October 16, 2015

North Carolina Department of Agriculture and Consumer Services
Structural Pest Control and Pesticide Division
Attn: James Burnette, Jr., Director
1090 Mail Service Center
Raleigh, NC 27699-1090

Re: Comments on the proposed rule to amend 02 NCAC 09L.1009

Dear Mr. Burnette,

Toxic Free NC and the Carolina Farm Stewardship Association (CFSA) provide the following comment to the North Carolina Department of Agriculture and Consumer Services (the Department). The Department's proposed rule is published at 30 NCR 4, 450, and provides notice of the Department's intent to amend 02 NCAC 09L.1009 (the Proposed Rule).

Toxic Free NC is a 501(c)(3) organization that represents thousands of individuals from across North Carolina and the United States with a mission to engage them in the transition to a toxic free society through initiatives that promote human and environmental health. Founded in 1986, Toxic Free NC is the oldest organization that concentrates primarily on the human risks and environmental effects of pesticide exposure in the state. Supporters range in occupation from beekeepers, to farmers, to concerned mothers, to farmworkers.

Toxic Free NC has worked tirelessly over the past 30 years to educate North Carolinians about the harmful effects of pesticides and the consequences of indiscriminate pesticide use on our environment. Toxic Free NC has also been actively involved in pesticide and pollinator policy in North Carolina and nationally. The organization is part of a broad network that works across the United States and internationally on issues relating to pesticide exposure, pollinators, and human health effects.

CFSA is a farmer-driven, membership–based 501(c)(3) non-profit organization that helps people in the Carolinas grown and eat local, organic foods by advocating for fair farm and food policies, building the systems family farms need to thrive, and educating communities about local, organic agriculture. Founded in 1979, CFSA is the oldest and largest sustainable agriculture organization in the Southeast. For over 30 years, CFSA has contributed to the development federal, state and local policy to create a regional food systems that is good for consumers, farmers and farmworkers, and the land.

Comments on the Proposed Rule

Toxic Free NC and CFSA jointly submit this comment after reviewing the EPA's national pollinator protection strategy, and the new federal neonicotinoid pesticide labeling requirements, cited in the NC Register as the impetus for the Proposed Rule. CFSA conducted a survey of beekeepers, collecting information from 120 people with apiaries in North Carolina. Based on the federal policies, beekeeper preferences, and sound science, both organizations suggest some changes to the Proposed Rule.

1. The Proposed Rule should increase the notification range of apiaries near application sites to three miles

The Department's Proposed Rule increases the notification range from its current half mile to one mile. The policy decision to increase the notification range is in line with the intent of the National Strategy to Promote the Health of Honey Bees and Other Pollinators (National Strategy), which has as its overall goal of reversing pollinator losses and helping to restore pollinator population. National Strategy at p. 8.

Increasing the notification range to one mile seems to be an effort to act in the spirit of the National Strategy without relying on the best science available. The National Strategy does not require a specific physical distance of one mile between pollinator and pesticide. However, both the National Strategy and the state of North Carolina place a premium on using sound science. *See* Appendix A of the National Strategy at page A-2 (calling for the use of the best available science to support protective decisions); *see also* SL 2015-263 (declaring North Carolina's support for the use of sound science in agriculture).

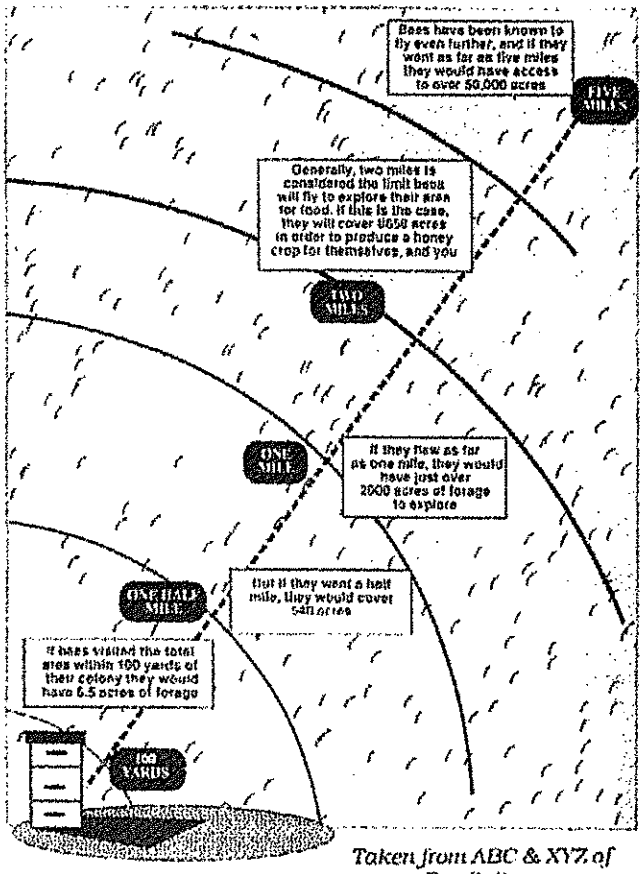
Since the Federal government hasn't provided a specific, required distance between honey bee and pesticide, best practice for a regulatory authority like the Department requires a review of the scientific literature about the distance over which bees forage. One study found that 10% of the honeybees in a given hive forage almost 6 miles from their hive, while both the median and mean distances traveled were in excess of 3.5 miles.[1] Another study found that bees forage up to 3.7 miles away from their hives.[2] Please refer to the image below that describes the

