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Unique Stakeholder Group Works to Reduce Honey Bee Exposure Corn Dust Research Consortium (CDRC) Calls for Widespread Cooperative Measures To Support Honey Bees, Beekeepers, and Farmers

San Francisco, California – The non-profit Pollinator Partnership (P2) today released the 2013 Preliminary Report and Provisional Recommendations of the Corn Dust Research Consortium (CDRC), a multi-stakeholder initiative formed to fund research with the goal of reducing honey bee exposure to fugitive dust emitted from planter fan exhaust during mechanical planting of treated corn seed. The report can be found at <u>http://www.pollinator.org/PDFs/CDRCfinalreport2013.pdf</u> with provisional recommendations starting on page 23.

The CDRC participating organizations include the American Seed Trade Association, the American Honey Producers Association, the American Beekeeping Federation, the Association of Equipment Manufacturers, Bayer CropScience, the Canadian Honey Council, the Farm Equipment Manufacturers Association, the National Corn Growers Association, the Pollinator Partnership, Syngenta, and the University of Maryland. These organizations came together to fund and oversee research projects in 2013 to better understand ideas for mitigating risks to honey bees from exposure to fugitive dust emitted from fan exhaust from machinery during corn planting.

The CDRC funded three research teams, led by Dr. Reed Johnson of Ohio State University, Dr. Mary Harris of Iowa State University, and Dr. Art Schaafsma, University of Guelph on behalf of the Grain Farmers of Ontario. It is hoped that the preliminary results and provisional recommendations will inform best practices for the 2014 planting season. Additional research in subsequent seasons will be needed to replicate and substantiate the findings.

Two research questions were addressed by CDRC-funded research. The first question (Question 1) sought to develop a greater understanding of the use by honey bees of floral resources in and around cornfields during spring planting season and how this is influenced by vegetation management practices. Native bee communities may also be affected by exposure through forage, an issue not addressed in this research.

The second question (Question 2) was to evaluate the effectiveness and deposition levels of pesticide dust in and around fields when commercially available neonicotinoid-treated corn seed products are planted using a new product in comparison to standard lubricants (talc and graphite). Aspects of the product, BFA, developed by Bayer CropScience, had already been evaluated in other studies.

The three research teams took their own approaches to the questions. Their methods and their observations were not identical, nor were they intended to be. The variety of landscape features and differences in grower practices, as well as the timing of the planting, varied according to location. Only one of the research teams, led by Dr. Art Schaafsma, studied the effectiveness of the BFA alternative lubricant for use during treated seed planted with pneumatic planters. Despite these differences, consistencies were observed, particularly with respect to honey bee foraging during planting.

All preliminary and provisional recommendations from the report are based on small sample sizes and one year's data; all require further testing in the coming year. However, the original goal was to be as helpful as possible in influencing the behaviors of all stakeholders with respect to the 2014 growing season; and several practical solutions that the research highlighted are offered.

The first significant finding of the research, with respect to the forage question (Question 1), was that honey bees collected pollen largely from trees and woody plants (apple, hawthorn, willow, maple, etc.) during the time of corn planting. This was a consistent finding at the Iowa, Ohio and Guelph sites. The second honey bee forage discovery (also Question 1) had to do with the pesticide levels in the honey bee-collected pollen. Across all three sites, the highest residue levels occurred during the approximately two-week planting period.

The second question, (Question 2), tested the effectiveness of the alternative lubricant, BFA, as a replacement for talc or graphite to separate corn seeds in the pneumatic planters often used in corn planting in North America. The CDRC tests showed that when the BFA lubricant was used, total dust and pesticide load in the dust were reduced when compared to the use of conventional lubricants, despite a higher concentration of pesticide in the dust. Further research is needed to determine the overall effectiveness of Bayer's new lubricant in both reducing dust and dust-borne pesticide levels.

