March Risk Management VTM

Accident Protocols; Fleet Safety Turns Into Risk Management

Accident Reporting Compliance: 24-Hour Rule & Scene Protocol

Training Goals & Learning Objectives

By the end of this training, team members and managers will be able to:

- Understand the **required accident procedures at the scene**
- Recognize the importance of **immediate reporting to supervisors and Risk Management**
- Identify all **mandatory documentation required within 24 hours**
- Understand the requirement for **drug and alcohol testing**
- Know the payroll deduction and repair approval policies
- Recognize consequences of failing to follow procedure
- Understand how non-compliance increases company risk exposure

Why This Matters for Us

As Fleet Safety transitions into the **Risk Management Department**, procedural compliance is no longer optional — it is a risk control requirement.

Recent incidents have shown:

- Delayed reporting beyond 24 hours
- Missing documentation
- Drug testing delays
- Incomplete supervisor investigations

These failures increase:

- Legal exposure
- Insurance claim costs
- Subrogation challenges
- Regulatory risk
- Internal liability

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Accident Protocol: At the Scene

Immediately following an accident, the driver must:

1. Ensure Safety

- Check for injuries to all parties
- Call 911 for ambulance if needed
- Call police immediately
- Turn on 4-way flashers

2. Cooperate – But Protect Yourself

- Remain calm
- Do not argue
- Do not admit fault
- Do not apologize
- Do not blame equipment

3. Gather Required Information

Obtain:

- Police department name
- Officer name and badge number
- Case number
- Other driver and passenger names, addresses, phone numbers
- Insurance company, policy number, and phone number
- Vehicle make, model, year
- License plate number
- Names and phone numbers of injured persons
- Names and phone numbers of witnesses

4. Document the Scene

Take clear photos:

- Entire scene
- All vehicles (all angles)
- Property damage

- License plates

5. Report Immediately

Contact:

- Direct Supervisor
- Risk Management Department at riskmanagement@masseyservices.com

Immediate Reporting Requirement

ALL vehicle accidents must be reported immediately, regardless of:

- Severity
- Fault
- Whether the vehicle was occupied
- Whether damage appears minor

Failure to report immediately increases legal and financial exposure and may result in DARs or further disciplinary action.

24-Hour Documentation Rule

All required documents must be submitted within **24 hours** of the incident.

Required Documentation:

From Team Member & Supervisor:

- Payroll Deduction Form (if at fault)
- Vehicle Loss Notice (ACORD)
- Clear photos of vehicles and scene
- First Report of Injury (FROI)
- Treatment Refusal (if applicable)
- Supervisor's Accident Investigation Report

Documents can be found under **X Drive > Risk Management > Auto Accident Forms**. Send all documentation to:
riskmanagement@masseyservices.com

Failure to comply may result in disciplinary action.

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Drug & Alcohol Testing Requirement

Mandatory within 24 hours:

- Applies to all accidents
- Even if vehicle was parked
- Unless vehicle was unoccupied

Requirements:

- Testing at approved facility only
- No refusal
- No delay
- Chain of custody form must be sent to HR and Risk Management

Refusal or delay may result in termination.

Documentation for the drug test can be found in the glovebox of all vehicles. SC Office Managers are to replenish these forms when necessary. They can order them from HR.

Fault Determination Process

The Risk Management Department will review:

- Police reports
- Camera footage
- Witness statements
- Internal documentation
- Supervisor investigation

A formal determination of fault will be documented and communicated.

Payroll Deduction Policy

If found at fault:

- $500 payroll deduction will be applied

General Manager responsibilities:

- Process payroll deduction form within 24 hours

Failure to process timely creates internal compliance issues.

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Vehicle Repairs Policy

🚫 No repairs may begin without written approval from Risk Management.

Requirements:

- Use approved vendors
- Send estimates and invoices to riskmanagement@masseyservices.com
- Fleet Director must approve invoices before payment

Unauthorized repairs create cost overruns and audit risk.

What Counts as Non-Compliance

- Not calling police
- Not collecting insurance information
- Delayed reporting
- Missing documentation
- No supervisor investigation
- Failure to complete drug testing
- Starting repairs without approval
- GM not processing payroll deduction timely

Consequences of Non-Compliance

Internal:

- Coaching
- Disciplinary action
- Payroll deduction (if at fault)
- Possible termination (drug testing refusal/delay)
- Increased vehicle downtime

External:

- Increased liability exposure
- Higher insurance premiums

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- Claim denials
- Subrogation loss

Manager Accountability

Supervisors and GMs are responsible for:

- Ensuring immediate reporting
- Completing investigation reports
- Submitting documentation within 24 hours
- Processing payroll deductions
- Enforcing drug testing compliance

Discussion Prompts

Use during meeting:

- “What prevents accidents from being reported immediately?”
- “What risk does delayed documentation create?”
- “Why is drug testing required even for parked vehicle accidents?”
- “How does failing to gather insurance information affect subrogation?”
- “What happens financially when repairs start without approval?”

Key Takeaway

Every accident is a risk event.
The first 24 hours determine our legal protection, insurance recovery, and financial outcome.

Immediate reporting.
Complete documentation.
Zero assumptions.
Full compliance.

Discounts

C. **Senior Citizen & Armed Services/Veteran Discount**

i. The Senior Citizen & Armed Services/Veteran Discount is granted to new customers over 55 years of age, current armed forces personnel, or American Veterans who purchase a residential service

D. **Commercial Customer Employee Discount**

i. The Commercial Customer Employee Discount is granted to employees of PrevenTech customers who purchase a new residential service.

E. **Referral Discount**

i. The Referral Discount is granted to someone who refers a new customer.

F. *All of the aforementioned discounts are as follows:*

i. Pest Prevention: $25.00 deducted from the initial service on an annual contract.

ii. GreenUP Landscape, Lawn or Tree/Shrub Care: $25.00 deducted from the initial service on an annual contract.

iii. Termite Protection (Conventional, Fumigation, Baiting): $50.00 deducted from the treatment or installation price.

Integrated Pest Management (IPM)

Integrated Pest Management provides the framework of Massey's Pest Prevention Program. IPM has many different definitions and methods of implementation. A few definitions claim IPM is a pest management process that excludes pesticides. IPM actually is the inclusion of multiple actions that can reduce and in some cases eliminate the need for pesticide use.

IPM is a multi-step process that considers factors such as the pests, their life cycles, their behaviors, their needs, their food sources, their nesting areas, and then uses a series of control methods to manage their numbers. The use of an IPM program allows for the responsible and effective reduction of pests, which minimizes adverse effects on people and the environment.

Steps of Integrated Pest Managment

While all situations are different, there are 5 major components that are common to all IPM programs

1. Pest identification is essential in eliminating the issue. If you don't know what you are dealing with, you won't be succesful.
2. Is it really a pest?
3. Monitoring and accessing pest populations
4. Using a combination of control strategies to eliminate the pest issue
5. Prevention of future pest issues

Once an organism has been identifed as a pest there are a number of different control strategies that can be employed depending on the specific pest and the environment.

<u>IPM Control Strategies</u>

Mechanical and Physical Control

Mechanical and physcial control strategies will either directly kill a pest (without the use of pesticides), physically remove the pest from the environment or stop the entry of the pest into the structure. Some examples of mechanical and physical control strategies include:

- Heat treatment for insect pests
- Changing white porch bulbs to amber bulbs which blocks the UV light that attracts bugs
- Exclusion
    - Caulking cracks and crevices to eliminate crawling or flying insects
    - Wire mesh inserted into gaps where rodents may potentially enter
    - Door sweeps to stop pest entry
    - Mattess covers to stop the movement of bed bugs
- Trapping
    - Rodent traps
    - Sticky traps
    - Vacuum

Cultural Control

Cultural controls are practices that reduce pest establishment, reproduction, movement and survival. It may be the most difficult control strategy to implement because it involves changing people's habits. The environment in which the pest is living is manipulated to stop or reduce the chances of having pest issues. Cultural control strategies may include:

- Improving sanitation around garbage cans to reduce fly pressure
- Removing food sources to make areas less attractive to German roaches

- Eliminating debris piles within a yard to decrease harborage areas for rodents
- Adjusting sprinkler heads away from the home so moisture buildup behind the exterior wall does not occur

Education and Communication

Education and communication with the customer is another key component of an effective IPM program. Sometimes elimination of a pest involves their buy in and assistance. We must be upfront and communicate to the Customer what it will take to rid get rid of a pest population.

Failure to communicate with the Customer that it may take more than one treatment to rid their home or business of fleas, ticks, rodents, some species of ants, etc. can lead to frustration on everyone's part. Our jobs would be much easier if we had a magic wand that would instantly eliminate pest issues. But since that is not the case, educating the Customer on the biology and behavior of the pest and the steps it will take to eliminate the issue is a must! Hand out Massey's one-page Fast Facts on each pest regularly.

