

# **LOS ANGELES UNIFIED SCHOOL DISTRICT PEST OF THE MONTH PROGRAM NO. 12**

## **HONEY BEES SCAVENGING IN TRASH CONTAINERS**

### **INTRODUCTION**

Honey bees, *Apis mellifera*, evolved on earth at about the same time the flowering plants appeared. These plants need bees to pollinate their flowers so that they could set seed and thus reproduce themselves and survive. In order to attract bees, plants started to produce nectar in their flowers to induce bees to visit them. In attempting to remove nectar from flowers, bees inadvertently pollinate them thus allowing these plants to produce seeds, fruits, nuts, berries, vegetables, etc. This relationship between flowering plants, nectar, pollen, and honey bees has been in existence for eons. There are those who believe that without bees, life on earth as we know it would not exist. Pollinators are at the base of all food webs and food chains on the planet. The maintenance and perpetuation of world plant communities are heavily dependent on pollination particularly cross pollination which helps to enrich plant communities by ensuring genetic variation which helps plants to survive and adapt to changing environments. Honey bees are extremely beneficial insects and they play a very important role in producing honey, beeswax, pollen, and pollinating crops. Estimates of the value of insect pollinated crops in the U.S.A. (mostly by bees) made in the late 1980's ranged from \$4.6 to \$18.9 billion. The value of honey bees based on fruit, nut, vegetable, and seed production resulting from their pollination services is estimated to be about 150 times the value of honey and beeswax which they produce.

### **WHY ARE HONEY BEES SCAVENGING IN TRASH CONTAINERS AT VARIOUS LAUSD SCHOOLS?**

The normal food of honey bees is nectar and pollen which they obtain from flowers. Southern California is in the fifth year of what is described as drought conditions. As of this writing, the rainfall total for the Los Angeles area for 2004 is 50% below average. Barring some kind of a miracle, all indications are that we are going to have another drought year in Los Angeles County. There is a direct relationship between rainfall and plant growth and flower production. In dry years, plant growth is retarded and flower production is reduced. Smaller and fewer flowers with less nectar are produced in years of decreased rainfall. Honey plants in foothills, canyon, estuarine, and mountainous areas dry up and die earlier in the year when drought conditions are present. This puts great stress on honey bee colonies in these areas because they are unable to obtain food from their normal sources. In times of dire need, honey bees like many other animals, would resort to being opportunistic and resourceful and try to find food so that they can survive. The choices facing honey bees in drought conditions are stark indeed and these choices

are to find food or die. Under such conditions, honey bees can become desperate and they will begin to scavenge for food in unusual places such as trash containers. Last summer honey bees have been observed persistently trying to obtain sugar from churro carts at a theme park in Southern California to the extent that they forced vendors to close the dispensing windows on these carts. This type of behavior is rather unusual for honey bees. Given a choice, they would rather obtain their food from flowers. They have done that for millions of years.

## **WHAT IS ATTRACTING HONEY BEES TO TRASH CANS AT LAUSD.**

Sanitation engineering studies and basic trash receptacle research at various LAUSD schools over the past two years reveal that there are three materials that are **extremely attractive** to honey bees in school trash receptacles. These materials are:

1. **Rich's Honey Dip Donut Glaze®.** Once or twice per week, cinnamon rolls are prepared and served by LAUSD kitchens. This donut glaze is poured over these rolls. As the name implies, one of the constituent of Rich's Honey Dip donut glaze is honey. When remnants of these cinnamon rolls and the styrofoam containers in which they are served are discarded in the trash, the glaze melts in the sun and it becomes highly attractive to honey bees. Once bees taste this rich, sweet food, they become very excited and they doggedly look for more even if this meant burrowing down into the trash in cans to find it.
2. **Madeira Farms Table Syrup®.** Pancakes and waffles are periodically served for breakfast at LAUSD schools. These are served with Madeira Farms portion pak table syrup. This material contains about 75% high fructose corn syrup. Discarded portion pak containers and food materials which contains this high sugar syrup is extremely attractive to honey bees .
3. **Brooks Farm Bakery® pre-packed cinnamon rolls.** These rolls are dispensed to students in enclosed sealed plastic bags. The rolls have a white sugary glaze on them. When remnants of these rolls and their plastic wrappers are discarded in the trash, the glaze liquefy particularly when they are exposed to direct sunlight. Honey bees just love to lap up this high sugar content liquid glaze.

