ORGANIC FOR ALL

Kendra Klein, PhD
Senior Staff Scientist
Friends of the Earth

March 14, 2019
This project is possible thanks to the generous members of Friends of the Earth-US as well as grants from foundations, including California Consumer Protection Foundation and Turner Foundation.
USDA Pesticide Data Program
77% of ~10,000 samples had residues (2016 data)

APPLES
47 different pesticide residues found

6  Known or Probable Carcinogens
16 Suspected Hormone Disruptors
5  Neurotoxins
6  Development or Reproductive Toxins
11 Honeybee Toxins

www.whatsonmyfood.org
Pesticide Action Network
How do the synthetic pest control products allowed in organic farming compare to the pesticides allowed in conventional farming?

25 synthetic active pest control products allowed in organic crop production

900+ synthetic active pesticide products registered for use in conventional farming by EPA*


The organic farmer must first use mechanical, cultural, biological and natural materials and move onto the toolbox only when and if they don’t work. In this way the toolbox is “restricted.”

Including:
- Alcohols
- Hydrogen peroxide
- Ozone gas
- Calcium hypochlorite
- Soaps
- Lime sulfur
- Boric acid
- Copper sulfate
**Sixteen participants**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Six day intervention**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Six days conventional diet**

**Six days organic diet**
<table>
<thead>
<tr>
<th>Type of pesticide</th>
<th>Analyte</th>
<th>Parent compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organophosphate Insecticides</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA</td>
<td>Malathion</td>
<td></td>
</tr>
<tr>
<td>TCPY</td>
<td>Chlorpyrifos</td>
<td></td>
</tr>
<tr>
<td>DMP</td>
<td>Azinphos-methyl, chlorpyrifos-methyl, dichlorvos, dicrotophos, dimethoate, fenitrothion, fenthion, isazofos-methyl, malathion, methidathion, methyl parathion, naled, oxydemeton-methyl, phosmet, pirimiphos-methyl, temephos, tetrachlorvinphos, trichlorfon</td>
<td></td>
</tr>
<tr>
<td>DMTP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMDTP</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DAPs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEP</td>
<td>Chloethoxyphos, chlorpyrifos, coumaphos, diazinon, disulfoton, ethion, phorate, sulfotep, terbufos</td>
<td></td>
</tr>
<tr>
<td>DETP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEDTP</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pyrethroid Insecticides</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-PBA</td>
<td>Allethrin, cyhalothrin, cypermethrin deltamethrin, fenpropathrin, permethrin, trialomethrin</td>
<td></td>
</tr>
<tr>
<td>F-PBA</td>
<td>B-cyfluthrin</td>
<td></td>
</tr>
<tr>
<td><strong>cis-DCCA</strong></td>
<td>cis-Cypermethrin, cis-cyfluthrin, cis-permethrin</td>
<td></td>
</tr>
<tr>
<td><strong>trans-DCCA</strong></td>
<td>trans-Cypermethrin, trans-cyfluthrin, trans-permethrin</td>
<td></td>
</tr>
<tr>
<td>Neonicotinoid Insecticide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothianidin</td>
<td>Clothianidin</td>
<td></td>
</tr>
<tr>
<td><strong>Phenoxo Herbicide</strong></td>
<td>2,4-D</td>
<td>2,4-D</td>
</tr>
</tbody>
</table>
Percent decrease in urinary pesticide levels after six-day organic diet intervention
**Organic Diet Intervention Studies**


**Diet Comparison Studies**


Organic Shmorganic
Conventional fruits and vegetables are perfectly healthy for kids.

Organic food no healthier than non-organic: study

Is organic food worth the higher price? Many experts say no

The Organic Food Movement Is an Insufferably Classist Waste of Money

Spinning Food: How Food Industry Front Groups and Covert Communications are Shaping the Story of Food

https://foe.org/resources/spinning-food-how-food-industry-front-groups-and-covert-communications-are-shaping-the-story-of-food/
“Existing US regulations have not kept pace with scientific advances showing that widely used chemicals cause serious health problems at levels previously assumed to be safe.

Our most vulnerable population, our children, face the highest risks.”


---

**Chemicals on our food: When “safe” may not really be safe**

Scientific scrutiny of pesticide residue in food grows; regulatory protections questioned

Carey Gillam

https://www.ehn.org/when-safe-may-not-really-be-safe-2621578745.html
Cumulative exposures add up

~ 40% of US children may be exposed to organophosphate pesticides at levels greater than benchmarks for neurological harm
Public Education & Advocacy

"Everyone has the right to clean, organic food. That is a human right." - Tara, study participant, Baltimore

www.OrganicForAll.org
WHY IT MATTERS

Your Health
Decades of data shows that

Farmers, Farmworkers and Rural Communities

Pollinators and the Environment

www.OrganicForAll.org
Social Media Video

~310,000 views

Without captions:  https://www.youtube.com/watch?v=J8nrfy1jgCQ&feature=youtu.be
With captions:  https://youtu.be/fnQGLJJCQBgY
A bill has been introduced in the Maryland General Assembly to ban chlorpyrifos in our state. Several other states are also moving in this direction.

Policymakers should closely review this study – and all of the evidence on chlorpyrifos – and act in the public interest to ban this dangerous chemical.
THANK YOU!

Kendra Klein, PhD, Senior Staff Scientist, Friends of the Earth
Kklein@foe.org
@KendraCKKlein