

2010 First Place Winner

For Bee or Not For Bee by Shelby Kilpatrick, 16, Copper Canyon, Texas
Is My Community Honey Bee Friendly?

I am a member of the Collin County Hobby Beekeepers Association and the Texas Beekeepers Association. These are large organizations on the local and state levels whose primary objectives include supporting beekeepers and educating the public on bees. Given those associations, I assumed the above question to be true. However, all I really knew was that my fellow beekeepers, my family and I were honey bee friendly. My quest began to find out if my community was “For Bee or Not For Bee”?

In order to determine if my community is honey bee friendly, I created a survey and distributed it to my friends, 4-H members, beekeepers, Master Gardeners, Master Naturalists, Extension Agents and a large email parent’s network through my dad’s company. One hundred thirty-five were returned, providing input from a variety of people and geographically representing the North Central Texas Area, my community. The survey consisted of four main themes: Landscape, Pest Management, Local Laws and Restrictions, and General Honey Bee Questions. [1] This essay presents results consistent with my belief that my community is “For Bee” and indeed honey bee friendly.

The first main topic, Landscape, includes: water, beneficial insects, plants, lawn care and wildflowers. Water is one of the four main things that honey bees forage for. Water sources may include natural features such as ponds or lakes; or man-made features such as bird baths, installed ponds or rain gardens. [2] Beneficial insects, such as bees, are insects that pollinate plants or reduce pests that might cause harm to one’s garden. Native plants are well adapted to the local weather and soil conditions performing better in our landscapes. [3] A typical lawn care service mows lawns, trim brushes and trees, and maintains flower beds weekly. Because of this frequency, vegetation does not achieve blooming maturity, reducing the bees foraging area. The majority of respondents indicated that they keep water available, identify the honey bee as a beneficial insect, use native plants in their landscapes and do not use lawn services. Additionally, whether people researched bee friendly plants or not, most people provide a variety of flowering plants in their landscape. [1] This is important to bees as they need pollen and nectar to survive. [3]

Responses regarding the wild flower seeding programs along the roadways and green spaces to allow for roadside plants to grow and bloom which provide a significant food source for honey bees were limited. Some cities in my community like Bartonville, Plano and Richardson have wildflower seeding programs. [1] Flower Mound is named after a 12.76 acre mound that is covered in wildflowers annually. [4] Double Oak, a neighboring town, allows its residents to keep wildflower areas in their yards within certain restrictions. [5] Dallas County Commissioner Dickey has allowed the Dallas County Master Gardener Association (DCMGA) to use property around her office to create demonstration gardens that attract honey bees. The DCMGA have also planted wildflower seeds along the Katy Trail. [6]

The Texas Department of Transportation manages a wildflower seeding program. Approximately 30,000 pounds of wildflower seed are sown each year along Texas's highways. [7] The Lady Bird Johnson Wildflower Center, in partnership with Native American Seed, award Seed Grants to Texas K-12 schools supporting the Wildflower Center's mission to increase the sustainable use and conservation of native wildflowers, plants and landscapes. [8] Since 2009, sixty grants have been awarded across Texas. [9] Over fifteen Seed Grant schools are within my community. [8] Thanks to Mrs. Johnson's vision in establishing the National Wildflower Research Center in 1982, honey bee pollen and nectar sources have increased and been preserved. [10]

The second main topic was Pest Management, which focused on outdoor chemical usage. Lawn and garden products are tested extensively and application instructions are approved by the Environmental Protection Agency. [11] When applying chemicals in one's yard, it is advisable to do so in the early morning or late evening. At this time winds are generally calm, avoiding chemicals drifting away from the intended treatment area. Also, during these times, the honey bees are less likely to be foraging, thus reducing the risk of harming them. [12] In relation to the survey, about half of the respondents apply chemicals with bee protection in mind, use organic or avoid chemical use. Additionally, respondents indicated that when using chemicals they follow label directions and apply either in the morning or evening. [1]

The third part focused on Local Laws and Restrictions related to beekeeping. Most respondents were unsure, so I researched this myself. Within the communities of Lake Dallas and Denton, one can keep bees as long as one manages them properly and does not create a nuisance. [13,14] On the other hand, the City of Plano's ordinance allows for beekeeping with very restrictive and complex parameters including record keeping and limits three hives per City lot. [15] Plano's ordinance might deter all but the most avid beekeepers. Copper Canyon, Argyle and Double Oak do not list any ordinances pertaining to beekeeping.

