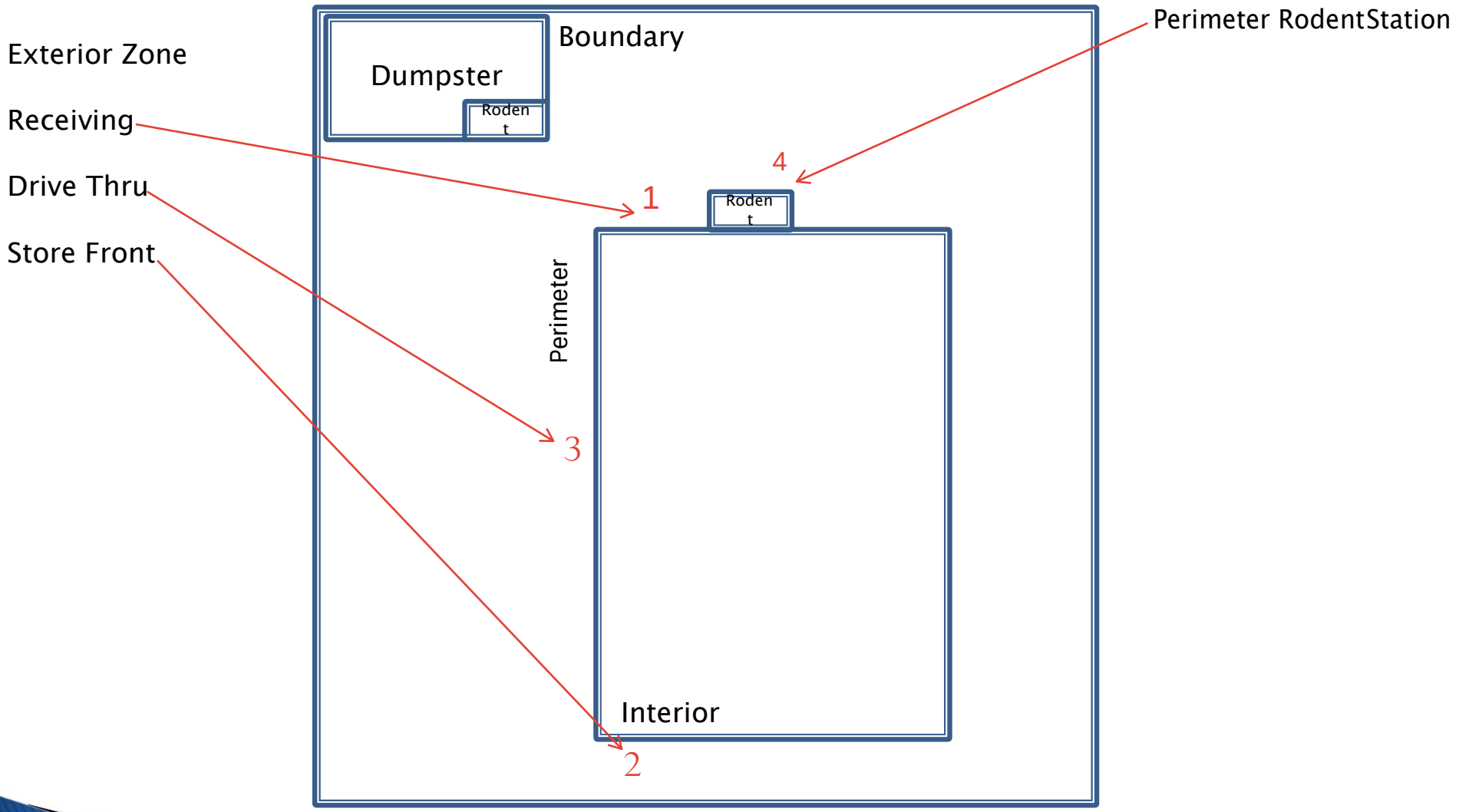
Boundary



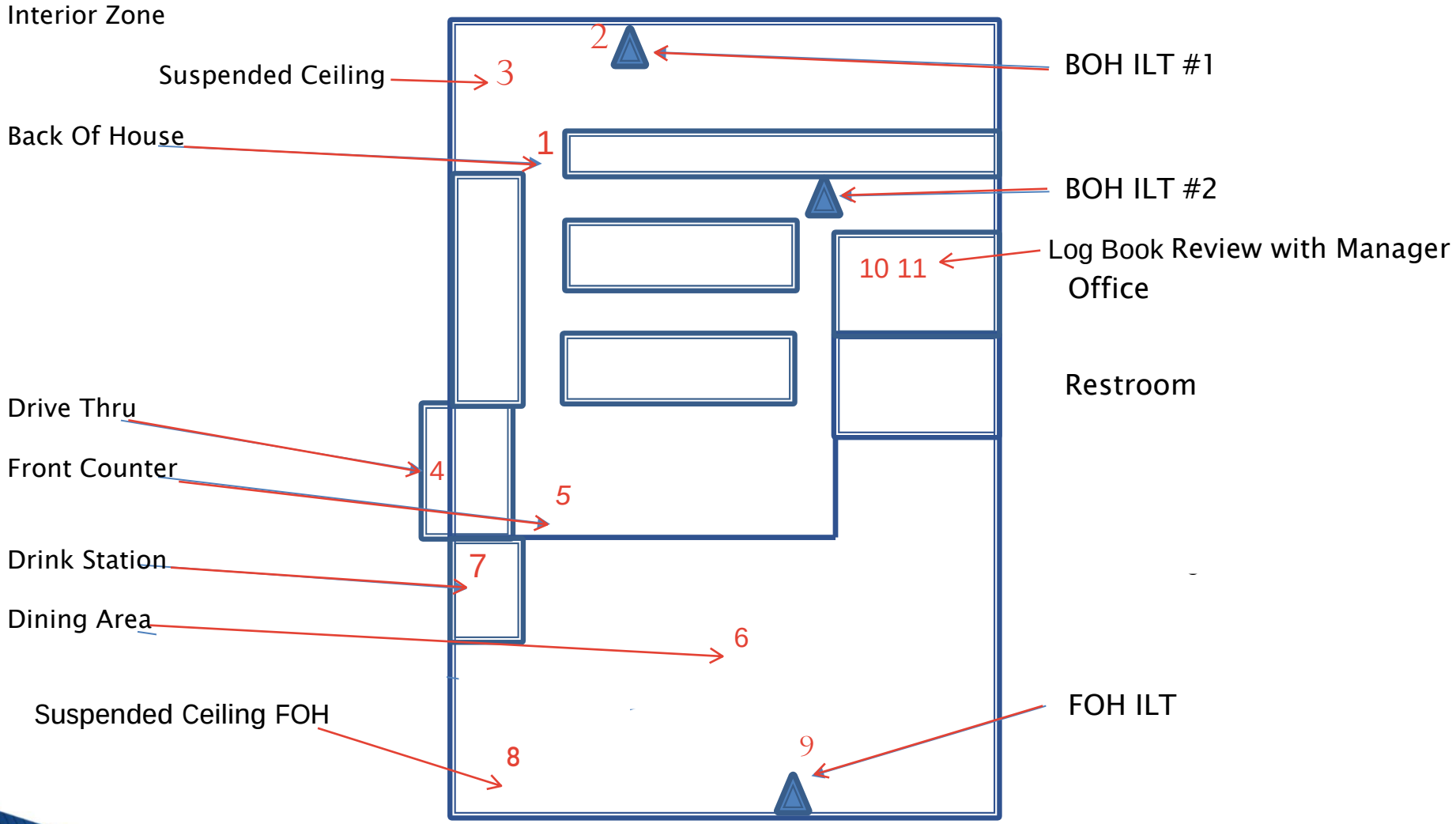
Barcode Location Placement for inspection points



Barcode Location Placement for inspection points



Barcode Location Placement for inspection points



To: ***Massey Service Center Managers***
From*:* *Tom Jarzynka*
Subject: ***EZ Conceal Insect Monitor***
Date: ***October 20, 2018***
cc: ***Executive Team, Region & Division Managers, Technical & Training, Purchasing, file***

Last week at NPMA Pest World VM Products provided a preliminary introduction of the EZ Conceal Insect Monitor to convention attendees. Next week this product will be introduced to the rest of the pest management industry. See attached.

The EZ Conceal has multiple features that make it an attractive choice for our customers and us. The first and most obvious is, when properly placed, trapped insects are not readily visible. Many customers don't want to see bugs caught on traps. Food service accounts need to be monitored, but health inspectors write them up when insects are seen on monitors. Many commercial customers don't allow monitors to be used for this reason, or want to risk someone taking picture of insects on traps and posting it on social media. The ability to conceal the catch is a big advantage over other insect detection devices.

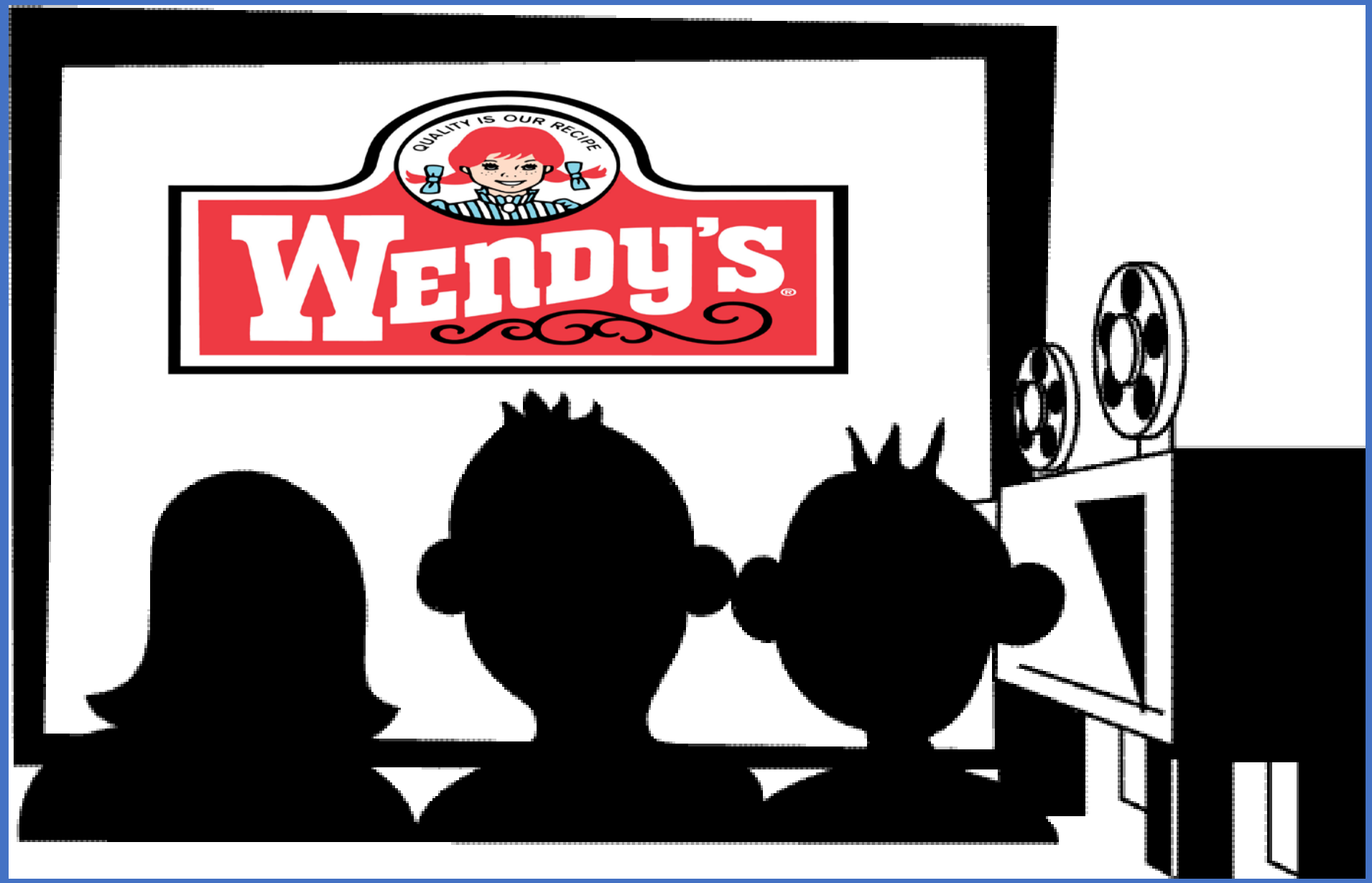
Other EZ Conceal features include:

