

Early Detection is Key to Minimizing Insecticide Use in Home Gardens

Jim Kalisch

UNL Extension Entomologist

Nobody likes pests, especially when they are crawling over fresh fruits and vegetables. This spring after planning what to plant, research pest problems.

There are general feeding types and specific pests for common garden vegetables, such as lettuce, cabbage, tomatoes and peppers. The Web, garden books, local extension offices, garden journals or magazines provide excellent information.

The most common pests are grasshoppers, spider mites and leaf beetles. Cutworms also are general pests that result from moths coming into the garden and laying eggs. Cabbage and broccoli often are attacked by imported cabbage worms in late spring and carrots often are attacked by carrot weevils in late July.

It usually is not necessary to treat soil before or at planting, but it's a good idea to till ground thoroughly before gardening so any underground life will be exposed. Some insects left underground will attack roots or bulbs.



Spider mite damage and two-spotted mites

All photos by Jim Kalisch, UNL Department of Entomology



Bean leaf beetle



Spotted cucumber beetle



Colorado potato beetle



Variegated cutworm



Cabbage looper



Carrot weevil

Early detection is important. Check once or twice a week to detect the first occurrence of pests, which often is indicated by chewed-up portions of leaves, wilting, spots or holes.

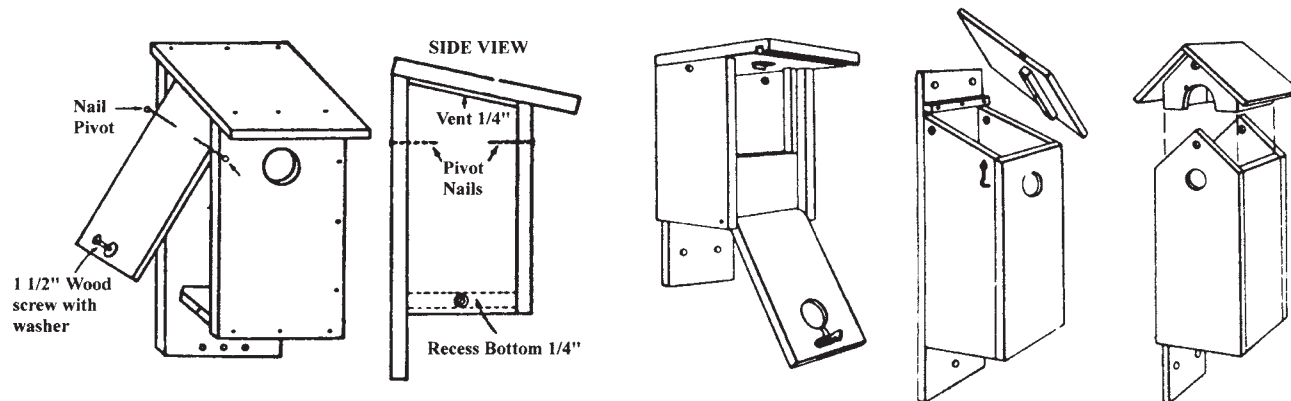
Measures to minimize the use of

insecticides include physically removing the pest, destroying the pest on sight, removing the infected plant part or using insecticidal soap, especially for soft-bodied pests.

Unfortunately, there may come a

time to use insecticide as treatment. Appropriate insecticides do not last long, usually only one to three days. Choose insecticides with carbaryl or permethrin because they can be used on a variety of crops.

Bird House Care Is Important To Make It Last



Ron Johnson, Ph.D.

UNL Wildlife Specialist

Providing bird houses and shelves can be a fun and rewarding part of a wildlife program. A well-built house that is durable, rain-proof, cool and easy to clean can add to the attractiveness of a yard.

To determine what type of nest box or platform to build, think about the birds most likely to visit the yard. Bird houses and shelves can be constructed from a wide variety of materials, including PVC pipe or natural items, such as gourds. Avoid using metal for bird house construction because it tends to overheat. Any good, solid, untreated wood generally is the best construction material.

Cedar, pine or poplar are particularly easy to work with and weather well. Cedar is durable and its naturally occurring aroma may discourage parasites inside the house. One-inch boards, which actually measure 3/4 inch, provide sufficient insulation and are widely available. Re-using scrap wood from other building projects can save money and cut down on waste.

Galvanized siding or aluminum nails or screws are preferable because they don't rust and are readily available. Also, nails with roughened shanks are better than smooth nails. To prevent injuries to occupants from sharp points, make sure there are no nails protruding from the box cavity.

