***Silent Spring* Foreshadows Present Day Issues**

Rachel Carson's iconic book, *Silent Spring*, published in 1962, had enormous environmental consequences, in that it raised public awareness about the effects of DDT and eventually led to its banning, and bringing back eagles and other raptors from the edge of extinction. Yet, since that time, the use of equally hazardous pesticides has only increased, and most of the public still has little awareness of what is happening to our water, soils, wildlife populations, and effects on our own health.

Pesticides by definition include herbicides, insecticides, fungicides, rodenticides and any other chemicals released into our environment intentionally to kill living things. About 1 billion pounds of conventional pesticides are used each year in the United States to control weeds, insects, and other pests. Benefits of these uses may include increased food production and reduction of insect-borne disease; however, such benefits must be weighed against the environmental and health risks posed by their use.

That is where the EPA comes in whose job it is to register and regulate pesticides. Their current mode of determination includes a Conditional Registration category for specific uses, without undergoing the full risk assessment process or meeting all data (testing) requirements. In fact, Conditional Registrations account for two-thirds of current pesticide product registrations, more than 2,100 products having been granted Conditional Registration status since 1990. This process allows for rapid release of products to the market that may remain in use for many years before they are adequately tested.

Other testing deficiencies:

1. Testing is often done on the active ingredient alone, not on the product as a whole. This is particularly problematic when the product contains more than one active, because often one active will enhance the effectiveness (risk) of the other, a synergistic effect.
2. Inactive ingredients are not required to be listed on the label and therefore are not tested, even though some may have health effects.
3. Most testing data is provided by the manufacturer.
4. Agricultural seeds are often coated with pesticides but analysis and tracking of these seeds is exempted due to a loophole in the regulations.

So, the fact that a product is on the market does not mean that it has been tested properly and that it is "safe".

Other things of interest to home gardeners who are making decisions about management of their lawns and gardens:

1. Killing pest insects with pesticides is likely to kill beneficial insects, pollinators, and microorganisms in the soil, and may pose problems for birds and other wild life.

2. Most plants, especially native plants, are resilient enough to withstand a fair amount of damage from insects. Pause before deciding to intervene. Frequently just spraying with water, or water with soap, will take care of any perceived problem.
3. Natural or organic pesticides should be used with care because they can still be toxic to non-target species. For example, Neem oil will smother all insects on contact. Timing of use is recommended – when pollinators are not present.
4. Consistent use of pesticides can lead to toxins entering rivers and streams through run-off, posing risks to insects and aquatic species.

In spite of all the reasons to reduce pesticide use, we have the overuse or misuse of pesticides by mis- or uninformed homeowners, overuse by professional lawn care professionals, and state government officials who seem reticent to enact regulations which go beyond EPA standards.

Take-home message: Avoid using chemical pesticides as much as possible. You are already assaulted by chemicals in your day-to-day life over which you have no control. Learn about better ways to garden and about non-toxic alternatives for pest control (www.ProtectOurPollinators, www.PollinatorPathway, and www.XercesSociety.) You will feel good about protecting your family, your pets and the environment from further exposures. And your example will be carrying forward Rachel Carson's voice to a new generation.