Chemical Control

Chemical control is an IPM strategy that involves using natural and/or synthetic pesticides to manage pests. Pesticides play an important role in IPM, but should not be the first option you choose. Pesticides should only be used when needed and always be used in conjunction with other control methods. Some examples include:

- Dusting cracks and crevices then caulking potential entry points
- Rodent exlclusion and trapping with the use of rodenticide inside bait boxes on the exterior of the structure.

Before applying a product determine if there are other methods that will be more effective and provide a longer lasting solution. Once you decide chemical control is necessary, you must choose the most effective and most appropriate formulation for the environment you are in and it must be applied so there is minimum exposure to people, pets and other non-target organisms.

Pest Prevention

Our goal at Massey Services is to eliminate pest infestations in and around the home. A continued focus in Massey's customized environmental management program includes eliminating ways for pests to become reestablished in and around a structure as well as targeted, preventative applications of products in anticipation of upcoming pest pressures. The purpose of both exclusion techniques and the treatment for specific pests is to ultimately reduce or eliminate pest issues on the exterior of the home, in turn, reducing pests inside the home. Treatment techniques take into consideration the Conditions, Avenues and Sources of pest activity and work to eliminate them.

Conditions, Avenues and Sources

All living organisms need food, water and shelter to survive. Pests in and around a home are no different. A significant component of our Pest Prevention Program is to identify and then eliminate factors that are allowing pests to flourish so the pests die or move out.

Conditions

Conditions are situations that postively contribute to the success of pests. Conditions are comprised of the biological elements food, water and shelter which are necessary for pest species to survive. Some conditions conducive to pest activity might include:

- Standing water
- Mulch piled too high around the foundation of the home
- Improperly store food
- Sanitation issues around garbage cans/dumpsters

Avenues

Avenues are direct pathways into the home or structure. In some cases, these avenues of entry may permit the pest to bypass any treatment that has been applied. Some examples of avenues of pest entry are:

- Tears in window screens
- Gaps around doors and windows
- Unsealed areas around utility wires going into the structure
- Tree branches touching the home
- Pets can even be an avenue of infestation!

Sources

Sources are the points of origin or the actual breeding ground of the pest. In many cases, Conditions and Sources go hand in hand. Sources of pest infestaiton may include:

- Accumulated leaf litter in gutters
- Underside of landscape timbers or potted plants
- Debris piles in the yard
- Mulch beds in the yard or around the structure's foundation
- Large ant mound or wasp nest

Integrated Pest Management methods are utilized in Massey's Pest Prevention Program. Massey coined Pest Prevention as a customized environmental program that eliminates the conditions, avenues and sources of pest activity in and around a structure. Note that there is no reference in this definition requiring the use of a material application.

Massey Services versus the other guys

In the structural pest industry, every company has access to the same products and equpiment that we at Massey Services have. We don't use any special products. We don't manufacture products. We don't sell products. We sell and provide Great Service. It takes more than products and equipment to get a quality job done.

What does Great Service look like?

1) A Great Image:
    a. Looking better than everyone else.
    b. Being better dressed and possessing a cleaner vehicle and cleaner equipment.
2) A Quick Response:
    a. Return calls immediately.
    b. Keep appointments.

   c. Be on time, every time.
3) Exceeding Expectations:
   a. Smile and be polite.
   b. Listen and show care and concern.
   c. Solve the problem the first time, every time.
4) Saying and Doing What's Right:
   a. Be honest. Always tell the truth.
   b. If you don't know something, don't fake it.
   c. Find the right answer and follow up.
5) Two-way Communication:
   a. Keep the communication between you and the Customer open and frequent.
   b. Paperwork must be neat and legible.
6) Taking Ownership:
   a. It's **OUR** problem, **NOT** theirs!
   b. Follow up until the customer is completely satisfied.
   c. Thank everyone for their business!

Our goal is to provide Great Service for our Customers. We achieve this through utilizing IPM and Pest Prevention techniques. Each structure you arrive at is unique and has the potential to provide numerous Conditions, Avenues and Sources of pest infestation. Your job as an Inspector or Technician is to provide a thorough inspection of the strucutre, analyze Conditions, Avenues and Sources of pest infestation and determine the best method to prevent or eliminate the pest from the structure. Not only do we work on discovering factors that allow for the success of a pest, but we must determine whether it is really necessary to prevent future pest populations from developing through the preventative applicaton of products. Occasionally no products are necessary.

Over the next few months, you will be receiving training on the specifics of providing service to our Customers utilizing components of Integrated Pest Management. You will receive refresher training on

- The majority of pests you deal with, their biology, behavior and nesting habits
- Proper treatment protocols including exclusion methods
- Product selection
- Initial and regular service protocols

PROVIDING *GREAT* CUSTOMER SERVICE

By
Bob Belmont

We're all in the service business, and hopefully, we are providing *great* service so our customers will rave about us and our companies will grow.

Great service starts with a ***great image***. Do you bring along a clean uniform just in case the one you're wearing might get dirty? A great image means a clean and tidy vehicle. Is your vehicle cleaned out nightly so that if a customer just happens to look into the cab, everything will be clean and organized? Is your vehicle free of dents, scratches, and cleaner looking than your competition's vehicles? Are your tools and equipment clean? If your competitor has a sharper looking setup he may already be drawing the attention of your customers. Is your paperwork clean and organized? Is your portfolio holder clean and attractive? I'll never forget a plumber I hired about 6 years ago. Upon completion of his job he brought in his dented aluminum invoice holder. The invoices and the holder were so dirty that one might guess the dirt was from working on numerous toilets, septic tanks and rusty water heaters. Nevertheless, I was pretty turned off. A great image is normally just a given in companies that already give *great service*.

The next key to *great* customer service is to always provide a ***quick response***. When a customer calls, he or she would enjoy an immediate response, if not a return call within a very short wait. When you wait until the end of the day, you now qualify as providing mediocre service at best. *Great service* means scheduling convenient appointment times for your customers in a timely manner. Great service means showing up on time every time. When you show up on time, do so with a smile! Be polite and ask about any concerns requiring special attention. Anticipate the situation based upon the customer's history, seasonal changes, pest outbreaks in the neighborhood, weather situation, and conditions at the account. Explain what you're going to do and why you're going to do it.

A third key to great customer service is to ***exceed customer expectations***. Always listen and show that you care about their concerns. After listening to their concerns, provide a thorough inspection of all of the areas they discussed including other areas you feel may also be conducive to pest development in the future. Provide a professionally prepared, written report with specific recommendations. Interior and exterior inspections should indicate all potential conditions, avenues, and sources conducive to pest development, with recommendations for preventing future infestations. If pests are present, deal with them immediately and solve the problem the first time. Understand that a polite smiling technician who only comes out for regular service and looks over the property, carefully baits garden areas, writes up an invoice, places it in the pre-arranged spot, and leaves, barely meets and definitely does not exceed customer expectations.

Great customer service means ***saying and doing what's right***. If you're not sure exactly what's happening, don't guess! If you're not sure what the particular pest problem is, don't fake it! Worse yet, if the customer calls them sugar ants, don't you call them sugar ants! If you're sure they're ants, but not which kind, then call them ants and take

some back to try and determine the correct type. Use a clean, professional vial rather than a cheap pill bottle. Always tell the truth. If you don't know, find out the right answer and follow-up! As soon as you learn anything that helps to educate the customer, don't hesitate, just call to leave the message.

Great customer service is ***open and frequent two-way communication***. Discuss all of the pests and the conducive conditions you find during your inspection. Explain what you have done (and why you have done it) to prevent future problems. Explain exactly what and how much the customer can expect to see and what corrective measures, if any, the customer needs to take. If recommendations are in writing, make sure that your paperwork is neat, complete, and accurate. Hand them appropriate information about pests and their prevention. Have available handouts that discuss seasonal problems. Since communication should be frequent, your portfolio of information about pests and their prevention should help in filling your communication needs. Thank your customer for their business and always leave the residence in as good or better condition than when you arrived. Establish realistic and attainable standards and expectations. Your customers should clearly understand the need to follow your recommendations. They should trust that your professional training and that of the experts who back you up would be of the kind that will keep them in an ongoing pest-free situation. This trust can only be gained through open, frequent two-way communication.

Finally, *great service* comes when you ***take ownership***. It's OUR problem, not the customer's problem! You need to take whatever time necessary to prevent pests, and if you can't handle something, one of the other experts at your company can. If the customer sees any pests, instruct them to save them for you. Pro-active follow-up is the key component in solidifying a great service relationship. Finally, thanking everyone involved goes a long way to ensure future trust. If, at your recommendation, a client pruned his trees because ants were trailing onto eaves and then down into his kitchen, he has just followed instructions and has helped to eliminate ants indoors. When you give thanks for following your recommendations, the customer generally feels like he was part of the solution, and then future recommendations will probably be followed. So remember to always thank the customer every time your recommendations are followed.