1. it is similar in size to standard cardboard monitors
2. the semi-permanent adhesive allows it to be attached to horizontal and vertical surfaces - a version with magnetic tape is being developed
3. the base fits evenly to the surface, no room for nymphs to get under it
4. the top can be removed with one hand, allowing you to hold a flashlight or other service device in the other hand
5. the glue board comes out of the monitor when the top is removed, again allowing service with one hand
6. the device can be placed with no glue board and used as a bait station
7. solid black, blends in, not readily visible in areas where roaches harbor

The EZ Conceal will be available through Univar. Massey Services is the first company to have private label EZ Conceal Station, AX product code is 838051. There are 10 to a bag. Our cost is $2.20 per station, $22.00 per bag. The EZ Conceal is to be provided as a <u>premium product and resold</u> to the customers like we do with rodent bait stations, fly lights, etc. Our resale price is $3.70 each. The glue board refills are a new version of the Catch Master 72TC, renamed 72CRM. The 72 CRMs are perforated, can be used as one glue board (like the 72TC) or split into 4 refills for the EZ Conceal. The cost of both the 72TC and the 72CRM will be the same. Our cost for a Massey IDT is $0.10. The EZ Conceal refills will be $0.05 per perforated section. AX will be updated with the Catch Master 72CRM product code as soon as it is available.


MASSEY
SERVICES INC.
1-888-2MASSEY


MASSEY
SERVICES INC.


QUALITY IS OUR RECIPE
WENDY'S

Interior Service

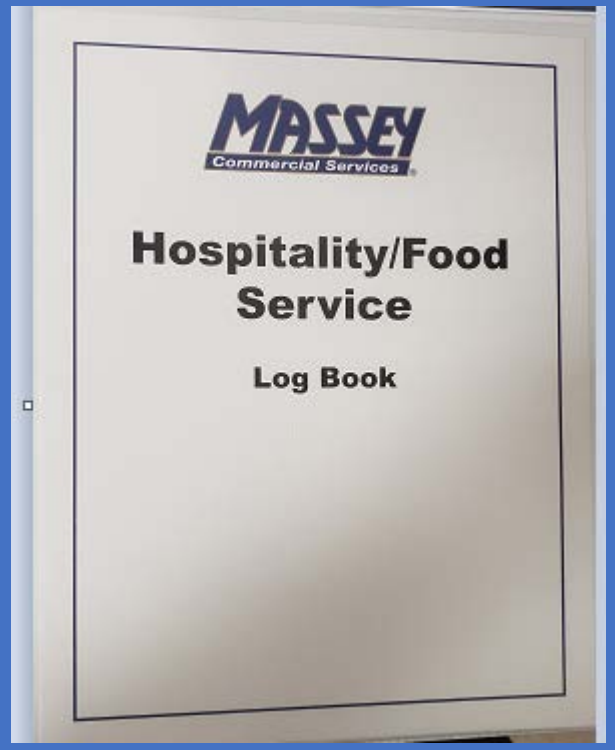
Upon arrival, our first check in with Manager

- **Professional & Polite**
- **Sightings?**
- **Any concerns?**

Interior Service

A logbook will be supplied to each store and maintained by the service technician. It will include:

- Scope of Service
- All applicable licenses
- Equipment Graph
- Emergency Contact Information



Interior Service

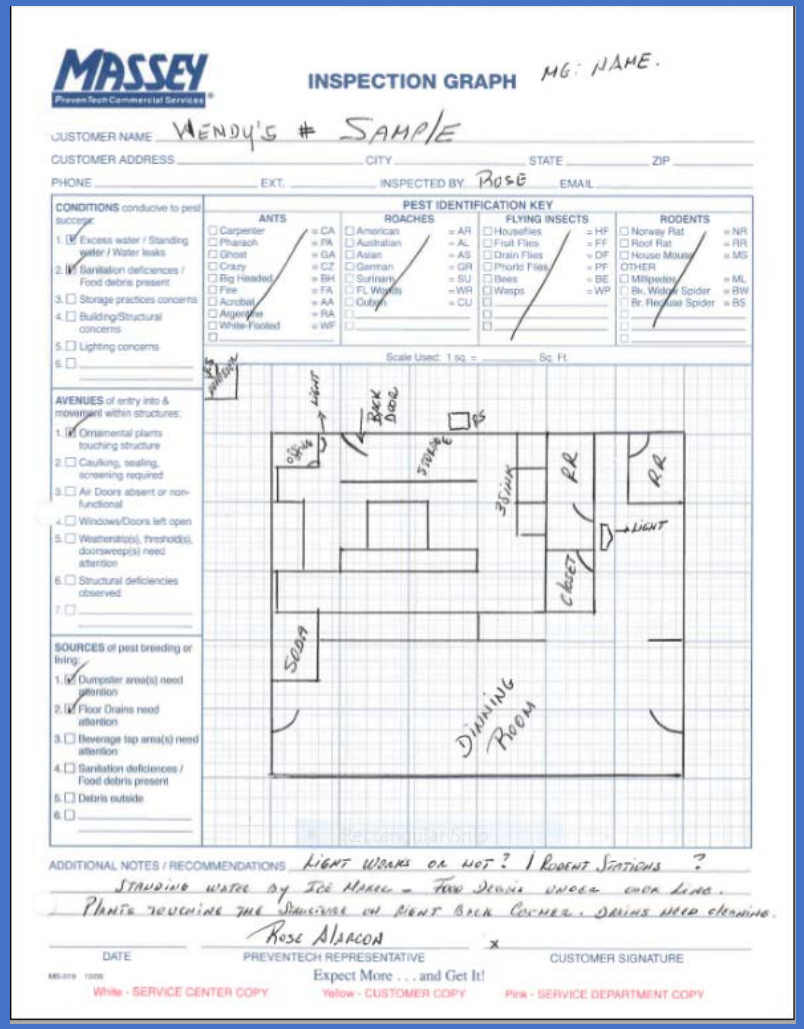
Service Report:

- **Must have 12 months in logbook in chronological order**
- **Detail pesticides used, where applied and target pest**
- **Insect and rodent activity, structural and sanitation conditions with recommendations will be included**
- **Must be reviewed with management**
- **If there is activity, a red “Critical” sticker should be placed on report and escalation started**

Interior Service

Equipment Map

- Must be in Log Book



MASSEY
PreventTech Commercial Services

INSPECTION GRAPH MG: NAME.

CUSTOMER NAME WENDY'S # SAMPLE

CUSTOMER ADDRESS _____ CITY _____ STATE _____ ZIP _____

PHONE _____ EXT. _____ INSPECTED BY ROSE EMAIL _____

CONDITIONS conducive to pest success:
1. ☑ Excess water / Standing water / Water leaks
2. ☑ Sanitation deficiences / Food debris present
3. ☐ Storage practices concerns
4. ☐ Building/Structural concerns
5. ☐ Lighting concerns
6. ☐ _____

AVENUES of entry into & movement within structures:
1. ☑ Ornamental plants touching structure
2. ☐ Caulking, sealing, screening required
3. ☐ Air Doors absent or non-functional
4. ☐ Windows/Doors left open
5. ☐ Weatherstrip(s), threshold(s), doorsweep(s) need attention
6. ☐ Structural deficiencies observed
7. ☐ _____

SOURCES of pest breeding or living:
1. ☑ Dumpster area(s) need attention
2. ☑ Floor Drains need attention
3. ☐ Beverage tap area(s) need attention
4. ☐ Sanitation deficiences / Food debris present
5. ☐ Debris outside
6. ☐ _____

PEST IDENTIFICATION KEY

ANTS		ROACHES		FLYING INSECTS		RODENTS	
☐ Carpenter	= CA	☐ American	= AR	☐ Housefies	= HF	☐ Norway Rat	= NR
☐ Pharaoh	= PA	☐ Australian	= AL	☐ Fruit Flies	= FF	☐ Roof Rat	= RR
☐ Ghost	= GA	☐ Asian	= AS	☐ Drain Flies	= DF	☐ House Mouse	= MS
☐ Crazy	= CZ	☐ German	= GR	☐ Phorid Flies	= PF	OTHER	
☐ Big Headed	= BH	☐ Surinam	= SU	☐ Bees	= BE	☐ Millipedes	= ML
☐ Fire	= FA	☐ FL Woods	= WR	☐ Wasps	= WP	☐ Bk. Widow Spider	= BW
☐ Acrobat	= AA	☐ Cuban	= CU	☐ _____		☐ Br. Recluse Spider	= BS
☐ Argentine	= RA	☐ _____		☐ _____		☐ _____	
☐ White-Footed	= WF	☐ _____		☐ _____		☐ _____	
☐ _____							

Scale Used: 1 sq. = _____ Sq. Ft.

ADDITIONAL NOTES / RECOMMENDATIONS LIGHT WORKS OR NOT? / RODENT STATIONS ?
STANDING WATER BY ICE MAKER - FOOD DEBRIS UNDER COOK LINE.
PLANTS TOUCHING THE STRUCTURE ON RIGHT BACK CORNER. DRAINS NEED CLEANING.

Rose Alarcon

DATE | PREVENTECH REPRESENTATIVE | x CUSTOMER SIGNATURE

MS-019 12/09

Expect More . . . and Get It!

White - SERVICE CENTER COPY Yellow - CUSTOMER COPY Pink - SERVICE DEPARTMENT COPY

Interior Service

There must be 18 Inspection Points and are as follows:

Boundary:

1. Parking Lot
2. Dumpster Rodent Station
3. Dumpster

Interior:

4. BOH
5. BOH ILT
6. BOH Suspended Ceiling
7. Drive Thru
8. Front Counter
9. Dining Room/Booths/Tables
10. Drink Station
11. FOH Suspended Ceiling
12. FOH ILT
13. Logbook
14. Review with Manager

Perimeter:

15. Receiving
16. Drive Thru
17. Store Front
18. Perimeter Rodent Station

Interior Service

FOH Inspect:

ILT
Booths/Tables
Drink Station
Dining Room
Suspended Ceiling

BOH Inspect:

ILT
Drive Thru
BOH
Suspended Ceiling
Front Counter

Interior Service

FOH Inspect:

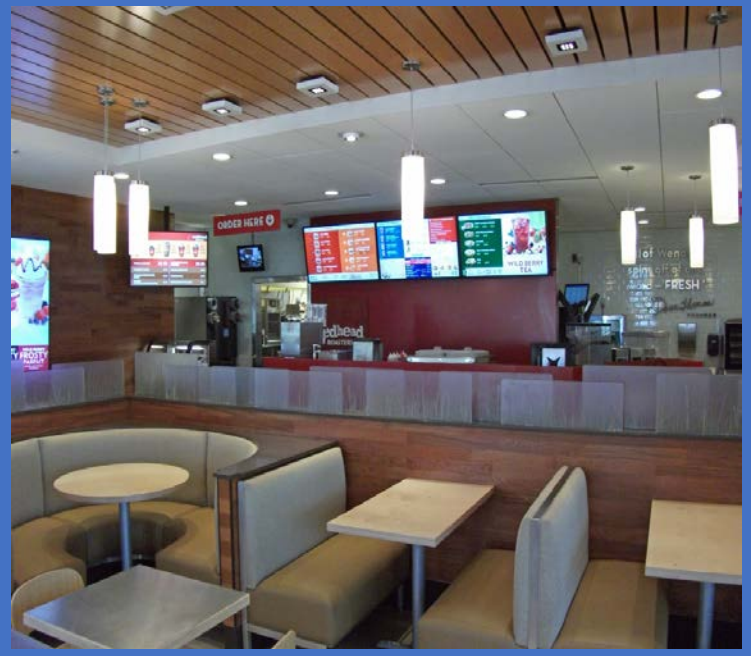
ILT

Booths/Tables

Drink Station

Dining Room

Suspended Ceiling



Interior Service

BOH Inspect:

ILT

Drive Thru

BOH

Suspended Ceiling

Front Counter

Interior Service

Ensure all Conducive Conditions, Avenues of Entry, Sanitation and Structural issues are documented on an inspection point with location details added. Example: IP 4 BOH – broken tile by back door.

