



THE NEXT STEP Toward a Healthier Future

A BI-MONTHLY NEWSLETTER OF THE SEBASTOPOL TOXICS EDUCATION PROGRAM

Protecting the Bees

I've been delighted to hear people increasingly recognize the importance of bees — and seek to address the threats to their well-being.

After all, bees play a vital role in growing many of our tastiest foods, including apples, peaches, strawberries, plums, avocados — even chocolate! Our diet would be so much poorer without them — as would our economy. The U.S. Department of Agriculture (USDA) estimates that bee pollination adds over \$15 billion of value to crops each year.

Pollinators such as bees are also considered indicator species. Thus, when they fare poorly, we're being warned that our vital support systems are being compromised.

Unfortunately, though, bee populations have dropped catastrophically in recent years, primarily from Colony Collapse Disorder (CCD).

This is creating a crisis in agriculture. For instance, Central Valley almond growers depend on bees, and import millions each year for pollination. However, this year there weren't enough bees available, leaving many trees poorly pollinated. U.S. bee shortages have also increased bee rental expenses for farmers.

What's causing CCD?

Folks have been debating about the causes of CCD, but from the start I suspected toxics as a likely key component. Now the evidence for

that is becoming increasingly clear. For instance, in 2012, several peer-reviewed independent studies showed that widely-used neonicotinoid pesticides (such as acetamiprid, clothianidin, and imidacloprid) harm bees in ways consistent with CCD. Their increased use since 2005 has roughly coincided with rising bee deaths. (Note: Other human activities that hurt bees include habitat destruction and industrial beekeeping practices.)

Acting for solutions

Because of these studies, the European Food Safety Authority did a formal peer review this year, and concluded that neonicotinoids pose an unacceptably high risk to bees. They also were critical of the safety claims made by the industry-sponsored science. Based on this evaluation, the European Union recently decided to ban for two years the use of several neonicotinoid pesticides.

However, the U.S. government has been much slower to address the links between toxics and these bee deaths. Although a recent USDA report acknowledges toxic pesticides as one of CCD's likely causes, it didn't make any specific policy recommendations. The Environmental Protection Agency (EPA) says that it's reviewing the situation and will issue recommendations in 2018.

But commercial beekeeper Larry Pender feels that more urgent action is needed. He says, "I can't wait for the regulators to take their time, because we need these bees now." He told CBS News that he lost a half million dollars last year alone, and had to lay off five of his seven workers.

So now a coalition of beekeepers and public interest groups are suing the EPA. They're seeking "a suspension of the registrations of insecticides that have repeatedly been identified as highly toxic to honey bees, clear causes of major bee kills, and significant contributors to the devastating ongoing mortality of bees known as [CCD]."

Plaintiff Steve Ellis, a Minnesota and California beekeeper, says, "Bee-toxic pesticides in dozens of widely used products, on top of many other stresses our industry faces, are killing our bees and threatening our livelihoods. Our country depends on bees for crop pollination and honey production. It's time for EPA to recognize the value of bees to our food system and agricultural economy."

What you can do

■ **Buy organic food and honey.** This supports the farmers who don't use toxics and allow nature's creatures to live in harmony.

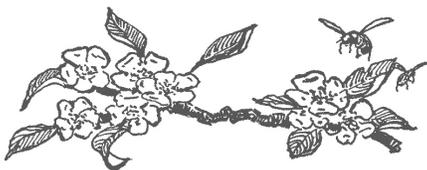
■ **Create a bee haven in your backyard.** Don't use toxic pesticides, especially those that harm bees. Grow plants that bees like, especially native flowers. Provide shelter by leaving some areas and dead trees undisturbed. Offer water (in shallow dishes, to avoid hosting mosquitoes). If you're a beekeeper, investigate non-toxic beekeeping practices.

■ **Encourage community-level change.** Share your concerns with others in constructive ways, through conversations, films, books, flyers, and events. Write letters to the editor and look for other creative and fun ways to build momentum. Support groups acting for the bees.

■ **Teach your children to love bees.** Yes, we want to be cautious and give bees space. But we can still treasure the key role they play in our lives and our world.

For more information and useful resources, see www.panna.org/current-campaigns/bees. For instance, the "Bee the Change" e-booklet offers action specifics.

ALSO SEE: www.en.wikipedia.org/wiki/Colony_collapse_disorder • www.rt.com/news/bee-eu-pesticides-ban-750 • www.centerforfoodsafety.org/issues/304/pollinators-and-pesticides



The Texas Fertilizer Plant Explosion: Reading Behind the Headlines

Often our news just offers us fragments of information, strong images without enough context for us to understand and interact with our culture in powerful ways.