How close are you to providing **great service**? A great service organization starts and ends with great people. It's hiring great people and allowing those people the freedom to get the job done right. Great service is more than just good intentions. It's quality people and constant training. It's knowing what to do, how to do it, and getting it done.

WEEKLY TRAINING SESSION

Liquid Broadcast Application

Topic Category: Lawn

Recordable Verifiable Training Hours: 1.5

Objectives: This lesson is designed to teach proper Liquid Broadcast Application techniques.

Length of lesson: Approx 90 minutes.

Materials needed:

- Training Guideline
- GreenUP Protocol Liquid Broadcast Application document. Located in the G:Drive Shared\GreenUp Reference Materials\GreenUp Protocols\Individual Protocols\Lawn Care Basic Application
- Lawn truck with CLEAN Droptank.
- Lawn Wand with weighted string attached (see specification below)
- 40 by 25 area (a turf area is preferred).
- Stop watch
- Pre- and Post- tests.

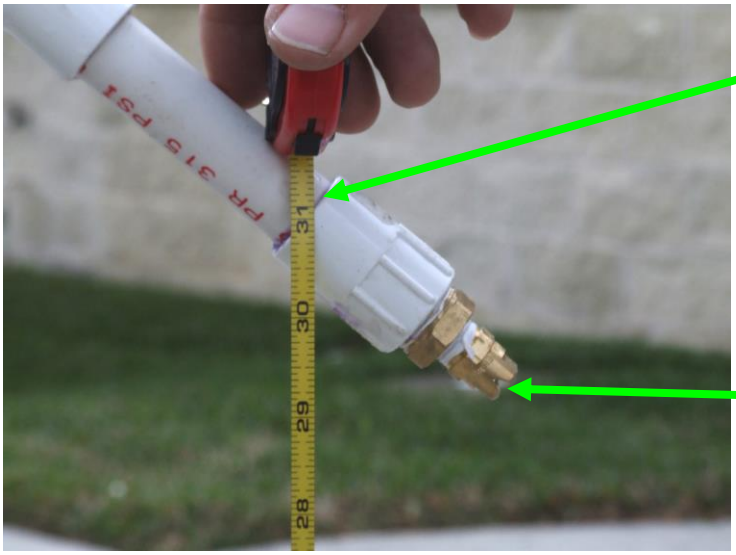
Training Guidelines:

- 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 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 through Massey University.
- Take all Specialists out to the 40 by 25 area. Allow each Specialist (even the ones who have used the Lawn Spray Wand previously) to make the proper application.
    - Make sure the wand is held at the proper height and parallel to the ground.
    - Time each 40 foot pass (it should take 10 seconds each pass). Do not be concerned about the total time for the 1000 sq. ft. The important part is 10 seconds per pass.
    - Check for proper overlap. (1 foot on each side).
    - Practice the "Trim" technique.
- Provide each Specialist with the Lawn Spray Wand. Calibrate each truck for 5 gallons per minute. Ensure the pressure is as low as possible while still getting 5 gallons per minute.

WEEKLY TRAINING SESSION

Liquid Broadcast Application

Tie a few large washers or fishing weight at the end of the string so they will weight the bottom of the string to the ground. Tie the weighted string to the point shown below ensuring that from the tie point to the bottom of the washers or weight is 31 inches.



Tie string here.

Nozzle will be 29 inches from the ground.

WEEKLY TRAINING SESSION

Liquid Broadcast Application

Name _____ Date _____

PRE & POST TEST

1. The Lawn Wand is calibrated to put out _____ gallons in 1 minute.
   a. 2
   b. 3
   c. 4
   d. 5

2. T or F The amount of time it takes to treat 1000 sq. ft. is one minute.

3. The amount of water that will be applied in 1 minute over 1000 sq. ft. is _____ gallons.
   a. 2
   b. 3
   c. 4
   d. 5

4. T or F The Lawn Spray Wand is designed to duplicate the application of a boom sprayer using only one spray nozzle.

5. T or F The Lawn Spray Wand is moved quickly in a side to side motion.

6. T or F If the total application pattern is smaller than 6 feet and the walking pace of the applicator remains constant, more material will be applied in the given area.

7. At the proper walking speed, _____ linear feet will be covered in 10 seconds.
   a. 10
   b. 40
   c. 50
   d. 60

8. T or F In the proper trim position, the applicator will be closer to the object that he does not wish to spray.

9. T or F In the proper trim position, the nozzle of the Lawn Spray Wand will be closer to the ground than in the fill position.

WEEKLY TRAINING SESSION

Liquid Broadcast Application

10. T or F In the proper fill position, the nozzle of the Lawn Spray Wand will be 29 to 32 inches from the ground and the middle length of the wand will be kept parallel to the ground.

11. T or F The amount of overlap required between fill passes is about 1 foot on each side.

12. T or F Dripping on non-target areas is avoided by holding the nozzle of the wand up when walking over concrete or roadway areas.

WEEKLY TRAINING SESSION

Liquid Broadcast Application

PRE & POST TEST ANSWER KEY

1. The Lawn Wand is calibrated to put out _____ gallons in 1 minute.
   a. 2
   b. 3
   c. 4
   d. 5

2. T or F The amount of time it takes to treat 1000 sq. ft. is one minute.

3. The amount of water that will be applied in 1 minute over 1000 sq. ft. is _____ gallons.
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WEEKLY TRAINING SESSION

Liquid Broadcast Application

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12. T or F Dripping on non-target areas is avoided by holding the nozzle of the wand up when walking over concrete or roadway areas.

LIQUID BROADCAST APPLICATION

Objective

Liquid broadcast applications are made as a standard part of the Agronomic Program. The Lawn Wand is used to make all liquid broadcast applications to turf. Materials that are normally applied with the Lawn Wand include fertilizers, micronutrients, and insecticides. When used properly, a Specialist will be able to consistently make a liquid broadcast application to a lawn at a rate of 5 gallons per 1000 sq. ft. (depending on the vehicle) in one minute.

Knowing Your Equipment

The Lesco Spray Gun is used as the trigger valve for the Lawn Spray Wand. Do not use a ball valve such as the Apollo Valve pictured below. The Lesco Spray Gun was chosen to provide proper on/off control of the application and can be easily rebuilt when needed.

Figure 1. Lesco Spray Gun

Figure 2. Apollo Valve

Figure 3. Apo

Proper Calibration

The pump should be calibrated to put out 5 gallons per minute. Keep the pressure as low as possible to still maintain the proper output. This will keep mist down to a minimum. At the proper pressure, the tip of the Lawn Spray Wand will just begin to elevate itself. Too much pressure will produce unnecessary mist, which may cause staining and will give kickback when the valve is first opened.

Applying Material

The thought behind the use of the Lawn Spray Wand is to duplicate the application that is performed with a boom sprayer having multiple nozzles using one nozzle and multiple passes. The application is performed in the same general manner as the weed control application. The wand is not moved from side to side. The wand is held at a height to achieve a total spray pattern of about 6 feet. If the wand is held lower or if the tip is closer to the ground, the pattern will be reduced. If this happens and the walking speed is kept at the standard pace, the spray application will be more concentrated and lawn damage could occur.

LIQUID BROADCAST APPLICATION

The walking speed for the Liquid Broadcast Application is the same walking speed as the backpack weed control and granular broadcast applications. This is a speed that will cover 50 linear feet in 12 seconds. When you are counting 1001, 1002, 1003, each count should be a step 1000-step, 1-step, 1000-step, 2-step. Begin moving as soon as you begin to spray. Otherwise, a heavy concentration will be applied in a small area.

A smooth walking motion without bouncing as you walk is important for an even application.

Two positions are used when applying liquid material: the trim position for edging near the side of the home, sidewalks or driveways and the fill position. Careful attention must be paid when treating around concrete areas, the side of the home or other non-target surfaces. This is not only important to avoid staining from Pre-M, Iron or Manganese, but also because we should not be applying any pesticide to non-target areas. Attention must also be paid to ensure that the turf area near the concrete is properly covered to ensure control of chinch bugs and other problems that may infest this area. Trimming and filling correctly are needed to create a good spray pattern and to evenly cover the turf.

Trim Position

Position yourself close to the object you do not wish to spray with the arm you use to hold the wand closest to the object you do not wish to spray. Lower the wand and angle away from the non-target area. Move your elbow away from your body and bend your wrist slightly toward your body to keep the spray pattern horizontally in front of you. The center of the spray pattern should be about two feet from the edge of the turf while the edge of the spray pattern is hitting right at the edge.

Very tight areas (3 feet or less) will require you to reduce the output of the spray by not opening the spray valve fully and/or increasing your walking speed.

