



The Buzz

Newsletter of the Iowa Honey Producers Association



February 2014



Package bee ads Pg2
CIBA Beekeeping Auction Pg4
AHPA Convention Report Pg6
Beekeeper of the Month Pg12



April 12th CIBA Annual Auction Perry, IA 10 am

Package bees are for sale now. Some suppliers will require orders to be placed before the end of February. Some years it can become difficult to find packages going into March so now is a good time to start considering any package bee purchases for 2014.



For Sale: 2 or 3 pound packages of Italian bees with queen. Picked up in Cedar Rapids or Aurora, Iowa in mid-April. Bees from Hill-Ward Apiary in California. All orders must be received by February 28.

Contact Douglas Child
319-634-3682

FOR SALE: 2#, 3# and 4# packages. The 4# can come with one or two queens. Your choice of Italian or Carniolan queens. We are getting two loads in April. Prices available on our website www.eberthoney.com

Contact: Phil ehoney37@netins.net
641-527-2639 or

Alex alex.ebert@eberthoney.com
641-821-9648

FOR SALE: 3 pound package bees with your choice of Italian or Carniolan queen, available in April. \$5 deposit refundable upon return of box.

Also for sale, 3-4 frame nucs (state inspected), with your choice of Italian or Carniolan queen (limited supply).

Should be ready first part of May. Pick up for packages and nucs north of State Center.

Contact fieldstonefarms@netis.net or 641-477-8521 for more details.

For Sale: Package bees in Western Iowa. We will have 2 pound packages available early, mid or late April. 3 pound packages will be available until mid to late April. 2 # packages will be \$82 and 3 # packages will be \$96. Choose from Italian or Carniolan bees.

Queen prices haven't been decided yet, call for information. All packages will be picked up in Griswold. Order early, any orders received after March 1st will be charged an additional \$15 processing fee.

Contact Mike Brahms, 3 Bee Farms, for deposit information and questions at (712) 778-4256 or mbrahms@netins.net

FOR SALE: 5 frame Nuc w/Italian queen - \$125.00.
Also a few singles w/Italian queen - \$150.00

Nucs and Singles will be ready for pick-up May 10th from Goodell, Iowa. For more information, call Pat Ennis @ 515-293-2601

FOR SALE: I will have Queens's available mid-April. Pick-up is in Goodell. For more information, call Pat Ennis @ 515-293-2601

FOR SALE: Beekeeping Equipment and supplies - Goodell IA
Offering reasonably priced new and some used beekeeping supplies and equipment. For more information, please call Pat @ 515-293-2601

FOR SALE:

3 lb. Packages with marked Italian Queens for Pick-up only in West Chester, IA (no deliveries)

Pick-up will be the week of May 12, 2014 (actual date will be determined based on weather in GA)

\$95/pkg. (\$90/pkg. for orders of 10+); extra marked queens = \$26/each Email number of packages and contact info. to:

kalonahoneycompany@gmail.com

or visit our website

www.kalonahoney.com and click on the "package bees" tab or contact Tim Wilbanks cell: 319-321-2494

FOR SALE: Package Bees

Spring Valley Honey Farms will have 2# and 3# packages W/Italian or Carniolan queens. Availability will be mid-April. Price not confirmed as of yet, to book please call:

Home: 515-465-5939

Connie @ 515-480-6076

Pat @ 515-293-2601

Pick-up in Perry or Goodell

Prices of packages will be our web site as soon as we know @

www.springvalleyhoneyfarms.com

FOR SALE: Beekeeping Supplies @ Spring Valley Honey Farms in Perry IA, is offering a fairly complete line of new beekeeping supplies available February through June from their showroom. No set business hours, so call with your needs. 515-465-5939 or Connie @ 515-480-6076

The Buzz Newsletter Article Submissions

Please send submissions, classified ads, and photos to Alex` Ebert by email to **TheBuzz@ABuzzAboutBees.com** (also alex.ebert@eberthoney.com) or by mail to The Buzz, c/o Phil Ebert, 14808 S. 102nd Ave. E., Lynnville, IA 50153. **The deadline for submissions is the 10th of each month to be included in the following month's newsletter.** The Buzz is a monthly newsletter published by the Iowa Honey Producers Association which is an affiliate of the Iowa State Horticultural Society.

President's Message February 2014

February is upon us and winter is well under way with spring just around the corner. Most of the 25 plus bee classes are underway or soon to start. Hopefully you have spent some time reading and getting ready for spring because it will be here before you know it. There are people who advertise in this newsletter who bring in package bees so if you have not yet ordered bees, check the ads and get it done. Most bee orders need to be in by February 28th.

I'm spending time to get ready to go to California to check out the bees we sent in November for the Almond pollination. It's roughly 3,800 miles out and back. Driving straight through can be done, but we take our time going out, taking 3 days, but taking only 36 hours coming back, driving straight through. Some people think it's a vacation going to California this time of year but it's not even close to that!! We will start work on January 20th with hopes to get 800 hives done a day. That all depends on what the almond growers want or will accept as far as the bee frame numbers per hive. With a shortage of bees they will almost take anything with live bees in them. That makes our job easier because then we just give them a pollen patty, a feeder of syrup, and grade them as A, B, or C. The A's are for boomers or anything with 12 to 16 frames of bees. B's are 6 to 11 frames of bees and C's are 5 or less frames of bees. You get paid according to the grades. If the Almond growers are a little pickier then we will need to combine some of the C's to make one good hive. That takes a lot more time. Either way we should be done in 5 to 6 days, working from about 8:00 am to 5:30 pm each day with some days finishing after dark. We work rain or shine, unless it's lighting, and it has rain the last three years, (a reminder for me, don't forget to take the rain suit.) We have x amount of work to do and this window of time to get it done in. When the day's done, all you want is a hot shower, supper and some shut eye. When were done and get home, we can make plans from on how the bees looked. It's a crazy cycle, but it

works.

It's also time to think about the Central Iowa beekeepers Spring Auction. It will be April 12th, starting at 10:00 am in Perry again this year @ Curt and Connie's "in town honey house" I'm looking for sellers, so if you have extra equipment around and want it gone, this is a good way to get that done. Send me a list of what you have and I'll get it posted. The auction is always a good way to pick-up those needed and wanted items or maybe a bargain or two!! It's also a good reminder for me to go through my stuff, take an inventory and make a beekeeping plan for this year. Hope you can attend and see you there.

Bee Happy, Bee Faithfull, Bee Joyful
and Bee Yourself!!
Pat

Trivia Question:

- 1 - How many acres of almonds are in production?
- 2 - How many bee hives are needed per acre?
- 3 - And how many total bee hives are needed for the California Almond Pollination?

