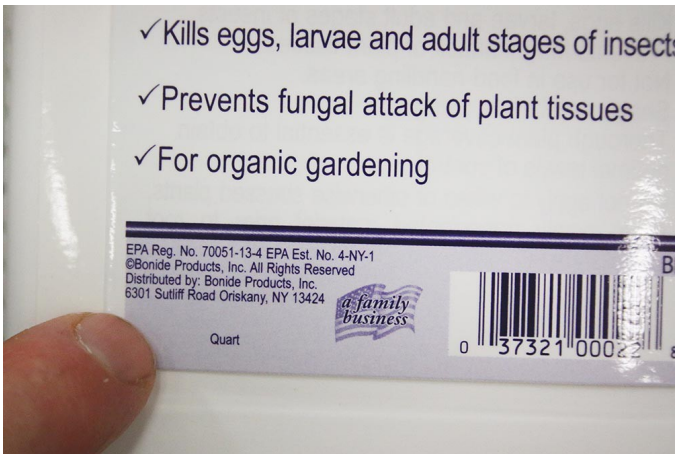
Are Home Remedies a Good Solution? Penn State Extension Says No!

Many home remedies can be found on the internet, but are they the best choice?



Suppose a new pest appeared in your home or in your yard, and now you need to figure out how to control it or make it go away. Besides asking your friends or neighbors for advice, the next place you may look for solutions is on the internet. Many home remedies are suggested through these sources, but are they the best choice? These remedies can be appealing because you can make them yourself and they often contain products that are probably already in your home. Some of these products include dish soap, vinegar, salt, boric acid, vegetable oil, garlic, chile/cayenne peppers, etc. However, do these homemade remedies really work, can they be harmful to the plants they are sprayed on, can they harm beneficial insects, and are they really safe?

Penn State Extension does not recommend using home remedies for many reasons. They do not come with precise instructions on how to use; they may not be effective; they have the potential to harm humans, pets, and plants; and their use can violate federal law.

Every pesticide product has a detailed label with information about what it controls and what it can be used on, how to mix and apply it, what precautions must be taken (wearing gloves or goggles, do not use near water sources, etc.), basic first aid information, and how to store and dispose of the product. All pesticide labels must be approved by the U.S. Environmental Protection Agency and those labels will have an *EPA Registration Number* on them. **Reading the label is of utmost importance in using pesticides safely.** The home remedies found on the internet provide very little information compared to what is contained on a pesticide label. Furthermore, for a pesticide label to be approved by EPA means that it went through many years of testing to scientifically prove that the product does what it claims and is safe when used according to the label directions. The lack of information provided with home remedies should be of concern.

Pesticide products are toxic, as they are intended to control a pest. However, recognize that all products have a toxicity level, even water. When choosing a pesticide, start with the least toxic product that can solve the problem; if the appropriate level of control is not achieved, move to a stronger pesticide. The majority of pesticides available to consumers have a **Caution** or **Warning** label on them, meaning they are slightly to moderately toxic to humans. However, any pesticide, regardless of its toxicity, can be dangerous if not used according to its label.

Because home remedies use products that may already be in your home, they seem like they should be safer. For example, a common home remedy uses dish detergent or antibacterial soap mixed with other products to control insects on plants. These products may contain additives for the following purposes: surfactant, solvent, pH adjuster, cleaning enhancer, opacifier (not transparent), viscosity (thickness) adjuster, preservative, colorant, fragrance, product stabilizer, antibacterial agent, and foaming agent. Be aware that the products suggested to be combined in these home remedies may include additives that could harm the environment. The dish detergent label does not provide any directions on how to

use it on plants to control insects. Do you know if the additives are safe for the plants, for beneficial insects, for the environment? For example, spraying home remedies that contain dish detergent on plants on a sunny day can injure the plant, essentially burning it.

Home remedies often lack specific mix or use rates or identify how often to use it. Not using enough may not control the pest while using too much may be harmful to the environment. Another thing to consider is do you know exactly what insects you are controlling? Will beneficial insects be affected? Beneficial insects such as ladybugs eat aphids, which are pests. Therefore, using a product that may harm beneficial insects is not a good choice. Insects go through several life cycle stages, with some stages being more vulnerable to control than others. Do you know which life stage should be targeted? Where can the home remedy be used? Just because it may be safe on flowers does not mean it is safe for fruit and vegetable plants.

Handling some of these home remedies can be harmful to humans. The pepper spray can be very potent if it gets on your skin or in your eyes. Exposure to boric acid can cause health effects, including death, in humans and animals. How and where do you store these home remedies? Curious kids and pets, and even adults, can be accidentally exposed to something in a container that has no label or first aid instructions.

Another issue to consider is the process of preparing the home remedies. Some of these remedies require cooking and letting the mixture sit. Do you really want to cook these products with the same cookware and utensils that will also be used to prepare food for you and your family? Where are you going to let these concoctions sit that children, pets, or wildlife will not get in them? Also, be aware of the fumes that could be released while either mixing several products together or during cooking. Not only could these fumes be dangerous to breathe but could also be irritating to your eyes and skin. Remember, that young children, due to their smaller size, are much more susceptible to chemicals than adults.

Using pesticide products in ways not listed on their product labels is against the law. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA) are two major laws that regulate pesticides. For a pesticide to be legally applied under FIFRA, it must either be registered with the Environmental Protection Agency or have an official exemption from the requirements. Those products that are exempt from federal registration (known as minimum risk or 25(b) products) will normally state that on their label. The Environmental Protection Agency (EPA) sets tolerances or maximum residue limits for pesticide residues on foods under the FFDCA. If a tolerance for a pesticide residue does not exist, then the food containing the residue is subject to seizure by the government.

How does this apply to a home remedy applied to a food crop or livestock used for food? If a residue of that home remedy gets in or on the food, and there is no tolerance or food additive regulation allowing it, then the sale or distribution of that food would be illegal under FFDCA.

So what if the home remedy is only being used in your own vegetable garden, on flower beds, or inside your home? As long as the treated crop is not sold or distributed, or any foods or products derived from the crop, then there are no violations of FFDCA. However, using products in ways that are not listed on their labels is never a good idea and can have unintended consequences as described earlier.

When researching information to find out the best way to manage pests in your home or garden, go to reputable sources, such as Penn State Extension. Did you know that Penn State Extension has an office in every county in Pennsylvania? That office has a small staff of experts covering some of these topics: horticulture, field and forage crops, nutrition, food safety, dairy, renewable natural resources, agronomy, tree fruit, green industry, equine, and many others. Although each office does not have an expert in each of these areas, they can find answers to your questions through their extensive network of specialists throughout the other county offices and in the College of Agricultural Sciences at the main Penn State campus. To find contact information for your county office, visit the County Offices website.

References

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