



Rockin E Gardening Handouts

Tips and Suggestions for 'Year-Round' Gardening

1201 West 500 South Woods Cross, UT

www.RockinEcountrystores.com

801-299-9990

Lady Bird Beetles - (Lady Bugs)

Everyone loves a ladybug, but gardeners hold them in especially high regard. Lady beetles eat aphids, scale insects, thrips, mealybugs, and mites – all the pests gardeners despise. They also add color and variety to the gardens. Kids love to find Lady Bugs in the gardens. Many people believe that they bring good luck when they land on you. With lady beetles, you get more bang for your buck, because both the adults and the larvae feed on pests. Lady beetle larvae look like tiny, colorful alligators chomping on their dinner.



Aside from protecting your favorite garden plants from aphid damage, ladybugs also pollinate flowers. As they move among flowers looking for food, they move pollen and fertilize the flowers so they can produce seeds.

In Europe, during the Middle Ages, insects were destroying the crops, so the Catholic farmers prayed to the Virgin Mary for help. Soon the Ladybugs came, ate the plant-destroying pests and saved the crops! The farmers began calling the ladybugs "The Beetles of Our Lady", and they eventually became known as "Lady Beetles"!



There are more than 5,000 different types of lady beetles world-wide and more than 300 different types of lady beetles in North America.



Ladybugs only dine on insects; they will not eat or harm any plants or vegetation.

Many species feed upon aphids, eating 50 to 75 aphids per day, but other species feed upon scale insects, mealybugs, fruit flies, thrips and spider mites. A few species of lady beetles even feed upon mildew. A single ladybug can eat up to 5,000 insects in its lifetime.

Apart from aphids, ladybugs also require a source of pollen for food, and they are attracted to specific types of plants. The most popular ones have umbrella shaped flowers such as fennel, dill, cilantro, caraway, angelica, tansy, wild carrot & yarrow. Other plants that also attract ladybugs include alyssum, calendula, cosmos, coreopsis, marigold, scented geraniums, statice, and dandelions.



Color and Spots

Ladybugs come in all different colors. Red, yellow, orange, gray, black, brown and even pink.



Their distinctive spots and attractive colors are meant to make them unappealing to predators. Nature has uniquely designed a warning system of colors. Red, yellow and black are colors that warn predators that the insect they are about to eat might not be a dinner.

Their coloring is a reminder to all that have tried to eat their kind before: "I taste awful."

Ladybugs make a chemical that smells and tastes bad so predators won't eat them. When threatened, the bugs will secrete an oily, foul-tasting fluid from joints in their legs.

Ladybugs can also protect themselves by playing dead, by pulling their legs up "turtle-style". They will also release a small amount of blood from their legs.

The bad smell and the apparent look of death usually deter predators from their 'ladybug snack'.



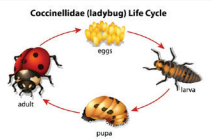
After the threat of danger has passed, the ladybug will resume its normal activities.

Birds are ladybugs' main predators, but they also fall victim to frogs, wasps, spiders, and dragonflies.

The spots on a Ladybug fade as they get older.

Life Cycle

Ladybugs mate in the spring and lay yellow eggs in clusters of 10 to 50 on the underside of leaves. Approximately five days later the eggs hatch, and the larvae emerge, extremely hungry. A Ladybug can lay up to 1000 eggs in its lifetime.



The larvae, tiny alligator-shaped caterpillars with orange spots on their backs, will eat about 400 aphids during their 2 to 3 week cycle. Although they look dangerous, lady beetle larvae are quite harmless to humans.



The larvae then pupate. They emerge from their cocoon, in about one week, as adults. They begin feeding on aphids, other insects, and pollen to build up their body fat.



In the late-summer and fall ladybugs begin to migrate to the mountains. They lie dormant under the snow during the winter months. Ladybugs hibernate in the winter and live off stored fat, kind of like a bear.



In the early spring they fly back to the valleys to resume searching for food.



Release

Store ladybugs in a refrigerator, between 35 to 40 degrees, until you are ready to release them. Ladybugs pur-



chased March through May should not be stored more than three to five days, since their body fat has been depleted. After May they may be stored two or three months.



Ladybugs should always be released after sundown, since they only fly during the daylight. During the night, they will search the area for food. They will stay in the area as long as there is enough food to eat. The more they eat, the more eggs they will lay, and the more insect-eating larvae you will get. If you release ladybugs in the daylight hours many will simply fly away; into your neighbor's yard.

