What pesticides are used on what food crops? What residues remain when the crops go to market and how risky are those residues? And what about the vulnerable amongst us — are we fully protecting pregnant women, infants and children, and the elderly?

Worrisome evidence that even minute levels of pesticides in food can impact human development has driven demand for organic foods — produced without synthetic insecticides, herbicides or fungicides. Since the beginning of the organic movement, consumers increasingly have made it clear they want toxic pesticides out of their food and off their plates.

Yet a recent decision by the U.S. Department of Agriculture (USDA) to stop measuring the use of pesticides on American farms could make it much harder to track pesticide use and risk trends.

What we know and how we know it

Annually since the early 1990s, the National Agricultural Statistics Service (NASS), an agency of the USDA, has collected detailed data on pesticide use on a representative sample of farms across the country. Until recently, it issued reports every year for corn, soybeans, cotton and wheat, and periodically for other crops such as oats and sorghum. In odd years, NASS surveyed pesticide applications on oats and in even years, on vegetables.

Despite some shortcomings, NASS pesticide use data has been the only free, publicly available resource for anyone studying, monitoring, measuring — and attempting to manage — pesticide use and risks. Academics, agribusiness, environmental groups, state officials and the U.S. Environmental Protection Agency (EPA) all have used it in weighing decisions and setting policy. Many believe the NASS data is arguably the most important U.S. public health law passed in the 1990s.

The Food Quality Protection Act

The Food Quality Protection Act (FQPA) of 1996 provided a new standard of “reasonable certainty of no harm” to govern the review, establishment and adjustment of all pesticide tolerances. Tolerances set maximum legal limits for pesticides in food.

The impacts of the FQPA on pesticide use and risks have been measured and, to a degree, managed as a result of the investigations by the USDA in pesticide use and residue data, and by the EPA in pesticide risk assessment. Drawing on much of the same data, we have been able to estimate where risks have gone up and down, and by how much.

Our analytical work — some of it commissioned by the EPA — shows that considerable progress has been made in reducing pesticide risks in parts of the food supply (such as apples, see below), while little progress and even some slippage has occurred elsewhere, especially in imported produce. There’s also an emerging consensus about where the FQPA has failed to live up to its promise.

Fortunately there are government officials and agencies that want to sustain and even accelerate progress in reducing pesticide risks. During the Bush era, however, the EPA has made little use of the FQPA’s new tools and powerful mandate. Fortunately, the law remains intact and the EPA largely could finish the job of lowering pesticide dietary risks to meet the FQPA’s new standard by the end of 2009 — if provided direction and support from the new White House and Congress.

The USDA still is collecting and reporting PDP pesticide residue data. But anyone trying to track the source of the residues — what’s being applied where — could be crippled by the decision by NASS to terminate collection of pesticide use data.

It’s often said that what gets measured gets managed. Without measuring pesticide use, we will be stymied in attempts to manage pesticide risks.

The latest pesticide data

In 2008, the USDA released pesticide use data only for apples and cotton in the 2007 crop season. NASS collected no data for corn or soybeans in 2006 and 2007. The lack of this use data means independent analysts cannot quantify what’s likely to be an enormous increase in pesticide use.

While monitoring residue levels is important, the latest research shows that avoiding exposure to even low levels of pesticide during pregnancy isn’t just a health issue for the developing fetus, but one that affects the whole family through childhood and adulthood.

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PCC opens ninth store in Edmonds

OPENING DAY SEPTEMBER 3

by Troy Bulic, Editor

One of the most wonderful things about opening a new store is joining a new community and getting to know the people. We expect our newest store in Edmonds will attract many new members, but thousands of members already live in the north end — many have been driving Edmonds or more for years to shop at PCC.

Opening a new store means more people can get the delicious, local, organic foods they want. It also means more market opportunities for more organic farmers, increasing the demand for organically farmed land. It means more people are exposed to the cooperative business model, where profits are ploughed back into our collectively owned business instead of being shipped to a faraway city.

For all these reasons, we’re grateful to you, our current members, for the collective strength in our business that makes it all possible.

Opening a store in Edmonds has created more than 100 new jobs for people who want their work to support a more sustainable culture. Some existing staff from other stores are moving to Edmonds — taking opportunities for promotions and professional growth — and new staff are joining us. So when you see a new face, introduce yourself and welcome them!

As with previous stores, the Edmonds store incorporates “green” building techniques. Bets are that PCC Edmonds will qualify for LEED® platinum certification, making it the first U.S. grocery store to earn this highest distinction. (See pccnaturalmarkets.com/sustainability for more information.)

