Central Maryland Beekeepers Association

Supporting and promoting beekeepers and the viability of honeybees in central Maryland

Your Bees are Dead. Now What?

Introduction
The death of one hive can be heart-rending. The death of many hives is demoralizing, let alone a financial burden it may put you under. What now?

Sit down and read this whole document. This will allow you get a whole picture of what to do and how to do it. It will also allow you the process of "counting to 10", always a good practice.

Unless you have insurance on your bees, you may get no recompense for the losses, and that is a mind-numbing and acrimonious road to walk in any case. That is not a reason to do nothing, however. Both you and your bees live in community, and communication is what holds that community together. We need to be heard, and we need to help the community by offering the best knowledge we can of what went on. Things can change if the knowledge is available.

First: Your own emotions
Get hold of your own emotions. You will feel everything from anger to sadness, and you may be tempted to act. The object of this sheet is to make the best use of a bad situation. The main point here is to feel the emotions, just don't start down any particular road of action.

Second: "Who, what, why, where, when?"

- Don't call anyone yet. Gather information. You are the first responder. What comes of this is your responsibility alone right now.
- Make a point of recording what you know and what you remember in the last 24 hours. Date, time of day, weather, wind direction, evidence, location, including latitude/longitude (available via Google Maps). If bees are still moving, observe carefully and take legible notes. Note wing condition, attitude relative to the comb, number and location of the remaining bees, condition of brood, whether the queen is present (dead or alive).
- Collect dead bees as evidence.
  - If the whole hive is dead, collect bees from both inside and outside the hive
    - Take a full cup of affected bees and freeze them in a plastic bag.
    - Take a full cup of affected bees and put them in 70% isopropyl alcohol or Everclear in a glass jar.
- Photograph what you can.

Third: Decide who to tell
This is not as easy as it may sound. The information you have gathered, and your own suppositions, will help point the way. Each group has its own demands and capabilities.

Bees die for all sorts of reasons; one issue can be compounded by another. It may be a pesticide kill, starvation, disease, animal pests, but in each case the people you report to may change. Some of the different reasons may be date-related:

- **Late Fall to Early Spring Die-out**
  - Likely reasons: Starvation, varroa/disease
  - Starvation symptom: many bees die facing into cells. Cause can be a number of factors, but all will

fall under “management issues”, i.e. the beekeeper didn't pay enough attention or take the right action at the right times. Further education is warranted.
    - Varroa/disease symptoms: Hive may have been weak for some time, “failure to thrive”. Actual varroa load can be determined from a lab test on dead bees. “Seeing” varroa, or not, is not sufficient, as the varroa will have died off with the bees. Word to the wise: If you do not have sugar roll test or drop test data for the dead hive, some investigators won't even talk to you.
- **Die-out in March**
    - Likely reasons: Starvation, queen death
- **Die-out in June through August**
    - Likely reasons: Varroa/disease, queen death
- **Die-out August through October**
    - Likely reasons: Varroa/disease, queen death, starvation

Other reasons:
Beyond date-related reasons, there are other reasons the bees may have died. These may be seasonal, in that they happen when bees are active, but are not specific to any single season.

- **Pesticide kill symptoms**: Masses of dead bees in front of the hive; fast dwindling of hive population (empty in 2-3 days); bees shivering, moving oddly on the comb.
- **Absconding symptoms:** No bees left in the hive, including queen. Hive may be robbed out, i.e. no honey remaining. Wax moth or Small Hive Beetle may be obvious.
- **Colony Collapse Disorder symptoms**: Very few bees remaining, but queen is in the hive. Hive not robbed out (i.e. honey remaining, left alone by other bees)
- **Loss of queen symptoms:** Few bees remaining, no queen evident, little brood left, not many dead bees on bottom. Hive robbed out, no honey remaining. Wax moth or Small Hive Beetle may be obvious.

Who to call:
There are 4 groups that may need to know, depending on the probable cause:

- **The State apiarist –** The State apiarist should always know when you suspect disease or pesticides are involved, but may not be the only one to tell. His/her job is not as mentor, but as one who has the knowledge and skills to coordinate what needs doing for all the beekeepers of the state. Be sure to have all your information above, at hand when calling. **T**he State Apiarist: 410-841-5920

- **The MD Department of Agriculture, Pesticide Regulation Dept.** – Call only if evidence or symptoms are consistent with a pesticide kill. They can be reached by phone: 410-841-5710. They will want to take their own evidence.

- **The USDA Bee Lab in Beltsville MD** – The Beltsville lab will, for free, test any sample sent in for varroa, nosema, SHB and other diseases/pest residue. They do not test for pesticides. For more information, call 301-504-7299. Read up on their services before calling.

- **The Feds**: beekill@epa.gov They want to know about pesticide kills. Make sure to include all relevant information noted above as well as your complete contact information.

- **The Pollinator Stewardship Council** - may need to know if there are legal issues coming forward, or if compliance with existing laws is not being enforced. Note that this should be explored only under relatively extreme circumstance, as it will take staying power on your part. (http://pollinatorstewardship.org/)