Combining Strategies for Pest Control
Understanding Integrated Pest Management
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“How do we best meet the army of insects, weeds and diseases that invades our homes and landscapes almost daily?”

There are a lot of possible solutions to our pest control concerns. Some are more effective, some less expensive and yes, even less toxic to our home environments. Many can be combined; others may work best by themselves. What worked in the past may or may not be effective in another time or place.

Discover how you can design a safe and effective pest control program for your home, yard and garden.
Getting Started
The heart of effective, efficient and environmentally friendly pest control is knowledge of the pest, its host(s) and the environment in which it lives. This is true whether you are dealing with insects, weeds or diseases. There is usually some stage in a pest’s life cycle in which we can intervene. This might be by acting on the pest directly, its host(s) or changing the environment in which both live, or all three. How, when and where we do this is based on what is known as the “pest triangle.”

The Pest Triangle

There is always a relationship between the pest you are dealing with, the host it is attacking and environment in which it lives. Remember that the host need not be just a plant in your landscape or home. It could be your entire lawn, the floor joist under your house or the carpet in your living room or even you!

Eliminate or alter any of these three parts of the triangle and you inhibit the ability of the pest to do harm. You can’t have carpet beetles without the beetles (pest) or the carpet (host)! For example: Powdery Mildew can be a serious disease on many ornamentals in your yard. It is very sensitive to bright sunlight and air movement. Altering a shady site (environment) by pruning will provide more sunshine and the threat from this fungus will be reduced. By spraying a fungicide, you kill or eliminate (temporarily at least) the pest. You have solved your problem in the short run with the pesticide and achieved long term control by changing the environment. Remember that pesticides may or may not be a part of your pest control strategies.

Your Pest Control Tool Bag

Here are some examples of the ways you might change the pest triangle:

Pest
- Pull weeds
- Spray a pesticide
- Hand pick insects
- Use weed, disease & insect free soil or compost
- Add beneficial predators

Host
- Use genetically resistant plants
- Maintain healthy plants
- Protect the host with physical or chemical barriers

Environment
- Change humidity levels
- Alter temperatures
- Change sunlight
- Increase competition from beneficials
- Change drainage
- Remove alternate hosts where pest may survive

Variety is Better

Remember that the more and diverse ways you attack the “pest triangle” the more effective will be your pest control efforts. This may or may not include the use of pesticides. Rarely will a single point of contact (including pesticides)
provide good long-term control. There are lots of tools in your Pest Control Tool Bag. Use them all! Combining several pest control strategies is often called Integrated Pest Management or IPM.

How Serious is the Threat?...Scouting

The most important first step in designing your pest control strategy is an evaluation of the seriousness of the threat. Your objectives in Scouting for a pest are to:

- **Identify** the pest.
- Identify the current stage in the pest’s **life cycle**.
- **Map the location(s)** of the pest.
- Determine the **number** of insects, weeds or disease infected plants.
- **Inventory** the environment surrounding the pest as well as the entire area that might be affected by your control actions. This might include chemically sensitive family members or neighbors. Don’t forget to look for **beneficial** and non-target plants, insects and animals.
- **Identify Key Hosts**. These are plants or other hosts that have a history of problems or in some other way indicate the presence of the pest.
- Identify existing **damage** from the pest.
- **Keep accurate records** of what you discover. You may find that the same problems appear on the same hosts year after year. Good records will help you time your future control measures.

You can see that you are going to have to do your homework! The Pest Triangle is going to be a little different every time you look at it. Environments change with the seasons; weeds grow up, insects mature. Your pest control strategies will change with the changes in the relationships between the pest, its host, and the environment in which they live.

Ask Yourself…Ask Others

- **Find out** how many pests attacking a host at any given time constitute a real threat.
- **Ask yourself** how much damage you are willing accept before taking action. This is called the **Control Threshold**.
- **Find out** how much and what kind of action it will take to keep the damage to a level that you are willing to accept. And then TAKE ACTION!

Finding the Right Answer

Common sense and environmentally friendly pest control or IPM is a little more challenging than just spraying a pesticide. It requires more thought and sometimes more work. It requires the right answers to the right questions. So where do you go for help?

**The University of Nevada Cooperative Extension Service Master Gardeners** are volunteers trained by the University of Nevada, Reno (UNR) in home horticulture and household pest control. They volunteer regularly in most of Nevada’s counties. You can contact them through your county cooperative extension office. You can also contact Master Gardeners through UNR Cooperative Extension Service’s web site at: [www.nce.unr.edu](http://www.nce.unr.edu)
Garden Clubs, Societies & Other Organizations
Larger communities have garden clubs, rose societies etc. These groups are usually more than willing to help you with your questions.

Local Retailers and Services
Reputable nurseries and landscape services have probably seen your problem before. They can be a useful source of information. Remember that they are in the business of selling products and services and that might influence their recommendations.

It Is Worth It! The Benefits of Integrated Pest Management

- Preservation of beneficial, including predators, and other non-target species.
- Reduction in Pesticide Use.
- The use of less toxic solutions and products.
- Delayed pesticide resistance.
- More effective Pest Control.
- A better understanding of the world in which we live.
- A knowledge that you have done your best to live in harmony with your “neighbors.”

Remember that the responsibility for keeping our world a safe and environmentally friendly place in which to live, now, and in the future, begins with YOU. Integrated Pest Management is a proven tool helping you achieve this worthwhile goal.

References

M.L Robinson, Dick Post, Wayne Johnson. Scouting The Landscape (Environmental Stewardship) PowerPoint Presentation, University of Nevada, Reno, Cooperative Extension Service