Water the plants in the area of your yard you want to introduce ladybugs before you release any ladybugs; make sure the plants have water on the leaves and stems. Ladybugs tend to crawl upwards and towards the light so release ladybugs in small groups at the base of plants and shrubs that have aphids, or other insects.

Release a portion of them and store the remainder in the refrigerator. Repeat every few days until they are all released.

Be sure to wait several days after spraying any insecticides in the area before you release your ladybugs. Insecticides do not know the difference between good bugs and bad bugs.

Poor Results?

Since there are no fences or boundaries for Ladybugs, they will leave if they don't like their new home. Unfortunately, the record for effective use of lady beetles released in a garden is often poor.



Commercially, lady bugs are harvested high in the mountains during the winter and put in cold storage until they are ready to be shipped.

One reason ladybugs do not stay in your yard is that the collected beetles are sometimes ready to go! They are poised to migrate long distances from their collection areas.

Also, field-collected lady beetles usually are in a state known as reproductive diapause, during which time they do not produce eggs. Only after feeding for several weeks after release do they resume egg laying.

To overcome this, some companies feed a special protein diet to their ladybugs in storage. This diet helps to slow down their natural instinct to fly. When they are released into the yard they are ready to start eating immediately. But again, they are not attached with a leash, and you cannot stop them from liking your neighbor's yard better than your own yard. Either way, you are increasing the number of lady bugs in the neighborhood.



Attracting and Protecting Lady Bugs

Lady beetles require food for themselves and for their young. An effective way to encourage lady beetles is to have a source of aphids, or other preferred prey, for them to feed on. Since lady beetles are actively moving about and seeking food during most of the growing season, they may eventually find your garden on their own, or from a neighbor who released lady bugs in their yard.

Adult lady beetles may also feed on other foods, such as pollen and nectar. A garden that provides this is important.

Lady beetles most often visit flowers such as dill, coriander or alyssum. Artificial foods, such as sugar-water sprays, or mixtures of sugar/water/yeast, are sometimes used to retain lady beetles in a garden.



Avoid or reduce use of broad-spectrum insecticides. Certain selective insecticides, such as *Bacillus thuringiensis*, soaps, horticultural oils, pyrethrum, and neem are sometimes compatible with lady beetles.

Learn to recognize the different stages of these beneficial insects. Learn to tolerate a few holes in leaves, or not-so-perfect flowers in your gardens.

Make insecticide applications only when necessary and use selective insecticides or limited treatments to avoid killing lady beetles.

Add plants to your garden that can provide pollen and nectar for lady beetles



Fun Facts

Some ladybugs have no spots, and others have up to 20 spots.

In the past, doctors would mash ladybugs and put them in your mouth to cure a toothache

You can fit 80,000 ladybugs into a gallon jug

Male ladybugs are smaller than female ladybugs

Ladybugs can live for as many as three years

A ladybug beats its wings 85 times per second when it flies

Ladybugs are both male and female.

A ladybug's wings are so thin you can see through them.

A ladybug will not fly if it is below 55 degrees Fahrenheit.

There are special organs on Ladybug's feet to help them smell.

The ladybug uses its antennae to touch, smell and taste.

A ladybug has two sets of wings. The outer set is the hard shell

for protection, and the inner set are what it uses to fly. The spotted wing covers on ladybugs are made from a material called chitin, the same as our fingernails.

A ladybug's jaws chew side to side instead of up and down

The color of a ladybug's spots begin to fade as it gets older. Ladybugs are most active when their body temperature is 75 degrees or warmer.



More Resources

<https://entomology.ca.uky.edu/ef105>

<http://www.organiccontrol.com/product/3/lady-bugs>

http://entnemdept.ufl.edu/creatures/beneficial/lady_beetles.htm

<http://extension.colostate.edu/topic-areas/insects/lady-beetles-5-594/>

"Ladybug, ladybug, fly away home, Your house is on fire, your children do roam. Except little Nan, who sits in a pan, Weaving gold laces as fast as she can."

This verse started in ancient England as a warning to the ladybugs crawling on old hop vines. After harvest, the farmers set fire to the vines to clear the fields. The adult ladybugs could fly away, but the larvae could only crawl. The unfortunate pupa (Nan in the rhyme) was fastened to the burning plants.

Although ladybugs can surely handle aphids, scale, mealy bugs, thrips, and small flies, they can't do it all.

Caterpillars and grasshoppers, for example, are too much for a ladybug, but may be just right for a Praying Mantis.

There are more than 5,000 different types of lady beetles world-wide, and more than 300 different types of lady beetles in North America. These are just a few of the many Lady Bird Beetles you may or may not see.