LIQUID BROADCAST APPLICATION

Fill Position

The lawn spray wand must be held in the manner shown. The middle length of the wand (between the two 45 degree elbows must be held parallel to the ground to get the correct angle of spray. It should be held at a height so the nozzle is a minimum of 29 inches from the ground and a maximum of 32 inches from the ground. The spray pattern should be a total of about 6 feet. If the wand is held lower or if the tip is closer to the ground, the pattern will be reduced. If this happens and the spray pace is kept constant, the spray application will be more concentrated and lawn damage could occur. If the wand is held too high, some of the spray will be lost to mist. A smooth walking motion without bouncing as you walk is important for an even application.

Proper application of liquid materials requires good Trim and Fill techniques, but it also relies upon appropriate spacing. Overlapping the spray pattern ensures that the dose of material being applied is even and consistent.

Areas that have been trimmed will require a greater overlap than fill areas depending on the angle of the pattern that was applied. Typical overlap for trimmed areas would be about 2 feet. Fill pattern treatments will require an overlap of one foot on each side of the spray pattern.

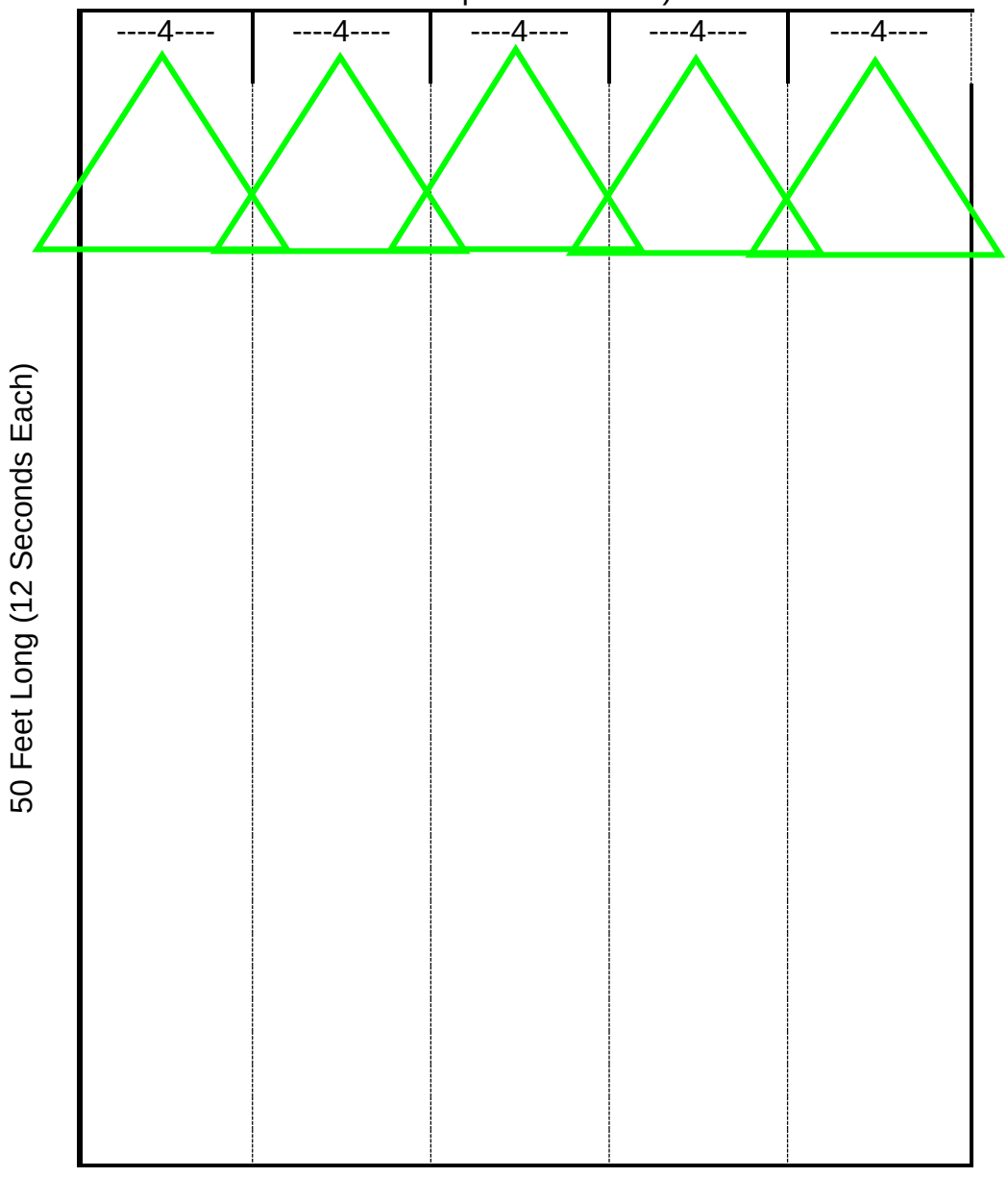
With either position, begin moving as soon as you begin to spray. Otherwise, a heavy concentration will be applied in a small area. Hold the hose in front of you with your other arm. Allow enough slack to prevent restriction of the spraying arm. Do not place the hose over your shoulder. This will result in potential exposure to the fertilizer and pesticides.

Any time you walk across concrete areas or the roadway, position the tip of the Lawn Spray Wand up so it does not drip. This is imperative to avoid drip stains and concrete is a non-target area where products should not be applied. Never allow the spray to enter a body of water, storm sewer or fishpond. Most pesticides are deadly to fish.

LIQUID BROADCAST APPLICATION

Liquid Broadcast Application

20 Feet Wide (5 passes with 4 foot effective spray. One foot overlap on each side)



LIQUID BROADCAST APPLICATION

In addition to making a perfect application, it is also important to work in an efficient manner. Be mindful of time spent during the application where spraying is not actually occurring. This is the unproductive time that can be removed from your day without impacting the time needed for a perfect application.

You will also need to be mindful of not getting wrapped around trees or causing damage with the spray hose. Be careful of irrigation heads and tender annuals or shrubs.

Steps to correctly applying liquid broadcast materials are:

- Start in the front yard and work in blocks.
  - In your mind, break the lawn up into square or rectangular sections to make the application easier.
  - Find an object in the distance to walk towards
    - Always look ahead, not down at your feet
  - Locate the longest straight edge and fill parallel to it.
  - Use natural edges, such as fences, ornamental beds, or property lines as the boundaries when possible.
- Use the Trim Position technique to apply material around the perimeter of each block, focusing on places that are hard to reach.
  - Trimming should be completed prior to starting the fill passes, except when trimming hard to reach areas: fill them in before moving on.
- Make your fill passes using the Fill Position technique after the blocks in the front have been trimmed.
- Repeat the process of blocking, trimming and filling in the backyard.
  - When moving from the front yard to the backyard, trim down the sides of the structure.
- Be careful when pulling long lengths of hose around objects, such as houses, trees and shrub beds. You can easily damage property.
- When the treatment is complete, align the hose with the vehicle and ensure there are no obstacles.
  - Be sure there are no beds or structures between where the hose lays and the vehicle.
- Hold the spray wand in your hand, walk back to the vehicle, and roll up the hose.
  - Do not leave the gun on the ground and roll up the hose. This is a very dangerous practice.
  - When rolling up the hose, make sure to guide the hose so that it sits correctly on the reel.
- **Any time you walk across concrete areas or the roadway, position the tip of the Lawn Spray Wand up so it does not drip.** This is imperative to avoid drip stains and concrete is a non-target area where products should not be applied.

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

Topic Category: Shrub Care

Recordable Verifiable Training Hours: 1.0 to 1.5 hours

Objectives:

- Read and discuss our Shrub Care Protocol.
- Ensure proper understanding by all Specialist
- To **calibrate every Specialist for granular shrub fertilizer applications.**
- **To ensure that every Specialist can perform the proper technique for liquid shrub care applications.**

This meeting will qualify for 1 hour of Department of Ag ID Cardholder Training. Make sure you fill out the Department of Ag ID Cardholder Training form for each Team Member. Keep a copy in the Team Members training file at your office.

Length of lesson: 60 to 90 minutes.

Materials needed:

- Training Guideline (Below)
- Training Document Shrub Care Applications – Granular and Liquid (GreenUp Protocols\Individual Protocols\Lawn Care Basic Application)
- 12-2-14 or 12-0-14 Shrub Fertilizer
- 64 ounce and 32 ounce measuring cup (clean and dry)
- Scale to weigh from 1 to 4 pounds.
- 2 pieces of cardboard from fertilizer pallets to demonstrate applying a handful of fertilizer to 25 sq. ft.
- 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.
- Hand out the Verifiable Training Record Form (VTRF)
- Begin the meeting by defining the training topic and handing out the Pre-test
- Distribute and review the training materials on Shrub Care Application Procedures
    - Allow the Team Members to complete the Pre-test as the application information is discussed.
- Use the Training outline as a guide for key points.
    - Encourage active participation from all Team Members
    - Ask probing questions to discuss key points.
    - Read and answer questions from the test and have the Specialists write in their answers.
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
    - Collect the pre-test and discard.
- Thoroughly review and discuss our Shrub Care Protocol.
- **Begin the demonstration portion of the training**
- Show the points of reference for the shrub fertilizer from the protocol.

