

# Welcome to the Ensystex Calibration & Spraying Training



While we are waiting to start

Please kindly enter in your Full Name and Email Address on the Zoom Platform

Or email to [za\\_client@ensystex.com](mailto:za_client@ensystex.com) or WhatsApp 082 609 2474

This is for Registration Purposes and in order for  
us to send you a certificate of attendance!

Sit Back Relax and Enjoy!



# Spraying and Calibrations

Do's and Don't

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# What is Calibration?

Calibration is the process of measuring and adjusting the amount of pesticide your equipment will apply over a target area.

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# Calibration

- ▶ It is a critical “first step” in making certain that your equipment is applying pesticide uniformly and at the correct rate.
- ▶ Calibrating your equipment will save you money, by not wasting pesticides from overapplication; and time, by preventing the need for re-application from underapplication.

# What is the result of incorrect calibration?

Incorrect calibration can lead to:

- Overapplication of pesticide, which is wasteful, costly, and potentially harmful to the environment. Overapplying pesticides also can result in excess residues on or in plants, soil, and surface or groundwater. Furthermore, exceeding the label rate of application is a violation of the law!
- Under application of pesticide, which wastes time and is costly because it leads to poor pest control and presents the need for re-applying the pesticide. It will also encourage pesticide resistance.

# Calibration

Whenever possible, calibration should be done using water or another non-toxic carrier.

Wear the appropriate protective equipment whenever using a pesticide

Remember to always read and follow all of the pesticide label information.



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# Pre-Calibration

Before you begin to calibrate a sprayer, check it carefully to be sure that all components are in good working condition.

- Remove nozzles and screens and clean them in soapy water with a soft brush. Remove any deposits from the nozzle opening with a toothpick or compressed air. (Never use a knife or metallic object to clean nozzles. It will ruin them.) Never try to unclog a nozzle by blowing through it with your mouth.
- In a place away from any wells or water supplies, rinse the spray tank thoroughly and partially fill it with clean water.
- Pressurize the sprayer and flush hoses and boom with plenty of water.
- Reinstall nozzles. For boom sprayers with multiple nozzles, make sure that all nozzles are the same size and type. Choose the right nozzle size, type, and alignment for your application needs (see Nozzle Tip Selection).



