

Bee School 2024



Norfolk County Beekeepers Association

Introduction



☞ Introduction:

- ☞ NCBA President Tony Lulek – Opening Remarks
- ☞ Bee School Director – Tony Lulek
- ☞ Bee School Administrator – Dana Wilson
- ☞ NCBA Board members.
- ☞ Multiple Year Beekeepers and Helpers.

☞ Attendance

- ☞ Please make sure you sign in at every class
- ☞ Verify your contact information

Introduction



- ❧ please make sure that you turn off your cell phones
- ❧ Extra Help: Please come early to class or be willing to stay late.
 - ❧ We are usually here around 6:30 and can stay after till about 9:30
- ❧ Course Materials
 - ❧ These are posted on the Bee School Website for each week. < <https://www.norfolkbees.org/bee-school.html>>

Introduction



- ❧ Test: download from web site and take at home, bring back for review. Answers will be posted online. We want you to learn the material. Everyone should pass.
- ❧ Course Outline (see Appendix I)
- ❧ Google Group & Facebook Guidelines (See Appendix II).



Beekeeping 101 Course Guide – 2024

Suggested Guidebook: Beekeeping for Dummies Book – 4th edition [BFD]

- 1) Session 1. January 23, Tuesday - [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Give out ticket for door prizes
 - b) Introduction of Staff
 - c) Talk you out of beekeeping
 - d) Overview of syllabus & Introduction to Beekeeping [BFD- CH#1]
 - e) History of beekeeping / Colony Collapse
 - f) State inspection / Zoning / Restrictions / Insurance
- 2) Session 2. January 30, Tuesday – [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Bee Biology [BFD- CH#2] TEST - [Ed Rock](#)
 - b) Equipment list, time, cost, ordering [BFD- CH#1, 4, & 5] TEST – [Tony Lulek](#)
 - c) Ordering bees [BFD- CH#6] – [Tony Lulek](#)
 - d) Present Mentor Program - [Tony Lulek](#)
- 3) Session 3. February 6 – **In Person-Aggie Main Conference Room**
 - a) Barkers Beehives & Supplies & Academy
 - b) Receive name tag
 - c) Apiary site selection: bring map of your where you think you want your apiary [BFD- CH#3] [Mo Khalil](#)
 - d) Installing a package [BFD- CH#6] – [Ed Rock](#)
 - e) Installing a nuc [BFD- CH#6] – [Mo Khalil](#)
- 4) Session 4. February 13, Tuesday – [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Sell Tickets for Raffle
 - b) Wood's Beekeeping Supply & Academy
 - c) Pest, diseases, & mite control [BFD- CH#12 & 13] TEST – [Tony Lulek](#)
 - d) Hive Inspection (Tony Lulek) [BFD- CH#7] – [Ed Rock](#)
 - e) Raffle drawing hives and packages
- 5) Session 5. February 27, Tuesday – **In Person-Aggie Main Conference Room**
 - a) Spring Management [BFD- CH#8] TEST – [Tony Lulek](#)
- 6) Session 6. March 5, Tuesday, – [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Summer Management [BFD- CH#9] – [Ed Rock](#)
- 7) Session 7. March 12, Tuesday – [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Fall/Winter Management [BFD- CH#9] TEST – [Mo Khalil](#)
- 8) Session 8. March 19, Tuesday - [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Sustainability in your Apiary [BFD- CH#4] – [Tony Lulek](#)
- 9) Session 9. March 26, Tuesday – [Kathy Varney](#), [Tony Lulek](#) – **In Person-Aggie Main Conference Room**
 - a) Meet your Mentor – [Dana Wilson](#) (15 minute session)
 - b) Products of the hive [BFD- CH#18] – [Kathy Varney](#)
 - c) Processing Wax – [Kathy Varney](#)
 - d) Extraction [BFD- CH#16 & 17] – [Kathy Varney](#)
- 10) Session 10. April 2, Tuesday – [Tony Lulek](#) – **In Person-Aggie Cafeteria**
 - a) Final Test
 - b) Smoker lighting
 - c) Graduation (Diplomas given out and cake served)

Google Group

Google Group and Facebook Guidelines.

The Google Group

The Google group was started as a way for the officers to communicate information to the club. This is the foremost purpose of the Google group. Please keep this in mind when you send out an email. Please be considerate of all our club members and keep the emails to a minimum to reduce emails to their inboxes.

There are a few simple steps that everyone can take to ensure that the Google group is not a burden to our members, but rather a source of communication. With over 200 members and emails, this is the best way for the board to communicate to the club.

Google group guidelines:

First and foremost, be kind, courteous, and considering of your fellow beekeepers.