BANANA - HONEY DRINK Printed from COOKS.COM

- 1 banana
- 1/2 c. milk (skim or whole)
- 3 tbsp. wheat germ
- 1 tsp. honey
- 1 tsp. vanilla or strawberry flavoring

Blend in blender until banana has dissolved. Yields 2 servings. Note: This is a quick energy-builder and very nourishing.

For Sale: 8 beehives reconditioned; some new parts, 90% complete, new paint, state inspected.

- 3 bee smokers
- 1 honey extractor

Call Dave at 319-331-6590



Wanted: William Lambright is looking to buy medium honey supers and a radial hand crank extractor.

Contact by mail:
1053 Fair bank Amish Blvd.
Fair bank IA 50629.

FOR SALE: Approx. 10 cases of new 9oz hex jars with lids—Make an offer.

Contact Phil Ebert at 641-527-2639 or e-mail ehoney37@netins.net

I'm Continuing Draper's Wax Operation!

If you've ever used Draper's Super Bee wax, you know the quality of their filtered wax. I have purchased their wax operation and will continue to uphold their standards! Call or e-mail me if you have cappings to sell or want to buy wax!

Royce Blackledge
Black Cat Acres
66435 270th Lane
Nevada, IA 50201
(515) 979-6585
royce.blackledge50@gmail.com

FOR SALE: Honey Styx

I sent 2 barrels of honey to Oregon to have put into styx, so these are Iowa honey. Good flavored light honey.

\$0.09 each in boxes of 2000 -
\$180.00
0.12 each 500 - 1999
0.15 for 1 - 499

Curt Bronnenberg
14405 Hull Ave.
Perry, IA 50220
(515) 465-5939
CBronny823@aol.com

Mark Your Calendar for the Beekeeping Annual Auction!



The Central Iowa Beekeeper's Annual Auction
is being held on April 12th 2014 at 10:00 a.m.

The auction located is right on Hwy 141, north side of the road –
just 1 block west of the hospital in Perry, Iowa.

Curt and Connie Bronnenberg have graciously offered the Central Iowa Beekeepers the use of their “in town honey house” again this year. There will be a restroom available, as well as hot coffee, hot chocolate, bars, and rolls.

WE ARE IN NEED OF CONSIGNERS AND BUYERS!!

Now is the perfect time to clean, sort, and sell your extra beekeeping equipment,
or to purchase good beekeeping equipment!

Please e-mail me your list of items you would like to consign.

Items consigned in time will be advertized in the March and April Buzz Newsletter.

For a listing of the items being consigned, please e-mail me after April 1st,
and I will send you the list of consigned items thus far.

Consignment fee is 10% if consigned before March 9th and 15% thereafter.

All drawn comb will be inspected.

For your convince, there will be signs posted on Highway 141.

Pat Ennis
515-293-2601
Flat_Lander@lycos.com



HOPE TO SEE YOU AT THE AUCTION!!



State Apiarist

Hi All. It's still December as I'm writing this, but only by a thread. Happy New Year! We had a couple really nice days earlier this week which gave me a chance to sneak a quick peek on some of my bees. I'm guessing many of you were up to exactly the same thing at exactly the same time. Hopefully you all saw good looking bees still with plenty of food stores. Obviously, there's a whole lot more winter for the bees to get through, and the hardest is all still to come, but that said, it's fun to have a midwinter look. Now, here's hoping we'll all see more of the same come late February and into March when things can be pretty dicey! A lot of places, at least around central Iowa, didn't get much of anything for a fall flow. But there was plenty opportunity to feed syrup or sugar water and some pollen patties up til about the first of November or so. I don't really enjoy any part of feeding syrup to my bees, but it really is cheap insurance. A few bucks worth of syrup can save a colony which otherwise may starve out. As each year goes by, I realize good beekeeping really is learning to control as many variables as we can, so the bees are strong and healthy enough to deal with all the variables which are out of our control.

I'm looking forward to the upcoming trip to San Antonio for the American Honey Producers / Apiary Inspectors of America / American Bee Research Convention meeting. ...There could have been a lot of acronyms in that last sentence. One of the larger topics for discussion in my AIA group surely will be all the European Foulbrood and/or "Crud" / "Snotty brood" / "Parasitic Mite Syndrome" / "Idiopathic Brood Disease" which has been seen so much just these past two years. I know we've been seeing a lot of EFB and similar looking conditions here across Iowa. It turns out, others are reporting similar experiences all over. There seems to be something different in this recent uptick of EFB (more pervasive, virulent and persistent into the summer) – and there still isn't a complete understand-

ing of the crud / croup / snottbrood / whatever so it'll be interesting to hear others' thoughts.

It's that time of year, already, to start daydreaming and making plans for the upcoming bee season. This is the month when gardeners are flipping through the seed catalogs with visions of all sorts of crazy vegetables and whatnot, and it's the month when (I'm guessing) a lot of us start doing the same with all the nice glossy bee supply catalogs. Last spring, or whatever you want to call it, made it just about impossible for me to get to some of the plans I'd made last winter for handling nucs and rearing out some early queens. I'm excited for this year's "second chance" at some of those goals. It's always easier said than done, but make a plan now for your bee work – get your equipment ready so splits and nucs can be easily made before the bees head into swarming mode, try out a "new" Varroa management technique or treatment, make some queens, maybe sell a couple nucs in June, try producing a little comb honey or capture a varietal honey, make up some later season nucs and try to over winter them, whatever you'd like...

It's also time to consider getting your apiary locations listed on the IDALS Sensitive Crops Directory. The directory is wiped clean each year around New Years, in order to keep a relatively accurate picture of where the bees are. So each spring time, don't forget to go back to the website and renew or update your registry. The purpose of the Sensitive Crops Directory is to provide apiary locations to pesticide applicators in order to reduce incidents of accidental pesticide exposure. Registration is voluntary – beekeepers are not required in any way to provide this information. But, commercial pesticide applicators are required to view the registry and avoid spraying anything labelled as toxic to bees within a mile from any listed apiary between the hours of 8AM and 6PM. We (the bee inspectors: Boyd, Erik, and myself) also use the directory each year to help us locate new bee yards for inspection. Keep in mind that

any apiary in Iowa is subject to inspection. –this is true for nearly all states across the US. ...but of course, since we don't require apiary or beekeeper registry in Iowa, we don't nearly know where all the bees are. The Sensitive Crops Directory listings are a huge help.