The survey concluded with General Honey Bee Questions pertaining to the record losses of honey bees as reported in 2004 by commercial beekeepers, now referred to as Colony Collapse Disorder (CCD). I wanted to determine if people are aware that honey bees are declining and if they are doing more to support the bees. As I suspected from previous public educational encounters, most of the respondents indicated they are aware of CCD and are concerned about honey bees disappearing. [1] Many respondents are planting food sources for bees, supporting local beekeepers, joining local beekeeping clubs, increasing awareness on bee related issues, limiting chemical use, and keeping water sources available. Those that were not previously doing anything to help bees, are open to ideas and learning more about how they can help. [1]

As a result of this survey and research, there is no doubt that my community is "For Bee" and wants to be even more bee! I will personally reward survey responders with educational tips enabling them to become more honey bee friendly. I will continue to study, support and participate in the Honey Queen/Princess and the Ambassador Programs within the afore mentioned organizations cultivating greater support and well-informed stewards of the honey bee as it is better to be For Bee, then Not For Bee.

Endnotes:

1. 135 Anonymous Participants “Are You and Your Community Honey Bee Friendly?” Survey Jan. 2010 **Survey Results and Copy of Survey**
2. National Wildlife Federation-Supply Water for Wildlife. 26 Jan. 2010 <<http://www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Create-a-Habitat/Supply-Water-for-Wildlife.aspx>>
3. Gareau, Tara P.; DeBarros, Nelson; Barbercheck, Mary; and Mortensen, David. Conserving Wild Bees in Pennsylvania. Pennsylvania State University Publication 2009. Accessed online 15 Jan. 2010 <<http://pubs.cas.psu.edu/FreePubs/pdfs/uf023.pdf>>
4. The Flower Mound. Town of Flower Mound, Texas. 28 Jan. 2010 <http://www.flower-mound.com/comm_info/themound.php>
5. Town of Double Oak, Texas. Double Oak Code of Ordinances, Chapter 6 Health and Sanitation, Article 6.300 Offensive Conditions on Real Property, Section 6.306 Managed Wildflower/Native Landscape Areas. Accessed online 24 Jan. 2010 <<http://codes.franlinlegal.net/doubleoak-flp/>>
6. Solomon, Diane. Dallas County Master Gardener. Telephone Interview. Wildflower Programs in Dallas County. 27 Jan. 2010
7. Texas Department of Transportation Wildflower Program. 24 Jan. 2010 <http://www.dot.state.tx.us/public_involvement/wildflowers/default.htm>
8. Lady Bird Johnson Wildflower Center Seed Grants. The University of Texas at Austin. 27 Jan. 2010 <<http://www.wildflower.org/wildflowers/>>
9. Tiede, Saralee. Director of Communications, Lady Bird Johnson Wildflower Center. Telephone Interview. Lady Bird Johnson Wildflower Seed Grants. 28 Jan. 2010
10. Biographical Information, Mrs. Lyndon Baines Johnson. Lyndon Baines Johnson Library and Museum, National Archives and Records Administration. 28 Jan. 2010 <http://www.lbjlib.utexas.edu/Johnson/archives.hom/biographys.hom/ladybird_bio.asp>
11. Originally prepared by Kerns, Waldon; Luna, John; May, Jim; Relf, Diane; Thnberg, Eric; and Weaver, Mike. Revised by Latimer, Joyce; Goatley, Mike; Evanylo, Greg; Hipkins, Pat; and Appleton, Bonnie. Groundwater Quality and the Use of Lawn and Garden Chemicals by Homeowners. Virginia Cooperative Extension Publication 2009. Accessed online 24 Jan. 2010 <<http://pubs.ext.vt.edu/426/426-059/426-059.pdf>>
12. Riedl H.; Johansen E.; Brewer L.; and Barbour J. How to Reduce Bee Poisoning from Pesticides. A Pacific Northwest Extension Publication 2006. Oregon State University, University of Idaho, and Washington State University. Accessed online 27 Jan. 2010 <<http://extension.oregonstate.edu/catalog/pdf/pnw/pnw591.pdf>>
13. City of Lake Dallas, Texas. City of Lake Dallas Code of Ordinances, Chapter 18, Article II. Keeping Animals Generally, Section 18-44. Bees. Accessed online 27 Jan. 2010 <<http://codes.franklinlegal.net/lakedallas-flp/>>