I thought of this again in April, watching news of the West Texas fertilizer plant explosion. It leveled four blocks, killed 15 people, injured 200, registered seismically as a 2.1 earthquake, shattered windows seven miles away, and severely damaged a nearby school, nursing home, and apartment complex.

People in this small farming town south of Dallas didn't even know that this potential risk was in their midst. Even the EPA was apparently misinformed by a plant emergency planning document that indicated no risk of fire or explosion.

The explosion was likely caused by fire reaching stored ammonium nitrate. Ammonium nitrate is probably the world's most widely used artificial fertilizer and has caused serious explosions before — at plants, in transit, and in bombs such as Oklahoma City. Nearly every U.S. state has at least one major fertilizer production facility.

I see this as just one example of a common material causing serious harm during its lifecycle. Risks such as these are the reason that, in 2012, an advisory group to the EPA recommended that it address "specific threats" to communities near chemical facilities by toughening security and storage standards, and asking facilities to use less-toxic options.

A Congressional Research Memo prepared for Sen. Frank Lautenberg indicated that there are 6,985 U.S. chemical facilities where a "worst-case scenario" accident could impact populations of at least 1,000 people. At 90 of the facilities, over a million people could be endangered.

I hope our government acts to reduce those risks. But we can help too, by seeing each product's lifecycle impact and choosing less-harmful options instead. So here, instead of synthetic fertilizer, we can use a naturally-sourced one. Even better is compost, which can be produced locally and is no more explosive than, well, dirt. That sounds good to me!

To read more about the lifecycle costs of toxic pesticides, see the STEP Index under Lifecycle costs.

SOURCES: www.abajournal.com/news/article/fatal_explosion_at_texas_fertilizer_plant_does_massive_damage • www.truth-out.org/news/item/16254-in-the-wake-of-west-texas-1000-toxic-chemical-accidents-you-have-not-heard-of

Mercury in Local Fish

A recent survey of mercury in the state's fish by the State Water Resources Control Board surprised many when it found that bass caught on an Occidental Road bridge had an average mercury level of .53 parts per million (ppm). This is well over the .44 ppm level where the state recommends against consumption. Carp there averaged .35 ppm, a level where recommended consumption is limited to one serving a week.

This was the only survey site with fish mercury levels this high, and because this is a preliminary study, officials say they need to do further testing before deciding whether to post a warning. Previous mercury findings have led to advisories against eating bass in Lake Mendocino, Lake Sonoma, Napa

County's Lake Berryessa, and Marin County's Soulejoule reservoir.

Mercury occurs naturally in local soils, and we have had mercury mines around here. It also commonly gets into our shared environment from coal-burning power plants, as well as via cement plants, metal smelting, and other manufacturing. This toxic bioaccumulates up the food chain, so larger fish can carry concentrations a million times higher than the level in their water.

Mercury causes significant neurological damage in humans, and is especially harmful to young children and fetuses. Caution is also advised for women of child-bearing age. For more about its effects, see www.epa.gov/hg/exposure.htm.

SOURCE: www.pressdemocrat.com/article/20130529/ARTICLES/130529485/1350

Timely Tips

■ **The next Sebastopol Toxics Collection Day is on August 20**, from 4 to 8pm. To make an appointment, call (707) 795-2025 or (877) 747-1870 at least 24 hours before the event.

■ **Toxic disposal information.** For more about what's toxic and how to discard it, see the Sonoma County Waste Management Agency's website www.recyclenow.org or its Recycling Guide in your AT&T yellow pages. Or call them at (707) 565-3375.

■ **The TNS Online Index makes it easy for you** to quickly discover what's toxic and the effective alternatives. For instance, look under these **bolded** words in the Index at www.healthyworld.org/STEPIndex.html.

- Healthier **housecleaning**
- Nontoxic **gardening**
- Less-toxic approaches to **ants, snails, mold, and weeds**
- Repelling **mosquitoes** without toxic DEET
- Using **vinegar** to control weeds
- Buying **fish** varieties that contain less mercury, and helping get it out of our shared environment
- Protecting **teenagers** from toxics at their summer jobs
- Keeping toxics out of our waterways by bringing your car to a **carwash** instead of washing it in the driveway

ABOUT STEP

The Next STEP (TNS) is published six times a year by the **Sebastopol Toxics Education Program (STEP)**. **STEP is a project of the City of Sebastopol**, implemented by local citizen volunteers. **STEP's mission** is to support city residents in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

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