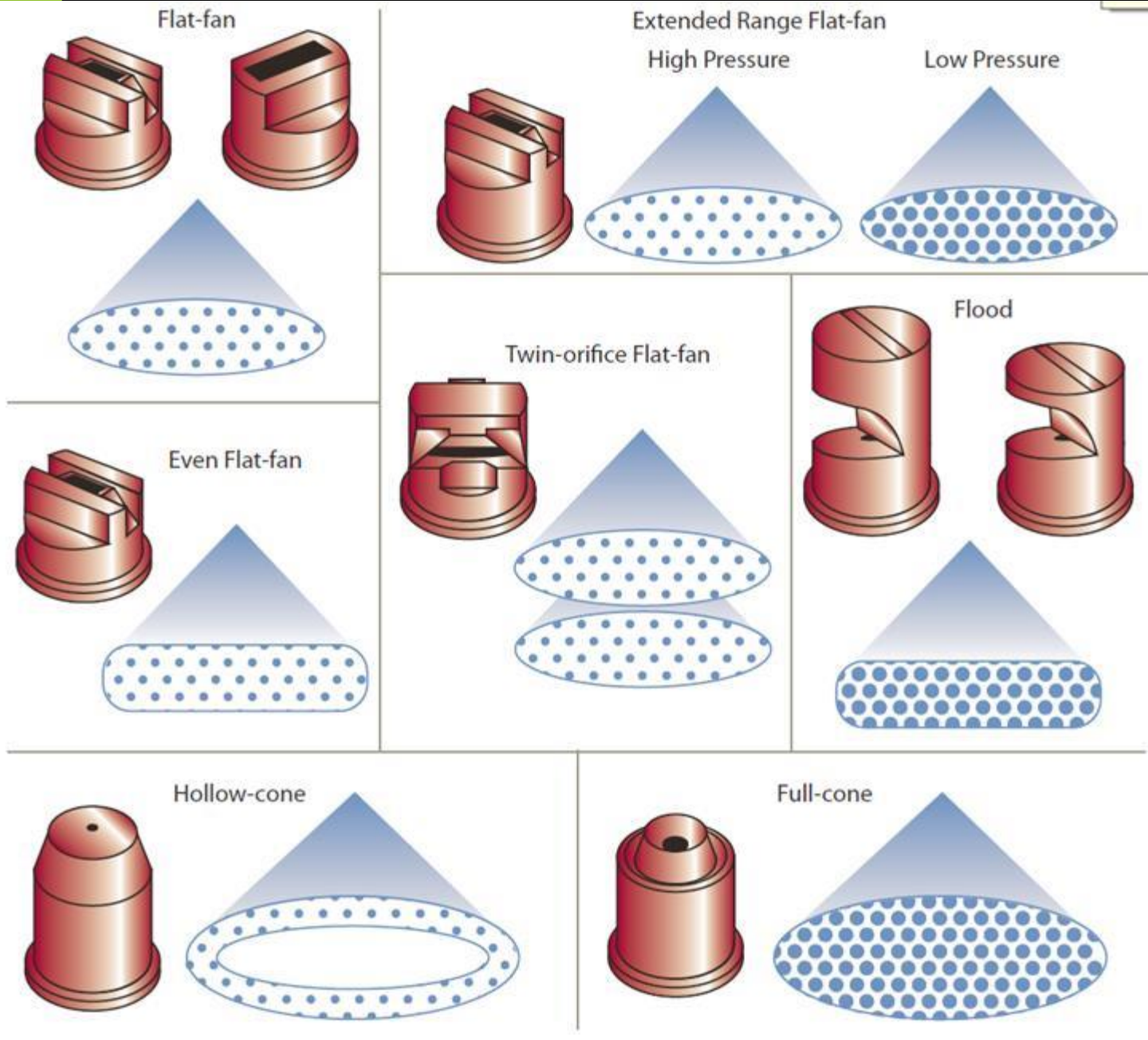
# Pre-Calibration

- Pressurize the sprayer and check nozzles for uniform output by spraying water on the pavement and watching for streaks as the spray dries. Wet streaks directly under the nozzles may result from damaged or worn nozzle tips, low operating pressure, or low boom height. Wet streaks between nozzles may result from incorrect alignment or boom height. Clogged nozzles may produce streaks anywhere in the spray pattern of the bad nozzle. Replace any nozzle producing heavy or light streaks and recheck for an even pattern.
- Check all hoses, fittings, and the pump for leaks.
- Check all pressure gauges. If a gauge is rusty or of questionable accuracy, replace it.
- If you are using a sprayer with multiple nozzles on a boom, follow the steps below to be sure that all the nozzles are releasing nearly equal amounts of spray solution, use water for this procedure.



# General steps in pesticide equipment calibration

- Make sure that the sprayer and its parts are in proper working condition. Inspect the spray tank, hoses, nozzle(s), pumps, strainers, and agitators for any leaks or defects. Repair or replace defective parts.
- Mark off a test area which will be used for a calibration run to determine how much spray solution the sprayer will deliver.
- Determine the pressure for the spraying - which is not always possible with hand sprayers but is possible with boom sprayers and aerial sprayers.
- Using water in the tank as the spray solution, select the pressure and speed of delivery and apply the spray in the test area. The speed of delivery with hand sprayers is walking at the same speed that will be used when the pesticide will be applied.



# Nozzle Selection

- Nozzle tips must be selected according to the spray coverage, droplet size, and application volume desired.



## General steps in pesticide equipment calibration

- Record the time it takes to spray the test area.
- Using a suitable measuring device, collect and measure the spray from the nozzle(s) in the same time it took to spray the test area.