Interior Service

We must follow the current M & S Material Rotation – this is issued monthly. If you have not seen it yet, please ask your manager to see it and explain it to you.

Commercial & Consumer Interior Program

	First Trimester				Second Trimester				Third Trimester			
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
PrevenTech Monitors	X	X	X	X	X	X	X	X	X	X	X	X
Primary Service Zone	2	3	1	2	3	1	2	3	1	2	3	1
Exclusionary Services												
Void Applications												
Boractin												
Delta Dust (as required)												
Crack & Crevice Applications												
Alpine WSG												
Phantom												
Arilon												
Flying Insect Program												
Alpine WSG - Flies												
Tempo Ultra WP - Flies												
Invade Bio Cleaner												
Phantom - interior ants	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot
Niban FG												
NyGuard - IGR												
Kitchen - German CR												
Advion												
InVict Gold												
Maxforce Impact												
Alpine Roach Gel												

MASSEY SERVICES INC.

Interior Service

COCKROACH TREATMENT – The cockroach program is a proactive gel baiting program. All baits should be applied in a discreet fashion with no visible signs of build-up. NO roach bait shall be applied directly above and/or paper goods storage areas for utensils, pots, pans, etc. Bait will not be applied above the bottom shelf on prep tables and storage racks. No bait will be applied on or near the menu board or in customer view on the rear counter of the front service line. It includes the removal of old bait prior to application of new bait.

MASSEY SERVICES INC.

Interior Service

Activity Found:

Any cockroach activity, live or dead, should be reported to the store management for immediate removal and cleaning of the area. Intensive Cleanout service may be initiated in two stages (an initial cleanout and follow up treatment 7 -10 days later) for heavy roach activity and includes the use of residual pesticides which requires preparation on the restaurant's part. Once a successful cleanout and follow up treatment process is complete, the technician will revert back to the standard bait program.

Interior Service

Cockroach Monitoring:

- Placement cannot be visible to employees or guests
- Purpose: Monitors are an early warning system – instead of waiting for a roach to be seen, monitors will pick up evidence of roaches in advance of getting to the point where roaches are out of their hiding spots and out in the open. This will allow faster identification of the issue, better and expanded treatment options and quicker resolution of the pest activity.
- Type of Roach Monitor and Placement: It is essential that the roach monitors are placed only in approved locations. These monitors do not contain any pesticides. Only enclosed roach monitors can be used and have been approved by Wendy's QA.

Interior Service

Cockroach Monitoring:

- Servicing of Roach Monitors: The roach monitors will be inspected on every service visit. Service technician will identify and record what species of insects were present and in what numbers. Data will be entered using hand held equipment in the appropriate area / zone / location found. Roach monitors will be cleaned, and new glue boards installed if any insects are captured in the roach monitors.
- Roach Monitor Tracking: Roach monitors placement within the restaurant will be documented on the equipment map in the pest vendor log book. All cockroach monitoring devices will be numbered, barcoded and documented so each device is tracked and accounted for on each service visit.
- Approved roach monitors: One example of an approved enclosed roach monitor is the EZ Roach Monitor.

Interior Service

Cockroach Monitoring:

- <u>Cockroach Monitor Locations</u>:
- Front Service Counter / PUW
- Drink station nearest window or front sink area
- Close to the wet area
- Front, menu-board wall
- Frosty dispenser, behind Lemonade dispenser
- Central location along wall
- Sandwich Line Front
- Central location – underneath equipment at side panel area
- Power Soak Area
- Wall behind sink or under splash-guard
- Water Heater Area/Room

Interior Service

Activity Found:

1. **Pest Control company notifies District Manager, FAD/DAO, DVP and QA of any signs of roach or rodent activity.**
2. **The FAD will contact the District Manager to offer support.**

Interior Service

Activity Found:

3. The pest control company meets with the DM/DAO (or designee) at the restaurant level to discuss:

- **Level of activity**
- **Associated structural and/or sanitation deficiencies**
- **Treatment strategy**
- **Plan of action**

Interior Service

Other Treatments:

Additional strategies may include contact residuals, Boric Acid and Insect Growth Regulators, etc. but must be applied in the same method and areas as the bait

IDTs will NOT be used

Interior Service

Rodent Treatment:

- **BOH and suspended ceiling will be inspected**
- **Activity (droppings and nesting material) will be noted on service report. Removal of droppings is Wendy's responsibility**

Mass Trapping:

- **Minimum of 100 traps (combination glue boards and snap traps)**
- **Placed after restaurant is closed and staff has left**

Interior Service

Mass Trapping:

- **Placed floor level and in ceiling**
- **Placed so they can not be seen from exterior windows or doors**
- **Must coordinate with management to remove the traps each morning, at least 30 minutes before the first crewmember arrives**
- **Continue until no activity for 3 consecutive days, then weekly until no activity for three consecutive weeks**

Interior Service

Large Flies:

- **Must have two Gilbert 2000GT Flying Venus units**
- **Mounted approximately 6 feet from floor to top of trap**
- **Must not be mounted above food prep or storage areas**
- **Bulbs replaced annually – glue boards monthly**
- **Note on service report – structural, sanitation or air flow deficiencies that may interfere with fly control.**

Interior Service

Small Flies:

- **Technician will inspect and identify breeding source(s)**
- **Communicate directly with management to address sanitation and/or structural deficiencies**

Exterior Service

Rodent Treatment:

- **Inspect for activity, burrows and entry points**
- **Locked station will be maintained on dumpster pad**
- **One decorative (rock, circuit or vent style) bait station near or around the building. More may be needed depending on activity**
- **All stations will be locked and contain date/product cards**

Exterior Service

Other insects:

- **Residual applications (barrier treatments) should be made following our material rotation and methods of application to the exterior surfaces where ants and other occasional invaders may tend to enter the facility**

Exterior Service

Flies:

- **Residual pesticides will be applied where flies congregate – dumpster, wipe downs over entry doors, drive thru, trash cans**
- **Fly Bait in the dumpster**

Service Report

The service report will detail:

- Pesticides used
- Where Pesticides were applied
- Target Pests
- Insect and Rodent Activity
- Structural and Sanitation Conditions
- Recommendations

Must be reviewed with manager on duty at time of completion

Service Report

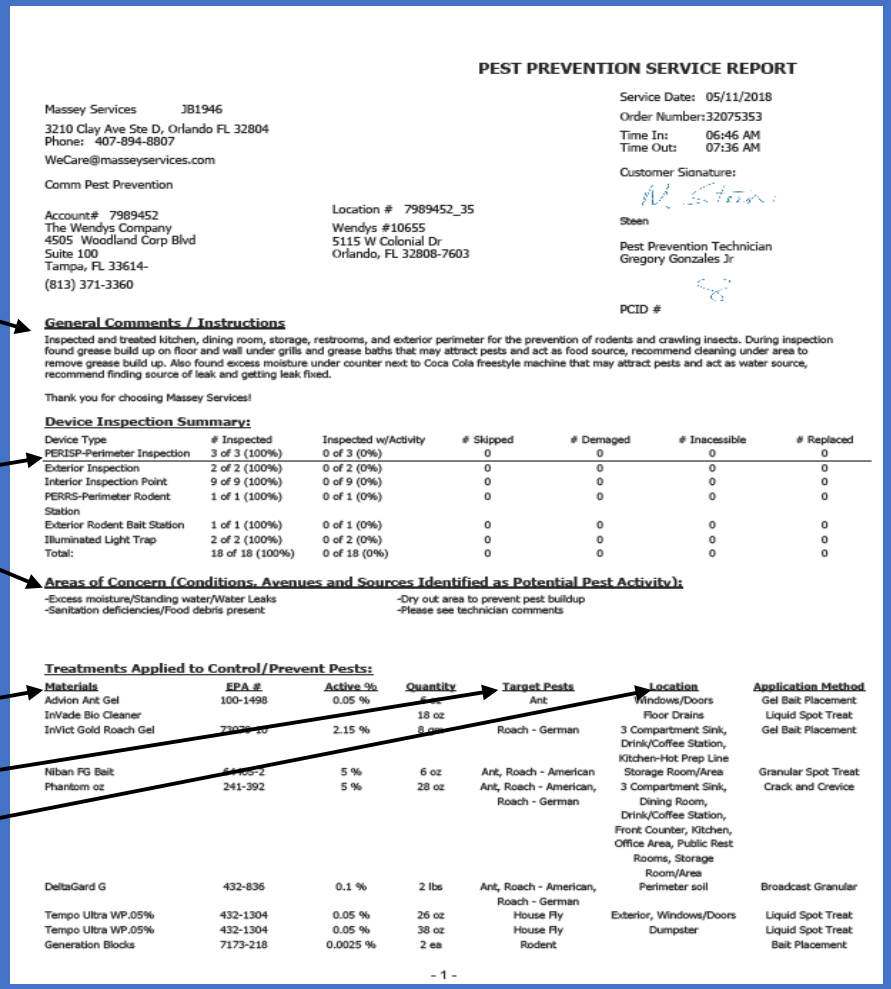
Service Performed

Areas of Concern

Inspection Points

Materials Applied

Target Pests & Where



PEST PREVENTION SERVICE REPORT

Massey Services JB1946
3210 Clay Ave Ste D, Orlando FL 32804
Phone: 407-894-8807
WeCare@masseyservices.com

Comm Pest Prevention

Account# 7989452
The Wendys Company
4505 Woodland Corp Blvd
Suite 100
Tampa, FL 33614-
(813) 371-3360

Location # 7989452_35
Wendys #10655
5115 W Colonial Dr
Orlando, FL 32808-7603

Service Date: 05/11/2018
Order Number: 32075353
Time In: 06:46 AM
Time Out: 07:36 AM

Customer Signature:

Steen

Pest Prevention Technician
Gregory Gonzales Jr

PCID #

General Comments / Instructions

Inspected and treated kitchen, dining room, storage, restrooms, and exterior perimeter for the prevention of rodents and crawling insects. During inspection found grease build up on floor and wall under grills and grease baths that may attract pests and act as food source, recommend cleaning under area to remove grease build up. Also found excess moisture under counter next to Coca Cola freestyle machine that may attract pests and act as water source, recommend finding source of leak and getting leak fixed.

Thank you for choosing Massey Services!

