In 2014 a Presidential Directive required States to develop a Managed Pollinator Protection Plan (MP3), a voluntary means of increasing communication between stakeholders to mitigate acute exposures of bees to pesticides. However, Iowa has been proactive, implementing the Iowa "Bee Rule" nearly 40 years ago. The development and implementation of the Bee Rule included public participation, stakeholder involvement, is based on a BMP to reduce bees to pesticide exposure, has defined public outreach, is reviewed an updated as needed, and via pesticide complaints, the results can be quantified. The Bee Rule is not voluntary, but a requirement of licensed Commercial Pesticide Applicators in Iowa.

The Iowa "Bee Rule"

In 1979 the Iowa Department of Agriculture and Land Stewardship (IDALS) first implemented an Administrative Rule to protect honey bees from exposure to pesticides that are toxic to bees. By adding the locations of managed beehives to the Iowa beecheck[®] registry, pesticide applicators are able to locate and plan accordingly to minimize colony exposure to applied pesticides. Effective January 22, 2009, the Department adopted an amended "Pesticide/Bee Rule" of the Iowa Administrative Code Chapter 21-45.31(206). The updated rule effectively limits and restricts the timing of applications within a one mile radius of the hives. The Rule reads:

"45.31(1) Owners of apiaries, in order to protect their bees from pesticide applications, shall register the location of their apiaries with the state apiarist. Registration shall be on forms provided by the department. The registration expires December 31 each year and may be renewed the following year. 45.31(2) Between 8 a.m. and 6 p.m., a commercial applicator shall not apply to blooming crops pesticides labeled as toxic to bees when the commercial applicator is located within one mile of a registered apiary.; A commercial applicator shall be responsible for maintaining the one-mile distance from apiaries that are registered and listed on the sensitive crop registry on the first day of each month. This rule is intended to implement Iowa Code sections 206.6(5)"a"(3) and 206.19(2)."

The Iowa Sensitive Crop Directory / beecheck® Registry

IDALS has partnered with the non-profit company FieldWatch[™], Inc., to provide online registry tools to promote communication between producers of pesticide-sensitive (i.e. specialty) crops, beekeepers and pesticide applicators. The new Iowa Sensitive Crops Registry using the FieldWatch[™], Inc. platform was rolled out in 2017.

The online FieldWatch[™] registries support ongoing stewardship activities to reduce incidences of offtarget pesticide exposure. The registries provide state of the art mapping features that provide applicators the locations of registered specialty sites. The boundaries on map entries are user-submitted specialty/sensitive site designations. In addition to site designations, the map interface provides other data layers, including one mile radius boundaries around apiaries.

The two online registry tools developed and provided by FieldWatch[™], Inc. are 1) driftwatch[®]: a registry site for use by producers of commercial crops sensitive to pesticides, and 2) beecheck[®]: a registry site for beekeepers and apiarists. Specialty crop producers with apiaries may enter hive locations using either the driftwatch[®] or beecheck[®] registries. Submitted producer site entries are overseen by state-appointed stewards prior to their inclusion in the online registries.

Forms referred to in the "Bee Rule" can be provided as paper copies by contacting the Department, or interactive online registration may be accessed by visiting:

http://www.iowaagriculture.gov/Horticulture_and_FarmersMarkets/sensitiveCropDirectory.asp and clicking on the FieldWatch[™] logo near the top of the webpage.

Annual Registration

Registered beekeepers may update their information at any time during the year. However, because registration expires December 31st of each year, producers and beekeepers that wish to remain actively

registered must confirm, and edit if necessary, their registration information beginning in January of the following year.

Field Markers

Field markers are available on a cost share basis to registered beekeepers. Beekeepers are asked to post the field markers at the physical location of the apiary at a height above crop canopy that will make the field markers visible to both ground and aerial applicators.

Best Practices for Pesticide Applicators:

- Determine Need: Apply insecticides only when needed.
- Avoid Drift: Do not allow insecticides to drift onto adjacent crops or weeds.
- Use Additives: When spraying close to an apiary site where hives cannot be moved or covered, use a drift reducing additive to minimize drift.
- *Plan Applications:* Apply insecticides when bees are not visiting plants in the area. In general, evening applications are the least harmful to bees.
- *Make Best Choices:* Choose the least hazardous insecticide formulation and products whenever possible.
- *Read the Label:* Read and follow all label directions. If the insecticide is toxic to bees, there is a statement in the "Environmental Hazards" section of the label that states, "This product is toxic to bees..."
- Use Safer Formulations: Liquid or granular applications are less hazardous than dust. Microencapsulated forms of insecticides are most hazardous.
- Use Safer Products: Pyrethroids (e.g. Asana, Pounce) are less damaging to bees than organophosphates (e.g. Lorsban).

Best Practices for Beekeepers:

- *Be Aware:* Learn about the insecticides being used in your area. If insecticides with "highly toxic to bees" label statements are being applied to area crops, it may be best to move your hives if possible. The new site should be at least three miles away from the pesticide treated area.
- *Openly Communicate:* Notify growers and commercial applicators in the area of the exact location of your hives. Register your hive locations via the Sensitive Crops Directory, above.
- *Place Apiaries Strategically:* Place colonies away from fields that are likely to be treated with insecticides and where they will not be subjected to pesticide drift.
- *Mark Hives:* Make sure that your current address and phone number are legibly printed on your hives so that you can be contacted if necessary.
- *Check Apiaries Frequently:* Inspect your apiaries regularly so that any problem from insecticide damage is identified quickly and action can be taken to rehabilitate the apiary.

Resources:

Sensitive Crops Directory:

To search for or register a sensitive crop or apiary: http://www.iowaagriculture.gov/Horticulture_and_FarmersMarkets/sensitiveCropDirectory.asp Sensitive Crop Registry Help - PH: 515-242-5028

Iowa Department of Agriculture and Land Stewardship:

State Apiarist, Andy Joseph 2230 South Ankeny Blvd Ankeny, IA 50023, PH: 515-725-1481