1. Only post bee related topics: news stories, new information, links, articles etc.
2. Be considerate of all members: make sure that the information is pertinent to ALL MEMBERS, to all levels of beekeeping. If it is of a more specific nature, please use the Facebook page
3. When replying to an email please reply only to the person initiating the email. Do not reply to all.
4. Do not engage in email dialog or conversations via emails. If you wish to do this, please only communicate with one person, not the club as a whole, or use the forum for this type of dialog.
5. If you have information about certain aspects of beekeeping, please post them on Facebook.
6. There are many people in our club with varying degrees of experience. If someone posts an email asking for help, please allow for people in their town or surrounding towns to answer the email. This allows more people to be active in helping out other members of the club, and will help build a stronger club.
7. There are also options on the Google group concerning how emails are received. You can either select not to have them sent, once a day, and you can go to our page <http://groups.google.com/group/norfolkbees> whenever you want and see what has recently been posted.

Benefits of the Google Group:

Updates from the officers Newsletters and Club updates are sent via the group Changes in meetings, events, etc.

Unsubscribing

If you do not wish to be a member of the Google group there is a simple way to unsubscribe. There is a link at the bottom of the emails. Just click on that and follow the instructions. If you do unsubscribe, I would suggest that you join the forum so that you can get updated information.

Facebook

Facebook: Norfolk County Beekeepers

Our page on Facebook is closed to the public. Only dues paying club members will be allowed in. This is a great place to ask questions, post stories, share pictures and stories. Several members of the club monitor this throughout the entire year. It is a very active page and there are posting most days. This is also a place that we will post notices, updates and changes to club related events.

Facebook guidelines:

First and foremost, be kind, courteous, and considerate of your fellow beekeepers.

1. Only post bee related topics: news stories, new information, links, articles etc.
2. Be considerate of all members: make sure that the information is pertinent to ALL MEMBERS.
3. Do not engage in a dialog or conversations via Facebook posts. Be respectful of member's posts. If you wish to do this, please only communicate with that one person, not the Facebook group as a whole.

If anyone needs help with the Google group or Facebook you can contact Tony, Ed Szymanski, or Eileen Walther

Who are we?



Norfolk County Beekeepers Association

Norfolk County Beekeepers Association

- ❧ Founded in 1953
- ❧ 2005 – Club had 71 members and 18 students in bee school
- ❧ 2024 – Club has 500+ members, and almost 100 students in bee school for the last 10 years
- ❧ A diverse group of people, from all walks of life.
- ❧ One beekeeper with 60,000 hives can't make a difference, but 60,000 beekeepers with one hive can make a difference. (*Michael Pollan, Vanishing of the Bees*)

What the club does!



- ❧ Host monthly meetings in person and Zoom with programs and guest speakers to enhance your beekeeping skills and build lifelong friendships
 - ❧ We host at the Norfolk Aggie & also share meetings via Zoom
- ❧ Host Beginner Bee School once a year
 - ❧ Mentoring program for new bee school students and new club members
- ❧ Host Intermediate Bee School once a year
- ❧ Monthly newsletter (past ones are posted on the website)
- ❧ Promote Research-Based Best Practice Beekeeping

What the club does!



- ❧ Promotes the art and science of beekeeping to the general public
- ❧ Provide scholarships & Grants
 - ❧ to Norfolk Aggie students
 - ❧ to NCBA member eligible students
 - ❧ To NCBA members for queen rearing courses
 - ❧ To NCBA members for Master Beekeeper certification
- ❧ Connect with local, state and national beekeeping organizations
- ❧ Lobby for pollinators and beekeepers at the State level
- ❧ Subsidize Queen Purchase

What do I want out
of this Class?



Do I have what it takes?

Am I a Bee Haver or Bee Keeper?



- ❧ Time Commitment
- ❧ Maintenance
 - ❧ Frequent/often early in spring
 - ❧ Routine in summer
 - ❧ Frequent in fall
 - ❧ Mite counts
 - ❧ Hive treatments
- ❧ Expense

Am I a Bee Haver or Bee Keeper?



- ❧ Be cognizant of neighboring hives
- ❧ Do not be a disservice to the bees
- ❧ You will fail at some point
- ❧ Cost
- ❧ Mentor guidance
- ❧ Get involved in local club

History of *Apis Mellifera*



The **western honey bee** or **European honey bee** (*Apis mellifera*) is a species of honey bee. The genus name *Apis* is Latin for "bee", and *mellifera* means "honey-bearing".



Honeybees around America

- ∞ First Honeybees to America in 1622
- ∞ First documented apiary, Newbury 1640
- ∞ Spread with Settlers and via Swarms
- ∞ Per Thomas Jefferson, 1784, to Native Americans:
‘White Man’ s Flies’

Eureka! 1851



Lorenzo Langstroth clarifies *bee space*, the $\frac{1}{4}$ to $\frac{3}{8}$ " needed between frames for bees to build comb.

