

## Handling and storage tips

On all purchased products –

- Read the label and follow instructions carefully.
- Store as directed on the label. Many products are heat-sensitive. If stored improperly, some will become useless, while others will degrade into highly toxic chemicals.

## Get off the **TOXIC GREEN** treadmill.

Overwatering and overfertilizing cause thatch buildup, resulting in pest problems, which are then combated with toxic chemical pesticides that kill off not only the pest but also beneficial insects and healthful bacteria and organisms in the soil. Pests then proliferate, necessitating more toxic pesticides which stimulate pest resistance.

## Avoid **TOXIC CHEMICAL PESTICIDES**

that can pollute air and water and harm health of humans, pets and wildlife.

- Insecticides:
  - Dursban<sup>(R)</sup> (chlorpyrifos)
  - Cygon<sup>(R)</sup> (dimethoate)
  - Cythion<sup>(R)</sup> (malathion)
  - Orthene<sup>(R)</sup> (acephate)
  - diazinon
  - Oftanol<sup>(R)</sup> (isofenphos)
  - Sevin<sup>(R)</sup> (carbaryl)
  - Baygon<sup>(R)</sup> (propoxur)
  - lindane
  - Talstar<sup>(R)</sup> (bifenthrin)
  - Tempo<sup>(R)</sup> (cyfluthrin)
  - Demon<sup>(R)</sup> (cypermethrin)
- Herbicides:
  - 2,4-D<sup>(R)</sup> (chlorophenoxy)
  - atrazine
  - Roundup<sup>(R)</sup> (glyphosate)
- Fungicides:
  - Benlate<sup>(R)</sup> (benomyl)
  - mancozeb
  - maneb

If you have a lawn care service, a pest control service or other yard service:

- Ask what pests are present that require immediate treatment
- Find out what chemicals they apply
- Get the label and technical data for all products they use on your property
- Insist that only the least toxic alternatives be used
- If your present service can't use the least toxic alternatives, switch to one that can
- Remember that none of the EPA-registered chemical pesticides are "safe" or "environmentally friendly"

If your homeowners or condo association takes care of your lawn:

- Insist that no chemical pesticides or fertilizers be used in your yard
- Ask the Association Board to switch to the least toxic pest alternatives

For additional information:

- *Recognition and Management of Pesticide Poisonings*, 5th edition 1999, available free from the EPA by calling 1-800-490-9198 (Document # EPA 735-R-98-003)
- *Designer Poisons: How to Protect Your Health and Home from Toxic Pesticides* by Marion Moses, M.D.
- *Our Stolen Future: Are We Threatening Our Fertility, Intelligence, and Survival?* by Theo Colburn et al
- [www.chem-tox.com](http://www.chem-tox.com)

## FACT

Facts about Alternatives to Chemical Trespassing, Inc.

**PO Box 5922, Sarasota FL 34277-5922**

a 501(c)(3) not-for-profit organization working to stop urban pesticide pollution

# alternatives to **TOXIC LAWN CARE PESTICIDES**

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To Chemical Trespassing, Inc.

**PO Box 5922**

**Sarasota, FL**

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**Sound cultural practices prevent most pest problems and eliminate the need for toxic chemical pesticides.**

**Don't overwater.** Proper watering (1/2 to 3/4 inch water only when necessary, not more than once a week) encourages deep roots and healthier grass. Overwatering reduces roots, and increases root-rotting diseases and weeds.

**Don't overfertilize.** Overfertilizing may artificially "green up" your grass and promote lush growth, but it causes a buildup of thatch. Thatch is a breeding ground for pests and diseases – especially chinch bugs, sod webworms, nematodes and brown patch fungal disease.

**Don't mow too short.** When mowing, cut off no more than one-third of the grass blade (keeping it at least 3" high). The higher the grass is cut, the deeper its roots grow. Deeper roots increase grass vigor and health. Healthier grass is more pest resistant and prevents weeds.

**Use a mulching mower. Don't remove the clippings.** Grass clippings return nutrients to the soil and do not cause thatch.

**Don't try to kill all bugs.** Very few insects are harmful to plants. Many – like the ladybug and lacewing – are beneficial insects that keep harmful pest insects under control. Others – like the butterfly – are neither harmful nor beneficial. Pesticides kill all insects – the good, the bad and others – and may deprive birds and other wildlife of food. **Identify harmful pests; then spot treat only when populations are out of control. Use the least toxic alternative.**

After you *identify* a pest problem, **spot treat** only the affected area. Use the **least toxic** alternative.

For identified pest insects:

- horticultural oils
- insecticidal soaps
- neem products [Bioneem<sup>®</sup>]
- *Beauveria bassiana* (good soil fungus)
- *Bt-Bacillus thuringiensis*
- boric acid products
- diatomaceous earth (not swimming pool type)
- beneficial insects (ladybugs, praying mantis, big-eyed bug, etc) and nematodes
- spinosad products [bait with Conserve<sup>®</sup>]
- insect growth regulators

For weeds:

- **in grass**, corn gluten pre-emergent (apply in February and October in Florida before weeds show – a broad spectrum, especially good for crabgrass and broadleaf weeds)
- mulch bare ground [Term-A-Rid613<sup>®</sup>, termito-preventive mulch]
- mechanical means (hand-pulling, hoeing, or weed-whacking)
- hot water
- fatty acids [Scythe<sup>®</sup>]
- vinegar or vinegar products [Burn-Out<sup>®</sup>]

For fungus:

- stop or reduce water applied to foliage
- botanical oil
- baking soda (bicarbonate of soda)
- sulfur

## Least toxic alternatives

for specific pest insects

fire ants:

- boric acid bait [Triad<sup>®</sup>, NiBan<sup>®</sup>]
- baits [Ascend<sup>®</sup>, Amdro<sup>®</sup>]
- pine oil botanical [Insecto 7<sup>®</sup>]
- diatomaceous earth (not swimming pool)
- spinosad [bait with Conserve<sup>®</sup>]
- insect growth regulator [Extinguish<sup>®</sup>, PreCor<sup>®</sup>]
- mix 4 oz dish detergent or insecticidal soap with 1 gal hot water; pour on mound

chinch bugs:

- neem products [Bioneem<sup>®</sup>]
- *Beauveria bassiana* [BotaniGarde<sup>®</sup>, Naturalis<sup>™</sup> store below 80°F]

mole crickets:

- beneficial nematodes [BioHaltFlea<sup>®</sup>]
- boric acid baits [Triad<sup>®</sup>, NiBan<sup>®</sup>]

caterpillars of moths:

- *Bt-Bacillus thuringiensis* [Thuricide<sup>®</sup>]
- spinosad [Conserve<sup>®</sup>]

fleas:

- diatomaceous earth (not swimming pool)
- boric acid [BioFlea<sup>®</sup>]
- beneficial nematodes
- insect growth regulator [Archer<sup>®</sup>, PreCor<sup>®</sup>]

sweet-feeding ants:

- boric acid sugar baits [Terro2<sup>®</sup> put on ant trails]

aphids and scale insects:

- horticultural oils
- insecticidal soaps
- beneficial insects

## About fertilizers

- **Always avoid** all "weed-and-feed" and fertilizers containing pesticides – especially atrazine or chlorpyrifos [Dursban<sup>®</sup>].
- **Avoid** synthetic chemical fertilizers. They decrease biological activity.
- **Use organic** fertilizers [Fertel<sup>®</sup>, EarthRite<sup>®</sup>, Sustane<sup>®</sup>, bone meal, blood meal, kelp, fish meal]
- **Use** compost to enrich soil.
- **Follow** label instructions for application rate. Less is better...