If you've never included your bee yards in the Sensitive Crops Directory, don't be intimidated by the process. Go online to

www.iowaagriculture.gov/Horticulture_and_FarmersMarkets/sensitiveCropDirectory.asp and click on "producers". This will open the "log in" page. From here, just click on "first time visitor" and follow the steps to create your user profile and enter the location(s). If you've been registered in past years, all you need to do is enter your user id and password, then click "update for 2014" to re-register the apiary locations. For first time users, you'll be asked to provide either the PLSS info or the GPS coordinates (latitude and longitude) for each apiary. More and more pesticide applicators (especially the aerial applicators) are using GPS technology. You can easily capture your gps numbers these days using a smart phone, using the gps navigator from your vehicle, or using google maps. Google maps makes it easy without having to go to the bee yard itself to acquire the gps coordinates. Just find the location online in google maps, then hold your cursor over the hives location and "right click" the mouse. You'll see a box appear on the screen saying "What's here?". Click on that. A green arrow will appear on the map. Now just hold your cursor over the arrow, and the gps coordinates will be given. If you aren't comfortable with computers or you have questions, or you need some help with the process in any way, just give me a call: (515) 326-5765, or an email:

Andrew.Joseph@IowaAgriculture.gov.
Ok, enough for now. Enjoy yourselves. See you!
Andy





Neonicotinoids

Are Neonicotinoids (neonics) Killing Bees? That is the question and we need your help. The Xerces Society for Invertebrate Conservation has asked that question and has published a review of the research that has been conducted into the effects of Neonicotinoid insecticides on bees. The review also has identified the short falls of the studies and recommendations for action. It can be downloaded [here](http://www.xerces.org) from the following web site, www.xerces.org. The review is divided into three sections. The first presents clearly documented information about neonics impact on bees. The second section outlines what can be inferred from the available research, while the third identifies the knowledge gap in our understanding with the interaction of neonics and bees. I strongly encourage and recommend you and read this report. It will increase your understanding of the situation.

What can you do as a concerned Iowa beekeeper if you suspect your hive has been poisoned? **Report it** to the Iowa Department of agriculture pesticide bureau to initiate an investigation (515-281-8591). Beekeepers in Ontario and Quebec Canada were successful in connecting neonics to bee kills by reporting suspected bee poisoning as [reported](#) in the article in Catch The Buzz by Alan Harman dated Sept 23 2013. During 2012 they were experiencing a large number of bee mortality. The beekeepers are working with the Canada's equivalent to the US EPA, Canada's Pest Management Regulatory Agency and the Canada Department of Agriculture to determine why the bees are dying. They found that 70 % of the reported cases had tested positive for the presence of neonics residue. They are now working together with Agriculture & Agri Food

industries, local and Provincial Canadian government agencies, growers and the pesticides in-

dustry to address this issue.

Iowa's State Apiarist has been working with the Iowa Pesticide bureau on a Initial intake form for gathering the necessary information to initiate an investigation when a beekeeper/Pollinator calls with an bee incident or kill issue. You, as the beekeeper, will be asked to provide the answers to a number of questions when reporting the bee / pollinator incident or kill.

1. General information with regards to you as the initiator including, name, address, phone number, location, date and time of the incident if known, etc.

2. What is the cause of the incident? Is it a planter dust exposure or pesticide applicator exposure. If possible, gather and provide as much information as you can including the name, address and field location of the perpetrator for either the planter or applicator information including the crop and or pesticide used at the time of the exposure if that information is known.

3. You will be asked to provide a description of the incident and any special instructions that the investigator would need to know to aid in the investigation.

4. You will be asked to describe the bee symptoms you observe. This could include, Lethargy, Ataxia (loss of muscle control), jerking movement, disorientation, or bee death, etc.

5. You will be asked to provide the location of the colonies, how the colonies over winter and what treatments were used to manage hive pests within the last year.

Now it is time for the beekeeper to step up to the plate and report any bee kill incidents. As Randy Oliver stated at the Honey producers meeting in November, there is no evidence of neonics killing bees as there has been no reported instances. They were able to connect the dots in Canada so we should be able to do it here in Iowa.

If you suspect your bees have been poisoned report it to the following government agencies.

1. Iowa Pesticides Bureau Wallace Bld , Des Moines IA 515-281-8591
2. Iowa State Apiarist Ankeny, IA 515-725-1481
3. Pest Management & the Environment ISU Ames IA 515-294-1101

It is also helpful if you have registered you hive location with the Sensitive Crop registry. They can be reached at 515-242-5028.

We can do this but we need your help.

Submitted by Bob Wolff

AHPA CONVENTION REPORT

It was 11 below zero when I left home for San Antonio. It was only 35 degrees when I got there but that was still 40 degrees warmer than when I left home. There didn't seem to be nearly as many people as past years but they said registration was above average. I did notice quite a few people left early.

There wasn't any big news but I will recap a few items. There was a lot of talk about the new pesticide labels. The way the label is written it pretty much gives five ways to kill bees legally. The sprayer must "attempt" to notify the beekeeper. There are five exceptions that allow the spayer to spray blooming plants. It is a lose/lose situation for the beekeeper.

Dennis Van Englesdorp talked about mite load and colony mortality. They have found that once the mite load exceeds 5%, the colony is dead. They just don't know it yet. That has been treatment target the last couple of years and our survival rate has increased dramatically since we started using that threshold. They are recommending four treatments per year for commercial beekeepers that migrate. If you were listening to Dave Mendes and Randy Oliver at the last couple of IHPA meetings, you heard them talk about that treatment sequence.

The other thing I took away from Dennis's talk was that many of the mite treatments were only 40% to 50% effective. You can still control your mite load that way but you have to be in the colony more frequently. Test after treatment to see where you are at.

All of the stress factors have the capability of suppressing the immune system of the bees. These factors interact with each other and with things they encounter in the environment, such as ag chemicals. The effects of nosema have been magnified with ag chemicals. Viruses impair nutrition by disrupting the gut cells. We are not sure how viruses interact with ag chemicals but it is being looked at. We know clothianidin inhibits aspects of immunity and increases the rate of DWV.

The National Honey board is funding several interesting projects in this area. One of them was how microbial contents can affect queen viability.

Others were the effect of agrochemical residues on queen rearing and the interactive effect of nosema with agro chemicals.

What happens when a colony is under stress? Population is reduced. The colony uses up its food reserves. There is a shift from nursing to foraging. This results in an upward shift toward older bees. That's not a good trend. As egg laying decreases, the strength of the queen pheromones also decrease. This leads to superseding in many cases as the colony goes downhill.

It is possible to put ID chips on bees. This can be used to measure the number of foraging bees. I don't remember who was running that project.