Device Inspection Summary:

Device Type	# Inspected	Inspected w/Activity	# Skipped	# Damaged	# Inacessible	# Replaced
PERISP-Perimeter Inspection	3 of 3 (100%)	0 of 3 (0%)	0	0	0	0
Exterior Inspection	2 of 2 (100%)	0 of 2 (0%)	0	0	0	0
Interior Inspection Point	9 of 9 (100%)	0 of 9 (0%)	0	0	0	0
PERRS-Perimeter Rodent Station	1 of 1 (100%)	0 of 1 (0%)	0	0	0	0
Exterior Rodent Bait Station	1 of 1 (100%)	0 of 1 (0%)	0	0	0	0
Illuminated Light Trap	2 of 2 (100%)	0 of 2 (0%)	0	0	0	0
Total:	18 of 18 (100%)	0 of 18 (0%)	0	0	0	0

Areas of Concern (Conditions, Avenues and Sources Identified as Potential Pest Activity):

-Excess moisture/Standing water/Water Leaks
-Sanitation deficiencies/Food debris present
-Dry out area to prevent pest buildup
-Please see technician comments

Treatments Applied to Control/Prevent Pests:

Materials	EPA #	Active %	Quantity	Target Pests	Location	Application Method
Advion Ant Gel	100-1498	0.05 %	6 oz	Ant	Windows/Doors	Gel Bait Placement
InVade Bio Cleaner			18 oz		Floor Drains	Liquid Spot Treat
InVict Gold Roach Gel	73079-10	2.15 %	8 gm	Roach - German	3 Compartment Sink, Drink/Coffee Station, Kitchen-Hot Prep Line	Gel Bait Placement
Niban FG Bait	64405-2	5 %	6 oz	Ant, Roach - American	Storage Room/Area	Granular Spot Treat
Phantom oz	241-392	5 %	28 oz	Ant, Roach - American, Roach - German	3 Compartment Sink, Dining Room, Drink/Coffee Station, Front Counter, Kitchen, Office Area, Public Rest Rooms, Storage Room/Area	Crack and Crevice
DeltaGard G	432-836	0.1 %	2 lbs	Ant, Roach - American, Roach - German	Perimeter soil	Broadcast Granular
Tempo Ultra WP.05%	432-1304	0.05 %	26 oz	House Fly	Exterior, Windows/Doors	Liquid Spot Treat
Tempo Ultra WP.05%	432-1304	0.05 %	38 oz	House Fly	Dumpster	Liquid Spot Treat
Generation Blocks	7173-218	0.0025 %	2 ea	Rodent		Bait Placement

- 1 -

Service Report

Must be reviewed with Manager on duty

Pictures

WENDY'S GUIDELINES FOR TAKING PEST ELIMINATION VENDOR PICTURES

Who will be allowed to take pictures: The Approved Pest Elimination Vendor's Service technician, Service Manager, DM, Region Manager, and National Account & QA Teams.

What type of equipment will be used to take pictures: Only Approved Pest Vendor equipment (I-Phones or Hand-Held equipment). No personal equipment will be used.

Why are pictures taken: To show structural or sanitation deficiencies, current pest issues, pest harborage and other conducive conditions.

Who will have access to the Wendy's pictures: The Approved Pest Elimination Vendor's Service technician, Service Manager, DM, Region Manager, and National Account & QA Teams.

Pictures

WENDY'S GUIDELINES FOR TAKING PEST ELIMINATION VENDOR PICTURES

The pest elimination vendors will not share any pictures taken at Wendy's restaurants with anyone other than the approved Wendy's group: Wendy's Franchise Owner / Operator, Wendy's QA Team, FMD, FMC, DVP, DAO.

Wendy's logos / trademarks or vendor names cannot be taken in any pictures: Examples such as Wendy's signage, Wendy's Logo's, names of vendors on equipment, menu boards / preorder boards and other identified Wendy's logoed items.

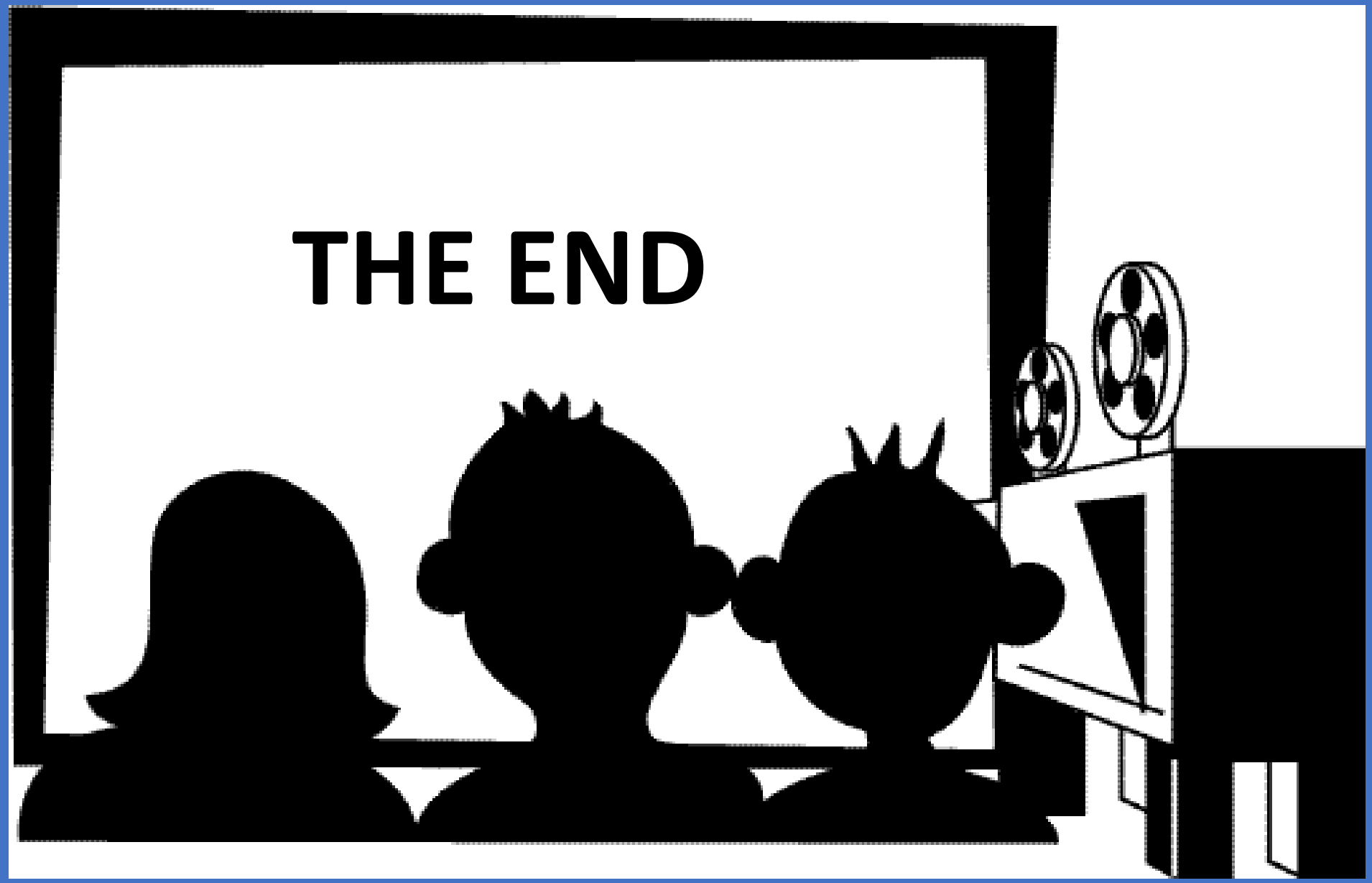
Once pictures have been transferred to Wendys leadership (bullet point #5), all pictures are to be held by the Approved Pest Elimination Vendor in safe and secure locations and protected as Wendy's Confidential Information.

Approved Pest Elimination Vendor will contact franchisee or operator and gain approval to take pictures.

Pictures

Pictures that do NOT meet guidelines

Pictures that do meet guidelines:


THE END

WEEKLY TRAINING SESSION

Chinch Bug Management Protocol

Topic Category: Lawn

Recordable Verifiable Training Hours: 1

Objectives: This lesson is designed to teach our Chinch Bug Management Protocol.

Length of lesson: Approx 60 minutes.

Materials needed:

- Training Guideline
- GU Protocol Chinch Bug Management Training Document located in the G: Drive \Shared\GreenUp Reference Materials\GreenUp Protocols\Individual Protocols\Lawn Damaging Insects
- Collect samples of Chinch Bugs from the field, if available.
- Pre- and Post- tests.

Training Guidelines:

- This training qualifies for Department of Agriculture ID Card Holder Training. Complete a Department of Agriculture ID Card Holder Training for each Team Member and maintain it in their personnel file at your office.
- Make copies of the tests and training materials for all Team Members attending.
- Set up the training area in an area of the office that will minimize disruptions.
- Begin the meeting by defining the training topic and handing out the Pre-test
    - Allow a few minutes for Team Members to complete the Pre-test.
    - Collect the pre-test and hand out the Verifiable Training Record Form (VTRF)
- Distribute and review the training materials on Chinch Bug Management Protocol.
    - Encourage active participation from all Team Members
    - Ask probing questions to develop key points
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
- Hand out the Post-tests. When complete, grade the tests and record the score on the VTRF.
- Collect tests and place with the verifiable materials in the Service Center Verifiable Training File.
- Make copies of the VTRF and place in each Team Member's training file.
- Complete all Weekly VTM's through Massey University.

WEEKLY TRAINING SESSION

Chinch Bug Management Protocol

Name_____ Date _____

PRE & POST TEST

1. T or F An adult female chinch bug can lay up to 300 eggs in a lifetime.
2. T or F Chinch bugs are active year round in most of the state, but the primary time of activity is April through October.
3. T or F Chinch bugs cause damage by chewing of the grass blades and injecting a toxic saliva.
4. T or F Chinch bugs can be found by pulling the lowest leaf of an infested grass plant down to reveal the inside of the sheath where they hide.
5. T or F Drought conditions discourage the development of a beneficial fungus that aids in the control of chinch bugs.
6. T or F Broadcast liquid applications are performed for the prevention and control of chinch bugs from April through September.
7. T or F Aloft is used in May and June for chinch bug prevention and control.
8. T or F Follow-up inspections after a treatment for active chinch bugs should be performed 2 to 3 weeks after treatment.
9. T or F If three treatments have been performed and failed to control the chinch bug infestation, the GreenUP Quality Assurance Department is to be called for a site visit.
10. T or F The effectiveness of pesticide treatments is directly related to how applications are made.

WEEKLY TRAINING SESSION

Chinch Bug Management Protocol

PRE & POST TEST ANSWER KEY

1. (T) or F — An adult female chinch bug can lay up to 300 eggs in a lifetime.
2. (T) or F — Chinch bugs are active year round in most of the state, but the primary time of activity is April through October.
3. T or (F) — Chinch bugs cause damage by chewing of the grass blades and injecting a toxic saliva.
4. (T) or F — Chinch bugs can be found by pulling the lowest leaf of an infested grass plant down to reveal the inside of the sheath where they hide.
5. (T) or F — Drought conditions discourage the development of a beneficial fungus that aids in the control of chinch bugs.
6. (T) or F — Broadcast liquid applications are performed for the prevention and control of chinch bugs from April through September. May through September in Northern Service Centers
7. (T) or F — Aloft is used in May and June for chinch bug prevention and control.
8. (T) or F — Follow-up inspections after a treatment for active chinch bugs should be performed 2 to 3 weeks after treatment.
9. (T) or F — If three treatments have been performed and failed to control the chinch bug infestation, the GreenUP Quality Assurance Department is to be called for a site visit.
10. (T) or F — The effectiveness of pesticide treatments is directly related to how applications are made.

GREENUP SERVICE PROTOCOLS

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Southern Chinch bugs (*Blissus insularis* Barber) are the most damaging and difficult-to-control insect pests of St. Augustinegrass in Florida. In warmer months, they can be found in leaf sheaths and thatch where they cause damage by sucking juices from the grass. Chinch bug populations tend to be clumped rather than dispersed throughout a lawn. Damage begins as yellowing areas that eventually die. As these insects move away from dead grass in search of healthy blades to feed on, affected areas increase in size.