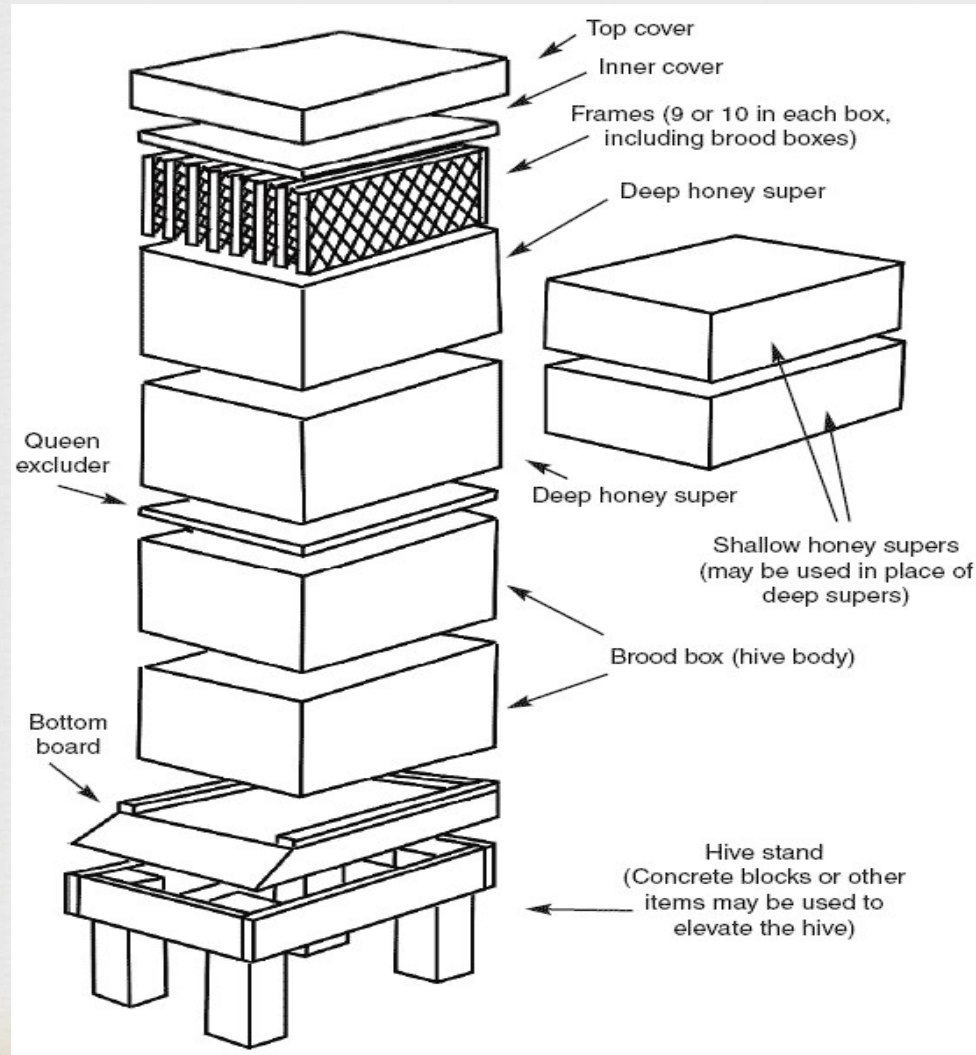
The Langstroth Movable Frame Hive is the first and most important invention in creating a commercial beekeeping industry.



Honeybees around America

- ☞ Langstroth Movable Frame Hive - 1851
- ☞ Honeybees to California 1860's
- ☞ 2 Million lbs of honey in CA in 1884
- ☞ What was a scarce product became an abundant commodity by 1880!

Still Called Langstroth Hives



- Moveable frame hives are the law of the land in the United States.



1980'S



Varroa Mites:
First found in
this country in
1987



Tracheal Mites:
First found in
this country in
1984 – no longer
an issue

2000's



- ❧ Increased public awareness of Honeybees in the ecosystem and their role in pollination of food crops!
- ❧ Increased literary interest in Bees and Beekeeping
 - ❧ *The Secret Life of Bees*
 - ❧ *Vanishing of the Bees*
 - ❧ *Queen of the Sun*
- ❧ Increase in “grow local” and awareness of the benefits of eating local food.
- ❧ High increase of allergies and food and chemical sensitivities.

State of Affairs



Health of our Honeybees



- ❧ Backyard and suburban gardening.
- ❧ Varroa Mites: Arrived in the country in approximately 1987 and wiped out the entire population of feral hives.
- ❧ Health of our honey bees. The perfect storm: our agricultural system and varroa mites.
- ❧ Varroa Collapse is when opportunistic viruses and bacteria cause the health of the hive to decrease and collapse.
- ❧ Colony Collapse is when an entire colony disappears.