I was talking to Andy in the San Antonio airport while we waited for our plane. A guy came and sat down beside us and asked where we were from. It turned out to be Dave Wick. He is a virologist who is an associate of Jerry Bromenshank. After some conversation I decided to start sending him some bee samples to be tested for viruses. At the present time, I believe that you can control viruses if you keep the mite load low but I have had no idea what our ac-

tual virus load has been. We will try to find out for sure.

Submitted by Phil Ebert



7 (Yes, 7) Causes of Colony Collapse Disorder.

Research into the honey bee malady has taught us a lot about bees. We might not know exactly what causes colony collapse disorder, but we now understand seven key maladies that may be contributing.

After four years of intense study, research, sampling, and just plain guessing, scientists have made more discoveries in the last year than all the honey bee research in the last 25 years put together. Still, Colony Collapse Disorder is still mostly a mystery. What they have found, though, is helping honey bees and beekeepers. Here's a look:

Poor nutrition.

Honey bees forced to dine on only a single source of pollen have problems. Imagine living for a month on only Twinkies. The first one is great, the second good... the 123rd is disgusting, and, you are slowly starving to death. When researchers looked closely at the diet for our honey bees, they saw the problem and today - after four years - there are almost a dozen healthy food choices on the market we can feed our bees (including Megabee and Nozeivit, sold by Dadant; Ultra-Bee, sold by Mann Lake; and Feed Bee, sold by Ellingson's Inc.) That's progress. (But look at your grocery store and see how many kinds of dog food there are... wouldn't you think hard working honey bees should have the same choices?).

Old pests revisited.

A common problem with honey bees

now is that old pest called *Nosema*. Simply put, this one-celled parasite damages the stomach of a bee, shortening its lifespan, and the damage allows some of these other pests' entry into the bee itself. It's like having a bad cut, then having it get infected. It's a no-win for the bees.

New pests.

Several new viruses (including an insect iridescent virus we nicknamed Ivy) and a couple of diseases were found. By themselves, though, none seem to be causing terrible problems. But now, after four years, we have identified these nasties and know what to look for... and maybe even what they do when combined with other problems.

The worst pest.

But after 25 years we still haven't found a good way to control *Varroa* mites. Scientists have discovered that these mites are even worse than we thought. When bees are attacked by these mites their immune systems shut down and the bees can't handle other pests and diseases. So the mite does its own damage and then makes it easier for other pests to do even more damage.

Systemic pesticides.

Incredibly small amounts of new pesticides - notably, Bayer's clothianidin, one of its neonicotinoid pesticides - are showing up in honey bee food fed to young bees. These sub-lethal amounts seem to be much more lethal for young bees than old bees, but it was the old bees that these chemicals were tested on. When only old bees are tested and they seem unaffected the pesticide is claimed to be safe to use. Maybe not.

Fungicides.

Until now considered safe to use around bees, these agrochemicals have been used for years without apparent problems. When honey bees are exposed to new formulations, many with the active ingredient prochloraz, however, it tends to harm the digestive flora bees (and us) use to help digest food. No digestion and



bees starve. That's a problem.

All Together Now.

By themselves, none of these issues is fatal to honey bees or their young. But more and more evidence is piling up that when bees are exposed to three or four of these at the same time, an individual bee is essentially overwhelmed. But rather than all die at once, they simply live shorter lives. Shorten the life of a typical honey bee by 5 or 6 days (out of a possible 45 or so in the summer), and you destroy the complex society of the colony, and soon, there are no bees to carry on the work.

Colony Collapse Disorder is, it seems, simply a symptom of too much of all of these in some combination. The researchers haven't found the complete answer yet... which virus, disease, chemical and immune system assault is the most lethal, but they are closer to the answer, and more importantly, have better advice for beekeepers on how to avoid these problems.

How Beekeepers Can Help

Make sure bees have a diverse and varied diet. Many floral sources are needed for a healthy, wholesome, season-long diet. And make sure those flowers have not been sprayed with the new insecticides and fungicides that are so detrimental to the young. And feeding bees is a good idea. Use one of the newer substitute diets available from the supply companies and feed whenever there's a food shortage or lack of variety. It will only help.

Make sure you control Varroa mites in your hives, keeping the Varroa populations as low as possible all year long. Use bees resistant to mites as much as possible. Trap mites using drone brood and screened bottom boards, and if treatment is necessary, use the safe organic acids or essential oils.

To keep stresses as low as possible in your hives, keep your colonies in full sun, all day long. This reduces mite populations and even small hive beetle infestations a great deal. And, winter your bees with more than enough stored food, with good wind and cold protection to help them through this tough time.

re-print permission: Source: January 18, 2011 at 1:30PM by Kim Flottum
Read more: Colony Collapse Disorder Causes - Causes of Colony Collapse Disorder - The Daily Green

How Much Land Does It Take to Feed A Bee Colony? More Than You Think.

Source: June 24, 2010 at 12:33PM by Kim Flottum

There's a lot going around about the ties between honey bee nutrition and Colony Collapse Disorder. Some of it is going around because I have been preaching this gospel for years now, and finally some are beginning to listen. Of course I'm not the only one... I just happen to have more places to preach than most people, so I get heard more.

But the question remains: how much does it take to feed a honey bee colony? It's not like I can go to the store and simply get a bag of Purina Honey Bee Chow... although beekeepers do feed their bees protein supplements on occasion. But even the best of these – and for the most part the formulas are secrets – are only short term fixes for a short term lack of food... sort of like that Power Bar thing you bring along on bike rides or hikes. Don't read the ingredients 'cause you don't want to know: Even though it tastes like sawdust and cardboard, it's filling and good for you, says the label. That's pretty much what honey bee chow is to a honey bee, too.

Mostly, beekeepers feed bees when there's nothing else for bees to eat, and beekeepers want their bees to be raring to go before a crop blooms. That's a key beekeeping secret: have lots of bees in your hives before the bloom, so those lots of bees can gather lots of nectar and pollen. If you let them raise lots of bees on that bloom, like they are programmed to

do, then when the bloom is over you have lots and lots of bees, and they eat all the honey they just made. For a beekeeper, that's not a good plan.

But how much do bees eat? Well, the rule of thumb is that it takes an acre of flowers to feed a colony of bees. But that's a constant acre of bloom to feed a colony of bees, not just a field of dandelions blooming in May then gone and the bees have enough for the rest of the year. Nope, doesn't work that way.

Bees need that blooming acre as early in the season as possible... say, January in the far south, March in the mid-section, and April in the north. And that bloom usually comes in the form of trees: Willows, maples and the like. There are about 40 full-sized trees on an acre. For one colony. That's about a million blossoms, by the way.