## **WHAT DO WE NEED TO DO ABOUT THIS SITUATION?**

The three food materials mentioned above are usually served for breakfast at LAUSD schools. The **easiest thing** for us to do to mitigate this problem is to promptly empty the trash cans that are in the food serving area immediately after breakfast and put new liners in the trash containers.

Honey bees can communicate the distance and direction to a food source to hive members. If bees are allowed to recruit nest mates to a food source such as trash receptacles at schools, they will guide many bees to this location and once they taste this

rich, concentrated food, they become drawn to it like being pulled by magnets. They will persist in coming to this area and they will not give up easily. Deny them access to this food early and they will not be able to recruit other bees to that site. **The idea here is to stop the problem before it starts by emptying the trash cans immediately after breakfast.**

It is not possible to pull foraging bees away from a rich food source that they have discovered. Honey bees scavenging in trash cans is a new opportunistic bee behavior and no information is available in the literature on how to mitigate this problem. We have experimented with a number of locally made traps to catch these rogue bees but the traps were not successful in drawing bees out of trash cans where they have been drinking pancake syrup. Catching a few bees did not help the situation. They just keep coming. Once they zero in on high sugar materials in trash cans, they return there almost in a robotic fashion as if drawn by magnets. Honey bees can fly as much as 5 miles to find food. In most situations, we cannot determine where the hive is located. The bees could be coming from a wild colony or hobby beekeepers with a few colonies kept in their back yards. Thus we cannot eliminate the source of the problem.

A second option is to place dome-shaped covers with push back lids in them on trash cans in the lunch area. This will help to keep the bees out of the trash receptacles.

The kids will invariably spill syrup and other sweet materials on the push back lids of these trash cans and they will require maintenance and cleaning on a regular basis. If you are working at a school where the lunch area has been besieged by honey bees, you need to plan ahead. Talk to your principal and your CPM and see how they can help you to procure trash can lids for the trash containers **in the lunch area.**

Another factor of great importance is the placement of trash receptacles in the lunch area.

**PLEASE DO NOT PLACE TRASH CANS BETWEEN THE LUNCH TABLES.** Contrary to popular belief, this is not helping the children and it does not result in better trash disposal. Trash cans placed between the lunch tables only draw honey bees, yellowjacket wasps, and flies too close to the kids. Besides, trash cans placed between the lunch tables are a hindrance to free and easy movement of children and can result in accidents. Trash cans should be placed on the perimeter of the lunch area at least **TWELVE FEET** away from the students. By doing this, hazards to the children can be minimized. **PLEASE** be reminded that some people are allergic to honey bee sting venom and they are at great risk if they are stung. Most people who are allergic to bee and wasp sting are not aware that they are hypersensitive until they are stung and react in a dramatic manner. **Everyone has to do his/her part in following good sanitation practices and good trash handling procedures so that the threat from bee or wasp sting is reduced.**

## **CONCLUSIONS**

This pest of the month program is being issued a bit early because honey bees do not start scavenging in trash receptacles until spring and summer. The purpose of disseminating this information now is to give you time to plan ahead and put a program in place to deal with rogue bees looking for food in trash cans at schools. Please be reminded that not all LAUSD schools are impacted by scavenging honey bees and we do not need to purchase trash can lids for all trash cans at all schools. Plant managers know, from past experience,

if their school has been affected by honey bees. Scavenging honey bees have negatively impacted some schools while others are not affected at all. It all depends on the environment surrounding a school and the number of managed and wild bee colonies in the area. **Everybody has to do his/her part in helping to mitigate this problem** and protect school children from being stung by bees. Thank you for your help and cooperation on this important matter.

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