---

[1] Beekman, M. & Ratnieks, F.L.W. (2000). Long-range foraging by the honey-bee, *Apis mellifera* L. *Functional Ecology*, 14, 490.
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.219.922&rep=rep1&type=pdf

[2] Hagler, J. R., Mueller, S., Teuber, L. R., Machtley, S. A., & Van Deynze, A. (2011). Foraging Range of Honey Bees, *Apis mellifera*, in Alfalfa Seed Production Fields. *Journal of Insect Science, 11*, 144.
http://doi.org/10.1673/031.011.14401

range at which honeybees typically forage. Given this research, it is inadequate to require notice only to apiaries within a one mile radius of an aerial pesticide application.



Taken from ABC & XYZ of Bee Culture

Beekeepers are aware of research that bees travel far more than a mile to forage. Responses to a survey of beekeepers sent out by CFSA show that 75% feel that a one-mile notification rage is "not far enough." When asked what notification range they would prefer, responses ranged from 2 to 10 miles, with the plurality selecting 3 miles.

The consensus between the scientific and bee keeping communities, coupled with both the federal and state preference for science-based decisions, are strong reasons for the Department to publish a final rule requiring notification distance of 3 miles.

2. **The Department should consider requiring notice to beekeepers up to three miles from ground applications of pesticides and when planting pesticide-coated seeds.**

Though this rule seeks to change the rules for aerial pesticide application only, CFSA's survey also asked bee-keepers about their desire for notice about ground

applications of pesticide and notice when pesticide-coated seeds are planted. The vast majority (85%) of beekeepers surveyed have a strong preference for receiving notice prior to ground applications of pesticide, and two-thirds (66.1%)would like notice prior to planting of coated seeds.

Aerial spraying increases the distance of pesticide drift, but ground application of pesticides also has the potential to harm foraging bees that enter the target area during and after spraying. The vast majority of beekeepers would like notice prior to ground application of pesticides to enable them to move or close their hives during periods of highest toxicity.

In addition, reducing exposure during the planting of pesticide-coated seed is one part of the Federal government's effort "to create physical and temporal space between the use of pesticides and those areas and times when pollinators are present", the Department should consider issuing a proposed rule requiring notice in such circumstances in order to bring North Carolina more clearly into compliance with the Strategy. *See* National Strategy at pages 47 and 50.

Many agricultural plants are pollinated solely or in part by native pollinators. The Proposed Rule does not make any effort to limit the impact on pollinators other than honey bees, though the Pesticide Board is vested with the authority to regulate pesticide use to prevent damage or injury beneficial insects. N.C.G.S. § 143-458(a)(4). The National Strategy is not solely focused on the protection of honey bees; it seeks to protect pollinators broadly. So, to bring North Carolina law into compliance with the National Strategy, the Department should consider amending its rules to protect other pollinators.

For these reasons, both Toxic Free NC and CFSA encourage the Department to consider issuing rules to provide beekeepers with notice of ground application of pesticides, notice prior to the planting of pesticide-coated seed, and to generally review and revise its rules to protect other pollinating insects.

3. **The Proposed Rule should require prompt disclosure of any aerial spray schedule and increase the number of hours of notice prior to non-scheduled spraying.**

The Proposed Rule increases the amount of notice to which beekeepers are entitled, from the current 24 hours to a proposed 48 hours prior to aerial pesticide application. Over half of the beekeepers that responded to CFSA's survey found that this was not enough notice to provide adequate time to respond. Just under a third of respondents said 48 hours constituted a reasonable amount of notice.

Of those who found the amount of notice to be too short, a plurality indicated that a week would constitute a reasonable amount of notice. A number of respondents said that it was feasible to move hives to a new location in 72 hours, but not in 48 hours.

Recognizing that, though many bee keepers want at least a week of notice, this is not feasible for a farmer facing a potentially devastating infestation, we suggest balancing the interests of beekeepers and farmers by accounting differently for scheduled and non-scheduled spraying. Scheduled spraying is arranged by a farmer in advance and is conducted as a prophylactic measure to cut off an anticipated problem before it becomes noticeable. The rule should require that the spraying schedule be provided to registered apiaries within three miles of the application site within two weeks of setting the schedule.

For both scheduled and non-scheduled spraying, notice should be provided 72 hours prior to spraying. This gives beekeepers the time they say they need to close up or move their hives, while still giving farmers facing an imminent threat to their crop the ability to respond to active infestation quickly.

