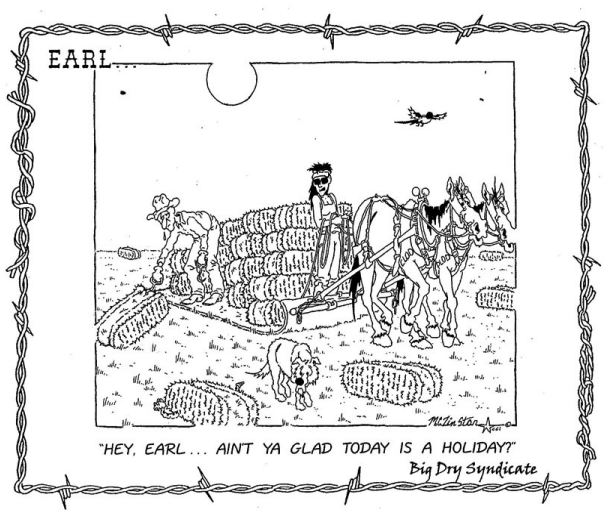

Commentary | Rita Brhel

Ethanol Defends Itself Against Big Oil Attacks

BY RITA BRHEL
P&D Correspondent

It's hard not to find supporters of ethanol and biofuels around here. Even if you don't grow corn yourself, you're bound to be driving past miles and miles of fields on the way to and from town or catching a glimpse of a soybean field if even just cruising from one side of Yankton to the other. Not to mention the reminder every time you fill up the tank of gas: Higher blend ethanol fuels are cheaper than anything else at the pump.

Rita **BRHEL**

So many of us here would say it's absurd not to support the Renewable Fuels Standard, which was established by Congress under the Environmental Protection Act of 2005 and that mandates a minimum level of renewable fuels produced and used for transportation in the United States. It is through this Renewable Fuels Standards that many people around here also have a good-paying job, because of the incentives provided to get biofuels plants up and going.

But not everyone is a fan of the Renewable Fuels Standard. Big players in the oil-and-gas industry — ExxonMobil, Marathon Petroleum and the American Petroleum — have been reported to be complaining to the Obama administration about the way the Renewable Fuels Standards program has been run, that the program rules have been much too restrictive and that the rules are actually impossible to follow beyond 2013. Through the years, the industry is supposed to be working toward higher and higher ethanol blends, but the oil-and-gas industry contends that motors just are not to the point of being able to run on higher ethanol blends without damage. And many consumers have been hearing this warning, too.

Now, the ethanol industry has formed an advocacy group called Growth Energy to counteract what it calls "Big Oil's misinformation and unsubstantiated attacks against the renewable fuels industry." Growth Energy's CEO Tom Buis says that Big Oil's goal is not to help Congress make the Renewable Fuels Standard more practical in meeting its goal but to do away with the Standard altogether. He believes that Big Oil's stance is purely out of greed and manipulation of Congress to stay in control of the fuels industry.

Growth Energy's counter-campaign will include multi-million-dollar TV ads on major cable news networks. For reference, the campaign's website is www.youreneodummy.com. Let's take a look at what Big Oil's been saying and how Growth Energy is responding, with a few comments from me thrown in:

• Big Oil — Higher blends of ethanol could damage vehicles. Growth Energy — All 2001 or newer vehicles are able to run on 15 percent ethanol blends. Me — It makes sense that the automobile industry would be following the Renewable Fuels Standard, considering it depends on the fuels industry.

• Big Oil — Higher blends will cause gas prices to rise. Growth Energy — Higher ethanol blends are consistently cheaper; in fact, without ethanol, gas would be more than $1 higher than it is now. Me — Ouch, $1 more is enough to convince me.

• Big Oil — The ethanol industry is heavily subsidized. Growth Energy — So is the fuels industry. Me — Tit for tat.

• Big Oil — The ethanol industry uses so much corn that it has caused food prices to increase. Growth Energy — Actually, it's the high price of fuel that causes higher food prices. In addition, the ethanol industry only uses part of the corn kernel and returns the highest-nutrient portion of the kernel back to the food chain. Me — Big Oil's trying to change the subject, which isn't really credible for argument's sake.

But then again, I'm biased because I am a fan of the ethanol industry. Even if I wasn't living in the Corn Belt and driving past corn fields to and from town, my checkbook sings a little every time I pull into the gas station and select the lowest-costing fuel: the ethanol blend.

Pesticides Linked To Bee Issue

BY RITA BRHEL
P&D Correspondent

PHOTO: RITA BRHEL

After years of speculation, accusations and rebuffs, the U.S. Environmental Protection Agency is validating the honey industry's hunch that massive bee deaths since 2006 are at least partially attributed to pesticide use.

"Multiple factors play a role in bee colony declines, including pesticides," said Jim Jones, assistant administrator for the EPA's Office of Chemical Safety and Pollution Prevention in Washington, D.C. The EPA released a report in May on factors leading to honey bee deaths, overwintering colony declines and the infamous Colony Collapse Disorder, showing the cause to be an interaction of habitat loss, parasites and disease, genetics, poor nutrition, and pesticide exposure.