Biology

The Southern Chinch Bug (*Blissus insularis* Barber) develops through gradual metamorphosis. Adult females may live up to 2 months and lay 4-5 eggs per day (250-300 eggs in a lifetime) preferring to deposit their eggs between the leaf sheaths and stem however some eggs are deposited in the thatch. The eggs hatch in 8 to 9 days at 83^0 F and 24 to 25 days at 70^0 F. Nymphs develop through 5 instars in 40 to 50 days during warm weather (80^0 F) but in cooler weather they will develop through 5 instars in 2 to 3 months and will occasionally develop through a 6^{th} instar in the winter months. Southern Chinch Bugs typically have 3-4 generations per year in North Florida and 7-10 generations in Central and South Florida. Chinch bugs are active year-round in most of the state, but they may hibernate in the winter in Northern Florida. The primary time of activity is April through October.

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Damage is caused by sucking the plant juices and the secretion of salivary toxins. Chinch bug populations of 20 per square foot or greater will cause injury to turf. Injury begins as a yellowing of the leaves followed by necrosis (browning leaf tissue) and death. The advanced symptoms are often mistaken for drought stress injury.

Common Areas for Chinch bug Damage

Chinch bug development occurs faster in areas with higher temperatures (open and sunny areas, near concrete and in drought-stressed areas). Chinch bug damage in drought stressed areas is very common. This is because turfgrass that is stressed due to factors such as drought will show injury quicker and more severely than from chinch bugs feeding in a healthy turf. Additionally, there is a naturally occurring fungus known as *Beauveria bassiana*. This fungus is one of the most important natural enemies of chinch bugs. Drought conditions discourage the development of *Beauveria.* High populations of chinch bugs in the summertime when development is quicker combined with overlapping generations means that post treatment infestations are likely to occur due to the high numbers of eggs present in the infested areas at the time of treatment. The use of systemic materials with longer residual activity will help to reduce this occurrence.

Scouting and Identification

Chinch bug damage can look similar to other problems such as drought stress from improper irrigation coverage, disease, nematodes, or nutritional deficiencies. Adults are approximately 1/5th inch in length, black, and have either a white stripe or “X” pattern on their wings. Nymphs (immature stages) are reddish in color and have a white stripe across their backs (Figure 1).

Chinch bugs can be easily found by pulling the lowest leaf of an infested grass plant downward to reveal the inside of the sheath where they hide. In severe infestations, only parting of the grass blades is necessary to see all stages of chinch bugs crawling over the stolons and in the thatch. Numerous attempts should be made to find chinch bugs in the outer edge of damaged area to confirm suspicions of an infestation.

Figure 1. Chinch Bug adult (left), late instar nymph (second from left), and nymphs (right).

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Our Chinch Bug Management Program

April-September (liquid broadcast application season): Preventive broadcast insecticide applications are made in combination with liquid fertilizer three times per year during the peak time of chinch bug activity, April through September. In April, the maximum rate of Imidacloprid is used in Southern and Central areas. In May and June, Arena (Clothianidin) or Aloft (Clothianidin with Bifenthrin) is used. From July through September, Imidacloprid (Zenith) plus Bifenthrin (Talstar) is used. If areas with high populations of chinch bugs are found during any of these services, additional spot treatments using Aloft/Arena or Bifenthrin and Imidacloprid combination are to be made. The product used for the spot treatments will be whatever product is ***not*** being applied in the broadcast application. These spot treatments are performed with a backpack sprayer (8010E nozzle) THE SAME DAY of the regular application. These treatments should be done before the liquid broadcast application to push the backpack treatment further into the thatch where the chinch bugs live. The area of activity should be treated along with a 5-foot buffer around the infested area.

October – March: Active infestations are spot treated with Imidacloprid only, using a backpack sprayer (8010E nozzle). Broadcast applications may be needed if the entire lawn is being affected. An inspection should be performed two to three weeks after application to ensure control was achieved. The use of Bifenthrin is avoided from October through April as part of our resistance management strategy. If activity remains after the two to three week follow-up, apply Arena or Aloft with a backpack sprayer (8010E nozzle) or broadcast depending on the severity of the problem. The area of activity should be treated along with a 5-foot buffer around the infested area.

Follow-ups

Part of the difficulty with controlling chinch bugs is that insecticide treatments are not effective against eggs. Our treatments will kill immature and adult chinch bugs when treatment is done properly, but the treatment does not prevent eggs from hatching. Eggs laid prior to the treatment can hatch daily after treatment. The use of systemic materials (Clothianidin or Imidacloprid) will help to continue to kill the young as they hatch. Follow-up inspections should be performed two to three weeks after treatment. If the follow-up inspection reveals populations of chinch bugs at damaging levels, retreatment is required.

Follow-up treatments for active chinch bug infestations are to be completed using either Arena/Aloft or the Imidacloprid and Bifenthrin combination. Use a different product (or combination) other than the product used for the last treatment. Example, if Arena or Aloft was used for the treatment and there is still activity found at the time of the follow-up inspection, use the Imidacloprid and Bifenthrin combination. If the Imidacloprid and Bifenthrin combination was used for the treatment and there is still activity found on the follow-up inspection, use Arena or Aloft for the retreatment. If two treatments have failed to provide control of the chinch bug problem, the Service Manager is to complete the next application. If there are still chinch bugs active at that time, the GreenUP Quality Assurance Department is to be called for a site visit.

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Resistance Management

Pesticide resistance is defined as the ability of an insect to withstand the effects of an insecticide by becoming resistant to its toxic effects through genetic mutation. This happens occasionally by nature, but can also happen as a result of repeated exposure to non-lethal doses of an insecticide. Once there are one or more pesticide-resistant insects in a population, the trait can become prevalent over time through the process of natural selection. Insects that are able to survive pesticide applications are resistant and pass on the resistance gene to offspring in future generations. Since the 1950's chinch bugs have developed resistance to insecticides that were repeatedly used for their control (DDT and Dursban). When those products were banned from residential use, the synthetic pyrethroid, Bifenthrin became the insecticide of choice in chinch bug management programs because of its long residual. Because it has been used so widely and frequently, some isolated populations of Bifenthrin-resistant chinch bugs have been identified in Florida since 2004. Combining insecticides with different modes of action is an effective way to slow the development of insecticide resistance. We rotate the use of Arena or Aloft (Clothianidin) with combinations of Imidacloprid and Bifenthrin in our chinch bug management program and avoid the use of Bifenthrin in turf from October through April.

Proper Applications

The effectiveness of pesticide treatments is directly related to how applications are made. The following calibration components are essential to getting a lethal dose of insecticide to the target pest.

- Proper rate – Mixture rates (oz/gal) are formulated to deliver a specific rate of insecticide per 1000 sq. ft., and should be effective if mixed and applied properly. Make sure the insecticide solution is well-mixed in the backpack sprayer or drop tank and agitated periodically while making applications.

- Proper walking speed - Walking speed for backpack or broadcast applications is 10 seconds to cover 40 linear feet. Walking too fast will result in a low dose and poor control of chinch bugs.

- Proper output– The rate of application for the broadcast treatment is based on 5 gallons of water per 1000 sq. ft. Backpack applications with the 8010E spray tip should apply 1.6 gallons per 1000 sq. ft.

- Proper back pack pressure - The backpack sprayer is designed to supply a maximum pressure of 40 psi when pumped to full capacity. Continuous pumping of the pressure bar is necessary to maintain 40 psi during the course of an application. Allowing the pressure to lessen will result in a lower rate of insecticide and poor control of chinch bugs.

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

See the Liquid Spot Treatment Protocol and the Liquid Broadcast Application Protocol found in the G: Drive\Shared\GreenUp Reference Materials\GreenUp Protocols\Individual Protocols for complete details.

Promoting growth in damaged areas

Following this protocol should eliminate extensive damage from chinch bugs. If an area of the lawn is weak due to chinch bug damage, but still has living turf in it, extra fertility will be needed to promote new growth and recovery. Plugging the area to provide quicker customer satisfaction may also be needed. In addition to the regular service applications, make one application of 20-0-6 or 15-0-5 at 5 lbs. per 1,000 square feet followed by weekly applications of 5-0-30 at 5 lbs. per 1000 sq. ft. to the affected area until it is uniform and healthy. Continue to inspect the area for chinch bug activity as these treatments are being performed.

WEEKLY TRAINING SESSION

Mole Cricket Management

Topic Category: Lawn
Recordable Verifiable Training Hours: 0.5

Objectives: This lesson is designed to teach the basics of Mole Cricket biology, damage identification and our control procedures.
Length of lesson: Approx 30 minutes.
Materials needed:

- GreenUp Mole Cricket Management Protocol (GreenUp Reference Materials\GreenUp Protocols\Individual Protocols\Lawn Damaging Insects):
- Pre and Post tests

Training Guidelines:

- Make copies of the tests and training materials for all Team members attending.
- Collect samples of mole crickets from the field if possible.
- Set up the training area in an area of the office that will minimize disruptions.
- Begin the meeting by defining the training topic and handing out the pre-test
    - Allow a few minutes for Team members to complete the pre-test.
    - Collect the pre-test and hand out the Verifiable training form
- Distribute and review the training materials. Use the Training outline as a guide for key points.
    - Encourage active participation from all Team members
    - Ask probing questions to develop key points
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
    - Collect the pre-test and discard.
- Hand out the Post-tests. When complete, have each Specialist pass their test to another Specialist for grading.
- Grade the tests as a group and discuss the answers.
- Collect the tests
- End the training session.
- Record the post test scores on the VTRF for each Team Member.
- Place with the verifiable materials in the Service Center Verifiable Training File.
- Make copies of the VTRF and place in each Team Member's training file.
- Complete all Weekly Training topics through Massey University.

Training Outline

1. Review the protocol for Mole Cricket Management. Provide special emphasis on the following:
    a. Mole cricket activity is on the rise and this is the time of year when we will begin to see damage.
    b. Characteristics of damage.
    c. Control measures.

WEEKLY TRAINING SESSION

Mole Cricket Management

Pre & Post Test

1. T or F Mole crickets are native pests.
2. T or F The three species of introduced mole crickets are the Tawny, Shortwinged and Northern.
3. T or F Full grown adult mole crickets are typically 2.5 inches in length.
4. T or F Mole crickets only damage Bahia grass.
5. T or F Mole cricket tunnels are about 2 inches in diameter.
6. T or F Control of mole crickets is best achieved using Bifenthrin as a broadcast spray.
7. T or F Mole cricket activity has been more prevalent over the last few years.
8. T or F Preventive treatment for mole crickets is performed in May or June with Aloft or Arena.
9. T or F Control of an existing mole cricket infestation is performed with Advion Insect Granular Bait.
10. T or F Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging.
11. T or F Mole crickets over winter in the pupa stage.

WEEKLY TRAINING SESSION

Mole Cricket Management

Pre & Post Test Answer Key

1. T or (F) Mole crickets are native pests.
2. T or (F) The three species of introduced mole crickets are the Tawny, Shortwinged and Northern.
3. T or (F) Full grown adult mole crickets are typically 2.5 inches in length.
4. T or (F) Mole crickets only damage Bahia grass.
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10. (T) or F Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging.
11. T or (F) Mole crickets over winter in the pupa stage.

Mole Cricket Management

Three species of mole crickets were inadvertently introduced to the southeastern United States about 1900, and have caused serious plant damage. The introduced species are: the shortwinged mole cricket, the southern mole cricket, and the tawny mole cricket.

Figure 1: From right to left – Shortwinged, Tawny and Southern Mole Crickets.

Until the mid-1990's, mole crickets were the most prevalent insect concern in Florida landscapes. Their prevalence has decreased dramatically since that time, but they remain a concern for Florida lawns and their potential as a lawn damaging pest should not be overlooked. As a matter of fact, mole cricket activity has been on the increase in the last few years. Since they are not as common of a landscape pest as they once were, the damage has not been readily recognized. For this reason, we must be more alert and cognizant of their potential and knowledgeable of our control methods.