We’re forging relationships with the Chamber of Commerce, the local Rotary chapter, Sustainable Edmonds, and schools and churches as partners for our scrup and food bank programs. We’re also a sponsor of the Green Edmonds festival on Saturday, September 13, on the playfield of the Frasure Anderson Center. This free, outdoor festival will showcase “green” products, services and ideas to help attendees live a greener, healthier lifestyle. Music will be featured on a shoppers stage.

After you visit PCC Edmonds, be sure to visit our Web site to post your comments about our newest store. Visit pccnaturalmarkets.com/edmonds.
in herbicide applications since 2005 needed from 200-300 before 1996 to around 50 now).  

Now, Monsanto can continue making bogus claims that Roundup Ready® technology reduces herbicide use with little fear of contradictory data. (There’s one private source of 2007 pesticide use data that might help fill the void. Stay tuned.)

No pesticide use data has been collected in 2008, so again there’ll be no new data available next year. An unusual coalition of industry and environmentalists, government agencies (including the EPA) and consumer organizations (including POGO) are asking the USDA and Congress to restore the $8 million needed to reinstate Pesticide’s data collection activities. Hopefully data collection will resume in the fall of 2009.

Reduced apple pesticide use and risks

The U.S. apple crop is a good example to illustrate what we’ve learned over the last 15 years about pesticide use and dietary risks. We have high-quality pesticide use data for apples through 2007, and residue data through 2005. Organophosphate (OP) insecticides are the major risk-driven in apples. They were before passage of the FQPA, and they still are today.

We use an index called the “Dietary Risk Index” to quantify the level of risk associated with residues found in a given food. DRI scores are a function of the residues found by the PDP, the amount of food usually consumed in an average serving, and the toxicity of the pesticide to humans, as evaluated by the EPA.

Without getting into all the details, our analyses show that DRI scores for domestically grown apples were six times higher in the years before the FQPA than today (i.e., down from 208-300 before 1996 to around 50 now).

Before the FQPA in 1996, about three OPs were applied on the average acre of apples, totaling five to six pounds of active ingredient. (No wonder so many apple farmworkers experienced symptoms of OP poisoning!) By 1999, OP use fell to four pounds per acre, then to three in 2001 through 2007.

The DRI score for azinphos methyl (an OP considered by the EPA to be too toxic to farm workers that it’s being phased out) was 10.7 in 1994, dropping to 9.1 in 2005. Still, about two pounds of azinphos methyl were applied to 62 percent of the apple acreage in 2007, a relatively high rate nonetheless and down in terms of volume by only about 15 percent since 1991. (Of all the azinphos methyl applied in the United States on apples in 2007, (5 percent was used in Washington State.)

Despite the EPA’s soft touch in recent years in implementing the FQPA, the law has reduced the amount of organophosphates applied on apples by about half and has cut dietary pesticide risks from apples to less than one-quarter the level common in the early 1990s.

Full and aggressive implementation of the FQPA — if that ever happens — should have high-quality pesticide use data for apples down even more. For people that are pregnant, sick, young or old, or those who want an added margin of safety, organic apples and processed apple products have near-zero DRI scores.

But what about progress in reducing pesticide use on pears, cherries, potatoes, and wheat and other key Pacific Northwest crops? Sadly, we don’t know. The USDA has decided that collecting pesticide use data isn’t a priority. These crops only occasionally are included in the PDP.

An emerging opportunity

No doubt some agriculture interests feel that the less data generated by government on pesticide use and risks, the fewer head- aches from noisy non-profit organizations.”

Pesticides and food: flying blind CONTINUED FROM PAGE 1

Go organic

The Organic Center’s analysis of government data found that it’s most important to choose organic versions of produce with thin, edible skins.

It determined that the 16 items listed below have the highest dietary risk index scores, in descending order.

Vegetables

- green beans
- cranberries
- sweet bell peppers
- nectarines
- peaches
- strawberries
- peaches
- tomatoes
- peas
- apples
- cherries
- cantaloupe

The center also found that non-organic, imported produce might contain higher levels of residues than non-organic U.S. counterparts.

For more information, visit organic-center.org and browse the “State of Science” section.

Dr. Charles Benbrook is chief scientist at The Organic Center, a non-profit research group carrying out and disseminating research on the benefits of organic food and farming.

Benbrook previously served as executive director of the Board on Agriculture, National Academy of Science.

** Numerous studies show organophosphates (OPs) are toxic to the human brain and nervous system. Two OPs that remain in widespread use — azinphos methyl and phosmet — account for most of the total DRI scores for domestically grown apples.**