14. City of Denton, Texas. Code of Ordinances City of Denton, Texas, Chapter 6 Article I. In General, Denton Animal Control Ordinance, section 6-9. Animal Nuisances (3). Accessed online 27 Jan. 2010 <<http://www.cityofdenton.com/index.aspx?page=105>>
15. City of Plano, Texas. City of Plano Code of Ordinances, Chapter 4, Section 4-1002. Beekeeping. Accessed online 27 Jan. 2010 <<http://pdf.plano.gov/animal/AnimalOrd.pdf>>

Other References:

- Texas Agricultural Extension Service. Wildlife Gardener, a Junior Master Gardener, Golden Ray Series Book. National Junior Master Gardener Program, Texas Cooperative Extension, and the Texas A&M University System, 2004.
- Fox News-Plight of the Bumblebee. Fox News Network. 21 Jan. 2010 <<http://www.foxnews.com/scitech/2010/01/12/plight-bumblebee/>>
- Penn State University. Bee research shows benefits of native plants, wild bees. Pennsylvania State University. 21 Jan. 2010 <<http://live.psu.edu/story/43831>>
- Use Lawn Chemicals with Care. Lincoln-Lancaster County Health Department Publication 2007. Accessed online 25 Jan. 2010 <<http://www.lincoln.ne.gov/city/health/envIRON/pollu/waste/pdf/HHWYard07.pdf>>
- Frazier, Maryann; Mullin, Chris; Frazier, Jim; and Ashcraft, Sara. What Have Pesticides Got to Do with It? Department of Entomology; Pennsylvania State University. Accessed online 23 Jan. 2010 <http://www.biobees.com/library/pesticides_GM_threats/What_Have_Pesticides.pdf>
- Insects, Bees, and Entomology; Learn About CCD-Honey Bee Colony Collapse Disorder. National Agriculture Library Articles. 22 Jan. 2010 <http://riley.nal.usda.gov/nal_display/index.php?info_center=8&tax_level=2&tax_subject=10&level3_id=0&level4_id=0&level5_id=0&want_id=1322&topic_id=1006&placement_default=0>
- Phillips, Theresa. What are GMOs? The New York Times Company. 25 Jan. 2010 <<http://biotech.about.com/od/faq/f/GMOs.htm>>
- State of Texas, United States of America. Texas Constitution, Texas Statutes, Agriculture Code, Title 6, Subtitle A, Chapter 131 Bees and Honey. Accessed online 28 Jan. 2010 <<http://www.statutes.legis.state.tx.us/Docs/AG/pdf/AG.131.pdf>>
- Brinda, Tom and Kirk, Lynn. Good Bugs, Bad Bugs. Lewis Ginter Botanical Garden. 22 Jan. 2010 <http://www.lewisginter.org/gardens/collections/GoodBugsBadBugs_000.php>
- Fiedler, Anna; Tuell, Julianna; Isaacs, Rufus; and Landis, Doug. Attracting Beneficial Insects with Native Flowering Plants. Department of Entomology, Michigan State University Publication 2007. Accessed online 29 Jan. 2010 <<http://nativeplants.msu.edu/pdf/E2973.pdf>>

