a voice
for the natural
landscaping
movement

Wild Ones®
NATIVE PLANTS, NATURAL LANDSCAPES

Reprinted from the
Wild Ones Journal,
Jan/Feb 2015 issue.

For more information, or to join Wild Ones Natural Landscapers, here's how to reach us:

Phone
(920) 730-3986
(877) 394-3954 (Toll-Free)

Mail
PO Box 1274
Appleton, WI 54912-1274

E-Mail
ExecDirector@wildones.org

WebSite
www.wildones.org

Celebrating natives
plant and natural
landscapes
since 1979.

GRAPEVINE

By Maryann Whitman

Ecological Pathways: Poisonous Slugs

How a series of interactions affect the Web of Life.


Garden Slug

No-till farming (not plowing and harrowing and disking the land frequently), benefits field and forage crop production by reducing soil erosion, conserving water (if irrigation is necessary), improving soil health, and reducing fuel and labor costs. It's generally a 'good thing' to do.

Neonicotinoids are the most widely used insecticides, worldwide. They are systemic insecticides applied to seeds to prevent 'feeding' damage by early season insects. "Systemic" means that the insecticide enters into the actual cellular structure of the plant—including nectar and pollen. These insecticides are very successful against insects (and a number of other organisms, not to mention pollution of surface waters—but we won't go into all that at the moment).


Dead ground bettle

Slugs thrive in the stable environment provided by no-till practices, and feed on duff and young green plants. Now, slugs are mollusks, not insects, so they are not susceptible to the insect specific poisons. But by chewing on the young plants, and ingesting the insects who have taken in the insecticides, slugs accumulate the toxins in their bodies—they become poisonous. Then, the insects that eat slugs, mostly predaceous beetles (who also eat other "pest insects" like aphids , but we won't go into that just now), are poisoned.

It's not yet clear what happens to frogs when they ingest the toxins accumulated in slugs, or birds when they eat the bugs. Hard to tell when they have tummy aches, or are feeling not so great. The research did show that, in the field, plots with neonicotinoid-treated seed had fewer insects and predators, more slugs, and lower yields than plots without the insecticides."

Ref: John F. Tooker, Department of Entomology, Pennsylvania State University