



# Rockin E Gardening Handouts

Tips and Suggestions for 'Year-Round' Gardening

1201 West 500 South Woods Cross, UT

www.RockinEcountrystores.com

801-299-9990

## Slug and Snail Controls

These slimy garden pests can be devastating to your garden. There are many ways to kill slugs and snails but there is not one 'best way'. The most important thing to remember in trying to control slugs and snails is persistence: **Don't give up!**

Slugs and snails can put even the best gardeners 'over-the-wall'. There are many weapons for the war on slugs. You can choose to use several methods for a more complete control, or just use one or two. Keep trying to control and kill those pesky critters all spring, summer, and fall. Try different methods until you find one that works; then try a new one when that method stops working.



Slugs and snails are so abundant in gardens that some damage is expected, and has to be tolerated. They cannot be completely eradicated, so target your control measures and protect the more vulnerable plants, such as seedlings, soft young shoots, and specific gardens or plants.



There are many controls for snails and slugs, but, there isn't one "best" control. Controls may include chemicals, handpicking, traps, and various other tactics (including feeding them beer). Handpicking requires persistence but it can be therapeutic as you gather and stomp on them, or throw them in the garbage can. Pay your kids a penny a piece for collecting them.

To control slugs and snails, you must start early and be relentless. Every slug that is allowed to reproduce can give rise to about three dozen more of its kind in as little as 30 days.

Most plants, once established, will generally tolerate some slug and snail damage, so control measures are not as critical.



**Slugs and Snails are some of the most common pests in Utah.** Hopefully this information may help you control them in your yard!

- \* The average yard contains more than 1,000 snails or slugs.
- \* Snails feed on dead organic material including tree bark, firewood and piles of trash.
- \* Snails prefer eating vegetable and flower plants, but they will eat most anything in the yard, including the bark off trees.
- \* Snails have a mouth that is surrounded by fleshy lips and contains a single "toothed" jaw used to tear away its food.
- \* There are not boy and girl snails; all snails lay eggs. However, snails must mate with another snail before laying eggs.



- \* Snails lay up to 100 eggs at a time under debris, stones, compost piles, or beneath the surface of the soil. These eggs hatch in about two weeks and the young snails immediately begin to eat.
- \* Snails are most active and feed during the night. They rarely venture from their hiding places during cold weather, or during exceedingly hot spells. However, they will continue to feed during the daytime when the weather is cool and wet (or when the gardens are kept wet with sprinklers).
- \* Water your gardens just before dark and then take a flashlight and stroll through your garden. Pick up and remove any of the little creatures you might encounter.
- \* Snails will travel quite a large distance from their home base looking for better feeding or sheltering conditions. You will see a trail of 'slime' where they have traveled. It is because of this migrating habit that it is impossible to completely eliminate the slug and snail problem.
- \* Slugs and snails both have shells. Slugs' shells are much smaller and not visible as they are underneath the flesh on their back.
- \* Snails can live up to thirteen years. Snails can lie dormant up to four years and still survive.
- \* Snails require moisture to survive. Try to keep your gardens as dry as possible but still keep your plants healthy.
- \* Slugs and snails can follow slime trails they left from the night before. Other slugs can also pick up on this same trail creating a slug network to the host plants!
- \* Snails are very tenacious; they can cross a street, or they can climb a 10' tall brick wall to find plants to eat.

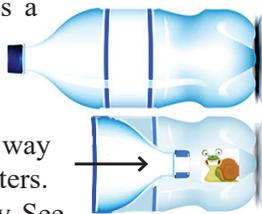


### Methods of Control

Most slugs feed at night, and the tell-tale slime trails, if present, will alert you to the level of activity. Damage is

most severe during warm humid periods.

Slugs and snails are always a problem in both the flower and vegetable gardens. There is no simple or easy way to control these pests. Diligence is perhaps the only way to win the battle against these critters. There are many different ways to try. See which of these methods work best for you.



**1. Snail traps.** You can build a snail trap with a pop bottle or milk jug. Cut the top off the pop bottle, reverse it, and staple it back into the bottom of the bottle. (2-Litre bottles with extra large openings work very well).