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

  - Show 56 ounces of shrub fertilizer in a measuring cup and let them know that this weighs 4 pounds.
  - Show that 14 ounces in a measuring cup weighs one pound.
  - Explain that one good sized handful (with gloves on) of shrub fertilizer weights about 3 ounces
  - Take 4 good sized handfuls of shrub fertilizer (with gloves on) as if you were fertilizing shrubs and put the 4 handfuls into a container such as a 5 gallon bucket. Transfer the material into a measuring cup. The amount of fertilizer in the 4 handfuls should look like 10.5 ounces in a measuring cup, which should weigh roughly 12 ounces or 0.75 pounds.
  - Take 2 pieces of cardboard from fertilizer pallets and place them on a concrete surface. Explain that this area is roughly 25 square feet. Have each Specialist take a good size handful of shrub fertilizer and scatter it evenly throughout the 25 square foot area as if making a shrub fertilizer application.
- Demonstrate how shrub spray is properly applied to shrubs around the office.
  - Show the proper technique to get leaf movement using the "figure 8" pattern and spraying from the ground up.
  - Show how to spray plants against a building by treating behind the plants next to the building and spraying outwards. Explain why the backsides of the leaves would be properly treated using this technique.
  - Have all Specialists perform this application with everyone watching and critiquing.
- 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

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

Name _____ Date _____

PRE & POST TEST

1. T or F Certain shrubs are treated preventatively at the time of every initial or regular service.
2. T or F All shrubs are treated preventatively at the time of every regular service.
3. T or F Sagos are sprayed and drenched at the time of every initial or regular service for the prevention or control of Asian Cycad Scale.
4. T or F Imidacloprid controls spider mites and caterpillars.
5. T or F Crape Myrtles that are too tall to spray are drenched at the time of every initial and regular service from spring through fall.
6. T or F Spraying shrubs in a "figure 8" pattern helps to ensure contact to the backsides of the leaves.
7. T or F It is imperative to use proper spray techniques to ensure contact of the new growth and backsides of the leaves and also to keep shrub spray materials from contacting window and the structure.
8. T or F Particular attention must be given to ensure that shrub spray drift does not contact people passing by or neighbors who may be in their lawns at the time of our treatment.
9. T or F One pound of shrub fertilizer looks like 14 ounces in a measuring cup.
10. At the equivalent rate of 8 pounds per 1000 sq. ft., 1 pound of shrub fertilizer would cover _____ sq. ft.
    a. 50
    b. 100
    c. 125
    d. 150
11. One good sized handful of fertilizer should cover about _____ sq. ft. at the equivalent rate of 8 pounds per 1000 sq. ft.
    a. 25
    b. 50
    c. 75
    d. 100

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

12. T or F I have been successfully calibrated to perform shrub fertilizer applications and have demonstrated my ability to perform shrub spray applications.

13. T or F When bees are present or when the shrubs are in full bloom, preventative applications are not performed, but soil drench methods can be utilized when shrub damaging insects or diseases are present.

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

Answer Sheet

1. T or F Certain shrubs are treated preventatively at the time of every initial or regular service.
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    d. 100

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

12. T or F I have been successfully calibrated to perform shrub fertilizer applications and have demonstrated my ability to perform shrub spray applications. The correct answer will be true if you performed the training properly.

13. T or F When bees are present or when the shrubs are in full bloom, preventative applications are not performed, but soil drench methods can be utilized when shrub damaging insects or diseases are present.

SHRUB CARE APPLICATIONS

Objective

Our Shrub Care Service is based on the principles of Integrated Pest Management and with great consideration of the 5 Key Principles.

Liquid Shrub Care Application Protocol

Shrub pest treatments are performed when plants either have a current pest issue (curative) or preventatively when particular plants are known to be susceptible to particular insect or disease issues. Shrubs that are treated on a preventative basis with every initial and regular service include:

- Azalea
- Crape myrtle
- Camellia
- Gardenia
- Sago
- Pittosporum
- Indian Hawthorne
- Holly
- Knock-Out Roses

The list above may be expanded (not reduced) depending on the geographical location and specific concerns in the Service Center.

This service is performed using a pump and droptank system from the Lawn Care vehicle. The products used will vary depending on the time of year and the most prevalent insect or disease problems.

In the cooler times of the year, Horticultural Oil is used for the insecticide and Kalmor is used for the fungicide. Horticultural oil is a mineral oil. It controls insects and mites through suffocation and by breaking down their exoskeleton. Horticultural oil is not systemic. It controls on contract only, so a thorough application of the front and backsides of the leaves is very important. Kalmor is a copper-based fungicide/bactericide. It is also not systemic. There are a few bacterial diseases that are prevalent during the cooler spring months as well as downy mildew, which are well controlled by copper-based materials.

Tristar is used as the insecticide in the later spring months (Florida and Louisiana).

Through the summer months, our I&D Slurry is used. The slurry contains Imidacloprid, Armada or Transom and wetting agent. Imidacloprid will do an excellent job on insects such as aphids, lace bugs, thrips, soft scale and mealybugs. It is important to recognize that Imidacloprid does not control caterpillars or spider mites. Armada and Transom do a good job on a wide variety of fungal disease issues. They do not control Pythium, phytophthora or Downy Mildew. There are many times when specific pest control materials will be needed to control specific pests. Use them according to label directions for the specific insect or disease problem. In these cases, the plants needing treatment are typically very limited; a backpack sprayer should be used.

SHRUB CARE APPLICATIONS

All Sagos are sprayed and drenched to prevent Asian Cycad Scale. From spring through fall, Crape myrtles that are too tall to spray are drenched to prevent aphids. The shrub gun can be used for this purpose; adjust the gun to course spray and treat the trunk ground in the root zone area until puddling occurs.

For the protection of pollinating insects, do not spray the foliage of shrubs that are in full bloom or if pollinators are in the area. If insect problems exist or if preventive insect applications are necessary and pollinators are in the area, perform a drench of the root system with the I&D mixture rather than spraying the foliage.

Equipment

When performing liquid treatments using the lawn care vehicle, a shrub gun is utilized. The shrub gun has a nozzle that can be adjusted to spray a pin-stream to wide cone pattern. When performing liquid applications from a backpack applicator, either an 8010E or adjustable cone style tip is used.

Technique

With either piece of equipment, the Specialist must use techniques that achieve coverage of the front side and back sides of all leaves including new growth. Properly using the shrub gun will include almost continual adjustment of the gun to create "leaf movement". As you move through the landscape you should be adjusting the nozzle to change the spray pattern according to thickness and hardiness of the plant and to allow pressure to fold back leaves to allow material to thoroughly coat both sides of the leaves without doing damage to ornamental. Treating with a “Figure 8” pattern is beneficial to get the spray pattern to swirl and move the leaves so the backsides can be reached.

- Covering the backsides of the leaves requires the most effort and skill. This can be achieved by spraying from behind the plant when it is against a structure, by starting from ground level and spraying upwards or by spraying from the side of the plant and moving the leaves so the backs of the leaves are seen.
- Treating the new growth must also be a conscious effort if the shrubbery is not well pruned. Keep in mind that aphids will primarily feed on the new growth.
- Treating the front sides of the leaves may be achieved when treating the backsides of the leaves; however, additional treatment may be needed to get complete coverage.
- Movement of the spray pattern should be at a pace to wet the leaves, but not so slow that they are dripping excessively. When you look at the shrub after treatment, all the leaves should be wet and dripping slightly.

It may also be beneficial to drench the root system of the plant with systemic materials. Drenching the root system with systemic materials is beneficial to get more of the control materials inside the plant and will achieve a more thorough and longer lasting control. The shrub gun will work for this application; however, a lawn wand may be beneficial for drenching larger areas in a more time efficient manner. Shrub guns will typically apply roughly 2 gallons a minute; the lawn wand can apply up to 5 gallons per minute. When drenching just one or two plants, a 2.5 gallon jug can be mixed and utilized.