But trees quit after a week or two and the bees are still eating. Then, under the trees, come dandelions for a week or so, but then what? Where do the bees go then? To other trees maybe, on another acre somewhere. Black Locust trees are wonderful, if it doesn't rain during bloom, then tulip poplar maybe, then basswoods. Meanwhile on some other acre white clover starts to bloom, then the alfalfa in that farmer's field nearby. By late summer a strong, healthy colony of bees have burned through about 20 or so acres of blossoms. I'm going to talk more about nutrition, lots more because it has become very, very apparent that more needs to be said.

But for now, in case you can't picture an acre... it's the size of a football field without the end zones. And by the end of this month a colony of bees will have eaten 20 of them (maybe more), each full of flowers.

Re-print permission: Read more: Colony Collapse Disorder - Beekeeping - Kim Flottum - The Daily Green

Bee Thinking About Beekeeping with the Seasons Pollinator Programs: Who, What & How You Can Help

No single program is endorsed over another single program over another; but rather share their information so that readers can decide if they would like to learn more and help support these programs. It's nice to know and keep informed on what's out there as far as bee research goes.

Pesticide Action Network North America

Pesticide Action Network North America (PANNA) works to replace the use of hazardous pesticides with ecologically sound and socially just alternatives.

As one of five **PAN Regional Centers** worldwide, they link local and international consumer, labor, health, environment and agriculture groups into an international citizens' action network. This network challenges the global proliferation of pesticides, defends basic rights to health and environmental quality, and works to ensure the transition to a just and viable society.

PANNA (Pesticide Action Network North America) is helping to create a domestic Fair Trade movement to support family farms and guarantee living wages and safer conditions for farm workers. Our commitment is to a truly green revolution, one that includes not only a sustainable agriculture, but most important, expansion of human rights to food, justice and self-determination. For more information on PANNA, visit: www.panna.org.

Project Apis m.

Project Apis m.'s mission is to fund and direct research to enhance the health and vitality of honey bee colonies while improving crop production. PAm is the go-to organization at the interface of honeybees and pollinated crops.

PAm has infused over 1.5 million into

bee research since 2006 to provide growers with healthier bees resulting in better pollination and increased crop yields.

Project Apis m. is a non-profit 501 (c) (5) organization governed by a nine-member board. Our board members are beekeepers representing the major national and state beekeeping organizations. Four scientific advisors review research proposals and provide recommendations to the board.

PAm's current 2013 research projects include 14 projects being undertaken at 12 different research institutions across

the U.S. Research studies for the year total \$340,151. For more information on Project Apis m. visit [www](http://www.projectapis.org).

<http://projectapis.org>.

Pollinator Programs: Who, What & How You Can Help

Pollinator Stewardship Council

The mission of the **Pollinator Stewardship Council** (formerly known as the National Pollinator Defense Fund) is to defend managed and native pollinators vital to a sustainable and affordable food supply from the adverse impact of pesticides.



Merchandise Price List

| | BUZZ | NEW BUZZ |
|------------------------------------|---------------------|---------------------|
| | | PRICE |
| | (includes shipping) | (includes shipping) |
| UTENSIL CROCK | \$36.00 | \$33.50 |
| 100th ANNIVERSARY HIVE TOOL | \$20.00 | \$20.00 |
| COFFEE CUP WITH SPOON | \$17.00 | \$12.50 |
| MAGNET | \$2.00 | \$2.00 |
| COOK BOOK | | |
| 1-9 BOOKS | \$6.50 | \$6.50 |
| 10 OR MORE | \$5.50 | \$5.50 |
| IHPA BALL CAP | \$8.15 | \$6.65 |
| IHPA VISOR | \$15.00 | \$13.50 |
| T-SHIRT | | |
| YOUTH S,M,L | \$15.00 | \$11.00 |
| ADULT S,M,L,XL | \$15.00 | \$13.00 |
| ADULT 2X, 3X | \$17.00 | \$15.00 |
| POLO SHIRT | | |
| ADULT S,M,L,XL | \$35.00 | \$29.00 |
| ADULT 2X, 3X | \$37.00 | \$29.00 |

T-Shirts - we have a few of the 100th anniversary shirts left. Please indicate if you would like the 100th Anniversary T-Shirt if available in your size. We will make every attempt to fulfill your order as you request. There are a limited number of Honey Pots, Crocks and Hive Tools left.

Please contact Rhonda Heston, IHPA Treasurer, at 515-724-2124 with questions.

Please send your check payable to Iowa Honey Producers to 52735 187th Ave, Chariton IA 50049

As pollination is required for one-third of the nation's food supply, we strive to accomplish our mission by: Ensuring that State Lead Agencies and US EPA enforce regulations to protect pollinators from pesticides, as mandated by FIFRA.

- Using multiple strategies, including litigation and legal petitions, as well as technical support for managers of pollinators who have suffered damages to their beekeeping operation caused by pesticides.
- Providing advocacy, guidance and tools for beekeepers to defend their bees from the detrimental effects of pesticides.
- Raising awareness about the potential adverse impacts of pesticides on pollinators important to the supply of food and the ecosystems that support them.

For more information on the Pollinator Stewardship Council and how you can help, visit: <http://pollinatorstewardship.org>

Source and re-print permission:
Kelley Beekeeping • Issue 43: January 2014

Honey Bees and Pesticides

Dr. Eric Mussen, UC Davis, Davis CA
University of California
Western Apicultural Society
www.ucanr.edu/sites/was2/



Honey bees have been exposed to bee-toxic chemicals probably since the beginning of their existence. Early on, those toxins were naturally occurring, plant-protective compounds secreted in nectars, pollens, and resins or by microbes working in their environments. Over time, the bees worked out their differences with nature and have survived until today.

Once humans truly began to impact the environment, called by some "the beginning of the anthropocene," honey bees have had to deal with human-applied compounds, many of which are quite

toxic to honey bees. Toxins from *Nicotiana tobacum* (nicotine), *Chrysanthemum* flower heads (pyrethrum, a mixture of pyrethrins), *Fabaceae* family, such as jicama (rotenone), a Mexican lily, *Schoenocaulon officinale*, (sabadilla), and the Asian *Azadirachta indica* (neem) were used centuries ago to eliminate pest problems and some are still being used to day in organic farming.

Human-synthesized chemicals tend to be more toxic to the pests and to non-target animals than many of the natural compounds. Beginning with salts of heavy metals then evolving into organic compounds, a succession of types of chemistries has replaced previous products, often due to their negative impacts on the environment and the ability of the target pests to develop resistance. Following World War II, chemicals used for gas warfare were re-formulated to be used in pesticide applications against arthropod pests. Chlorinated hydrocarbons were followed by organophos-

phates, carbamates, pyrethroids and neonicotinoids. Most of those products targeted the nervous system in one way or another. Non-targets were susceptible, too.

