



## **Position statement: Neonicotinoids and pollinator concerns**

As outdoor enthusiasts, Coloradoans have created environments that foster an outdoor lifestyle. We actively use our yards, parks and playing fields for gardening, recreation, sports and just spending time outside. Consequently, the health and appearance of the plants and trees in our residential yards, parks, school grounds, common areas, businesses and town centers are important to us. Well-maintained, attractive and thriving landscapes not only enhance the quality of our personal lives, but they serve the ecosystem and add to the economic value of our properties. Green industry professionals have a responsibility to apply science-based practices when managing pest, weed and disease issues.

Some recent reports suggests that plants treated with neonicotinoid pesticides are directly connected to bee decline and/or Colony Collapse Disorder (CCD) – a phenomenon in which worker bees do not return to their hive after foraging. Another frequently associated term is bee decline, a more general term meant to reflect the decreasing number of managed honeybee hives over the course of decades due to a multitude of issues – including urbanization (less agriculture production land), and fewer production beekeepers (as opposed to hobbyists) in the workforce, as well as environmental and pest stresses.

However, research and peer-reviewed publications, including those from U.S. Department of Agriculture (USDA) and the U.S. Environmental Protection Agency (EPA) strongly contradict the finger-pointing at neonics. Rather the research suggests that CCD of managed hives is likely caused by a combination of factors including the 1987 introduction of the destructive Varroa mite, bee pathogens and the constant stress of transporting bees hives to new locations by professional beekeepers. Findings in reports from USDA and EPA:

- Recognize the Varroa mite as the “single most detrimental pest of honey bees and is closely associated with overwintering colony decline”
- Note multiple diseases associated with CCD, many of which are amplified by the Varroa mite.
- Urge adoption of Best Management Practices (BMPs) to enhance bee health.
- Recognize the need to significantly improve genetic diversity in U.S. bee populations.
- Recommend increased nutritional options (forage) to lessen susceptibility to stressors.
- Recommend continued research on pesticide impacts at field-relevant exposures.
- Call for greater collaboration and information sharing among stakeholders to facilitate adoption of BMPs that are critical to improving bee health.

Other organizations, like the Pollinator Partnership, American Honey Producers Association and the American Beekeepers Federation, recognize that Bee Decline and CCD are broadly-based challenges, as they do not single out pesticides as a cause of bee death.

All pesticides used in Colorado must go through the EPA and CO Department of Agriculture (CDA) registration processes. At the federal level this happens under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Initial and ongoing re-registration is subject to a substantial review process and registered products must meet the high standard of having “no unreasonable adverse effect on health or the environment.” This means that the pesticides of concern in these cases have had extensive safety testing including:

- Honey bee acute contact toxicity (all outdoor use products)
- Honey bee toxicity of residues on foliage (if high acute toxicity and exposure likely)
- Field testing for pollinators (specific conditions)

Bee health is a complicated issue that dates back to the 1880s, with many factors at play. However, some organizations pursuing a pesticide-free agenda are attempting to connect bee decline and CCD in conjunction with pesticide use,

despite the lack of supporting evidence. There are lots of comprehensive reports – from the agencies in the US, Australia and the UK -- that all come to same conclusion: there are many threats to bee health: parasites and the diseases they vector, bee keeping practices, stress on bees of moving colonies for production, adverse weather, lack of good forage/nutrition, genetic weakness and pesticides. Pesticides are a factor, but they are not the only one. We don't have all of the answers at this point.

Questions about neonicotinoid concentrations in pollen and nectar remain. The studies that are published and often referenced are largely based on dosing or force feeding and are not reflective of what bees would encounter in the environment or the urban landscape. In some cases, concentrations from plants like ash trees or other wind-pollinated plants, which would not be visited by bees, are referenced. These studies do not help to answer the important questions we have but only serve to further confuse the situation and encourage an agenda of misinformation.

Pollinators are a critical component in healthy agriculture, horticulture and urban landscapes; so are effective pesticides with low environmental impacts. Neonicotinoids, when used properly and in strict adherence to the label, are important tools for crop and landscape management, and important tools in defending trees, shrubs and plants against destructive pests like Japanese Beetle, Mountain Pine Beetle, and Emerald Ash Borer.

When used properly, neonicotinoids effectively control problem insects while exhibiting less impact on non-target insects, like bees. Their ability to provide residual control means fewer applications and less applicator exposure, and because they conserve natural enemies, which increases industry use of Integrated Pest Management (IPM) and beneficial organisms. Based on current science, EPA continues to allow applications of neonicotinoids in accordance with the label, because there are among the safer chemicals available to combat many pests. Decisions made to restrict or prohibit use of such materials, without scientific proof, will undermine the research and development of new products in the future.

### **References and Resources**

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Pollinator Partnership, [www.pollinator.org](http://www.pollinator.org)

American Honey Producers Association, <http://www.ahpanet.com/>

American Beekeeping Federation, [www.abf.net](http://www.abf.net)