GREENUP SERVICE PROTOCOLS

SHRUB CARE APPLICATIONS

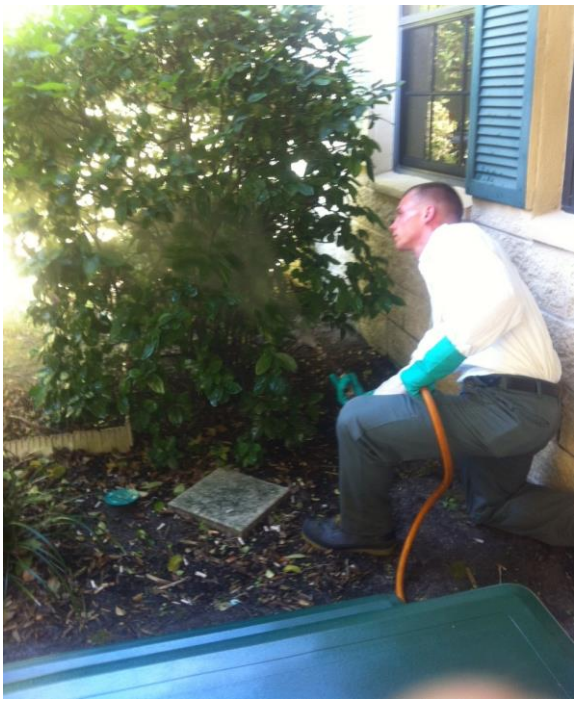

Figure 1

Figure 2

In Figure 1, the Specialist has positioned himself against the structure and spraying away from the building to keep the material off the structure and windows. He is also spraying upwards from ground level to ensure coverage of the backsides of the leaves.
In Figure 2, the Specialist is drenching the ground below using the shrub gun.

Safety and Liability

It is important to be consciously aware that the mist from a liquid application can move away from the target if not careful; particularly on windy days. Particular attention must be paid to ensure that the spray does not contact people passing by or neighbors who may be in their lawns while the application is being performed. Also be careful to ensure that the spray does not contact the customer's window, patio furniture or other non-target surfaces that could be stained or damaged. If this does occur, wash the windows or other surfaces with clean water before the material has a chance to dry.
It is also important to be on the lookout for nesting birds, pollinators or large quantities of beneficial insects. If treatment is required in these situations, utilize the drench method rather than the spray method. If treatment is not required, do not treat.

Do not allow pesticides of any kind to contact bodies of water or fish ponds. Many of the materials we use can be deadly to fish.

SHRUB CARE APPLICATIONS

Granular Fertilizer Applications

Nutritional applications are performed seasonally as prescribed by our Agronomic Program or when nutritional issues arise. This application is typically performed by hand and typical application rates range from 6 to 8 pounds per 1000 sq. ft. depending on the season. Placement of the fertilizer should be evenly from the trunk to a few feet past the dripline. The dripline of the shrub or tree is the outer edge of the canopy. The roots of an established tree or shrub reach well beyond the dripline.

Points of reference:
1 pound of fertilizer by weight looks like 14 ounces in a measuring cup.
4 pounds of fertilizer by weight looks like 56 ounces in a measuring cup.

4 pounds of fertilizer

A good size hand full of fertilizer (wearing gloves) weighs about 3 ounces by weight. To confirm this without an accurate scale, take 4 good sized handfuls of shrub fertilizer as if you were fertilizing shrubs and put the 4 handfuls into a container such as a 5 gallon bucket. Transfer the material into a measuring cup. The amount of fertilizer in the 4 handfuls should look like 10.5 ounces in a measuring cup, which should weigh roughly 12 ounces or 0.75 pounds.

One good sized handful of shrub fertilizer weighs about 3 ounces (or 0.1875 pounds). This amount of fertilizer covers roughly 25 sq. ft. when the rate is 8 pounds per 1000 sq. ft. If the rate is 6 pounds per 1000 sq. ft., a 3 ounce handful should cover roughly 30 sq. ft.

GREENUP SERVICE PROTOCOLS

SHRUB CARE APPLICATIONS

The shrub bed pictured above is roughly 25 square feet (3 feet wide x 8.33 feet long). The three azaleas picture above could be fertilized with one good sized handful of fertilizer. This amount of fertilizer would be spread evenly throughout this area to achieve a proper application. Fertilizer should never be left as clumps or visible piles.

When fertilizing small trees and larger shrubs, the same rate per square foot is used, but due to the larger area being fertilized, more fertilizer per plant will be applied.
Keep in mind that applying 8 pounds of our 12-2-14 or 12-0-14 fertilizer per 1000 sq. ft. applies 0.96 pounds of nitrogen per 1000 sq. ft. 1 pound of nitrogen per 1000 sq. ft. is the maximum allowable rate per application as per Florida Department of Agriculture Rule. If a shrub or tree is particularly nutritionally deficient, more frequent applications is preferred rather than heavier applications. Additionally, the plant is better able to assimilate the nutrients applied.

Sagos and palms are fertilized with our 8-2-12 or 8-0-12 at a rate of 12 pounds per 1000 sq. ft.

Any fertilizer debris on impervious surfaces must be removed with the power blower immediately after treatment to avoid staining surfaces and to comply with the Green Industries Best Management Practices. Do not allow any fertilizer to get into a body of water or fish pond.

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

Topic Category: Shrub Care

Recordable Verifiable Training Hours: 1.0 to 1.5 hours

Objectives:

- Read and discuss our Shrub Care Protocol.
- Ensure proper understanding by all Specialist
- To **calibrate every Specialist for granular shrub fertilizer applications.**
- **To ensure that every Specialist can perform the proper technique for liquid shrub care applications.**

This meeting will qualify for 1 hour of Department of Ag ID Cardholder Training. Make sure you fill out the Department of Ag ID Cardholder Training form for each Team Member. Keep a copy in the Team Members training file at your office.

Length of lesson: 60 to 90 minutes.

Materials needed:

- Training Guideline (Below)
- Training Document Shrub Care Applications – Granular and Liquid (GreenUp Protocols\Individual Protocols\Lawn Care Basic Application)
- 12-2-14 or 12-0-14 Shrub Fertilizer
- 64 ounce and 32 ounce measuring cup (clean and dry)
- Scale to weigh from 1 to 4 pounds.
- 2 pieces of cardboard from fertilizer pallets to demonstrate applying a handful of fertilizer to 25 sq. ft.
- 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.
- Hand out the Verifiable Training Record Form (VTRF)
- Begin the meeting by defining the training topic and handing out the Pre-test
- Distribute and review the training materials on Shrub Care Application Procedures
    - Allow the Team Members to complete the Pre-test as the application information is discussed.
- Use the Training outline as a guide for key points.
    - Encourage active participation from all Team Members
    - Ask probing questions to discuss key points.
    - Read and answer questions from the test and have the Specialists write in their answers.
    - Encourage group reading
- After reading and reviewing all materials, ask questions to verify the lesson has been understood.
    - Collect the pre-test and discard.
- Thoroughly review and discuss our Shrub Care Protocol.
- **Begin the demonstration portion of the training**
- Show the points of reference for the shrub fertilizer from the protocol.

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

  - Show 56 ounces of shrub fertilizer in a measuring cup and let them know that this weighs 4 pounds.
  - Show that 14 ounces in a measuring cup weighs one pound.
  - Explain that one good sized handful (with gloves on) of shrub fertilizer weights about 3 ounces
  - Take 4 good sized handfuls of shrub fertilizer (with gloves on) as if you were fertilizing shrubs and put the 4 handfuls into a container such as a 5 gallon bucket. Transfer the material into a measuring cup. The amount of fertilizer in the 4 handfuls should look like 10.5 ounces in a measuring cup, which should weigh roughly 12 ounces or 0.75 pounds.
  - Take 2 pieces of cardboard from fertilizer pallets and place them on a concrete surface. Explain that this area is roughly 25 square feet. Have each Specialist take a good size handful of shrub fertilizer and scatter it evenly throughout the 25 square foot area as if making a shrub fertilizer application.
- Demonstrate how shrub spray is properly applied to shrubs around the office.
  - Show the proper technique to get leaf movement using the "figure 8" pattern and spraying from the ground up.
  - Show how to spray plants against a building by treating behind the plants next to the building and spraying outwards. Explain why the backsides of the leaves would be properly treated using this technique.
  - Have all Specialists perform this application with everyone watching and critiquing.
- 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.
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WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

Name _____ Date _____

PRE & POST TEST

1. T or F Certain shrubs are treated preventatively at the time of every initial or regular service.
2. T or F All shrubs are treated preventatively at the time of every regular service.
3. T or F Sagos are sprayed and drenched at the time of every initial or regular service for the prevention or control of Asian Cycad Scale.
4. T or F Imidacloprid controls spider mites and caterpillars.
5. T or F Crape Myrtles that are too tall to spray are drenched at the time of every initial and regular service from spring through fall.
6. T or F Spraying shrubs in a "figure 8" pattern helps to ensure contact to the backsides of the leaves.
7. T or F It is imperative to use proper spray techniques to ensure contact of the new growth and backsides of the leaves and also to keep shrub spray materials from contacting window and the structure.
8. T or F Particular attention must be given to ensure that shrub spray drift does not contact people passing by or neighbors who may be in their lawns at the time of our treatment.
9. T or F One pound of shrub fertilizer looks like 14 ounces in a measuring cup.
10. At the equivalent rate of 8 pounds per 1000 sq. ft., 1 pound of shrub fertilizer would cover _____ sq. ft.
    a. 50
    b. 100
    c. 125
    d. 150
11. One good sized handful of fertilizer should cover about _____ sq. ft. at the equivalent rate of 8 pounds per 1000 sq. ft.
    a. 25
    b. 50
    c. 75
    d. 100

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

12. T or F I have been successfully calibrated to perform shrub fertilizer applications and have demonstrated my ability to perform shrub spray applications.

