Insecticides & Fungicides/Spreader−stickers, Wetting Agents: Getting the most out of Your Sprays

By Thomas Ogren

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Spreader−stickers or if you prefer, sticker−spreaders, are agents we can add to garden sprays to make them more effective. These additives are commonly used in commercial horticulture and in agriculture, but for some reason are as yet relatively unknown to most gardeners.
Sticker−spreaders can be made of many different components, organic or inorganic. Often the actual ingredients in a particular brand of sticker−spreader will be kept secret, as a proprietary formulation known only within the company producing it.
Some brands use silicone−based surfactants, oils, emulsifiers and buffering agents, while others may use odd combinations of things like fish oil and fatty acid soaps. Several are made entirely from some sort of emulsified soybean oil. Actually, common dish soap will act as a sticker−spreader, it just won't be as effective.
To be totally technically correct here, sticker−spreader is a combination of two adjuvants. Adjuvants are materials added to spray mixtures to increase the effectiveness of the main active ingredient.
If we want to be completely correct with our terminology here, we probably ought to note too that spreaders are adjuvant surfactants. Surfactants are adjuvants that reduce surface tensions of solutions, helping them spread and cover leaves more effectively.
Stickers are adjuvants that aid in the attachment to a surface.
The water−soluble wax product often used to spray Christmas trees to keep them turgid, Wiltpruff, is also sometimes used as a sticker−spreader.
I recently did some comparison spraying of roses in my own garden. I was spraying the roses with a homemade combination to keep the darn deer from eating them into the ground.
With both batches of spray I used, per gallon of water, two raw eggs, four cloves of garlic, and a cup of

skim milk. I blended all the ingredients in a blender before putting them in the sprayer. I sprayed two different sections of roses. In the first section I used the above mix, with the addition of 6 tablespoons of dish soap. In the second section of roses I used the same mix but used two tablespoons of a commercial grade sticker−spreader.
What was the difference?
Both sprays did keep the deer from eating the roses, for awhile.
The spray with soap resulted in roses that were not eaten for six nights following the spraying.
Deer did not eat the roses sprayed with the sticker spreader mix for 15 nights. It seemed obvious to me that the sticker−spreader had indeed locked the smelly spray material onto the roses better than had the soap.
Sticker spreader is sometimes used to make leaves on foliage plants shinier, and this works pretty well, too. If, for example, you are just spraying your roses with insecticidal soap (for aphids) and a little baking soda (for rust and mildew control) mixed with water and a bit of sticker−spreader, you'll immediately notice that the spray does stick to the leaves better and it also make them shine.

Spreader−stickers can also have somewhat of a synergistic affect when used with insecticides. It not only helps the insecticide adhere better to plant surfaces but it also helps the insecticide penetrate the bodies of insects it contacts. Perhaps most importantly, spreader−sticker also protects the insecticide or fungicide from washing off in the rain and from breakdown from sunlight.
I think I paid less than five dollars for a pint of spreader−sticker at a local nursery. A little bit goes a long way, so it seems inexpensive enough. Some of the insecticides I like most, organic botanical−based ones such as Neem are kind of pricey, and using sticker−spreader gets me more bang for my buck.

Tom Ogren is a nationally know gardener and has appeared numerous times on HGTV. His website is www.allergyfree−gardening.com

Insect Spray Warnings And Alternatives

By Carla Donnelly

All of us want to protect ourselves from anything that will harm us, no matter how small it may be. Mosquitoes, bugs and other small insects that fly or creep around our house are just some examples of those small beings that can pose serious danger to our health, especially to the young ones.

That is why almost all of us have resorted to having the insect sprays and repellants easily found in the shelves of our favorite grocery store. For quite a long time, these sprays have been the most effective method of getting rid of those pests in our house. However, as technology progresses and new studies have been made, these commercial sprays and repellants were found to be as harmful as the pests their trying to get rid us of.

One kind of chemical that have been present in insect sprays is the lead arsenate. Lead arsenate is an inorganic compound of arsenic and found to be useful in the purpose of killing pests. However, this chemical is highly toxic especially to organisms that it is not meant for. It also persists in the environment even after several years of not using them.

Chlorinated hydrocarbons, though found effective against mosquitoes causing malaria and fleas, have serious drawbacks also. First of all, other insects like houseflies were found to be resistant to this chemical. Also, DDT or dichloro, diphenyl, triochloroethane, one of the chemicals based on hydrocarbons, was found to be fat soluble. Those who are heavily exposed to this chemical most likely have concentrations of DDT 1000 times higher in their fats than in the blood. Although, it may not pose any real harm, it might eventually lead to some complications.

Organophosphates are very toxic chemicals that are also found in some insecticides. Parathion, an example of an organophosphate, is actually 30 times more poisonous than DDT. Each year, since it was developed during the time of World War II, these organophosphates poison thousands of people throughout the world, and even kill them. Those who are taking care of these victims are also in danger. The excretions of these patients or even vapors coming out from them are enough to poison a human being.

Infertility in adult men may be caused by several factors. However, recent studies show that exposure to insecticides have an effect in male infertility. This is because of the chemical chlorpyrifos found in these sprays. When exposed to chlorpyrifos or its metabolite, it may lead to reduction in the levels of testosterone in men.

Until the year 2000, this chemical, chlorpyrifos, had been the most common insect spray used in residences. After the results of the studies were released though, the Environmental Protection Agency prohibited its use in residential areas to prevent children from being exposed in that harmful chemical.

How to Understand the Label

Since this commercial product is known to have chemicals in it, we should understand what the label tells us to be safe. We need to know the toxic potential of these insect sprays. Since these chemicals

can prove to be lethal to humans, we must know the acceptable level that is safe to humans. The unit of measure of lethality is called the lethal dose 50 or LD50. The lesser the LD50 value, the more toxic the chemical is.

Alternatives

This information about the commercial insect sprays may be disturbing. But the good news is, there are several alternatives also available in the market that are much safer to use. You just have to read the labels carefully to know which one is better.

These alternatives are those that are made from organic components. There are some that are made from natural blend of plant extracts and oils. Others are either alcohol based or made from hot spices to repel insects. Most may not be aware but nicotine can also be used as insect repellant because it is extremely toxic to these harmful pests. And nicotine as insecticide has been widely used since 1880s. Miracle II is reported as effective on insect cleanup

Insect sprays are really important for us, especially if we have children around the house. We always

rely on these products to keep harmful, little insects away from us and prevent diseases caused by them. However, we should also be careful in choosing the right product; else, we might end up being more harmed by these things that should protect us.

Carla Donnelly is a writer on environmental and health issues at the MangoLife Wellness Website. Sign up for the free monthly newsletter and get a free vegetarian ecookbook plus a chance to win a chemical−free soap that raises the body ph and can help with insects.