



**SOUTH CAROLINA FAMILY AND COMMUNITY LEADERS**  
Affiliated with National Volunteer Outreach Network, Country Women's Council, U.S.A., Associated Country Women of the World and in partnership with Clemson University Cooperative Extension Service  
SCFCL website: <http://www.scfcl.com>

## Leader Training Guide

# Let's Keep our Bees Buzzing

### Objectives:

The participants will be able to:

1. Understand the importance of bees to the world.
2. Understand the travel of bees by growers

### Lesson Overview/Introduction:

As we breathe in the clean spring breeze and see beautiful bright flowers, many of us don't know half of what animals do for our environment and us individually. While admiring such a wonderful spring site we often hear a diverse amount of sounds, one of the most important and most widely known is the bee buzz. Many don't know that while bees are at the flower, they are typically quiet. The noise we hear is from their hives, or other bees flying. Without bees we would **not** be able to have most crops. Meaning our plant life wouldn't be full of the bright spring colors, it would be dull, and our plants would die. This would lead to a significant decrease of many foods that need to be grown in ways that require pollination.

### Lesson:

**Pollinators** are different types of insects, including bees, that extract nectar to use as an energy source which allows them to fly. They also extract pollen that they use to feed their babies known as larvae, both of these important substances are extracted from flowers. This is why you see pollinators everywhere. Bees are the key to any successful plant growing function because when the flowers are successfully pollinated it allows seed production, which leads to more crops maturing. It is so important to realize pollinators are a keystone species, and without them our ecosystem would fall apart.

**What is happening to the honeybees:** In recent years, many of our honeybees and other pollinators populations have significantly declined. Researchers say many factors have contributed to the rapid and abundant decline of the western honeybee, *Apis mellifera*, such as habitat loss, pesticides, climate change, and disease.

These issues lead to less bees, which correlates with less food production. Earlier the pollinators were referred to as "keystone species" which means without them being there, the whole ecosystem would fall apart.

**Grower's Solution to the problem:** Many growers will use assisted migration to bring honeybees to their crops. This is the case each year in California, where the annual, albeit assisted, migration occurs. This assisted migration is an event where about 1.5 million honeybee colonies are transported in large trucks to California where they will pollinate almonds. It's not only the 1.5 million bees from the surrounding California area, but also another half a million from the California area. Transporting a large quantity of bees can be difficult and stressful for everyone involved. It takes lots of hard work and organization in order to get such a vast number of bees to one place safely.

**Traveling can be Stressful:** Bees take notice of such a stressful time, and they too feel stress. There are quite a few major stresses bees take on during this time. Bees feel stress while traveling which causes them to age more rapidly, than bees that are consistently not on the move. This then leads to them dying quicker. Stress can be caused in a multitude of ways while traveling. Some of the stressor's bees experience include temperature, ventilation, food, and security issues. When the bees get too hot, conflict can occur. If the bees don't have ventilation, overheating can occur. If the bees aren't secure, they can try to escape, and if they don't have food they will starve. These stresses can affect the bee's ability to pollinate if they are able to survive, if these stresses become too much for the small animals, they will die.

**The Travel Plan:** Bees are very organized animals, and they try to do everything they possibly can in order to pollinate and continue on for future generations. Of course there are ways to minimize these stressors. To minimize temperature issues the driver of the bees won't stop during the hot day so the bees can keep on moving. The bee drivers can also spray the bees down with water to reduce the heat and cool the bees off. Ventilation issues can also cause overheating. To ensure ventilation won't be an issue, bees' boxes should be inspected before the drive.

If the bees get hungry and aren't given food, they will starve. The bees need food, on these trips they are often given sugar water to supplement honey.

**Laws on Bees:** To ensure the highest quality of travel for honeybees, there are some laws to follow when transporting bees.

- You need to have a certified inspection coming into South Carolina. If bees are leaving South Carolina they must be inspected by the South Carolina Department of Plant and Industry. If there is failure to comply with these guidelines could result in a misdemeanor or even jail time.

## Source Materials:

<https://cdllife.com/2013/bee-haulers-face-challenges-road/>

<https://www.honeyflow.com/blogs/beekeeping-basics/how-to-move-a-bee-hive>

<https://news.ncsu.edu/2016/08/commercial-bee-study/>

[https://www.scientificamerican.com/article/why-do-bees-](https://www.scientificamerican.com/article/why-do-bees-buzz/#:~:text=Honeybees%20(genus%20Apis)%20are%20incapable,quiet%20when%20foraging%20on%20flower)

[buzz/#:~:text=Honeybees%20\(genus%20Apis\)%20are%20incapable,quiet%20when%20foraging%20on%20flower](https://www.vpr.org/programs/2017-08-18/how-do-bees-make-honey-and-why-do-they-sting)

[https://www.vpr.org/programs/2017-08-18/how-do-bees-make-honey-and-why-do-they-](https://www.vpr.org/programs/2017-08-18/how-do-bees-make-honey-and-why-do-they-sting)

[stinghttps://www.clemson.edu/extension/pollinators/apiculture/rules-regs.html](https://www.clemson.edu/extension/pollinators/apiculture/rules-regs.html)

## **Lesson Summary:**

1. Planting a native flower buffer to allow for year-round nectar sources to encourage generational survival of bees outside of cash crop pollination.
2. Working with local honeybee groups and associations to locally source honeybees for the season to reduce transportation from far distances.
3. Encouraging riparian buffer zones to allow for the establishment of safe habitats for solitary native pollinators such as bumble bees, carpenter bees, and butterflies who do not live in social colonies but need untouched shrub and bramble to establish a nesting ground.

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