Health of our Honeybees



- ❧ Problems began in 2005. Colony Collapse.
- ❧ Pesticides are substances meant for attracting, seducing, destroying, or mitigating any pest.
- ❧ Pesticides: insecticides, miticides, fungicides, herbicides and fertilizers, and any other chemical, whether synthetically made or naturally occurring.
- ❧ Agriculture system as it stands today: Mono culture, GMOs, Hybridization, pesticides, pollination of crops.

Health of our Honeybees



- ❧ What is being done today:
 - ❧ Government agencies to protect the honey bee and reduce pesticides in our agricultural system and back yards gardening.
 - ❧ Local and state government working reducing pesticides.
 - ❧ State Representatives
 - ❧ Mass Farm Bureau
 - ❧ Mass Beekeepers Association

Health of our Honeybees

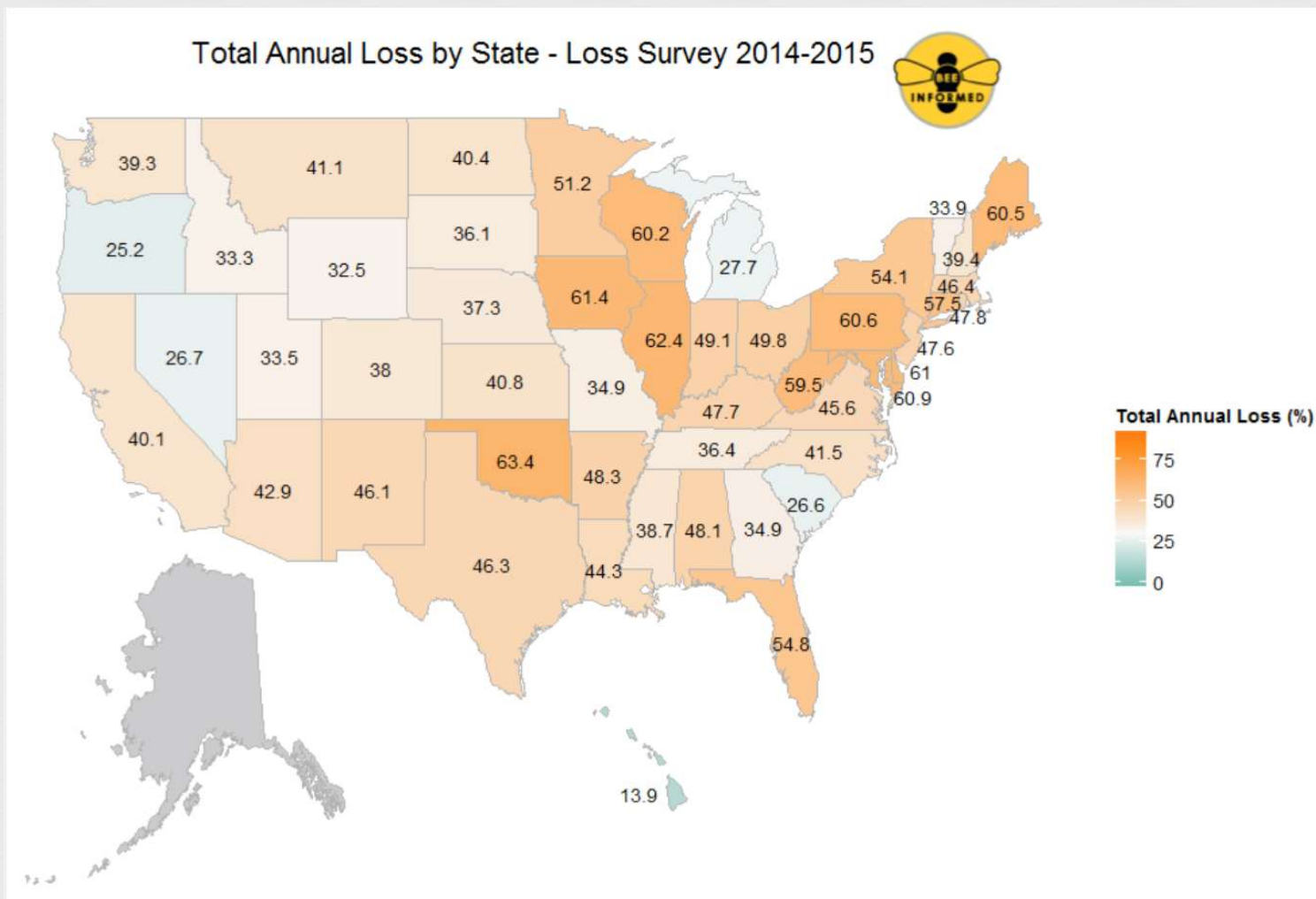
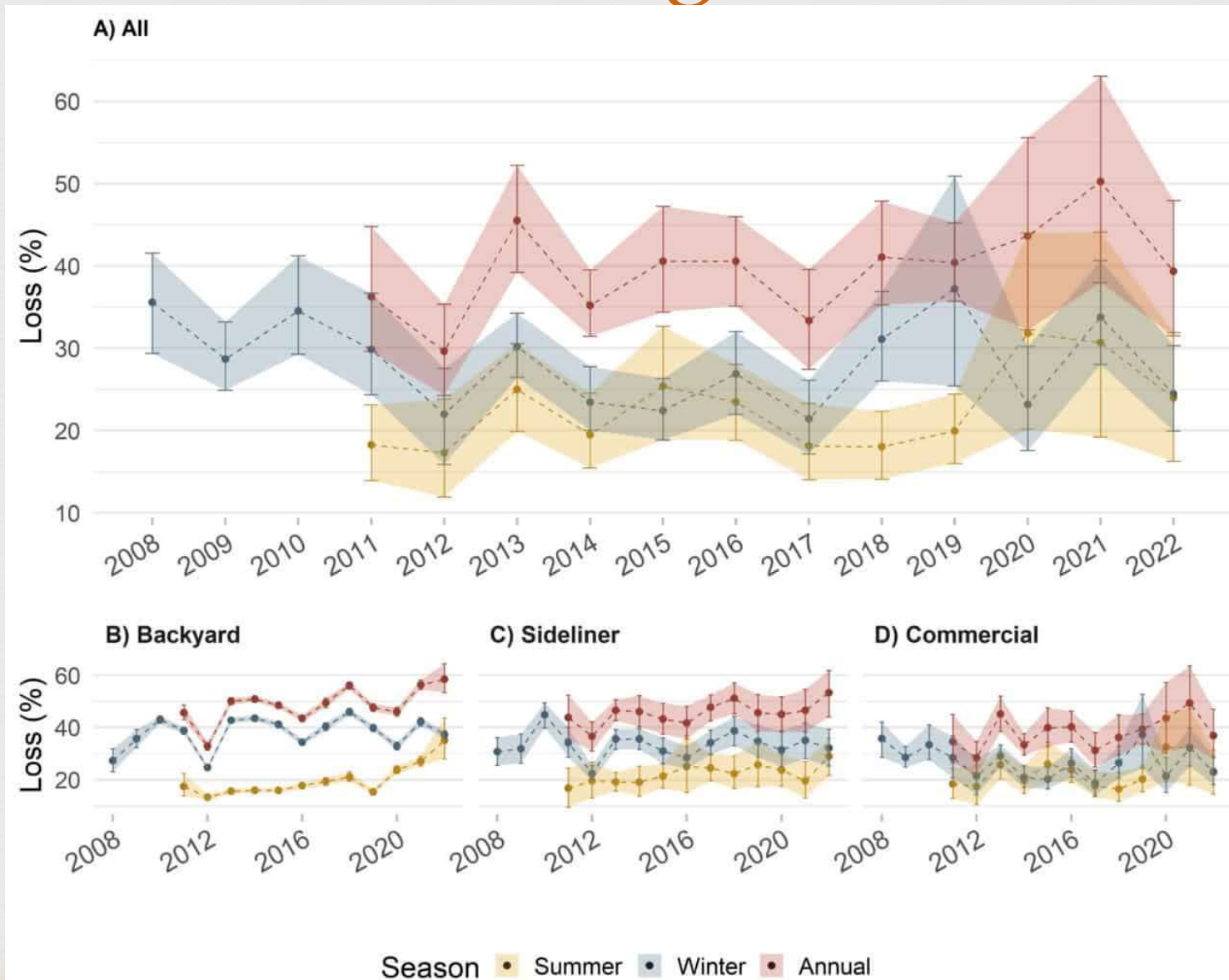


Figure 2: Total annual loss (%) 2014-2015 by state. Respondents who managed colonies in more than one state had all of their colonies counted in each state in which they reported managing colonies. Data for states with fewer than five respondents are withheld.

Beeinformed.org 2022 Data



Benefits of Beekeeping



- ∞ Local pollination and crop production
- ∞ Local honey & Allergy mitigation
- ∞ Public awareness of plight of pollinators
- ∞ Improves local environment

Becoming a Beekeeper



A BEE OR NOT A BEE...



Becoming a Beekeeper!