Another way to make a trap is to cut half-circle entries in the rim of a margarine or yogurt container. Bury the container an inch or so in the ground near any susceptible plants. Make sure to leave about an half-inch of container above the ground so beneficial insects don't fall into the trap. Fill with an inch of cheap beer. (Yeast mixed with water, molasses, strawberries, or anything sweet smelling, can be used as an alternative to beer.) Replace the lid to keep out water. Slugs and snails will crawl in and drown.



The object of the trap is for the snails and slugs to be attracted into the trap, and then not be able to get out. Your trap may need to be emptied every few days. Keep your trap free of dead snails in order to attract more snails. Either empty it regularly, or throw it away and build a new one when it gets full.

**2. Snail bait.** For the past 30 years, the primary snail and slug baits contained metaldehyde. This product was very effective controlling snails, but it was also toxic to dogs and many other birds and animals.



Today, most snail baits contain iron phosphate. Iron phosphate is much safer for pets, but it is slower acting. Snails usually stop feeding on plants immediately after consuming iron phosphate baits, but they can take up to seven days to die. The damage stops, but the snails have time to lay eggs before they die, so it is important to remove as many snails as soon as you see them.



Recently a new active ingredient, ferric sodium EDTA, has become available for home use. Ferric sodium EDTA, works in a similar manner to iron phosphate but is somewhat faster. Snails usually die within three days instead of seven.



A garden is at its greatest risk of snail damage when the plants are young. Be sure to start baiting at planting time, including seeds.

Snails and slugs must actively eat the bait for it to work. Since more than half of the snail and slugs are underground at any one time, total eradica-



tion is almost impossible. Even when 'good control' is achieved, only about 60 percent of the snails are killed. This may be sufficient to protect the plants, but the remaining snails have time to recover.



Put slug and snail bait out in the evening, just after watering the area. Scatter the bait lightly on the soil surface of infested areas; do not just put it in piles. Check your gardens in the morning. Remove any slugs and snails you see; don't just leave them to die or smash them. Eggs inside smashed snails may still hatch and grow. New snails hatch every few days.

Think like a snail. Put your snail bait where you would hide if you were a snail. You don't need to put the bait over the entire yard, just around the cool moist areas where you are trying to control them. If slugs and snails are invading from adjacent areas, make a thin line the entire length of the infested area to form a barrier. Hopefully, the snails will eat the bait and die before they reach your tender, young plants.

Reapply the bait every two weeks; more often if there is a heavy infestation, or in areas that are heavily watered.

**Tip: It is better to apply 'a-little-bait-frequently' than 'a-lot-of-bait-occasionally'.**

Change the slug and snail baits you use periodically. Not all baits use the same attractants even though most of them use the same chemical. Some snails may not be attracted to some baits but they may really like another brand.

Remember, most slug and snail baits do not kill them immediately. They poison and paralyze them so the air and sun can dehydrate them. If you water often; if the baits are used in cool, moist areas; or if the weather is cloudy or rainy, it may take several days for them to actually die.

Still, be aware that these products, as well as all other pesticides, need to be used carefully, and according to label directions, so that pets and children won't be tempted to eat them.

**3. Liquid Snail Killer.** Use this product just like any other snail bait; apply it at night, apply it around the area the snails might be, and re-apply it often. **Deadline** and **Corry's Liquid Snail Line** are paste-type products that are very effective controlling slugs and snails. They are sweet smelling and the snails love the taste. The liquid paste remains active for several days or weeks, depending on your watering habits. They do contain metaldehyde, so they are toxic to animals if they eat it.



**Dr. Earth's Final Stop® Snail & Slug Killer Spray** is a natural killer that produces remarkable results, because all the ingredients are formulated to perform different tasks and functions synergistically, in a controlled fashion. The unique combination of natural ingredients works to kill immediately, yet controls snails and slugs for weeks with continued protection.