Several steps will need to be taken to achieve a reduction in exposure of honey bees to neonicotinoids used to treat seeds. Many contributions toward this goal are needed from every sector involved in this situation – farmers, beekeepers, pesticide and lubricant manufacturers, equipment manufacturers, seed dealers, government agencies and regulators, extension agents, agricultural and commodity organizations, and agricultural media all need to become involved.

"The CDRC process involved collaborative oversight of practical research through multiple institutions. It has been complex but extremely rewarding. All stakeholders have shared the responsibility for transparency, open deliberation, and unbiased assessment throughout 2013," said Pollinator Partnership's Executive Director Laurie Davies Adams. (Contact LDA@pollinator.org) "We feel that the consequences of potential harm to honey bees have been taken very seriously by every institution involved in this collaboration. We have achieved something remarkable and rare – a consortium working together to improve the situation for honey bees through balanced, unbiased, and cooperative engagement in objective science."

A second year of funded research will focus on follow-up evaluation, information dissemination, and adaptive management in 2014. Interested institutions should contact the Pollinator Partnership at <u>info@pollinator.org</u>. Each of the research teams is expected to publish papers with respect to their individual data sets either as a result of the 2013 work or in conjunction with a second year's research.

About Pollinator Partnership Established in 1997, the Pollinator Partnership (P2) is the largest 501(c) 3 non-profit organization dedicated exclusively to the health, protection, and conservation of all pollinating animals. For further information, visit <u>www.pollinator.org</u>.

Quotes and Contacts from CDRC Members (alphabetized list of quotes and contacts for CDRC members who can be contacted for further information)

American Beekeeping Federation: Representative Manley Bigalk said, "The CDRC doesn't answer all the questions about neonicotinoids and honey bees, but it's a starting place to discuss reducing exposure."

American Honey Producers Association: Representative Brett Adee, said, "While I respect this process, the end result requires that many groups cooperate to make real progress for honey bees, and it needs to happen right away."

Association of Equipment Manufacturers (AEM): Mr Daniel J (Dan) Moss, Technical Consultant -Standards and Safety, said, "AEM's member manufacturers support pollinator health initiatives and are actively engaged in the development of international standards for planting equipment that work to reduce fugitive dust from machinery exhaust fans."

American Seed Trade Association: Jane Demarchi, VP, Government and Regulatory Affairs, said, "The US seed industry is working to safeguard bee and pollinator health. We have learned a lot this first year on the CDRC. Science is incremental, and we have taken one step. We look forward to taking the next step together."

Bayer CropScience: David Fischer (Co-Chair of the SETAC Pellston Workshop on pesticide risk assessment for pollinators) said, "Bayer's goal in participating in the CDRC is to contribute to good science and management practices. We believe that solutions can be found when stakeholders work together." Contact <u>david.fischer@bayer.com</u>.

Canadian Honey Council: "While this is an iterative process, the beekeepers across Canada are looking to this research for answers. Many things need to be done. We need all parties to pay attention to the role they play in supporting healthy honey bee populations," said Rod Scarlett, Executive Director. Contact chc-ccm@honeycouncil.ca.

Farm Equipment Manufacturers Association: "We are working to ensure that corn dust residues are contained through the better planting practices that this research has informed," said Mike McClure, Engineering Manager for the Great Plains Ag Division. Contact <u>mikem@greatplainsmfg.com</u>.

National Corn Growers Association: "Corn producers are stewards of the land and as good farmers look for ways to eliminate exposure to corn dust," added Don Glenn, Production and Stewardship Action Team.

Syngenta: Jay Overmeyer said, "This research has provided valuable information for development and support of BMPs to mitigate exposure of bees to seed treatment dust. We are looking forward to year two." Contact <u>jay.overmyer@syngenta.com</u>,

University of Maryland: Dr. David Inouye (Chair of the North American Pollinator Protection Campaign) said, "Now that the first year is completed, the CDRC will seek to replicate and test results and provisional recommendations. Additional studies are needed and will lead to better understanding of impacts and actions."

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