13. T or F When bees are present or when the shrubs are in full bloom, preventative applications are not performed, but soil drench methods can be utilized when shrub damaging insects or diseases are present.

WEEKLY TRAINING SESSION

Shrub Care Protocol and Granular Shrub Fertilizer Calibration

Answer Sheet

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SHRUB CARE APPLICATIONS

Objective

Our Shrub Care Service is based on the principles of Integrated Pest Management and with great consideration of the 5 Key Principles.

Liquid Shrub Care Application Protocol

Shrub pest treatments are performed when plants either have a current pest issue (curative) or preventatively when particular plants are known to be susceptible to particular insect or disease issues. Shrubs that are treated on a preventative basis with every initial and regular service include:

- Azalea
- Crape myrtle
- Camellia
- Gardenia
- Sago
- Pittosporum
- Indian Hawthorne
- Holly
- Knock-Out Roses

The list above may be expanded (not reduced) depending on the geographical location and specific concerns in the Service Center.

This service is performed using a pump and droptank system from the Lawn Care vehicle. The products used will vary depending on the time of year and the most prevalent insect or disease problems.

In the cooler times of the year, Horticultural Oil is used for the insecticide and Kalmor is used for the fungicide. Horticultural oil is a mineral oil. It controls insects and mites through suffocation and by breaking down their exoskeleton. Horticultural oil is not systemic. It controls on contract only, so a thorough application of the front and backsides of the leaves is very important. Kalmor is a copper-based fungicide/bactericide. It is also not systemic. There are a few bacterial diseases that are prevalent during the cooler spring months as well as downy mildew, which are well controlled by copper-based materials.

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SHRUB CARE APPLICATIONS

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For the protection of pollinating insects, do not spray the foliage of shrubs that are in full bloom or if pollinators are in the area. If insect problems exist or if preventive insect applications are necessary and pollinators are in the area, perform a drench of the root system with the I&D mixture rather than spraying the foliage.

Equipment

When performing liquid treatments using the lawn care vehicle, a shrub gun is utilized. The shrub gun has a nozzle that can be adjusted to spray a pin-stream to wide cone pattern. When performing liquid applications from a backpack applicator, either an 8010E or adjustable cone style tip is used.

Technique

With either piece of equipment, the Specialist must use techniques that achieve coverage of the front side and back sides of all leaves including new growth. Properly using the shrub gun will include almost continual adjustment of the gun to create "leaf movement". As you move through the landscape you should be adjusting the nozzle to change the spray pattern according to thickness and hardiness of the plant and to allow pressure to fold back leaves to allow material to thoroughly coat both sides of the leaves without doing damage to ornamental. Treating with a “Figure 8” pattern is beneficial to get the spray pattern to swirl and move the leaves so the backsides can be reached.

- Covering the backsides of the leaves requires the most effort and skill. This can be achieved by spraying from behind the plant when it is against a structure, by starting from ground level and spraying upwards or by spraying from the side of the plant and moving the leaves so the backs of the leaves are seen.
- Treating the new growth must also be a conscious effort if the shrubbery is not well pruned. Keep in mind that aphids will primarily feed on the new growth.
- Treating the front sides of the leaves may be achieved when treating the backsides of the leaves; however, additional treatment may be needed to get complete coverage.
- Movement of the spray pattern should be at a pace to wet the leaves, but not so slow that they are dripping excessively. When you look at the shrub after treatment, all the leaves should be wet and dripping slightly.

It may also be beneficial to drench the root system of the plant with systemic materials. Drenching the root system with systemic materials is beneficial to get more of the control materials inside the plant and will achieve a more thorough and longer lasting control. The shrub gun will work for this application; however, a lawn wand may be beneficial for drenching larger areas in a more time efficient manner. Shrub guns will typically apply roughly 2 gallons a minute; the lawn wand can apply up to 5 gallons per minute. When drenching just one or two plants, a 2.5 gallon jug can be mixed and utilized.

GREENUP SERVICE PROTOCOLS

SHRUB CARE APPLICATIONS

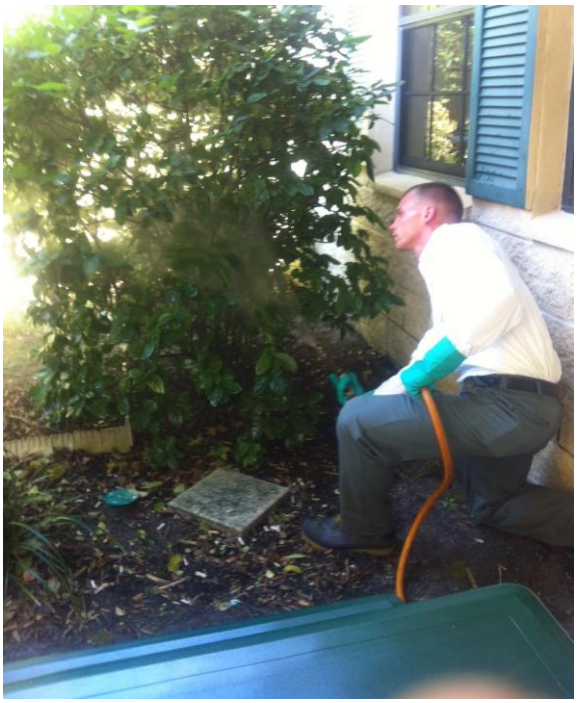

Figure 1

Figure 2

In Figure 1, the Specialist has positioned himself against the structure and spraying away from the building to keep the material off the structure and windows. He is also spraying upwards from ground level to ensure coverage of the backsides of the leaves.
In Figure 2, the Specialist is drenching the ground below using the shrub gun.

Safety and Liability

It is important to be consciously aware that the mist from a liquid application can move away from the target if not careful; particularly on windy days. Particular attention must be paid to ensure that the spray does not contact people passing by or neighbors who may be in their lawns while the application is being performed. Also be careful to ensure that the spray does not contact the customer's window, patio furniture or other non-target surfaces that could be stained or damaged. If this does occur, wash the windows or other surfaces with clean water before the material has a chance to dry.
It is also important to be on the lookout for nesting birds, pollinators or large quantities of beneficial insects. If treatment is required in these situations, utilize the drench method rather than the spray method. If treatment is not required, do not treat.

Do not allow pesticides of any kind to contact bodies of water or fish ponds. Many of the materials we use can be deadly to fish.

SHRUB CARE APPLICATIONS

Granular Fertilizer Applications

Nutritional applications are performed seasonally as prescribed by our Agronomic Program or when nutritional issues arise. This application is typically performed by hand and typical application rates range from 6 to 8 pounds per 1000 sq. ft. depending on the season. Placement of the fertilizer should be evenly from the trunk to a few feet past the dripline. The dripline of the shrub or tree is the outer edge of the canopy. The roots of an established tree or shrub reach well beyond the dripline.

Points of reference:
1 pound of fertilizer by weight looks like 14 ounces in a measuring cup.
4 pounds of fertilizer by weight looks like 56 ounces in a measuring cup.

4 pounds of fertilizer

A good size hand full of fertilizer (wearing gloves) weighs about 3 ounces by weight. To confirm this without an accurate scale, take 4 good sized handfuls of shrub fertilizer as if you were fertilizing shrubs and put the 4 handfuls into a container such as a 5 gallon bucket. Transfer the material into a measuring cup. The amount of fertilizer in the 4 handfuls should look like 10.5 ounces in a measuring cup, which should weigh roughly 12 ounces or 0.75 pounds.

One good sized handful of shrub fertilizer weighs about 3 ounces (or 0.1875 pounds). This amount of fertilizer covers roughly 25 sq. ft. when the rate is 8 pounds per 1000 sq. ft. If the rate is 6 pounds per 1000 sq. ft., a 3 ounce handful should cover roughly 30 sq. ft.

GREENUP SERVICE PROTOCOLS

SHRUB CARE APPLICATIONS

The shrub bed pictured above is roughly 25 square feet (3 feet wide x 8.33 feet long). The three azaleas picture above could be fertilized with one good sized handful of fertilizer. This amount of fertilizer would be spread evenly throughout this area to achieve a proper application. Fertilizer should never be left as clumps or visible piles.

