



# Pests & Partners

## Lab 101



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# Pest or Partner?

## Bumblebees

While many people have a fear of bees and their stinger, they are actually our best garden partner. Bees primarily come to the garden to get nectar for nutrition and in return they help pollinate our garden giving us more produce.

## Solution

When you see a bee, remain calm since bumblebees are not very aggressive. Do not wave your arms, swat at the bumblebees or accidentally bump into their nest. Instead, move slowly and carefully while retreating from the location.



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# Pest or Partner?



## Tomato Hornworm & Wasp

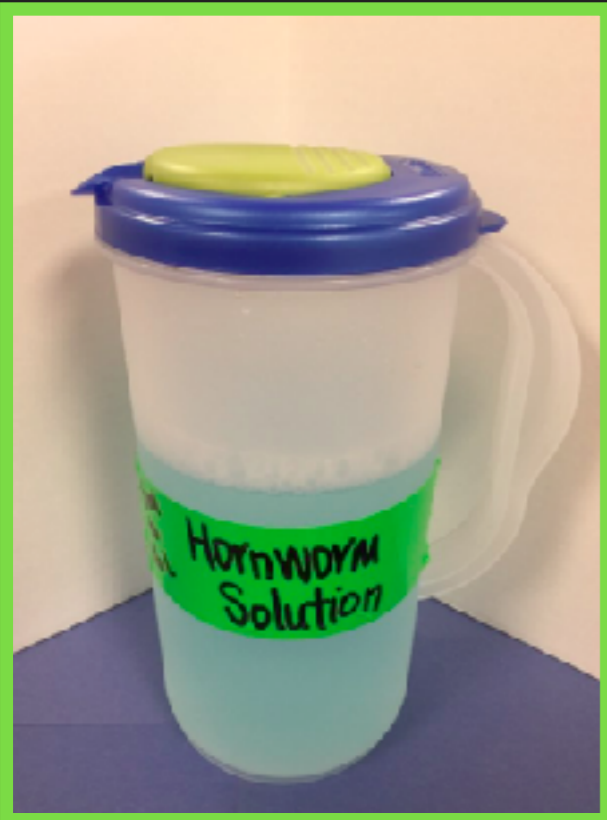
The tomato hornworm is a pest that can devour a plant in an entire day. Wasps can sting multiple times in an attack.

However, the wasp becomes our partner in two ways: pollination and laying its egg on the worm. When the larvae are ready to hatch, they feed on the host worm then move on to find more hornworms to devour.

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# Soapy Solution



Hornworms can be difficult to find during the school day. First of all, the hornworm uses mimicry to hide itself...it looks just like the stem & leaf on a tomato plant! Secondly, hornworms usually do their work in the early evenings.



If and when you do find one, simply pull it away from the plant using gloves and drop it into a solution of soapy water.

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# Pest or Partner?



## Ants

Did you know that ants are our ecological partner? Yes! They eat the eggs of many insects and serve as food for birds, lizards, and other beneficials. Their tunnels aerate the soil and allow water and nutrients to flow directly to the plant roots. They also distribute seeds by storing them in their tunnels. However, you must be aware of your surroundings and watch out for fire anthills. When their home is in danger, ants will bite and sting with fierce speed.



[Click HERE](#) to read more about ants!

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# Club Soda Solution

While there is a debate on whether or not this is a viable solution, we have found this method to work quite effectively and safely in the ATA Garden. However, because of the danger fire ants pose, please alert an adult to the location of an ant hill and the adult ONLY should pour the club soda directly into the ant hill.



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# Pest!

## Squash Bugs

While some research shows that squash bugs may control soil-dwelling insects, these are Mrs. Childress' #1 pest in the ATA Garden. Squash bugs like to pierce the vines of squash, zucchini, and pumpkin plants and can deplete a plant of its sap in literally one day. The most effective way to control these bugs is to harvest the eggs before they hatch. We use the duck tape method in addition to spraying the underside of foliage with a soapy solution.



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# Soapy Solution

We use a dilution ratio of 2 teaspoons Dawn Dish soap (blue) to 1 quart water to make our soapy solution. This solution should ONLY be applied in the early morning (AM) and/or late evening (PM) to avoid burning the foliage of the plant. This soapy solution is biodegradable yet it is effective on controlling many garden pests.



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# Partner!

## Epsom Salt Solution

We prefer to use natural solutions to help our plants thrive in the AT Allen Garden. In addition to composting, Epsom salt is another fertilizer option as it is a naturally occurring mineral called magnesium sulfate. Magnesium is critical for seed germination and the production of chlorophyll, fruit, and nuts. Magnesium helps strengthen cell walls and improves plants' uptake of nitrogen, phosphorus, and sulfur. Epsom salt can be applied in a variety of ways and locations in the garden. We use a dilution ratio of 1/2 teaspoon Epsom salt to approximately 1 quart of water.



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