Active ingredients include Rosemary Oil, Sesame

Oil, Peppermint Oil, Thyme Oil, Cinnamon Oil and Garlic Extract, and are assisted by 13 Inert Ingredients that work together to ensure a professional job every time.

**4. Diatomaceous earth.** Diatomaceous earth is a grit made from ground up fossilized algae. This sharp sand dehydrates snails and many other insect pests, as they crawl across it. Diatomaceous earth is not a poison, and it is safe for both humans and pets. (It is often used to dust chickens to control mites.) Dust the ground and plants affected by these pests. Re-apply diatomaceous earth regularly especially after heavy rainstorms or watering heavily.



**5. Slug & Snail Barrier Tape.** This copper strip acts as a barrier and prevents slugs and snails from crossing it. Have you ever put aluminum foil in your mouth and been shocked? This copper barrier strip does the same thing to snails. It produces an electrical charge as the snail crosses it. Snails will stay away! This tape works great for containers, raised beds, trees, and vines.



**6. WD-40.** To deter snails, you can spray a band of waterproof WD-40 on or around your containers. The snails and slugs will not be able to climb up the pot. WD-40 is waterproof, so it will be effective in the garden even after rain or watering. Protect your plants from the spray by covering them with newspaper or with a sheet of plastic. The WD-40 may last an entire season. Vaseline, or silicone lubricants, can also be used in this same way, but they get messy, and may need to be replaced.



**7. Gritty substances.** Snails do not travel over gritty substances, such as lava rock, or sharp sand. Put a layer of grit in your plant containers, and snails will avoid those plants. Spread sharp and angular gravel (not smooth rocks) over soil so the snails can't climb. All of these gritty substances will irritate the snail and slug's delicate undersides.

**8. Hand Picking.** Pay your children, or grandchildren, to pick up the snails in the yard. (This may be an expensive method, depending on how much you pay them, or how many snails are in your garden.) Either put them in a sealed plastic bag to dispose of them, or crush them.



An unpleasant way to kill a snail is to crush it. Hopefully there is someone in your family who is not squeamish. Do not crush them directly in your gardens, you may leave a few uncrushed eggs that may still hatch. Crush them on the sidewalk, driveway, or in the street.

**Remember, 'Persistence is the best long term solution for snails and slugs'!**

Whichever method you choose for control, keep it up until the ground freezes each winter. Snails continue to eat and multiply until the temperature gets cold; then they look for a nice warm place to hibernate until spring. Mother Nature does not do a good job killing snails during the winter.



Take some early morning walks through your garden with a flashlight, you might be surprised how many little critters you find eating your plants. Each snail you remove this year will help reduce the snail population next year.

Clean up old flowers, vegetables, and weeds where they will hide in the fall. Roto till all your gardens before winter and remove any debris that would conceal hibernating snails. Dead plants, weed cloth and black plastic, wood piles, and rocks are just a few of the places slugs and snails will find for winter hibernation.

## Winter Hibernation

Many species of slugs and snail overwinter in the egg stage. The eggs resemble little round spheres, are whitish to clear in color, and are often found in masses just below the soil surface.



Adult snails will hibernate during the winter, often in large groups, under stones and in crevices of trees. They seal themselves into their shells with a layer of mucus which hardens to form a cap. Winter is a long rest period, a period of prolonged fasting. Snails must deal with this by storing a maximum of reserve food. Snails can rest 4 to 6 months. They will go into hibernation when the temperature falls under 35 to 40° F. They emerge in the spring ready to lay hundreds of eggs near the soil surface.



## Summer Hibernation

In summertime, if the weather is hot and dry, and there is a food or water shortage, some snails will stop most activities and remain inside their shells. This type of dormancy should not be mistaken with the hibernation that takes place in the winter. This type of dormancy is called aestivation.

## Snail Reproduction

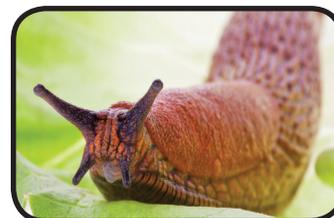
Garden snails are hermaphrodites. Each snail has both male and female sex organs. They don't need a partner to produce fertile eggs, however they seem to prefer mating with a partner.