# Calibration Calculations

- ▶ PROTHOR Label - Pre-Construction - 250ml/100L - 5L/SQM.
  - ▶ 5L takes 30 seconds from on-site calibration, thus 30 seconds per SQM.
  - ▶ 50 sqm would then take you 25 minutes to treat.
  - ▶ 50 SQM x 5L = 250L Solution.
  - ▶ 250ml x 2,5 = 625ml Prothor total usage.
- 
- ▶ MAXXTHOR Label - Harvester Termites - 100ml/10L - 5L/100 SQM
  - ▶ 5L takes 5 minutes from on-site calibration, 5 minutes per 100 SQM.
  - ▶ 300 SQM would then take you 15 minutes.
  - ▶ 300 SQM = 5L x 3 = 15L Solution.
  - ▶ 100ml x 3 = 300ml Maxxthor total solution.



# Calibration Calculation

- ▶ MAXXTHOR Label - Ants - 100ml/10L - Porous surface - 1L/10 SQM
- ▶ Wall Floor junction ( e.g. ants / cockroach ) 25 SQM room (5m x 5m)
  - ▶ 25m<sup>2</sup> (20 LM x 0,5m Spray width)
  - ▶ 2,5L solution per 25 SQM and 1L per 10 Linear meters

# Why is pesticide calibration important?

Pesticides are applied intentionally to the environment for the purposes of improving environmental quality for humans, domesticated animals, and plants. Therefore, the application of the right pesticide at the right time and proper rate is important to prevent contamination of the environment. To get the correct rate, pesticide application equipment must be properly calibrated and operated.



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A person wearing a white full-body protective suit, a mesh face mask, safety glasses, and blue gloves is holding a spray wand. They are standing in an industrial or agricultural setting with a metal railing visible in the background. The image is part of a presentation slide with a green and black geometric background.

# Before Spraying a Pesticide

- Read the label thoroughly!
- Be familiar with all precautions.
- Be familiar with First Aid information.
- Put on the proper Personal Protective Equipment (PPE)

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# When Mixing or Applying a Pesticide

- Never smoke or eat while mixing or applying pesticides. You could easily carry traces of the pesticide from your hands to your mouth. Also, some pesticide products are flammable.
- Follow the “Directions for Use” on the label carefully.
  - Use only for the purpose listed.
  - Use only the amount directed, at the time, and under the conditions specified.
  - Twice the amount will NOT do twice the job. You could harm yourself, others, or the plant/area/pet you are trying to protect.
- Always mix or dilute the pesticide outdoors or in a well-ventilated area. Only use the amount listed on the label and measure the pesticide carefully. (Never use the same measuring cups or spoons that you use in the kitchen.)
- Mix only the amount that you need for each application. Do not prepare larger amounts to store for possible future use. The pesticide will degrade and become ineffective over time.



# When Mixing or Applying a Pesticide

- Keep children, pets (including birds and fish), and toys (including pet toys) away from areas where you mix and apply pesticides for at least the length of time required on the label. If no time is listed on the label, wait until the pesticide has dried before reentering the area.
- If clothing becomes saturated in spray solution or contaminated with the pesticide concentrate, dispose of it immediately. Wash any parts of the body that may have been exposed to the pesticide, with soap and water, and finish the job in fresh, clean clothing.

# When Mixing or Applying a Pesticide

- Never put pesticides into food containers, such as empty soft drink, or milk bottles. Keep pesticides in their original containers - ones that clearly identify the contents. Refasten all childproof caps tightly.
- If a spill occurs, clean it up promptly. Don't wash it away. Instead, sprinkle the spill with sawdust, vermiculite, or kitty litter. Sweep it into a plastic garbage bag and dispose of it as directed on the pesticide product label. Cleanup materials that are contaminated with a pesticide must be handled as pesticide waste.

