Pesticide-Free New Canaan Initiative

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About Us

- Concerned parents...
- Synthetic Pesticides on Lawns
- Linkages with Illnesses
- Largely Unregulated Industry
- Needed to Know More

Top 3 Reasons to Switch …to go pesticide-free

- Bad for health
- Bad for environment
- Synthetic pesticides don't solve pest problems

The Challenge

- Cide, from Latin “to kill”, designed to kill over time (“chronic toxicity”),and disrupt biological systems
- Pesticide use increasing
- Children at higher risk
- Inadequate testing and control
- General lack of awareness of dangers
- Lawn vanity (current attitudes)
- Powerful companies sell chemicals
- Limits of EPA and other agencies

Increasing Use & Potency

- Pesticide ingredients sold rose from 25 million lbs in 1947 to over 140 billion lbs in 1985
- Private residences spray up to ten times more pesticides than are needed (NYTimes, 1991, Virginia Tech Study)
- US Geological Survey found at least two pesticides in every stream sample across the US and at least one in every fish sample
- 600% incr in nitrogen fertillizers since 1950, plants take up 1/3rd of it (Hunter)
- Synthetic pesticides employ higher potencies than organic methods (Hunter)

Inadequate Regulation

- Manufacturers are not required to disclose all ingredients
- Studies look only at lethal doses
- Warnings about potential long-term or chronic health effects from active ingredients not required
- States do not have adequate resources to monitor pesticides in surface or ground water (CT DEEP)
- 25 of CT State's 200 landfills have contaminated drinking water, another 35 considered threats
- CT has banned lawn pesticide use on grounds of daycare centers and k-8 schools, no where else

Inadequate Testing

- Approx 90% of pesticides used every day have not been adequately examined for their ability to cause cancer, genetic mutations or birth defects (Hunter, *Healthy Home*)
- 33 of 34 most common lawn pesticides not tested for human health hazards, however, most…
  - Block oxidation processes
  - Are neurotoxins
  - Destroy enzymes
- EPA relies on manufacturers to provide safety data
- Bottled water companies not required to test their water for pesticides (Hunter)

Health Risks

- 100% of Americans have traces of pesticides in their body tissue (CDC)
  - Stored in body fat
  - Absorbed through skin
  - Inhaled
- E.g., Showering and bathing in polluted water exposes the body to pesticide levels 6Xs that of drinking it because of skin absorption

Health Outcomes

- One can expect in US populations exposed to synthetic pesticides
  - lower fertility
  - autism spectrum disorders
  - birth defects
  - organ damage
  - mood disorders
  - cancer
  - neurological problems

Increased Risk to Children

- Take in more per body weight
- In their developmental prime (2yrs)
- Less able to detoxify
- Play outdoors
- Substances tracked into the home where it doesn't biodegrade
- Typically take baths more frequently
- Placenta does not protect the fetus

Child Health Outcomes

- 2012 AAP issues report on dangers of health effects on children exposed to pesticides (James Roberts, MD, MPH)
- 2012 NIH study found that persistent exposure by children to low doses of these toxic substances can cause serious inherited effects
- 1989 National Cancer Institute finds children develop leukemia 6Xs more often when exposed to pesticides (Leiss, J. et al., 1995)
- 2009 Agency for Toxic Substances and Disease Registry found children who live in homes where pesticides are used are 2Xs more likely to develop brain cancer than non-exposed (Am J. Pub Hlth, 85: 249-252)
- 1987 Study showed children absorbing insect repellent DEET for 3 nights developed toxic encephalopathy

Common Culprits to Avoid

- Alachlor and atrazine(herbicides), diazinon, Merit, Dylox, Talstar, Acephate, Orthene, Trimec, Balan, Tupersan, 2,4-D (Agent Orange), chlordane (for termites) and dioxins (sometimes a breakdown product)
- Note: GMO products are often required to be grown with the complementary pesticide

Pesticides Frequently Detected in U.S. Urban Streams (USGS, 2006)

Chemical	Use	Health Effects
Carbaryl	Insecticide	Reproductive, Neurotoxic, Endocrine Disruptor, Organ Damage
Chlorpyrifos	Herbicide	Reproductive, Neurotoxic, Teratogenic, Irritant
2,4-D	Herbicide	Reproductive, Neurotoxic, Endocrine Disruptor, Irritant
Diazinon	Insecticide	Neurotoxic, Teratogenic, Organ Damage
Diuron	Herbicide	Teratogenic, Organ Damage
Prometon	Herbicide	Irritant
Simazine	Herbicide	Organ Damage, Irritant
Tebuthiuron	Herbicide	Organ Damage

Practical Solutions

- Test your soil
- Follow good natural lawn care practices:
  - Mow high
  - Fertilize according to the tests
  - Mulch in place
  - Aerate and overseed
- Use a calendar –timing is important

Organic Alternatives

- Chickety Doo Doo
- North Country Organics
- Fire Belly Organic Fertilizer
- Lawn Restore
- Mega Green (www.multibloom.com)
- Earth-Rite
- Wow Plus
- Pro Gro
- Compost: Coast of Maine, Fafard, McEnroe, or nematodes (norganics.com)
- www.pesticidefreenewcanaan.org has a list of typical lawn problems and organic solutions

Natural Lawn Care Schedule

- Dec/Feb. Use calcium chloride or sand instead of salt for snow control
- Mar/Apr. Lawn mulch leaves, don't leaf blow
- Apr/May. Aerate and apply compost. Test your soil. Don't dethatch unless professional says so. Deweed (pull, use hot water or vinegar)
- Jun/Jul. Monitor weeds, water long and less frequently if needed. Plant natives.
- Aug/Sep. Overseed, and aerate if you haven't, mow high (3") until Nov. Apply calcium-rich fertilizers only if needed.
- Oct/Nov. Fall cleanup, leaf removal or mulch, final compost, mow to 2"

Call to Action

- Educate ourselves: residential spraying IS a problem and we can …
- SWITCH to organics (be a market maker)
- Support the current ban on k-8 schools, constantly threatened by chem companies (fight against integrated pest management –say no to IPM)
- Raise awareness: ladybug signs
- www.epa.gov/adminweb/comments.htm or call 202-564-4700
- Pesticide registry
- Act locally: E.g., Environmental Highschool Fellowship to educate youth and monitor local situation

Resources

- www.beyondpesticides.org
- www.pesticidefreelawns.org
- www.pesticideinfo.org
- www.grassrootsinfo.org
- www.audubon.org
- www.ewg.org/sites/tapwater
- www.epa.gov/adminweb/comments.htm
- www.ehponline.org
- www.pesticidefreenc.org