Biology

Typically, the eggs of these three species are deposited in April and May. Young mole crickets hatch from the eggs in late May and Early June. At the time of hatching, young mole crickets are about the size of a house fly and resemble the adults, but have poorly developed wings. The nymphs continue to grow through August and reach their mature size of one to one and one-half inches in September. Mole crickets over-winter and emerge in the early spring to begin their dispersal flights. Swarming Tawny and Southern mole crickets are attracted to lighted landscapes and to moist soil. Moist soil is conducive to enhancing the sound of the mating calls of the males. Shortwinged mole crickets do not fly.

A single generation per year is normal, although in southern Florida there are two generations of southern mole crickets and an extra peak of adult flight in the summer. For both southern and tawny mole crickets, adult emergence occurs earlier in southern Florida

than in northern Florida. In southern Florida, multiple overlapping generations of shortwinged mole cricket can occur.

Damage

Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging. Damage to turfgrass is done as the mole crickets tunnel through the soil, ripping and uprooting the turf as well as feeding on the lower grass stems and roots.
In bare areas, mole cricket tunnels can be seen. Mole cricket tunnels are about the size of your index finger in width. Soil will be soft and spongy and will give slightly when you walk on it with the back of your heels. Small areas of turf may pull out of the ground easily with the base of the plant being ripped. Mole cricket damage is more sever in Zoysia, Bermuda and Bahia turf, but St. Augustine and Centipede can also be affected.

Figure 2: Mole cricket tunnels

Figure 3: Mole cricket emergence hole and shortwinged mole cricket.

Mole Cricket Management

Our Mole Cricket Management Program

May - June (liquid broadcast application):

Preventive broadcast insecticide applications are made in combination with liquid fertilizer in May or June. All grass types are treated. The timing of these applications coincides with the mole cricket hatching. Aloft (Clothianidin with Bifenthrin) or Arena (Clothianidin) is used.

Other than in South Florida, it is rare to have noticeable mole cricket activity from June through August, but it is important to recognize that mole crickets may still be present; they are just too small to cause noticeable damage.

August through November:

Active infestations are treated with Advion Insect Granular Bait. The rate of application is 1.15 pounds per 1000 sq. ft. Applications should be made toward the end of the day. The soil should be moist before treatment with the grass blades being dry. Results will be best if rain or irrigation does not occur until after the following morning. A handheld spreader is the best application method unless the area is excessively large. Adjust the application setting to #3 and walk at the normal lawn treatment walking speed (40 feet in 10 seconds). For larger turf areas, use the Lesco spreader with the setting of #5 with the Lesco Calibration tool. Overlap is not required for a bait application.

Proactive Follow-ups

Re-inspect the turf 7 to 10 days after the application of the bait. At that time, look for the presence of newly raised tunnels and/or newly damaged turf. Newly raised tunnels will have cracks on the soil surface as seen in Figure 2. Newly damaged turf will still have some green remaining. If the amount of activity warrants retreatment, repeat the application of bait as described above. Follow-up every 7 to 10 days until the problem has been resolved.

December through April

Treatment during this time is typically not warranted. Overwintering mole crickets will not feed except on warmer evenings and swarming mole crickets are rarely numerous enough to warrant treatment. However, if damage is occurring, utilize the bait as described above and treat only on warmer evenings.

WEEKLY TRAINING SESSION

Rose Rosette Virus

Topic Category: Lawn

Recordable Verifiable Training Hours: 0.5

Objectives: This lesson is designed to teach the identification of Rose Rosette Virus

Length of lesson: Approx 30 minutes.

Materials needed:

- Training Guideline
- This Training Document
- Collect samples of Rose Rosette Virus from the field, if available.
- Pre- and Post- tests.

Training Guidelines:

- Make copies of the tests and training materials for all Team Members attending.
- Set up the training area in an area of the office that will minimize disruptions.
- Begin the meeting by defining the training topic and handing out the Pre-test
    - Allow a few minutes for Team Members to complete the Pre-test.
    - Collect the pre-test and hand out the Verifiable Training Record Form (VTRF)
- Distribute and review the training materials on Rose Rosette Virus.
- Use the Training outline as a guide for key points.
    - Encourage active participation from all Team Members
    - Ask probing questions to develop key points
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
- Hand out the Post-tests. When complete, grade the tests and record the score on the VTRF.
- Collect tests and place with the verifiable materials in the Service Center Verifiable Training File.
- Make copies of the VTRF and place in each Team Member's training file.
- Complete all Weekly Training VTM's through Massey University.

WEEKLY TRAINING SESSION

Rose Rosette Virus

Very small mites known as Rose leaf-curl mites are carriers of the rose rosette virus, also known as RRV. The extremely small eriophyid mite feeds on plant sap from the tender stems and leaf petioles. The pest alone causes little damage while feeding, but if they are a carrier of RRV, symptoms begin to appear in the plant typically within one to three months.

Infected roses exhibit reddened terminal growth on infected branches, and the stems become thicker and more succulent than those on unaffected parts of the plant. These stems exhibit an abnormally high number of flexible thorns, which may be either green or red.

Infected rose bushes produce less flowers and the petals may be distorted and fewer in number. Rose leaves that develop on infected branches are smaller than normal and may be deformed similarly to herbicide injury by 2,4-D. Lateral branches may grow excessively from main stems and create a witch's broom symptom, much like injury from herbicide glyphosate (Roundup and other brands).

Once the rose becomes infected, RRV moves throughout the plant and the entire bush becomes infected. By the time symptoms are evident in a rose, the virus may have spread to adjacent roses by the movement of the mites.

Symptoms of the virus generally become evident in the late spring to early summer and progress during the growing season. By late summer or fall, the plant will have a noticeable amount of abnormal growth as described above.

Controlling the small mites may provide some degree of protection from the spread of the disease, but there is no cure for RRV and it is not always preventable, since there are no vaccines for plant viruses.

WEEKLY TRAINING SESSION

Rose Rosette Virus

Name _____ Date _____

PRE & POST TEST

1. T or F Rose curl mites cause extensive damage to rose plants.
2. T or F Rose rosette virus is spread by airborne spores.
3. T or F Symptoms of damage from RRV look very similar to herbicide injury.
4. T or F An abnormally high number of flexible thorns is a symptom of RRV.
5. T or F Excessive lateral branches coming from a single stem is a symptom known as “witches broom”.
6. T or F RRV is preventable by controlling the eriophyid mites.
7. T or F Applications of fungicide will halt the spread of RRV.

WEEKLY TRAINING SESSION

Rose Rosette Virus

PRE & POST TEST ANSWER KEY

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2. T or F Rose rosette virus is spread by airborne spores.
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WEEKLY TRAINING SESSION

Mole Cricket Management

Topic Category: Lawn
Recordable Verifiable Training Hours: 0.5

Objectives: This lesson is designed to teach the basics of Mole Cricket biology, damage identification and our control procedures.
Length of lesson: Approx 30 minutes.
Materials needed:

- GreenUp Mole Cricket Management Protocol (GreenUp Reference Materials\GreenUp Protocols\Individual Protocols\Lawn Damaging Insects):
- Pre and Post tests

Training Guidelines:

- Make copies of the tests and training materials for all Team members attending.
- Collect samples of mole crickets from the field if possible.
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- Grade the tests as a group and discuss the answers.
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- End the training session.
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Training Outline

1. Review the protocol for Mole Cricket Management. Provide special emphasis on the following:
    a. Mole cricket activity is on the rise and this is the time of year when we will begin to see damage.
    b. Characteristics of damage.
    c. Control measures.

WEEKLY TRAINING SESSION

Mole Cricket Management

Pre & Post Test

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2. T or F The three species of introduced mole crickets are the Tawny, Shortwinged and Northern.
3. T or F Full grown adult mole crickets are typically 2.5 inches in length.
4. T or F Mole crickets only damage Bahia grass.
5. T or F Mole cricket tunnels are about 2 inches in diameter.
6. T or F Control of mole crickets is best achieved using Bifenthrin as a broadcast spray.
7. T or F Mole cricket activity has been more prevalent over the last few years.
8. T or F Preventive treatment for mole crickets is performed in May or June with Aloft or Arena.
9. T or F Control of an existing mole cricket infestation is performed with Advion Insect Granular Bait.
10. T or F Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging.
11. T or F Mole crickets over winter in the pupa stage.

WEEKLY TRAINING SESSION

Mole Cricket Management

Pre & Post Test Answer Key

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Mole Cricket Management

Three species of mole crickets were inadvertently introduced to the southeastern United States about 1900, and have caused serious plant damage. The introduced species are: the shortwinged mole cricket, the southern mole cricket, and the tawny mole cricket.

Figure 1: From right to left – Shortwinged, Tawny and Southern Mole Crickets.

Until the mid-1990's, mole crickets were the most prevalent insect concern in Florida landscapes. Their prevalence has decreased dramatically since that time, but they remain a concern for Florida lawns and their potential as a lawn damaging pest should not be overlooked. As a matter of fact, mole cricket activity has been on the increase in the last few years. Since they are not as common of a landscape pest as they once were, the damage has not been readily recognized. For this reason, we must be more alert and cognizant of their potential and knowledgeable of our control methods.

Biology

Typically, the eggs of these three species are deposited in April and May. Young mole crickets hatch from the eggs in late May and Early June. At the time of hatching, young mole crickets are about the size of a house fly and resemble the adults, but have poorly developed wings. The nymphs continue to grow through August and reach their mature size of one to one and one-half inches in September. Mole crickets over-winter and emerge in the early spring to begin their dispersal flights. Swarming Tawny and Southern mole crickets are attracted to lighted landscapes and to moist soil. Moist soil is conducive to enhancing the sound of the mating calls of the males. Shortwinged mole crickets do not fly.

A single generation per year is normal, although in southern Florida there are two generations of southern mole crickets and an extra peak of adult flight in the summer. For both southern and tawny mole crickets, adult emergence occurs earlier in southern Florida

than in northern Florida. In southern Florida, multiple overlapping generations of shortwinged mole cricket can occur.

Damage

Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging. Damage to turfgrass is done as the mole crickets tunnel through the soil, ripping and uprooting the turf as well as feeding on the lower grass stems and roots.
In bare areas, mole cricket tunnels can be seen. Mole cricket tunnels are about the size of your index finger in width. Soil will be soft and spongy and will give slightly when you walk on it with the back of your heels. Small areas of turf may pull out of the ground easily with the base of the plant being ripped. Mole cricket damage is more sever in Zoysia, Bermuda and Bahia turf, but St. Augustine and Centipede can also be affected.

Figure 2: Mole cricket tunnels

Figure 3: Mole cricket emergence hole and shortwinged mole cricket.

Mole Cricket Management

Our Mole Cricket Management Program

May - June (liquid broadcast application):

Preventive broadcast insecticide applications are made in combination with liquid fertilizer in May or June. All grass types are treated. The timing of these applications coincides with the mole cricket hatching. Aloft (Clothianidin with Bifenthrin) or Arena (Clothianidin) is used.

Other than in South Florida, it is rare to have noticeable mole cricket activity from June through August, but it is important to recognize that mole crickets may still be present; they are just too small to cause noticeable damage.

August through November:

Active infestations are treated with Advion Insect Granular Bait. The rate of application is 1.15 pounds per 1000 sq. ft. Applications should be made toward the end of the day. The soil should be moist before treatment with the grass blades being dry. Results will be best if rain or irrigation does not occur until after the following morning. A handheld spreader is the best application method unless the area is excessively large. Adjust the application setting to #3 and walk at the normal lawn treatment walking speed (40 feet in 10 seconds). For larger turf areas, use the Lesco spreader with the setting of #5 with the Lesco Calibration tool. Overlap is not required for a bait application.

