Stewardship Leaders in Agriculture

Pollination

American Farmland Trust
Saving the Land that Sustains Us

Dan Cummings

Mr. Cummings lives in Chico, California and as the CEO of Capay Farms manages over 10,000-acres of almonds and walnuts in Butte, Glenn, and Colusa counties. Mr. Cummings earned a B.A. in Economics from Stanford University and an M.B.A. from Harvard University and has a toolset that allows him to wear many hats. In addition to managing Capay Farms, Mr. Cummings is Chairman Emeritus of Project Apis m. (PAm) and currently serves as its Chief Financial Officer. PAm is a fundraising and research group seeking to enhance the health of honey bees. Mr. Cummings is also a partner and the CFO of Olivarez Honey Bees in Orland, California, and is the managing partner of Cummings-Violich, Inc., an Agribusiness Management Company that farms several thousand acres of almonds and walnuts. Furthermore, he is a Director of Blue Diamond Growers and has held several leadership positions with the Almond Board of California, currently serving as Chairman of their Bee Task Force.

Pollinating Almonds

Mr. Cummings is responsible for 10,000-acres of almonds in the Central Valley of California. With 870,000-acres of almonds growing in the valley yielding 2 billion pounds of almonds, efficiently pollinating the trees is a major business. Between October and February over 31 million honeybees are trucked from across the country to the Central Valley to undertake the critical pollination of almond orchards. Increasingly this pollination is under threat as colony collapse disorder (CCD), possibly a result of commercial bees feeding on only a single crop, but still largely unexplained, is killing or weakening many bee colonies. Mr. Cummings is addressing this issues form numerous angles. As Chairman Emeritus of Project Apis m., Mr. Cummings is ensuring that scientific research projects with practical solutions are funded. As a partner and the CFO of Olivarez Honey Bees, Mr. Cummings is providing California with a healthy supply of honeybees. Lastly, Mr. Cummings serves on the Almond Board looking into alternative forms of pollination such as self-pollinating trees and blue orchard bees.

ACHIEVEMENTS

- Chairman Emeritus of Project Apis m.
- Partner and CFO of Olivarez Honey Bees
- Almond Board of California Bee Task Force Chairman
- CEO of Capay Farms

Alternatives to Honey Bee Pollination

With colony collapse disorder (CCD) now causing an overwintering loss rate of 30%, the price of honey bee pollination is increasing and the search for alternatives in underway. The blue orchard bee (BOB) holds promise as an alternative pollinator. Unaffected by CCD, the BOB are willing to fly in lower temperatures, an important consideration for almonds as they are the first crop each year to be pollinated, and can produce higher yields but they are currently more expensive than honey bees. Another alternative to the honeybee are self-fertile almond trees. One of the best-known varieties is the Independence almond, which was developed by Zaiger Genetics of Modesto, and is marketed by Dave Wilson Nursery. With 5-7,000 of these trees in the ground it is too early to tell if they are a viable alternative to honeybee pollination.

PROJECT DETAILS

PROTECTING THE HONEY BEE

Mr. Cummings is working with honeybee researchers to try to identify what pathogens the honeybees are bringing back to their hives that may be contributing to the colony collapse disorder (CCD). "We as an industry have eliminated all single-cause agents, so we've learned a lot, but it's become more mysterious. [CCD] seems to be highly correlated with nutrition. The bees that have better forage, a more diverse diet, are more resilient. The bees' diet today is poorer than it's ever been," explains Mr. Cummings. Providing honeybees with a more diverse diet may be part of the solution to CCD. In areas that Mr. Cummings does not farm, he promotes the growth of native plants such as coyote bush. Not only do these environments provide the honeybees with a more diverse diet, the coyote bush serves as home to parasitic wasps that prey on mites that infest and can kill off bee colonies. He's planting hedge barriers to keep sprays from drifting, along with sweet clovers and bluebells that get mixed into the bee diet. Saving the almond industry in California may require a new ecological mindset where some farmland is set aside as areas of native habitat to provide honeybees with a more varied and healthy diet.

PROJECT APIS M.

Project Apis m. (PAm) is a non-profit 501(c) organization that was founded six and half years ago. The group fundraises money to support research proposal into honeybees that are guided by beekeepers and offer practical solutions. With over 40 project sponsored and $2.4 million donated to bee research the group has been leading way in the bee industry and was the first bee organization to receive a Specialty Crop Block Grant from CDFA. PAm also developed the first comprehensive Best Management Practices (BMP's) for commercial beekeepers, conducted in-depth look at pathogens in migratory beekeeping operations, coordinated effort to improve CA border crossings by bee trucks, provided funding for the first cost-share program for full pesticide analyses of hive matrices, and developed the first-ever comprehensive effort to improve honey bee forage resources. PAm has an active education component using YouTube and e-learning modules to educate beekeepers as well as producing two e-news letters and hosting honeybee research conferences.

PROJECT PARTNERS

Blue Diamond Almonds

California Almond Board

California Department of Food and Agriculture

Cummings-Violich Inc-Orchard Management Services

Olivarez Honey Bees

U.S. Department of Agriculture

U.S. Environmental Protection Agency

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The American Farmland Trust
1200 18th Street NW, Suite 800
Washington, D.C. 20036

For more information please contact:

202-331-7300
info@farmland.org
www.farmland.org