- ❧ We still need to cover the following things:
 - ❧ 9 guidelines to being a good beekeeper
 - ❧ Apiary Laws & Inspections
 - ❧ Glossary of Terms
 - ❧ Mentoring and mentoring guidelines.
 - ❧ Next weeks class: Bee Biology, Equipment Ordering, and ordering bees.

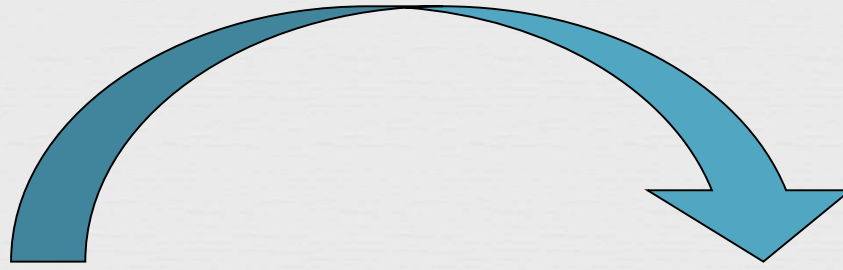
Becoming a Beekeeper! TESTS



- ❧ First test starts next week.
 - ❧ Check web site for test.
 - ❧ Online answers (download after you take the test)
 - ❧ Bring test to class to review
 - ❧ Ask questions.. .You are learning a new hobby and a new language.

- ❧ Don't always believe what you read online!!

Bee School Graduation



Picture
yourself
here



2016 Class

Guidelines to Beekeeping



Nine Basic Guidelines

(Adapted from Keith Delaplane, *Honey Bees and Beekeeping*, 1993)



Thou Shall:

- 1. use only standard beekeeping equipment.**
- 2. be considerate of non-beekeeping neighbors.**
- 3. control diseases and parasites.**
- 4. do your mite counts.**
- 5. maximize colony populations for the main nectar flows and in preparation of winter.**
- 6. protect thy beekeeping equipment.**
- 7. take pride in your bees, the honey and other hive products. Respect the honey bee at all times.**
- 8. help thy bees through winter.**
- 9. join and participate in a beekeeping association.**

See Appendix III – detail

Apiary Law & Inspections



Apiary Law & Inspections



- ❧ Massachusetts General Laws regarding Apiaries and Honey Bees
- ❧ Massachusetts Department of Agricultural Resources
330 CMR: 8.00 (See Appendix IV)
- ❧ Mass General Law: Part 1, TITLE XIX, CHAPTER
128, SEC 32-36
- ❧ You can download all of this from:
 - ❧ [malegislature.gov/Laws/General Laws](http://malegislature.gov/Laws/General%20Laws)
- ❧ A couple of important sections are 33, 34, 36

Apiary Law & Inspections



œ Part 1, TITLE XIX, CHAPTER 128, SEC 33

œ Maintenance of colony of honey bees in hives in which brood combs are fastened to container; diseased bees

œ Section 33. No persons shall knowingly maintain a colony or colonies of honey bees in hives, other receptacles, trees or other lodging places in which brood combs are fastened to the container of the colony or cross-built.

œ No person shall neglect, expose, sell, barter, give or in any other way dispose of diseased bees or any colony container, comb, frame or other appliance used about the diseased bees in whole or in part in such manner as to cause the spread of the disease.

Apiary Law & Inspections



Apiary Law & Inspections



∞ Part 1, TITLE XIX, CHAPTER 128, SEC 34

∞ Instructions as to treatment of diseased and miskept colonies; destruction

∞ Section 34. The inspector or his assistants, upon the discovery of bee diseases or any comb cross-built or fastened to the container in any apiary or colony shall give instruction to the owner or caretaker thereof as to the treatment of the diseased and miskept colonies, infected combs and equipment and shall cause the diseased and miskept colonies and all infected combs, hives and equipment to be treated, disposed of or destroyed in such manner as to suppress the disease.

∞ For the loss of colonies of bees and property destroyed by the inspector or his assistants the commonwealth shall pay to the owner two dollars per colony.

Apiary Law & Inspections



Apiary Law & Inspections



- ❧ Part 1, TITLE XIX, CHAPTER 128, SEC 36
- ❧ Access by inspector to places where bees, bee supplies, appliances or equipment are kept; inspection cards
 - ❧ Section 36. The inspector or his assistants upon presentation of proper credentials of the department shall have access to each place where bees, bee supplies, appliances or equipment are kept and to each place where bees have lodged.
 - ❧ No owner, renter, or keeper of beehives, used bee equipment, or places where bees have lodged, shall refuse or obstruct entry of the inspector or his assistants to any such place for inspection and for disease control purposes.
 - ❧ There shall be secured to each colony inspected a legible card showing the date of inspection, the health or disease of the colony, and the signature of the inspector.