Proactive Follow-ups

Re-inspect the turf 7 to 10 days after the application of the bait. At that time, look for the presence of newly raised tunnels and/or newly damaged turf. Newly raised tunnels will have cracks on the soil surface as seen in Figure 2. Newly damaged turf will still have some green remaining. If the amount of activity warrants retreatment, repeat the application of bait as described above. Follow-up every 7 to 10 days until the problem has been resolved.

December through April

Treatment during this time is typically not warranted. Overwintering mole crickets will not feed except on warmer evenings and swarming mole crickets are rarely numerous enough to warrant treatment. However, if damage is occurring, utilize the bait as described above and treat only on warmer evenings.

WEEKLY TRAINING SESSION

Chinch Bug Management Protocol

Topic Category: Lawn

Recordable Verifiable Training Hours: 1

Objectives: This lesson is designed to teach our Chinch Bug Management Protocol.

Length of lesson: Approx 60 minutes.

Materials needed:

- Training Guideline
- GU Protocol Chinch Bug Management Training Document located in the G: Drive \Shared\GreenUp Reference Materials\GreenUp Protocols\Individual Protocols\Lawn Damaging Insects
- Collect samples of Chinch Bugs from the field, if available.
- Pre- and Post- tests.

Training Guidelines:

- This training qualifies for Department of Agriculture ID Card Holder Training. Complete a Department of Agriculture ID Card Holder Training for each Team Member and maintain it in their personnel file at your office.
- Make copies of the tests and training materials for all Team Members attending.
- Set up the training area in an area of the office that will minimize disruptions.
- Begin the meeting by defining the training topic and handing out the Pre-test
    - Allow a few minutes for Team Members to complete the Pre-test.
    - Collect the pre-test and hand out the Verifiable Training Record Form (VTRF)
- Distribute and review the training materials on Chinch Bug Management Protocol.
    - Encourage active participation from all Team Members
    - Ask probing questions to develop key points
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
- Hand out the Post-tests. When complete, grade the tests and record the score on the VTRF.
- Collect tests and place with the verifiable materials in the Service Center Verifiable Training File.
- Make copies of the VTRF and place in each Team Member's training file.
- Complete all Weekly VTM's through Massey University.

WEEKLY TRAINING SESSION

Chinch Bug Management Protocol

Name_____ Date _____

PRE & POST TEST

1. T or F An adult female chinch bug can lay up to 300 eggs in a lifetime.
2. T or F Chinch bugs are active year round in most of the state, but the primary time of activity is April through October.
3. T or F Chinch bugs cause damage by chewing of the grass blades and injecting a toxic saliva.
4. T or F Chinch bugs can be found by pulling the lowest leaf of an infested grass plant down to reveal the inside of the sheath where they hide.
5. T or F Drought conditions discourage the development of a beneficial fungus that aids in the control of chinch bugs.
6. T or F Broadcast liquid applications are performed for the prevention and control of chinch bugs from April through September.
7. T or F Aloft is used in May and June for chinch bug prevention and control.
8. T or F Follow-up inspections after a treatment for active chinch bugs should be performed 2 to 3 weeks after treatment.
9. T or F If three treatments have been performed and failed to control the chinch bug infestation, the GreenUP Quality Assurance Department is to be called for a site visit.
10. T or F The effectiveness of pesticide treatments is directly related to how applications are made.

WEEKLY TRAINING SESSION

Chinch Bug Management Protocol

PRE & POST TEST ANSWER KEY

1. (T) or F — An adult female chinch bug can lay up to 300 eggs in a lifetime.
2. (T) or F — Chinch bugs are active year round in most of the state, but the primary time of activity is April through October.
3. T or (F) — Chinch bugs cause damage by chewing of the grass blades and injecting a toxic saliva.
4. (T) or F — Chinch bugs can be found by pulling the lowest leaf of an infested grass plant down to reveal the inside of the sheath where they hide.
5. (T) or F — Drought conditions discourage the development of a beneficial fungus that aids in the control of chinch bugs.
6. (T) or F — Broadcast liquid applications are performed for the prevention and control of chinch bugs from April through September. May through September in Northern Service Centers
7. (T) or F — Aloft is used in May and June for chinch bug prevention and control.
8. (T) or F — Follow-up inspections after a treatment for active chinch bugs should be performed 2 to 3 weeks after treatment.
9. (T) or F — If three treatments have been performed and failed to control the chinch bug infestation, the GreenUP Quality Assurance Department is to be called for a site visit.
10. (T) or F — The effectiveness of pesticide treatments is directly related to how applications are made.

GREENUP SERVICE PROTOCOLS

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Southern Chinch bugs (*Blissus insularis* Barber) are the most damaging and difficult-to-control insect pests of St. Augustinegrass in Florida. In warmer months, they can be found in leaf sheaths and thatch where they cause damage by sucking juices from the grass. Chinch bug populations tend to be clumped rather than dispersed throughout a lawn. Damage begins as yellowing areas that eventually die. As these insects move away from dead grass in search of healthy blades to feed on, affected areas increase in size.

Biology

The Southern Chinch Bug (*Blissus insularis* Barber) develops through gradual metamorphosis. Adult females may live up to 2 months and lay 4-5 eggs per day (250-300 eggs in a lifetime) preferring to deposit their eggs between the leaf sheaths and stem however some eggs are deposited in the thatch. The eggs hatch in 8 to 9 days at 83^0 F and 24 to 25 days at 70^0 F. Nymphs develop through 5 instars in 40 to 50 days during warm weather (80^0 F) but in cooler weather they will develop through 5 instars in 2 to 3 months and will occasionally develop through a 6^{th} instar in the winter months. Southern Chinch Bugs typically have 3-4 generations per year in North Florida and 7-10 generations in Central and South Florida. Chinch bugs are active year-round in most of the state, but they may hibernate in the winter in Northern Florida. The primary time of activity is April through October.

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Damage is caused by sucking the plant juices and the secretion of salivary toxins. Chinch bug populations of 20 per square foot or greater will cause injury to turf. Injury begins as a yellowing of the leaves followed by necrosis (browning leaf tissue) and death. The advanced symptoms are often mistaken for drought stress injury.

Common Areas for Chinch bug Damage

Chinch bug development occurs faster in areas with higher temperatures (open and sunny areas, near concrete and in drought-stressed areas). Chinch bug damage in drought stressed areas is very common. This is because turfgrass that is stressed due to factors such as drought will show injury quicker and more severely than from chinch bugs feeding in a healthy turf. Additionally, there is a naturally occurring fungus known as *Beauveria bassiana*. This fungus is one of the most important natural enemies of chinch bugs. Drought conditions discourage the development of *Beauveria.* High populations of chinch bugs in the summertime when development is quicker combined with overlapping generations means that post treatment infestations are likely to occur due to the high numbers of eggs present in the infested areas at the time of treatment. The use of systemic materials with longer residual activity will help to reduce this occurrence.

Scouting and Identification

Chinch bug damage can look similar to other problems such as drought stress from improper irrigation coverage, disease, nematodes, or nutritional deficiencies. Adults are approximately 1/5th inch in length, black, and have either a white stripe or “X” pattern on their wings. Nymphs (immature stages) are reddish in color and have a white stripe across their backs (Figure 1).

Chinch bugs can be easily found by pulling the lowest leaf of an infested grass plant downward to reveal the inside of the sheath where they hide. In severe infestations, only parting of the grass blades is necessary to see all stages of chinch bugs crawling over the stolons and in the thatch. Numerous attempts should be made to find chinch bugs in the outer edge of damaged area to confirm suspicions of an infestation.

Figure 1. Chinch Bug adult (left), late instar nymph (second from left), and nymphs (right).

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Our Chinch Bug Management Program

April-September (liquid broadcast application season): Preventive broadcast insecticide applications are made in combination with liquid fertilizer three times per year during the peak time of chinch bug activity, April through September. In April, the maximum rate of Imidacloprid is used in Southern and Central areas. In May and June, Arena (Clothianidin) or Aloft (Clothianidin with Bifenthrin) is used. From July through September, Imidacloprid (Zenith) plus Bifenthrin (Talstar) is used. If areas with high populations of chinch bugs are found during any of these services, additional spot treatments using Aloft/Arena or Bifenthrin and Imidacloprid combination are to be made. The product used for the spot treatments will be whatever product is ***not*** being applied in the broadcast application. These spot treatments are performed with a backpack sprayer (8010E nozzle) THE SAME DAY of the regular application. These treatments should be done before the liquid broadcast application to push the backpack treatment further into the thatch where the chinch bugs live. The area of activity should be treated along with a 5-foot buffer around the infested area.

October – March: Active infestations are spot treated with Imidacloprid only, using a backpack sprayer (8010E nozzle). Broadcast applications may be needed if the entire lawn is being affected. An inspection should be performed two to three weeks after application to ensure control was achieved. The use of Bifenthrin is avoided from October through April as part of our resistance management strategy. If activity remains after the two to three week follow-up, apply Arena or Aloft with a backpack sprayer (8010E nozzle) or broadcast depending on the severity of the problem. The area of activity should be treated along with a 5-foot buffer around the infested area.

Follow-ups

Part of the difficulty with controlling chinch bugs is that insecticide treatments are not effective against eggs. Our treatments will kill immature and adult chinch bugs when treatment is done properly, but the treatment does not prevent eggs from hatching. Eggs laid prior to the treatment can hatch daily after treatment. The use of systemic materials (Clothianidin or Imidacloprid) will help to continue to kill the young as they hatch. Follow-up inspections should be performed two to three weeks after treatment. If the follow-up inspection reveals populations of chinch bugs at damaging levels, retreatment is required.

Follow-up treatments for active chinch bug infestations are to be completed using either Arena/Aloft or the Imidacloprid and Bifenthrin combination. Use a different product (or combination) other than the product used for the last treatment. Example, if Arena or Aloft was used for the treatment and there is still activity found at the time of the follow-up inspection, use the Imidacloprid and Bifenthrin combination. If the Imidacloprid and Bifenthrin combination was used for the treatment and there is still activity found on the follow-up inspection, use Arena or Aloft for the retreatment. If two treatments have failed to provide control of the chinch bug problem, the Service Manager is to complete the next application. If there are still chinch bugs active at that time, the GreenUP Quality Assurance Department is to be called for a site visit.

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

Resistance Management

Pesticide resistance is defined as the ability of an insect to withstand the effects of an insecticide by becoming resistant to its toxic effects through genetic mutation. This happens occasionally by nature, but can also happen as a result of repeated exposure to non-lethal doses of an insecticide. Once there are one or more pesticide-resistant insects in a population, the trait can become prevalent over time through the process of natural selection. Insects that are able to survive pesticide applications are resistant and pass on the resistance gene to offspring in future generations. Since the 1950's chinch bugs have developed resistance to insecticides that were repeatedly used for their control (DDT and Dursban). When those products were banned from residential use, the synthetic pyrethroid, Bifenthrin became the insecticide of choice in chinch bug management programs because of its long residual. Because it has been used so widely and frequently, some isolated populations of Bifenthrin-resistant chinch bugs have been identified in Florida since 2004. Combining insecticides with different modes of action is an effective way to slow the development of insecticide resistance. We rotate the use of Arena or Aloft (Clothianidin) with combinations of Imidacloprid and Bifenthrin in our chinch bug management program and avoid the use of Bifenthrin in turf from October through April.

Proper Applications

The effectiveness of pesticide treatments is directly related to how applications are made. The following calibration components are essential to getting a lethal dose of insecticide to the target pest.

- Proper rate – Mixture rates (oz/gal) are formulated to deliver a specific rate of insecticide per 1000 sq. ft., and should be effective if mixed and applied properly. Make sure the insecticide solution is well-mixed in the backpack sprayer or drop tank and agitated periodically while making applications.