4. **The Proposed Rule should require that the notice include the exact pesticide to be used instead of just requiring the "type".**

The current rule requires that the notice provided to beekeepers give the *type* of pesticide to be used. According to N.C.G.S. § 143-460(28),

> The term pesticide means:
>
> a. Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and
> b. Any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

The statutory definition of "pesticide" is very broad, encompassing a variety of controls for a variety of pests. It is not clear in the current or Proposed Rule whether in reporting the *type* of pesticide, an applicator needs to alert a beekeeper as to the broad category of chemical being applied (e.g. insecticide), or provide more specific information (e.g. the pesticide's active ingredient).

The rule's use of the undefined phrase, "type of pesticide," has the potential to lead to frustrating and potentially devastating interactions between beekeepers and pesticide applicators. The rule should be revised to use a statutorily defined term, as this will provide clarity to applicators about exactly what information they are required to apply, and to beekeepers who will know what type of information they should expect. We propose that the Department replace the undefined term "type of pesticide" with statutorily defined, "active ingredient" to provide needed clarity.

The term "active ingredient" is defined by NCGS §143-460(1) to mean:

> a. In the case of a pesticide other than a plant regulator, defoliant, or desiccant, an ingredient which will prevent, destroy, repel, or mitigate insects, nematodes, fungi, rodents, weeds, or other pests;

b. In the case of a plant regulator, an ingredient which, through physiological action, will accelerate or retard the rate of growth or rate of maturation or otherwise alter the behavior of ornamental or crop plants or the produce thereof;
c. In the case of a defoliant, an ingredient which will cause the leaves or foliage to drop from a plant;
d. In the case of a desiccant, an ingredient which will artificially accelerate the drying of a plant tissue.

This will ensure beekeepers are provided with information that enables them to make the appropriate decision for their hives when faced with an aerial pesticide application nearby.

5. **The Proposed Rule needs more detail in the communication requirements.**

Neither the existing nor the Proposed Rule specify whether a voicemail or answering machine message provides sufficient notice to beekeepers when communication happens via telephone. In the section of this comment entitled "Proposed Language," we add clarifying language to state that a voicemail or answering machine message provides sufficient notice.

Proposed Language

Honeybees and other pollinators are essential to crop production in North Carolina. The Proposed Rule, as currently written, doesn't do enough to protect honeybees from the adverse effects of pesticides, and does nothing to protect other pollinators. With minor changes, the Proposed Rule can provide better protection for honey bees. Beekeepers want to protect their apiaries from harm related to pesticide application; the state can and should take into account sound science and the experiences of beekeepers in regulating aerial pesticide application.

Given the impact this rule will have on the beekeeping community and North Carolina's food production, the Department should consider revising the Proposed Rule as follows (language to add is underlined and language to delete is ~~struck through~~):

02 NCAC 09L .1009 NOTIFICATION OF APIARIES

(a) Any person who hires the services of an aerial applicator to apply a pesticide labeled as toxic to bees, shall notify, based on available listings of registered apiaries, the owner or operator of any registered apiary located within ~~one-half mile~~

three miles of the target area. Notice of a seasonal spray schedule shall be provided no more than 2 weeks after establishing the schedule. Notice of any applications shall be provided not less than ~~twenty-four~~ 72 hours nor more than ten days prior to the beginning of a single application or a seasonal spray schedule, giving the approximate time of day of application and ~~type of pesticide to be used~~ the active ingredient in the pesticide. ~~Notification may be either oral or written.~~

(b) Notification for the purposes of this Paragraph is defined as follows:

(1) written communication by:

~~(a)~~(A) U.S. mail,

~~(b)~~(B) Notification left at residence, or

~~(c)~~(C) Notification left at alternate as designated on the honeybee registration list.

(2) oral communication by:

~~(a)~~ (A) telephone, including either a conversation, voicemail, or answering machine message,
~~(b)~~ (B) personal communication, or
~~(c)~~(C) ~~verbal~~ telephone or personal communication with an alternate as designated on the honeybee registration list.

(3) digital communication by:

(A) electronic mail, or

(B) instant messaging.

(c) The Pesticide Section ~~will~~ shall distribute new registrations of beekeepers and their alternates by U.S. mail on the first of each quarter (January 1, April 1, July 1, and October 1) to all farmers growing crops within ~~one mile~~ three miles of the apiaries that are identified on the "Apiary Registration Form" of the Plant Industry Division. The list of revised registered apiaries will become effective on the fifth day of the first month in the quarter stated in this Rule. The registration of apiaries shall be effective for the calendar year that they are registered.

Thank you for your consideration.

Regards,

Preston Peck, Policy Advocate
Toxic Free NC
115 South Saint Mary's Street
Raleigh, NC 27603
Tel: 919.833.1123; email: preston@toxicfreenc.org

Rochelle Sparko, Esq.
Policy Director
Carolina Farm Stewardship Association
P.O. Box 448
Pittsboro, NC 27312
Tel: 919.542.2402; email: rochelle@carolinafarmstewards.org