Chemist also found targets in other biological pathways of target pests. Living organisms have to respire – utilize oxygen as an energy source. Respiration is a favorite target for non-arthropod pest organisms, such as fungi, but bees need to respire, too. Chemicals are synthesized that mimic the effects of insect's hormones. These include juvenile hormone mimics that keep the insect in its larva stage until it dies, enzyme analogs that block a metabolic pathway vital to the growth of the insect, and chitinase inhibitors that prevent the manufacture of chitin, the basic building block of insect exoskeletons.

Consequences of contact with these pesticides in the field vary. Honey bee exposure to the chlorinated hydrocarbons, organophosphates, and carbamates often resulted in loss of most of the foraging population. Since the poisoning was relatively slow, many foragers died in piles inside and around the hive, but not before contaminating the pollen supply. Scientists found that dead and dying bees, and stored pollen, contained residues in parts per million (ppm). Newly emerging bees consuming the contaminated pollen were likely to be seen dead and dying on the ground in front of the hives for up to a month following the poisoning.

The change to pyrethroids (analogs of pyrethrins) altered observations at the hive. Often very few bees were returning to die at the hive. Many simply flew off and could not return. Before dying, however, some did manage to bring back contaminated pollen. At sublethal doses, the bees persisted quite well following exposure. However, during the winter in colder climates, the clusters would die off, from the outside in. Honey bees have a detoxification system that works relatively well on low doses of pyrethroids, as long as the bees maintain a high enough body temperature.

WEAVER'S *famous* QUEENS and Package Bees

★ Buckfast

★ All-American

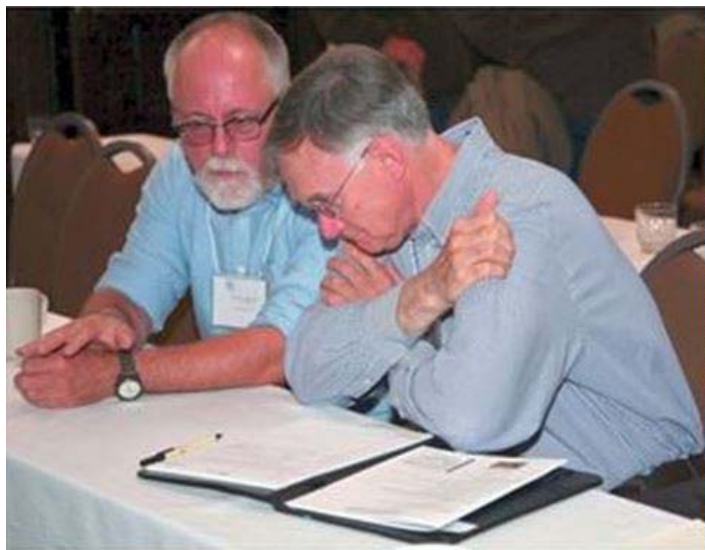
Order On-Line Now

Visit us on the Web at www.rweaver.com

THE R WEAVER APIARIES, INC.

16495 CR 319, Navasota, TX 77868

Ph: 936/825-2333 rweaver@rweaver.com



During the winter, bees on the outside of the cluster cool down to around 45 degrees Fahrenheit before working their way back into the warmer, central portion of the cluster. At the cooler temperature their detoxification system cannot keep up and the bees die.

Displacement of many of the older chemistries began in 1990 when the first neonicotinoid (nicotine analog), imidacloprid, came onto the market. It appeared to be a blessing. When applied as a spray to the plant, or as a root treatment either injected, drenched, or seed-treated into the soil, the toxin moved systemically throughout the plants but did not disperse all over the environment. Generally, the toxin killed sucking and chewing arthropods that fed on the treated plants. Also, the neonicotinoids were designed specifically to agonize the neonicotinic receptors of nerve cells of invertebrates but not to interfere with similar receptors of vertebrates. This made the products such safer for mammals, birds, fish, reptiles, amphibians, etc.

Preliminary testing determined that the neonicotinoids did move into the nectar and pollens of treated plants. However, at agricultural-treatment doses usually only contaminated those bee foods at levels around 4-10 parts per billion (ppb), while the lethal dose by ingestion of an adult honey bee averaged 192 ppb. Subsequent laboratory studies determined that the neonicotinoids showed surprisingly strong effects on the nerv-

ous system of honey bees at very low exposure levels. Although honey bees were stimulated, physiologically, to begin detoxifying and eliminating the parent compound from their bodies in a matter of hours, the major breakdown products still proved quite toxic. Behavior changes were easy to measure in laboratory studies. However, detrimental effects to colonies could not be documented in field studies in which colonies of bees were fed sublethal doses of imidacloprid in syrup for weeks. Current research shows that some aspects of honey bee health and activities in the hive are affected by exposure to very low levels of neonicotinoids, but neither colony death nor colony collapse disorder can be attributed to these chemicals.

Neonicotinoid products are registered for dose uses well above the agricultural field doses when they are used on landscapes, trees, and nursery plants. In some cases, the amount of imidacloprid in the nectar of treated Eucalyptus trees has exceeded 500 ppb and many suburban beekeepers have reported bees dying around their hives. Analyses of some of those dead and dying bee samples have revealed surprisingly high levels of neonicotinoid residues.

The current thinking about the impact of pesticides on honey bees is that most exposures of honey bees to pesticide residues come from contaminated hive products, basically contaminated stored pollen. The contamination comes from two basic sources: residues of chemicals used to reduce mite populations and residues of pesticides used in the bees' foraging environment. Practically all the pesticides are lipophilic – they blend well with hydrocarbons, oils, and waxes. Beeswax and the exocuticle of honey bees contain those materials. Often pollen grains also have lipids on their surfaces, making them excellent conveyors

of pesticides. Once in the hive, the pollen grains and beeswax can swap residues back and forth, so most of the stored pollen is contaminated, whether it started residue-free or not. The only good thing about this is that honey is lipophobic (“oil doesn’t mix with water”), so regardless of where it is stored it rarely ever picks up detectable levels of pesticides.

Effects of exposures to stored pollen levels of residues usually are not readily observable. Those exposures do, however, have physiological impacts on the bees. We can now detect changes at the molecular level that, until recently, escaped us. We can determine if genes have been up – or down-regulated. We can determine if immune system products are produced similarly, following bacterial challenge, in control bees and bees treated with very small doses of pesticides.