# Indoor Applications

- Make sure that the pesticide label indicates that the product can be used indoors. Never use pesticides labeled “for outdoor use only” inside a building.
- Provide adequate ventilation. If the label directions permit, leave all windows open and fans operating after the application is completed. If the pesticide product is only effective in an unventilated (sealed) room or house, do not stay there. Put all pets outdoors and take yourself and your customers away from treated areas for at least the length of time prescribed on the label.
- Apply most surface sprays only to limited areas such as cracks; don’t treat entire floors, walls, or ceilings unless the label recommends this use.
- When using total release foggers to control pests, the most important precautions you can take are:
  - use no more than the amount needed and
  - keep foggers away from ignition sources (ovens, stoves, air conditioners, space heaters, water heaters, etc.).
  - Do not place foggers in small, enclosed places such as closets and cabinets or under tables and counters.



# Indoor Applications

## In the Kitchen

Remove food, pots and pans, and dishes before treating kitchen cabinet

Don't let pesticides get on any surfaces that are used for food preparation.

Wait until shelves dry before refilling them.

Wash any surfaces that may have pesticide residues before placing food on them.

Cover aquariums with plastic during pesticide applications.

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# Outdoor Applications

- Drift is the movement of pesticides away from the target area or plants. You should always follow all label directions for both the pesticide and application equipment to prevent drift. Also:
  - Never apply pesticides outdoors on a windy day (sustained winds higher than 8 mph) or when winds are gusty or variable in direction.
  - Use coarse droplet nozzles on your sprayer to reduce misting. Larger droplets help prevent drift.
  - Spray as close to the target as possible, you want to get good coverage, while still preventing drift
  - Do not apply pesticides on very hot days, with temperatures above 90°F. The active ingredients in some pesticides can vaporize and drift onto non-target surfaces.
- Do not over apply pesticides.
  - Excessive application could cause the pesticide to run off or seep into water supplies and contaminate them. Once contaminated it is difficult or impossible to clean water sources.
  - Excess spray may leave harmful residues on your homegrown fruit and vegetables, This could affect other plants, wildlife, and fish.
  - Read the label to determine if the pesticide should be watered-in by irrigation

# Outdoor Applications

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  - Read the label to determine if the pesticide should be watered-in by irrigation
- Never mix or apply a pesticide near wellheads, stormwater drains, or bodies of water, such as creeks and streams.
- Keep pesticides away from plants and wildlife you do not want to treat.
  - Some pesticides are toxic to pollinators, so read the label carefully to determine if there are application timing or other restrictions.



# Outdoor Applications

Do not spray bird nests when treating trees.

Cover outdoor ornamental fishponds (do not allow to overheat).

When applying pesticides to food crops and gardens, always check to make sure they are labeled and follow the reentry time.

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# We will be demonstrating the following videos with regards to Calibration and Spraying!

- ❑ Cleaning of Sprayers - Nozzles and Filters
- ❑ Calibration
- ❑ Measuring of Chemical - Tip & Measure
- ❑ Spraying after Calibration
- ❑ Spraying Outdoors
- ❑ Spraying Indoors

THESE VIDEOS WILL BE MADE AVAILABLE ON  
YOUTUBE!



Cleaning  
- Filters  
- Nozzles



# Calibration





Spraying  
as per label



**Metronome** ★

Practice Effectively  
with Tempo Automation

9:41 94% 4G

**120** BPM

Tempo Automation

72

+1 BPM  
EVERY 4 BARS

Stop

The image shows the Metronome app logo, which is a white triangle with a diagonal line inside a black rounded square. Below the logo is a smartphone displaying the app's interface. The interface includes a tempo display of 120 BPM, a 'Tempo Automation' section with a circular dial set to 72, and a setting for '+1 BPM EVERY 4 BARS'. A 'Stop' button is visible at the bottom of the screen.

# Calibrating and Spraying Methods - Outdoors





# Spraying Methods - Indoors



# Measuring your Chemical Tip and Measure



Thank you for listening!

If you have any question's please  
send us an email and we will get  
back to you.

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