"As the report makes clear, we've made significant progress, but there is still much work to be done to protect the honey bee population," said Bob Perciasepe, acting administrator for the EPA.

Pesticide use was named as a primary role, with the connection between bee deaths and wide pesticide use clearly documented — though pesticide exposure cannot be completely implicated in Colony Collapse Disorder, in which adult bees inexplicably abandon the hive. Colony Collapse Disorder is more related to the synergistic effect of pesticide exposure with the infestation of a common parasite, the Varroa mite, which is becoming more resistant to available controls, as well as infection with various viral diseases recently discovered in the U.S. In addition, due to major bee deaths, the genetic pool is shrinking and the bees' biological resistance is further compromised by poor nutrition caused by loss of forage plants.

Considering a third of all food and beverages are made possible by pollination, mainly by honey bees — worth $20 to $30 billion annually to agricultural production — bee conservation is more than a nicety. And the EPA reports that agricultural producers are seeing major shortages of pollinators in their fields.

"There is an important link between the health of American agriculture and the health of our honey bees for our country's long-term agricultural productivity," said Kathleen Merrigan, the deputy secretary for the U.S. Department of Agriculture in Washington, D.C.

"These include the obvious pollinators that most people are familiar with, such as honey bees and bumble bees, as well as many species of native pollinators that are perhaps a little less known," added Ada Szczepaniec, entomologist with South Dakota State University in Brookings.

In mid-August, the EPA has ordered an immediate reduction in the use of pesticides and is changing pesticide labeling to be more mindful of bees during field application.

"Although no one pesticide has been clearly associated with causing Colony Collapse Disorder, there is evidence that the additive and synergistic effects of multiple pesticide exposures are harming bees," explained Marion Ellis, entomologist at the University of Nebraska in Lincoln, Neb.

Specifically, the chemicals affected by new EPA labeling requirements are neonicotinoids, including imidacloprid, dinotefuran, clothianidin and thiamethoxam. Neonicotinoids are especially effective against sap-sucking insects, such as aphids, thrips and stink bugs. They are primarily manufactured by Bayer CropScience and Syngenta both as a spray and a seed treatment.

Imidacloprid is the most widely used pesticide in the United States, and its use goes beyond crop protection to use with gardening, trees, lawns, termites, carpenter ants, cockroaches, fleas, and more. Its toxicity to insects is widespread. Some bird species and aquatic invertebrates are severely affected, as well. Exposure to high doses in mammals can cause lethargy, disorientation, and death. No studies have been published on imidacloprid's effects on humans, but a study on rats suggests that neonicotinoids, which is chemically related to nicotine, may negatively affect the developing brain.

Bees are especially susceptible to imidacloprid. The pesticide is more toxic orally than by contact to insects, and bees ingest the pesticide through the nectar and pollen and transport it back to the hive, where it is made into bee food.

Furthermore, "pesticide does not dissipate while stored in the hive," said Reuben Baris, environmental specialist with the EPA's Office of Pesticide Programs. And the same concentration of pesticide in the plant foliage is equal to that in nectar, as in the pollen, which is equal to that in the honey and bee food.

"Honey bees' exposure to these compounds is very different from that of traditional pesticides, where acute toxicity was a primary concern," Ellis explained. "Instead, honey bees at all stages of development may be chronically exposed to sub-lethal doses of these compounds."

Imidacloprid was first widely used in the United States in 1996, a decade before Colony Collapse Disorder became apparent, so it likely isn't the sole root of the problem, but there have been several studies to show that bees exposed to sub-lethal levels of imidacloprid are more susceptible to parasites and diseases, as well as odd behavior. In some ways, bees exposed to the chemical but not at a toxic level appear to be intoxicated: Nectar-foraging patterns and bee-to-bee communication through flight patterns become erratic. The exposed hives produce fewer bees and had fewer bees return from foraging trips. In addition, imidacloprid present in high fructose corn syrup, used to feed honey bees when forage is not available, causes Colony Collapse Disorder in colonies up to 23 weeks past the date it was fed.

The new EPA label denotes the neonicotinoids as a bee hazard and cautions applicators to avoid spraying plants when bees are present, when plants are in flowering or when there is any chance of pesticide drift. In addition, the label explains that bees die from both direct contact and from ingestion of residues in the nectar and pollen of plants grown from treated seed or exposed to soil or foliar treatments or tree injections weeks earlier.

The labeling must be followed to remain lawful.

"The emphatic language in the label, 'do not apply to blooming crops or weeds if bees are visiting,' signifies enforceable restriction," said Buyung Hadi, pesticide educator for SDSU. "Usage of the product neglecting this restriction is deemed illegal."

Baris acknowledged that it has taken many years to determine which pesticides were responsible for bee deaths, as well as the appropriate measures to take, but "we really want to avoid concluding there is no effect when there is an effect. Likewise, we don't want to conclude there is an effect when there isn't."

Taking steps to reduce pesticide exposure to honey bees is a major step in protecting both native and commercial bees, but "restricting new compounds may result in a reversion to older chemistries that clearly harm bees," Ellis worried.