- Proper walking speed - Walking speed for backpack or broadcast applications is 10 seconds to cover 40 linear feet. Walking too fast will result in a low dose and poor control of chinch bugs.

- Proper output– The rate of application for the broadcast treatment is based on 5 gallons of water per 1000 sq. ft. Backpack applications with the 8010E spray tip should apply 1.6 gallons per 1000 sq. ft.

- Proper back pack pressure - The backpack sprayer is designed to supply a maximum pressure of 40 psi when pumped to full capacity. Continuous pumping of the pressure bar is necessary to maintain 40 psi during the course of an application. Allowing the pressure to lessen will result in a lower rate of insecticide and poor control of chinch bugs.

CHINCH BUG MANAGEMENT IN ST AUGUSTINEGRASS

See the Liquid Spot Treatment Protocol and the Liquid Broadcast Application Protocol found in the G: Drive\Shared\GreenUp Reference Materials\GreenUp Protocols\Individual Protocols for complete details.

Promoting growth in damaged areas

Following this protocol should eliminate extensive damage from chinch bugs. If an area of the lawn is weak due to chinch bug damage, but still has living turf in it, extra fertility will be needed to promote new growth and recovery. Plugging the area to provide quicker customer satisfaction may also be needed. In addition to the regular service applications, make one application of 20-0-6 or 15-0-5 at 5 lbs. per 1,000 square feet followed by weekly applications of 5-0-30 at 5 lbs. per 1000 sq. ft. to the affected area until it is uniform and healthy. Continue to inspect the area for chinch bug activity as these treatments are being performed.

WEEKLY TRAINING SESSION

Mole Cricket Management

Topic Category: Lawn
Recordable Verifiable Training Hours: 0.5

Objectives: This lesson is designed to teach the basics of Mole Cricket biology, damage identification and our control procedures.
Length of lesson: Approx 30 minutes.
Materials needed:

- GreenUp Mole Cricket Management Protocol (GreenUp Reference Materials\GreenUp Protocols\Individual Protocols\Lawn Damaging Insects):
- Pre and Post tests

Training Guidelines:

- Make copies of the tests and training materials for all Team members attending.
- Collect samples of mole crickets from the field if possible.
- Set up the training area in an area of the office that will minimize disruptions.
- Begin the meeting by defining the training topic and handing out the pre-test
    - Allow a few minutes for Team members to complete the pre-test.
    - Collect the pre-test and hand out the Verifiable training form
- Distribute and review the training materials. Use the Training outline as a guide for key points.
    - Encourage active participation from all Team members
    - Ask probing questions to develop key points
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
    - Collect the pre-test and discard.
- Hand out the Post-tests. When complete, have each Specialist pass their test to another Specialist for grading.
- Grade the tests as a group and discuss the answers.
- Collect the tests
- End the training session.
- Record the post test scores on the VTRF for each Team Member.
- Place with the verifiable materials in the Service Center Verifiable Training File.
- Make copies of the VTRF and place in each Team Member's training file.
- Complete all Weekly Training topics through Massey University.

Training Outline

1. Review the protocol for Mole Cricket Management. Provide special emphasis on the following:
    a. Mole cricket activity is on the rise and this is the time of year when we will begin to see damage.
    b. Characteristics of damage.
    c. Control measures.

WEEKLY TRAINING SESSION

Mole Cricket Management

Pre & Post Test

1. T or F Mole crickets are native pests.
2. T or F The three species of introduced mole crickets are the Tawny, Shortwinged and Northern.
3. T or F Full grown adult mole crickets are typically 2.5 inches in length.
4. T or F Mole crickets only damage Bahia grass.
5. T or F Mole cricket tunnels are about 2 inches in diameter.
6. T or F Control of mole crickets is best achieved using Bifenthrin as a broadcast spray.
7. T or F Mole cricket activity has been more prevalent over the last few years.
8. T or F Preventive treatment for mole crickets is performed in May or June with Aloft or Arena.
9. T or F Control of an existing mole cricket infestation is performed with Advion Insect Granular Bait.
10. T or F Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging.
11. T or F Mole crickets over winter in the pupa stage.

WEEKLY TRAINING SESSION

Mole Cricket Management

Pre & Post Test Answer Key

1. T or (F) Mole crickets are native pests.
2. T or (F) The three species of introduced mole crickets are the Tawny, Shortwinged and Northern.
3. T or (F) Full grown adult mole crickets are typically 2.5 inches in length.
4. T or (F) Mole crickets only damage Bahia grass.
5. T or (F) Mole cricket tunnels are about 2 inches in diameter.
6. T or (F) Control of mole crickets is best achieved using Bifenthrin as a broadcast spray.
7. (T) or F Mole cricket activity has been more prevalent over the last few years.
8. (T) or F Preventive treatment for mole crickets is performed in May or June with Aloft or Arena.
9. (T) or F Control of an existing mole cricket infestation is performed with Advion Insect Granular Bait.
10. (T) or F Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging.
11. T or (F) Mole crickets over winter in the pupa stage.

Mole Cricket Management

Three species of mole crickets were inadvertently introduced to the southeastern United States about 1900, and have caused serious plant damage. The introduced species are: the shortwinged mole cricket, the southern mole cricket, and the tawny mole cricket.

Figure 1: From right to left – Shortwinged, Tawny and Southern Mole Crickets.

Until the mid-1990's, mole crickets were the most prevalent insect concern in Florida landscapes. Their prevalence has decreased dramatically since that time, but they remain a concern for Florida lawns and their potential as a lawn damaging pest should not be overlooked. As a matter of fact, mole cricket activity has been on the increase in the last few years. Since they are not as common of a landscape pest as they once were, the damage has not been readily recognized. For this reason, we must be more alert and cognizant of their potential and knowledgeable of our control methods.

Biology

Typically, the eggs of these three species are deposited in April and May. Young mole crickets hatch from the eggs in late May and Early June. At the time of hatching, young mole crickets are about the size of a house fly and resemble the adults, but have poorly developed wings. The nymphs continue to grow through August and reach their mature size of one to one and one-half inches in September. Mole crickets over-winter and emerge in the early spring to begin their dispersal flights. Swarming Tawny and Southern mole crickets are attracted to lighted landscapes and to moist soil. Moist soil is conducive to enhancing the sound of the mating calls of the males. Shortwinged mole crickets do not fly.

A single generation per year is normal, although in southern Florida there are two generations of southern mole crickets and an extra peak of adult flight in the summer. For both southern and tawny mole crickets, adult emergence occurs earlier in southern Florida

than in northern Florida. In southern Florida, multiple overlapping generations of shortwinged mole cricket can occur.

Damage

Mole crickets have enlarged forelegs with blade-like projections known as dactyls, which are used for digging. Damage to turfgrass is done as the mole crickets tunnel through the soil, ripping and uprooting the turf as well as feeding on the lower grass stems and roots.
In bare areas, mole cricket tunnels can be seen. Mole cricket tunnels are about the size of your index finger in width. Soil will be soft and spongy and will give slightly when you walk on it with the back of your heels. Small areas of turf may pull out of the ground easily with the base of the plant being ripped. Mole cricket damage is more sever in Zoysia, Bermuda and Bahia turf, but St. Augustine and Centipede can also be affected.

Figure 2: Mole cricket tunnels

Figure 3: Mole cricket emergence hole and shortwinged mole cricket.

Mole Cricket Management

Our Mole Cricket Management Program

May - June (liquid broadcast application):

Preventive broadcast insecticide applications are made in combination with liquid fertilizer in May or June. All grass types are treated. The timing of these applications coincides with the mole cricket hatching. Aloft (Clothianidin with Bifenthrin) or Arena (Clothianidin) is used.

Other than in South Florida, it is rare to have noticeable mole cricket activity from June through August, but it is important to recognize that mole crickets may still be present; they are just too small to cause noticeable damage.

August through November:

Active infestations are treated with Advion Insect Granular Bait. The rate of application is 1.15 pounds per 1000 sq. ft. Applications should be made toward the end of the day. The soil should be moist before treatment with the grass blades being dry. Results will be best if rain or irrigation does not occur until after the following morning. A handheld spreader is the best application method unless the area is excessively large. Adjust the application setting to #3 and walk at the normal lawn treatment walking speed (40 feet in 10 seconds). For larger turf areas, use the Lesco spreader with the setting of #5 with the Lesco Calibration tool. Overlap is not required for a bait application.

Proactive Follow-ups

Re-inspect the turf 7 to 10 days after the application of the bait. At that time, look for the presence of newly raised tunnels and/or newly damaged turf. Newly raised tunnels will have cracks on the soil surface as seen in Figure 2. Newly damaged turf will still have some green remaining. If the amount of activity warrants retreatment, repeat the application of bait as described above. Follow-up every 7 to 10 days until the problem has been resolved.

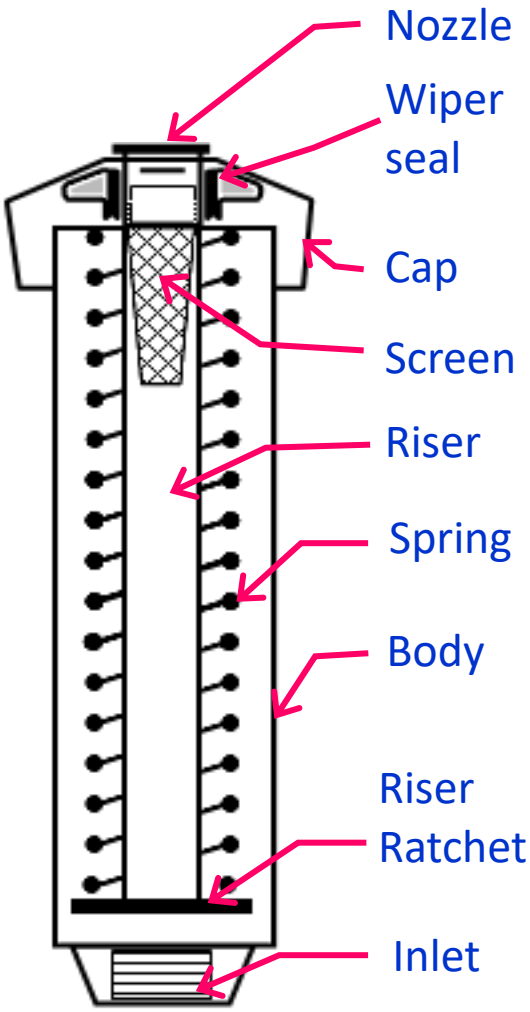
December through April

Treatment during this time is typically not warranted. Overwintering mole crickets will not feed except on warmer evenings and swarming mole crickets are rarely numerous enough to warrant treatment. However, if damage is occurring, utilize the bait as described above and treat only on warmer evenings.

WEEKLY TRAINING SESSION

Troubleshooting Sprinkler Heads

- **The only time to properly troubleshoot a sprinkler head is when the zone is actively pushing water through the sprinkler.**
- If the riser is fully extended but water is not coming out of the nozzle, the screen or nozzle is clogged.
- If the sprinkler is spraying in the wrong direction or the wrong angle, the nozzle or riser needs to be adjusted. Or both.
- If the sprinkler is visibly crooked, it needs to be straightened.
- If the sprinkler is fully extended and water is coming out of the seal, the sprinkler is compromised and needs to be replaced.
- If the sprinkler is fully extended and water is coming out of the base of the cap, the sprinkler is compromised and needs to be replaced.
- If the sprinkler is fully extended and water is bubbling up from around the sprinkler, the sprinkler connection at the base is compromised and needs to be replaced.
- If the sprinkler head is a rotor and is not turning, the rotor needs to be replaced.
- If the sprinkler nozzle is an MP and is not turning properly, the MP nozzle needs to be replaced.



- If the zone has been turned off and the riser is still above ground in the operational position, the sprinkler needs to be replaced.