And, indeed, exposures to field-level doses of one neonicotinoid and one fungicide, including pollen contaminated during a normal field application, left the dosed adult honey bees more susceptible to *Nosema ceranae*. There is no reason to believe that those two chemicals are unique in their effects on honey bees. So, exposure to any of the approximately 150 different chemical residues, which have been found to date in beeswax, stored pollen and adult honey bee samples across the country, is likely to impact your bees negatively. Air pollutants are likely to cause similar problems.

Thus, honey bees that do not live on a diet of mixed, clean pollens, and live in a hive that contains residues of mite control and other pesticide products, are not at all likely to be healthy and vigorous. In many cases, they are lucky to be alive.



Featured Beekeeper of the Month

Our featured beekeeper this month is another participant in the IHPA mentor program. Meet Sterling Greiner. His parents are Sid and Mary Greiner and they live on a farm near Williamsburg, Iowa. Sterling has two brothers. They raise sheep for showing as well as goats and pigs and also have several cats, a dog, and fish.

Sterling is in the eighth grade at Williamsburg Junior High School. He is involved in football, wrestling, swimming, track, diving, jazz band, choir and 4-H. His hobbies include sports, riding motorcycle, the outdoors and hanging out with friends. He is a member of the Cosgrove Hustlers 4-H club and his projects include livestock, foods, photography, aerospace, visual arts, horticulture and entomology. After graduation he would like to attend college to study business, and his future plans are to live on a small ranch and open a motorbike shop.

Sterling says bees have always been fascinating to him and since he is a honey lover, he thought it would be great to keep bees and produce honey. The bees would also be helpful to the garden. Matt Stewart was his mentor. He took



Sterling in his beekeeping veil.

classes in Washington, Iowa and says he learned a lot and had fun building his hive. A rare thing happened to Sterling his first year of bee keeping, he inherited two other hives from a nearby farmer. These hives were set up a year earlier and had been untouched since. Upon his first visit, he found the two hives were each single supers dripping

with honey. Sterling said there were also several swarms around their farm during the summer, but he didn't have much luck capturing them. His original hive seemed to thrive at first, but eventually something happened with the queen. Because he had several hives and swarms to watch he learned about the differences in the bees. He says his own hive was calm and easy to work with, even the wild swarms were docile. However, the only stings he received were from his inherited hives which were wild and crazy and a challenge to deal with. Sterling reports since studying and beginning this hobby he has become more aware of bees, their personality and things detrimental to their welfare. Because of this he has become a spokesman on the bee's behalf. Many people fear bees he says, but a little education goes a long way in calming those fears. He has given several presentations for 4-H to help educate others. His goal is to add a few more hives and eventually sell honey at the farmer's market.

It sounds like you received an exceptional amount of experience your first year in beekeeping Sterling, keep up the hard work.

Submitted by Ron Wehr



Sculpture created by bees inside an empty super from an inherited hive.



BEEKEEPING IN IOWA

By, Glen L. Stanley
State Apiarist, emeritus
Huxley, Iowa 50124

Beekeeping when done as it should be, has always been hard work. There is still few lifts around that take some of the labor out of the procedures, although for

many, many years the results of all the work were satisfactory.

Honey Bee colonies keep dying by the thousands because of the use of Insecticides, Pesticides and Chemical Fertilizers.

Over the last decade the Chemical Companies claim they test each of their insecticides with Honey Bees to determine if there was any effect. Most claim that individually the test proved it had little, or no, effect on the bees. The tests were made by the Chemical companies, SO maybe should be questioned.

It is possible they were partly correct that each insecticide individually didn't have a lot of effect on the bees. Most any given area would be treated with a variety of insecticides and the bees do not select which they gather with the pollen. Two or more of the chemicals used and collected by the bees in pollen become exceedingly toxic, killing the larvae that receive the pollen and even killing the adults.

The research that has been conducted at Iowa State over the past couple of years by Dr. Mary Harris only confirms the cause and effects and the amounts of contamination collected in the pollen by the bees. The research has been done here, and elsewhere, but what the Iowa Beekeepers need is a remedy for the cause. All the research in the world isn't going to eliminate the problem.

The use of toxic pesticides, neonicotinoids, is a significant factor in killing our bees. Low levels of these impair bees' pesticides impair bees ability to learn and find their way back to the hive, so, about ninety percent of colony losses is by pesticides the other ten percent by other causes.

Only two things cause the hives to become entirely clear of bees and one is

in the field. The other is Acarine mites which are now almost a has been.

Iowa is the most contaminated State of the fifty. The Governor talks about a healthy State but is the unhealthiest of all. Minnesota is one of the healthiest with comparatively clean water, lakes and streams. Birds and bee have few problems there.



For All Your Packaging Containers For Packing Honey

(No Order To Large or Small)

BL Plastic Containers, LLC



**"We Built Our Business on
Service, Quality, and
Dependability."**

BL Plastic Containers, LLC
1425 Metro E. Drive Unit 109
Pleasant Hill, IA 50327

Phone: 515-266-6112
Fax: 515-266-1112

sales@blplasticiowa.com
www.blplasticiowa.com

The Cure: That is up to the Environmental Protection Agency, Iowa's State Government and the Iowa Legislature. They need to take control of the use and, misuse of all these chemicals that are creating the problem. Just a few more years and there will be NO BEES.

Contact you State Senator and Representative and let them know the problem. Read the Book entitled, "SILENT SPRING" A 1970'S book by, Rachael Carlson.



Trivia Answer:

1 – With bearing almond acreage at 810,000 and another 80,000 planted acres to come online within two years, many are predicting a million acres of almonds by 2020.

2- 2 to 2 and a half hives per acre are recommended.

3 – 1,620,000 to 2,025,000 bee hives

Source: 2014 American Bee Journal, January issue and Scientific Beekeeping by Randy Oliver



Helping Beekeepers Keep Bees

Honey Bee Ware

Bees * Equipment * Supplies * Honey * Education

**N 2587 State Hwy 15
Hortonville, WI 54944
(920) 779-3019**

Honey Bee Ware in Hortonville, WI recently purchased Lapp's Bee Supply. Now more inventory than ever before!

Experience the best customer service around! Please visit our store or see us on the Web. We look forward to helping you with all your beekeeping needs.



Wayne & Joan Gerdtis

*Monday-Friday 9-5, Saturday 9-noon
Other times by appointment*

www.honeybeeware.com

If you liked **LAPP'S** you'll
LOVE
Honey Bee Ware!

**Full Selection of
Beekeeping Supplies**

**Family Owned and
Operated**

**Four Generations of
Beekeepers**

Website Store open 24/7!

Central Iowa Bee Supply

Cash and carry bee equipment supplier of woodenware, tools, suits, medications, and nutritional products from Dadant & Sons. Custom woodenware built by our own cabinetmaker, Don Charleston, is also available.