Apiary Law & Inspections



Apiary Law & Inspections



☞ Who to register your hives with or contact for an inspection:

Kim Skyrn

Email: kim.skrym@state.ma.us

Chief Apiary Inspector/ Apiary Program Coordinator
Mass. Dept. of Agricultural Resources

251 Causeway Street, Suite 500

Boston, MA 02114-2151

Phone: 617.626.1801, Fax: 617.626.1850

Apiary Law & Inspections



☞ Who are our inspectors: UPDATED 12/23/19

☞ Paul Tessier: Southeastern MA and Cape/Islands

☞ Bob Grady: Boston, North Shore, and Southeastern MA as needed

☞ Ori Ben-Shir: Middlesex Co. and Western MA

☞ Ken Warchol: Worcester Co. and Berkshire Co.

☞ Kim Skyr

*These need to be updated and I can't find who replaced Kenm:
Western MA – saw these folks - David Saleh, Shay Willette,
Kim Skyr and Paul Tessier*

Pesticide Exclusion



- ☞ In order for you to be excluded from pesticide spraying, you will need to fill out the form in your booklet and send it in.
- ☞ www.mass.gov/forms/request-for-exclusion-from-wide-area-application-of-pesticides or see Appendix V for form.
- ☞ In addition you can place markers on your property. This allows for any non-government pesticide sprayer to know that there are hives nearby.

MDAR Best Practices



See Appendix VI

This is a detailed 6 page report that was adopted by MDAR as a result of Mass Beekeepers Association

Pesticide Exclusion

PESTICIDE EXCLUSIONS



Under 333 CMR 13.03, an exclusion request may be made to opt out of wide area pesticide applications. Requests must be submitted to the Massachusetts Department of Agricultural Resources (MDAR) either via first class mail or through an online form. Exclusion requests may be made at any time during the year, shall be effective 14 days from receipt of the request, and shall be in effect for the remainder of the calendar year in which the request was made. All requests shall expire on December 31 of the calendar year in which it was made.

Approved Marking Methods:

White plastic or aluminum pie plates, a minimum of 9 inches in diameter, with the words "No Spray" clearly written in permanent marker. Plates must be placed on trees, stakes, or poles easily visible from the street, at least every 50 feet along the property boundary adjacent to the road and no more than 5 feet from the road.

FOR MORE INFORMATION PLEASE CALL: Juan Carlos Gutierrez at (617) 626-1723

Boston town ordinances – Article 89 Section 10



∞ Allston

∞ Boston/South
Boston

∞ Brookline

∞ Dorchester

∞ Hyde Park

∞ Jamaica Plain

∞ Mattapan

∞ Roslindale

∞ Roxbury / W.
Roxbury

Insurance



☞ Home Owners Insurance:

- ☞ Farm Family Insurance, Sheila McCarthy,
508-321-3288, Sheila.McCarthy@american-national.com
- ☞ Most carriers now cover apiary related items

Glossary of Terms



Glossary of Terms



☞ Beekeeping is new language

☞ Different terms for the same thing.

☞ See Appendix VII

☞ No list is going to be complete, but this is a good start.

Mentor Program



Mentor Program



- ❧ Each bee school student will be assigned a mentor
 - ❧ If you do not want a mentor, please let us know
- ❧ We will try to match beekeeper with a mentor that lives near by. This can be difficult, so please be patient with this process.
- ❧ If for some reason the mentoring relationship isn't a good fit, please let us know and we will find you a new mentor.
- ❧ See attached appendix VIII for mentor-student guidelines.

Now the “fun” part





Bee Stings

☞ They HURT and....



we REACT

- You will inevitably get stung
- Be aware of what happens.
- Most stings result in pain, some swelling, redness.
- If you think you are having a reaction (swelling of tongue, tingling sensation, dizziness, or shortness of breathe, seek medical attention. **Don't wait.**

Bee Stings



Bee Stings



∞ Normal Reaction

∞ Allergic Reaction

∞ Toxic Reaction

∞ Too many stings at one time

Bee Stings



Normal Reaction

- Normal Reaction
 - ❧ Pain
 - ❧ Welp develops at puncture site
 - ❧ Redness develops around welt
 - ❧ Swelling
 - ❧ a little at site
 - ❧ a lot at site (large local)
 - ❧ Itching local

Normal Treatment

- Normal Treatment
 - ❧ Baking soda paste
 - ❧ Benadryl
 - ❧ Hydrogen Peroxide
 - ❧ Plantain weed
 - ❧ Pressure

Normal Reaction



Bee Stings



❧ Allergic Reaction

- ❧ widespread, rapid swelling
- ❧ itching of body
- ❧ disorientation feeling
- ❧ stomach upset
- ❧ shortness of breathe
- ❧ loss of consciousness