After mating both snails part to lay 40 to 80 eggs each. The eggs are usually laid in a shallow hole in the ground. Each egg hatches into a tiny snail in three to four weeks. The shell of the snail grows as the snail's body grows. Baby garden snails may take about two years to reach adult size.



## More Resources:

<http://utahpests.usu.edu/IPM/htm/ornamentals/landscape-insects-and-diseases/slugs-and-snails-utah>  
[http://extension.usu.edu/files/publications/publication/Horticulture\\_Landscape\\_2011-01pr.pdf](http://extension.usu.edu/files/publications/publication/Horticulture_Landscape_2011-01pr.pdf)



# Make Your Own Snail Trap

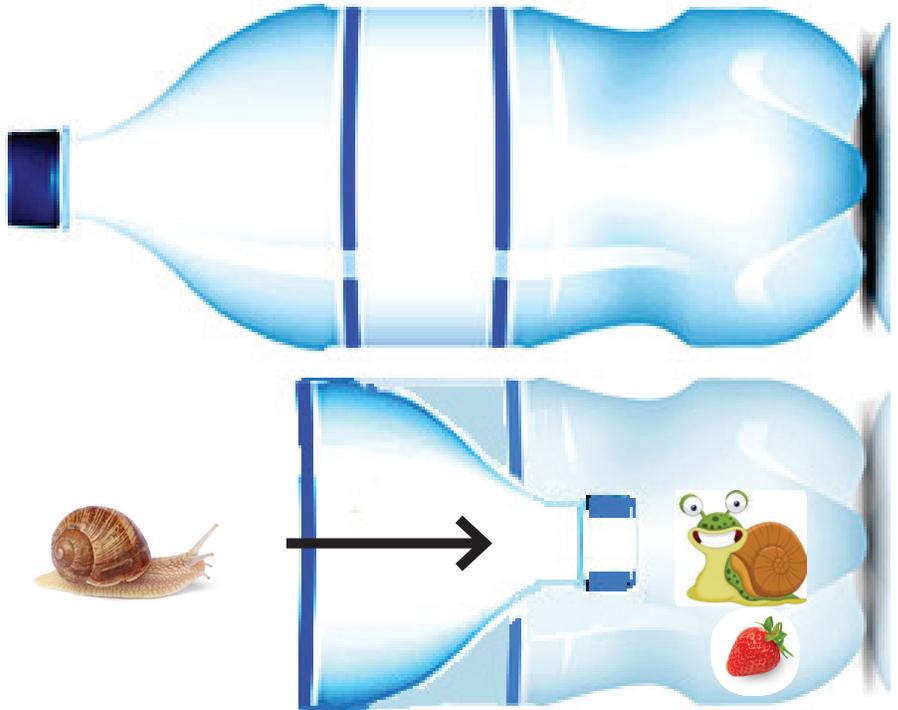
**Snail traps.** You can build a snail trap with a pop bottle or milk jug. Cut the top off the pop bottle, reverse it, and staple it back into the bottom of the bottle. (2-Litre bottles with extra large openings work very well).

Put some bait inside the trap. A ripe strawberry or peach, or some other sweet smelling fruit works well.

Another way to make a trap is to cut half-circle entries in the rim of a margarine or yogurt container. Bury the container an inch or so in the ground near any susceptible plants. Make sure to leave about an half-inch of container above the ground so beneficial insects don't fall into the trap.

Fill with an inch of cheap beer. (Yeast mixed with water, molasses, strawberries, or anything sweet smelling, can be used as an alternative to beer.) Cover the trap to keep out water. Slugs and snails will crawl in and drown.

*The object of the traps is for the snails and slugs to be attracted into the trap, and then not be able to get out. Your trap may need to be emptied every few days. Keep your trap free of dead snails in order to attract more snails. Either empty it regularly, or throw it away, and build a new one when it gets full.*



## Cover The Trap to Keep Water Out