Roseboro, Ken. Organic Consumers Association-Journal Article Says Suppressed Study Found GM Corn Killed Ladybugs. 25 Jan. 2010 <http://www.organicconsumers.org/articles/article_19470.cfm>

European Food Safety Authority (ESFA) Panel. Scientific Opinion of the Panel on Genetically Modified Organisms. The ESFA Journal 2008, 757, 1-12. Accessed online 24 Jan. 2010 <http://www.efsa.europa.eu/en/scdocs/doc/gmo_op_ej757_greek_safeguard_clause_on_mon810_maize_en.pdf>

Latsch, Gunther. Collapsing Colonies-Are GM Crops Killing Bees? 24 Jan. 2010 <<http://www.spiegel.de/international/world/0,1518,473166,00.html>>

Amos, Brit. Death of the Bees: GMO Crops and the Decline of Bee Colonies in North America. Global Research. 27 Jan. 2010 <[http://www.globalresearch.ca/index/php?context=va&aid=8436](http://www.globalresearch.ca/index.php?context=va&aid=8436)>

Reilly, Michael. Discovery News-Is Genetically Modified Corn Toxic? 23 Jan. 2010 <<http://news.discovery.com/earth/is-genetically-modified-corn-toxic.html>>

McDonald, John. Could genetically modified crops be killing bees? Hearst Newspapers, Hearst Communications. 24 Jan. 2010 <http://articles.sfgate.com/2007-03-10/home-and-garden/17234256_1_beekeepers-plant-genes-canola>

Ion Exchange-Benefits of Growing Native Plants. 26 Jan. 2010 <<http://www.ionxchange.com/benefits%20of%20native%20plants.htm>>

Howe, Linda Moulton. Organic Consumers Association-Honey Bee Disappearances: Could Pesticides Play A Role? 25 Jan. 2010 <http://www.organicconsumers.org/articles/article_4557.cfm>

Eilperin, Juliet. Study Points to Virus in Collapse of Honeybee Colonies. The Washington Post Company. 23 Jan. 2010 <<http://www.washingtonpost.com/wp-dyn/content/article/2007/09/06/AR2007090602501.html>>

Ten Reasons to Ditch Your Lawn and Garden Chemicals. Organic Land Care committee of Connecticut and Massachusetts, Organic Land Care Program. 24 Jan. 2010 <<http://www.organiclandcare.net/articles/ten.php>>

iVillage Garden Web-Organic Pesticides. 23 Jan. 2010 iVillage Inc. <<http://forums.gardenweb.com/forums/load/okgard/msg0621154920761.html>>

Re-Regulation of Pesticides-Fall 1996. MacNeil/Lehrer Productions. 21 Jan. 2010 <<http://www.pbs.org/newshour/backgrounders/pesticides.html>>

Tvedten, Stephen. Is what you put on your lawn killing you? Excerpts from Chapter 14 of "The Best Control". 22 Jan. 2010 <<http://www.safe2use.com/ipm/lawn.htm>>

Cox, Caroline. Corn Gluten Meal-A Natual Lawn Herbicide. Northwest Coalition for Alternatives to Pesticides (NCAP) Journal of Pesticide Reform Winter 2005/ Volume 25, Number 4. Accessed online 24 Jan. 2010 <<http://www.pesticide.org/pubs/alts/pdf/corn glutenmeal.pdf>>

Consumer Reports, Lawn-care services: How they stack up. Consumers Union of the U.S. 22 Jan. 2010 <<http://www.consumerreports.org/cro/home-garden/resource-center/lawn-care-5-08/lawn-care-services/lawn-care-services.htm>>

Garden Guides-Texas Kidneywood (Eysenhardtia Texana). 26 Jan. 2010 <<http://www.gardenguides.com/taxonomy/texas-kidneywood-eysenhardtia-texana/>>

Sohn, Emily. Discovery News-Scorpion Venom Tapped as Pesticide. Discovery Communications. 20 Jan. 2010 <<http://news.discovery.com/animals/scorpion-venom-pesticides.html>>