



Minimizing Pesticide Residues on Homegrown Produce



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Minimizing pesticide residues in food is an important accomplishment of U.S. agriculture. Is your own garden produce pesticide-safe?

Fortunately, today's pesticides are less persistent in the environment; more effective in smaller quantities; and more strictly regulated by federal and state laws. Also, public concern has helped make people more aware of risks and proper use of pesticides.

Of the 18,798 food samples analyzed by the Food and Drug Administration in 1989, less than one percent contained residues that exceeded tolerances. In fact, the amount of carcinogenic pesticides consumed in our daily diet is one-hundredth of the naturally occurring carcinogens in a single cup of coffee.

If your homegrown produce was analyzed, what level of pesticides would be found? Are you careful about mixing and applying pesticides? Do the products you use require an interval between pesticide application and harvest time? The following tips will help prevent pesticide contamination on homegrown fruits and vegetables.

Remember pesticides, fungicides and herbicides are formulated to kill pests, fungus and weeds. They are toxic and must be handled carefully. Read labels thoroughly, paying particular attention to recommended dosages. Over-treatment can be harmful to the plant and more importantly, may create harmful residues. Inspect plants for insects and disease, checking

most closely on the underside of leaves. Use pesticides only when necessary. If you apply treatments when an infestation first starts, you can control plant pests more easily and with less chemical.

- Wear proper protection when applying pesticides — long sleeves, gloves, hat and goggles, or whatever the label specifies.
- Obey recommended intervals between spraying and harvesting.
- Avoid spraying during the hottest part of the day. Do not spray if wind is more than 10 miles per hour.
- Apply pesticides as evenly as possible.
- Be sure pesticide concentrates are mixed thoroughly. Wettable powders often are difficult to get into solution.
- Avoid inhaling dust when opening containers of powdered pesticide.
- Always wash fruits and vegetables under running water before preparation. Do not use soap. It may cause problems if left on the



produce. A gentle brushing while using warm water will help reduce residues.

There are many naturally occurring toxins and carcinogens in our food supply that help plants and animals protect themselves against bacteria, molds, nematodes, insects, birds, grazing animals and other predators. Researchers at the University of California at Berkeley estimate that we consume 10,000 times more natural carcinogens by weight than we do man-made pesticide residues.

There is little reason to worry about the presence of naturally occurring toxins in our food. No human diet can be entirely free of all carcinogens or toxic substances. In fact it is hard to find a food that does not contain some potentially harmful, naturally occurring chemical. However, our bodies usually can handle these substances by metabolizing, detoxifying or excreting them. Remember, "the dose makes the poison," so be sure to keep pesticide residues at a minimum.

The information in this leaflet was provided by Dr. Al B. Wagner Jr., Extension Food Technologist, The Texas A&M University System.

All pesticides are classified according to their hazard potential to humans, animals and the environment. Three signal words which define possible hazards to users are:

—**Danger:** tells you the product has the highest hazard potential. This is often accompanied by the word "POISON" in red and will always display a skull and crossbones symbol on the label.

—**Warning:** identifies materials that have a moderate hazard potential.

—**Caution:** identifies products that have the least hazard potential.

Remember, washing garden produce is essential to removing pesticide residues. It is especially important if you eat the food raw. Cooking reduces residues even more, assuring you of safe and healthful homegrown produce.

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