When fertilizing small trees and larger shrubs, the same rate per square foot is used, but due to the larger area being fertilized, more fertilizer per plant will be applied.
Keep in mind that applying 8 pounds of our 12-2-14 or 12-0-14 fertilizer per 1000 sq. ft. applies 0.96 pounds of nitrogen per 1000 sq. ft. 1 pound of nitrogen per 1000 sq. ft. is the maximum allowable rate per application as per Florida Department of Agriculture Rule. If a shrub or tree is particularly nutritionally deficient, more frequent applications is preferred rather than heavier applications. Additionally, the plant is better able to assimilate the nutrients applied.

Sagos and palms are fertilized with our 8-2-12 or 8-0-12 at a rate of 12 pounds per 1000 sq. ft.

Any fertilizer debris on impervious surfaces must be removed with the power blower immediately after treatment to avoid staining surfaces and to comply with the Green Industries Best Management Practices. Do not allow any fertilizer to get into a body of water or fish pond.

WEEKLY TRAINING SESSION

MP Conversion Refresher

WHAT ARE MP ROTATORS?

MP's are a low volume (low GPM) low precipitation nozzle that fits on to a spray body. The precipitation rate matches the precipitation rate of the standard rotors that we currently use. (PGP Ultra). They range from a 10' radius to a 30' radius and have side strip nozzles which have a 5' by 15' rectangular pattern. MP's can be used to decrease the gallons per minute of a spray zone for better performance. They can also be used for correcting "mixed" zones. A mixed zone is one that has sprinklers with conflicting precipitation rates running at the same time.

Example:
zone #1 has (4) PGP rotors and (3) spray heads running on the same zone. The (3) spray heads need to be replaced with MP nozzles.

Reason:
PGP rotors have a precipitation rate of .45 inches per hour.
Spray nozzles have a precipitation rate of about 1.75 inches per hour.
MP nozzles have a precipitation rate of .40 inches per hour.
Precipitation rates need to be matched withing every zone. One zone can be different from another, but each zone needs to have one precipitation rate. PGP's and MP's are close enough to run together.

Conclusion:
All heads on a zone will run for the same length of time. Given the example above, after one hour of run time, the rotors will have placed close to ½" of water over the area they are hitting. The sprays have placed close to 1 ¾" of water in the area they cover. This variance in precipitation can cause major issues with any landscape. By changing the sprays to MP nozzles, the distribution of water is considerably more even at just below ½". The impact to the lawn in this case will be very positive.

Converting a spray zone to MP's
A practice that is seen often in Florida is having too many gallons per minute on a spray zone. Spray nozzles require only 30psi to function properly. This is lower than the 45psi needed for a PGP or the 40psi needed for the MP. Because of this some installers believe they can add more sprays to a given zone without taking into account the gallons per minute the water source wants to give them. A 5/8" water meter has a maximum of 15gpm. We prefer to keep the flow around 12gpm. A 1 ½ HP pump has the same limits. By changing all of the spray nozzles on a zone to MP's, we can reduce the GPM and improve the performance of the zone. By reducing the gallons per minute on a zone we reduce the pressure loss allowing for more pressure to be available for the nozzle to perform as intended.

MP ROTATOR PERFORMANCE DATA

MP1000
Radius: 8' to 15'
Adjustable Arc and Full-Circle
- Maroon: 90° to 210°
- Lt. Blue: 210° to 270°
- Olive: 360°

MP2000
Radius: 13' to 21'
Adjustable Arc and Full-Circle
- Black: 90° to 210°
- Green: 210° to 270°
- Red: 360°

MP3000
Radius: 22' to 30'
Adjustable Arc and Full-Circle
- Blue: 90° to 210°
- Yellow: 210° to 270°
- Gray: 360°

Arc	Pressure PSI	MP1000 Radius ft.	MP1000 Flow GPM	MP1000 Flow GPH	MP1000 Precip in/hr ■	MP1000 Precip in/hr ▲	MP2000 Radius ft.	MP2000 Flow GPM	MP2000 Flow GPH	MP2000 Precip in/hr ■	MP2000 Precip in/hr ▲	MP3000 Radius ft.	MP3000 Flow GPM	MP3000 Flow GPH	MP3000 Precip in/hr ■	MP3000 Precip in/hr ▲
90°	30	12	0.17	10.2	0.45	0.52	18	0.38	22.8	0.45	0.52	27	0.76	45.6	0.40	0.46
	35	13	0.19	11.4	0.43	0.50	19	0.40	24.0	0.43	0.49	28	0.82	49.2	0.40	0.46
	40	**14**	**0.21**	**12.6**	**0.41**	**0.48**	**20**	**0.43**	**25.8**	**0.41**	**0.48**	**30**	**0.86**	**51.6**	**0.37**	**0.42**
	45	14	0.23	13.8	0.45	0.52	21	0.46	27.6	0.40	0.46	30	0.90	54.0	0.39	0.44
	50	15	0.25	15.0	0.43	0.49	21	0.47	28.2	0.41	0.47	30	0.95	57.0	0.41	0.47
	55	15	0.27	16.2	0.46	0.53	21	0.48	28.8	0.42	0.48	30	1.01	60.6	0.43	0.50
180°	30	12	0.34	20.4	0.45	0.52	17	0.64	38.4	0.43	0.49	27	1.58	94.8	0.42	0.48
	35	13	0.38	22.8	0.43	0.50	18	0.71	42.6	0.42	0.49	28	1.70	102.0	0.42	0.48
	40	**14**	**0.42**	**25.2**	**0.41**	**0.48**	**19**	**0.77**	**46.2**	**0.41**	**0.47**	**30**	**1.82**	**109.2**	**0.39**	**0.45**
	45	14	0.44	26.4	0.43	0.50	20	0.85	51.0	0.41	0.47	30	1.93	115.8	0.41	0.48
	50	15	0.50	30.0	0.43	0.49	21	0.91	54.6	0.40	0.46	30	2.04	122.4	0.44	0.50
	55	15	0.51	30.6	0.44	0.50	21	0.95	57.0	0.41	0.48	30	2.13	127.8	0.46	0.53
210°	30	12	0.40	24.0	0.46	0.53	17	0.75	45.0	0.43	0.49	27	1.84	110.4	0.42	0.48
	35	13	0.45	27.0	0.44	0.51	18	0.81	48.6	0.41	0.48	28	1.99	119.4	0.42	0.48
	40	**14**	**0.49**	**29.4**	**0.41**	**0.48**	**19**	**0.86**	**51.6**	**0.39**	**0.45**	**30**	**2.12**	**127.2**	**0.39**	**0.45**
	45	14	0.51	30.6	0.43	0.50	20	0.91	54.6	0.38	0.43	30	2.25	135.0	0.41	0.48
	50	15	0.57	34.2	0.42	0.48	21	0.98	58.8	0.37	0.42	30	2.37	142.2	0.43	0.50
	55	15	0.59	35.4	0.43	0.50	21	1.01	60.6	0.38	0.44	30	2.49	149.4	0.46	0.53
270°	30	12	0.48	28.8	0.43	0.49	17	0.95	57.0	0.42	0.49	27	2.37	142.2	0.42	0.48
	35	13	0.53	31.8	0.40	0.46	18	1.03	61.8	0.41	0.47	28	2.55	153.0	0.42	0.48
	40	**14**	**0.63**	**37.8**	**0.41**	**0.48**	**19**	**1.10**	**66.0**	**0.39**	**0.45**	**30**	**2.73**	**163.8**	**0.39**	**0.45**
	45	14	0.67	40.2	0.44	0.51	20	1.17	70.2	0.38	0.43	30	2.89	173.4	0.41	0.48
	50	15	0.72	43.2	0.41	0.47	21	1.23	73.8	0.36	0.41	30	3.06	183.6	0.44	0.50
	55	15	0.75	45.0	0.43	0.49	21	1.30	78.0	0.38	0.44	30	3.22	193.2	0.46	0.53
360°	30	12	0.69	41.4	0.46	0.53	17	1.28	76.8	0.43	0.49	27	3.15	189.0	0.42	0.48
	35	13	0.77	46.2	0.44	0.51	18	1.37	82.2	0.41	0.47	28	3.40	204.0	0.42	0.48
	40	**14**	**0.84**	**50.4**	**0.41**	**0.48**	**19**	**1.48**	**88.8**	**0.39**	**0.46**	**30**	**3.64**	**218.4**	**0.39**	**0.45**
	45	14	0.88	52.8	0.43	0.50	20	1.57	94.2	0.38	0.44	30	3.86	231.6	0.41	0.48
	50	15	0.98	58.8	0.42	0.48	21	1.68	100.8	0.37	0.42	30	4.07	244.2	0.44	0.50
	55	15	1.01	60.6	0.43	0.50	21	1.74	104.4	0.38	0.44	30	4.27	256.2	0.46	0.53

Bold = Optimal pressure for the MP Rotator Nozzle is 40 PSI. This can easily be achieved by using it with the Hunter pressure-regulated Pro-Spray PRS40 Sprinkler Body at 40 PSI.

Works best with Pro-Spray PRS40

Compatible with:

Pro-Spray PRS40
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