**Owners: Susan Jones and
George Jones**

**Our shop is located at
14535 NE 88th St., Maxwell, IA.
Phone numbers 515-387-8707 and
515-450-8296, or online at our website
www.cibees.com Email us for your bee
supplies at cibees8707@gmail.com**

**Open: Thurs. 5-8 p.m.,
Saturday 10 a.m.-4 p.m., or call us.**

**We want to be your Central Iowa
bee equipment supplier for your hives and
all the supplies you need to get started in
the wonderful world of honey bees!**



**Come check out our shop 7 miles northeast of Elkhart,
or 5 miles southwest of Maxwell. When you need a Super
immediately for honey production - we are the ones to call.
When you need medication immediately - we are the ones to
come to. Cash and Carry. No more waiting on FEDEX
to show up in a week. You come and look at what you want
and walk out with it. No more shipping cost to worry about.
If we don't have it in stock, we will order it.**



Dadant

Starting Out Beekeepers Since 1863



www.dadant.com



**M01977
Tool Box**



**M01506 Nuc box
Deep 9 5/8
and
M01507 Medium
6 5/8" frame**



**B91401
Slotted
board**



**B92101 Screened IPM
Bottom board**



**M00334 Capping
Roller Punch**



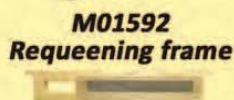
**B41301
Cloake
board**



**V01260 Economy
Vent Suit**



**V01261 Economy
Vent Jacket**



**M01592
Requeening frame**

**B52901
Topbar Hive
with metal roof**



GS4006 Observation Hive



**B55101
Queen Castle**

51 S. 2ND STREET, HAMILTON, IL 62341 217-847-3324 PH 217-847-3660 FAX TOLL-FREE (888) 922-1293
1318 11TH STREET, SIOUX CITY, IA 51102 712-255-3232 PH 712-255-3233 FAX TOLL-FREE (877) 732-3268

The Buzz Newsletter

Iowa Honey Producers Association
52735 187th Avenue
Chariton, IA 50049



Officers

President: Pat Ennis
1040 Union Ave.
Goodell, IA 50439
(641) 444-4767
Flat_Lander@lycos.com

Vice President: Eli Kalke
1445 165th St.
Clemmons, IA 50051
(641) 512-4728
FieldStoneFarms@netins.net

Secretary: Renae M. Beard
116 15th Street
Cedar Falls, Iowa 50613
(515) 650-0655

Treasurer: Rhonda Heston
52735 187th Avenue
Chariton, IA 50049
(515) 724-2124
R.Heston@yahoo.com

Historian: Butch Wetzel

Past President :
Curt Bronnberg
1433 Hull Ave.
Perry, IA 50220
(515) 465-5939
CBronny823@aol.com

District Directors

District #1 Jackie Beard
19682 415th St.
Chariton, IA 50049
(641) 774-8047
BeardRJ@wildblue.net

District #2 Louise Johnson
34147 310th St.
Guttenberg, IA 52052
(563) 252-2340
LouiseJ@alpinecom.net

District #3 Dennis Nielson
6948 25th Ave.
Newhall, IA 52315-9620
(319) 350-8361
dlnielson35@gmail.com

District #4 Mike Swett
2005 North Dakota Ave
Ames, IA 50014
(515) 450-2033
funcity@aol.com

District #5 Craig Greene
1554 135th PL
Knoxville, IA 50138
(641) 842-2112
cgreene@iowatelecom.net

District #6 Mike Divis
3312 210th St.
Anthon, IA 51004
(712) 373-9743
(712) 899-8117
mikyvyd@aol.com



Back-to-Basics Beekeeping Club
Contact: Jim and Tina Marshall
2923 Jones Ave.
Oskaloosa, IA 52577
641-660-0983

Central Iowa Beekeepers Association
Contact Arvin Foell
30930 530th Ave.
Kelley, IA 50134
Home phone 515/597-3060
Cell phone 515/450-9494
ajfoell@huxcomm.net

Des Moines Backyard Beekeepers
Contact: Julia McGuire
515-988-1828
jammcguire@yahoo.com

East Central Iowa Beekeepers
Contact: Dave Irvin
2254 S. Riverside Dr.
Iowa City, IA 52246
(319) 351-6205

State Apiarist
Andrew Joseph
(515) 725-1481
andrew_joseph@iowaagriculture.gov

IDALS website
www.agriculture.state.ia.us

Iowa Department of Inspections and Appeals
Mark Speltz
(515) 669-3266
mark.speltz@dia.iowa.gov

Iowa Honey Queen Program
Connie Bronnberg 515-480-6076
cbronny823@aol.com

Friendly Beekeepers of Iowa
Contact: Judy Spence
12839 Carpenter Trail
Carlisle, IA 50047
(515) 988-8397
jespencejr44@gmail.com

Great River Bend Beekeepers
Contact: David Hayes
1749 110th St.
Maquoketa, Iowa 52060
563-678-2862
prairiecreekfrm@netins.net

Loess Hills Beekeeping Association
22524 Hunt Avenue
Council Bluffs, IA 51503-7978
LHBA@LoessHillsBA.com

North Iowa Bee Club
Contact: Pat Ennis
1040 Union Ave.
Goodell, IA 50439
(641) 444-4767
Flat_Lander@lycos.com

Bee Emergency Information
Contact: Vern Ramsey
22781 Route J16
Birmingham, IA 52535-8162
(319) 498-4355

Contact: Mike Divis
3312 210th St.
Anthon, IA 51004
(712) 373-9743
(712) 899-8117

American Honey Producers Association
www.ahpanet.com

Northeast Iowa Beekeepers
Contact: Louise Johnson
34147 310th St.
Guttenberg, IA 52052
(563) 252-2340
LouiseJ@alpinecom.net

Northwest Iowa Beekeepers
Contact: Larry J. Boernsen
6724 200th St.
Ocheyedan, Iowa 51354
(712) 735-4205
Lm5kbees@iowatelecom.net

Red Rock Beekeepers
Contact: Gerald Murphy
1180 92nd Ave
Knoxville, IA 50138
(641) 218-4814

Southeast Iowa Beekeepers
Contact: Vernie Ramsey
22781 Route J16
Birmingham, IA 52535
(319) 498-4355
Vdramsey@netins.net

American Beekeeping Federation
www.ABFnet.org

National Honey Board
www.honey.com

Amy Toth, Assistant Professor
Iowa State University
Ecology, Evolution,
and Organismal Biology
amytoth@iastate.edu
www.public.iastate.edu/~amytoth/Toth_lab/Home.html