❧ Allergic Treatment

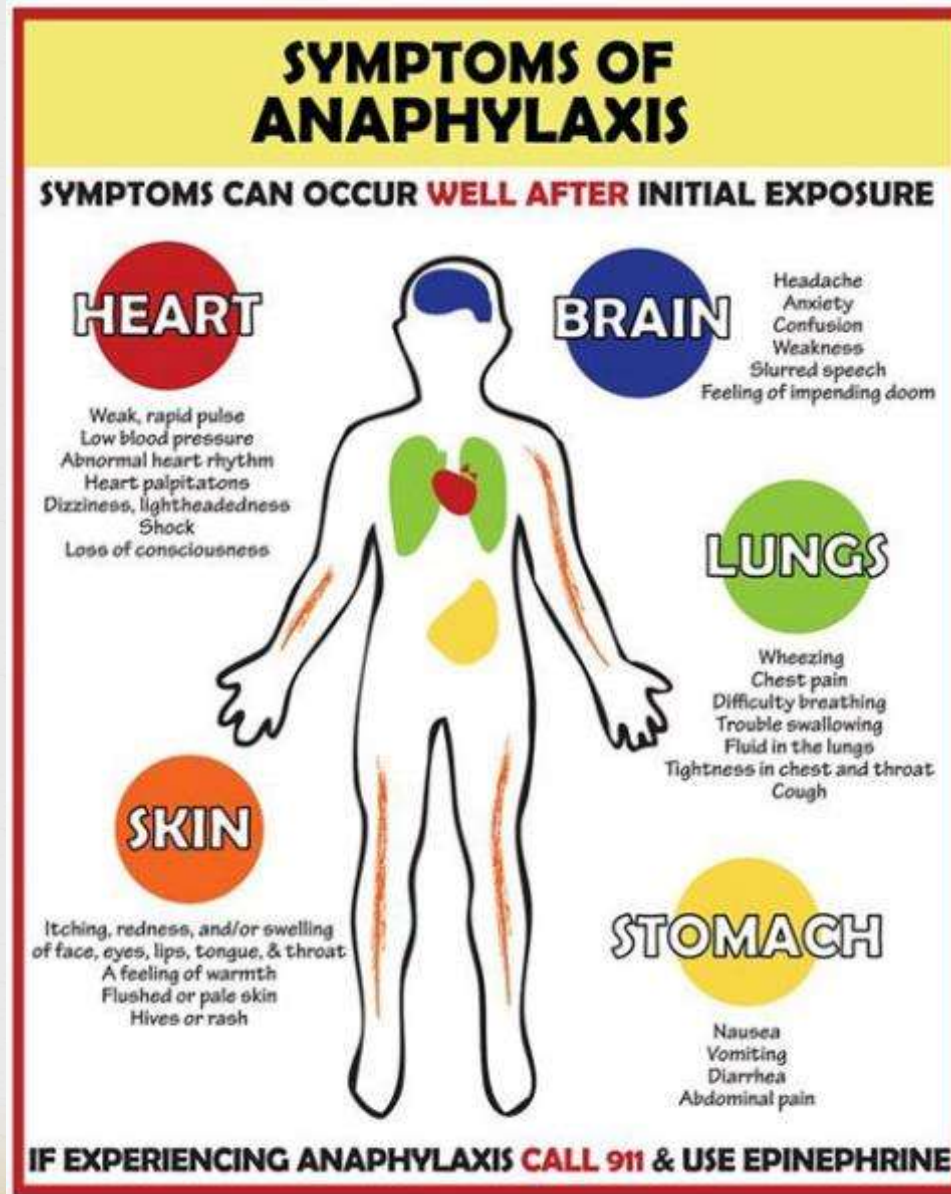
❧ **911 & EpiPen**

EpiPens



- ❧ **EpiPen** is an injection containing **epinephrine**, a chemical that narrows blood vessels and opens airways in the lungs. These effects can reverse severe low blood pressure, wheezing, severe skin itching, hives, and other symptoms of an allergic reaction.
- ❧ You can get a prescription from your doctor.

EpiPens



EpiPens



Too Many Stings!!



Bee Stings



What to do to avoid being STUNG.....

- ❧ proper clothing
- ❧ smoker
- ❧ best environmental conditions
- ❧ scrape sting out promptly
- ❧ slow movements-no jerking or 'windmills'
- ❧ extra care around hive/flowers
- ❧ don't remove veil too soon
- ❧ keep gentle bee stock



Bee Stings



A bee's front end is sweet and kind,
But never trust a bee's behind.
A bee can sting if it can sit,
So always stay in front of it!

What does it take?



∞ BEE-HAVER...



∞ BEE-KEEPER..



∞ We are here to provide a solid foundation for success