Bird houses and shelves, especially those made of durable, long-lasting cedar, don't need to be

painted. Exterior paint, however, will prolong the life of a bird house or shelf made of less durable pine or poplar. If colors are used, natural tones, such as light brown, gray or dull green, are best.

Drilling a few small holes in the floor of the birdhouse allows proper drainage. Leaving 1/2 inch gaps under the eaves or drilling several 1/4-5/16 inch holes along the top of the sides provides adequate ventilation.

Birds can be particular about the entrance hole size, so measurements should be fairly exact. Also, properly-sized entrance holes may keep out unwanted species. Avoid perches at the entrance hole because birds don't need them and perches make handy grips for would-be nest predators. In Nebraska, facing the entrance hole in a southeasterly to northeasterly direction may help prevent chilling from cold spring rains.

Roughen the inside portion of the hole just below the entrance so young birds can climb out of the house easily. This can be done by sawing grooves 1/8 inch deep or by punching dents in the wood with a screwdriver.

Houses need an access door that allows easy inspection with minimum disturbance to occupants. One of the sides can be made to swivel out for side access or hinges can be placed on the top. Also, houses mounted on smooth metal poles are less vulnerable to predators than those mounted to a wooden post or tree.

Clean nest boxes and shelves are more likely to be occupied. Proper

sanitation improves the chances of a healthy and successful brood. Nest boxes and shelves should be cleaned prior to each nesting season and immediately after any broods have left the box, even if the adult birds show signs of re-nesting. Old nesting material, eggs and dead nestlings should be removed from the box or shelf to keep parasites down. A nearby birdbath, with clean water and a place for sand or dust baths, also will aid in discouraging parasites.

Monitor bird houses once a week to prevent non-native nuisance species, such as house sparrows or European starlings, from taking over. If cleaning boxes after each brood has fledged, the box may be used again throughout the summer. In the fall, after cleaning out the boxes for the last time, the boxes can be left up as shelter in the winter or access to the boxes can be prevented by plugging the entrance holes or the boxes can be put in storage. If left outside, squirrels may gnaw to enlarge the entrance holes of boxes.

Know when not to disturb nesting birds. Avoid disturbing nest boxes at night and during rainy or windy weather because under these conditions, frightening the adult birds away could result in chilled eggs or nestlings. Also, avoid checking boxes the first few days of incubation, in the morning when females are laying eggs and when the young are close to fledging. Adults may abandon nests and nearly-fledged young could leave the nest prematurely.

Fertilizing House Plants

Plants brought into the home from a greenhouse are moving to an environment where light is less intense, and hence, where growth will be slower. Most plants already have sufficient fertilizer in their soil to sustain growth for up to three months under interior conditions. This is particularly true during fall and winter.

Even if plants continue to grow vigorously, it is wise to wait a month while it adjusts to its new environment, before adding fertilizer. Likewise, a newly potted plant needs time in which to grow new roots to absorb the fertilizer you will be applying.

It is often easier to feed a number of plants at the same time, and the schedules can be combined in this way: for a general practice, apply fertilizer to most indoor plants every 1-2 months while growth is rapid, and once or twice only during the winter months. Alternatively, apply the plant food more frequently in a diluted form; this accommodates plants which would be injured by full-strength fertilizer. Approximately half the recommended strength means using only half as much fertilizer per plant or in solution.

Annual plants grow very quickly and need fertilizing every two or three weeks during their short season. Some flowering plants, like Azalea, should not be fed at all while they are in flower.

Any prepared fertilizer mixture for the type of plants you have is fine: for most foliage and flowering plants, an N-P-K analysis ratio close to 1-2-1 will give balanced growth. African Violets grow best with a mix containing more nitrogen (N); and there are other formulations available for acid-loving plants like Azalea and Gardenia. For annuals and other garden plants growing in hanging baskets, an outdoor fertilizer is fine.

Soluble compounds are easy to apply and provide quicker results than solids or slow release pellets. Simply apply the fertilizer solution in place of water when you would normally be watering the plants. However, be sure the soil is slightly damp when you fertilize; never feed plants with dry soil, because roots will be damaged by the chemicals you add unless they are diluted further by soil moisture.

Use all fertilizers at or weaker than the recommended strength of dilution, never stronger. Newly rooted cuttings, seedlings and young plants will benefit from weaker solutions to avoid damage to the soft young roots.