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Newsletter

COLORADO STATE UNIVERSITY EXTENSION

USDA NRCS U.S. Department of Agriculture Natural Resources Conservation Service

DEALING WITH FLEAS AND TICKS - TIPS FOR HUMANS, PETS AND LIVESTOCK

BY KARLA MELGAR

As the temperatures warm up, we love to head out hiking, working in the yard, or just go for a nice walk, but it is no surprise bugs love these temperatures just as much. Spring is the time when many kinds of ticks break dormancy or start looking for new hosts to feed on. Fleas are another nuisance in Colorado that mostly affects wildlife. Unlike ticks, fleas reproduce poorly in the low humidity of homes. Both can carry disease pathogens to their hosts so it's important to protect yourself and your animals from tick bites and diseases caused by them.

FLEAS

Fleas are reddish-brown insects that feed on blood. The adults are wingless but have notorious jumping abilities which help them move from host to host. There are around 80 species of fleas in Colorado, but surprisingly, fleas are often not problematic in homes. Fleas prefer the burrows or nests of some mammals where humidity is high. Humans and pets are more susceptible to bites whenever the flea's main host has left their nest or burrow.

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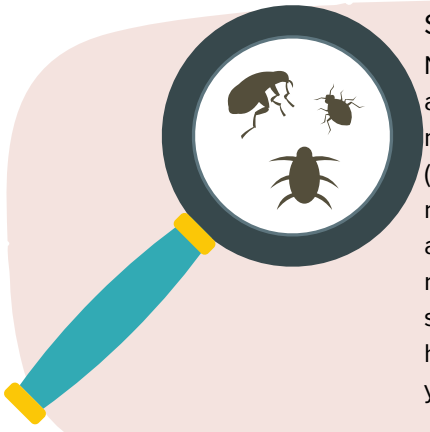


Should you be worried about plague?

Not all ticks that bite can transmit plague and not all animals or humans are affected. The plague is mainly transmitted by the rock squirrel flea (Diamanus montanus), which mostly feeds on rodents. Plague can infect all rodents, and cats are also at risk, dogs can be infected but are more resistant than most mammals and rarely show signs of illness. Humans can also be infected but historically, only 1 case of human infection per year has been reported in Colorado.

INSIDE THIS ISSUE

DEALING WITH FLEAS AND TICKS - TIPS FOR HUMANS, PETS AND LIVESTOCK - CONTINUED

Although infrequent, flea bites are still uncomfortable and something to avoid. You can manage your environment by vacuuming frequently on areas where pets usually rest and apply preventative care. Oral products that contain lufenuron prevent eggs from hatching and are available for cats and dogs. Egg stopper collards that contain methoprene or pyriproxyfen interfere with normal flea egg production. Spot on products that contain fipronil or imidacloprid are also effective at killing fleas and ticks. Consult your veterinarian about options for flea preventatives.

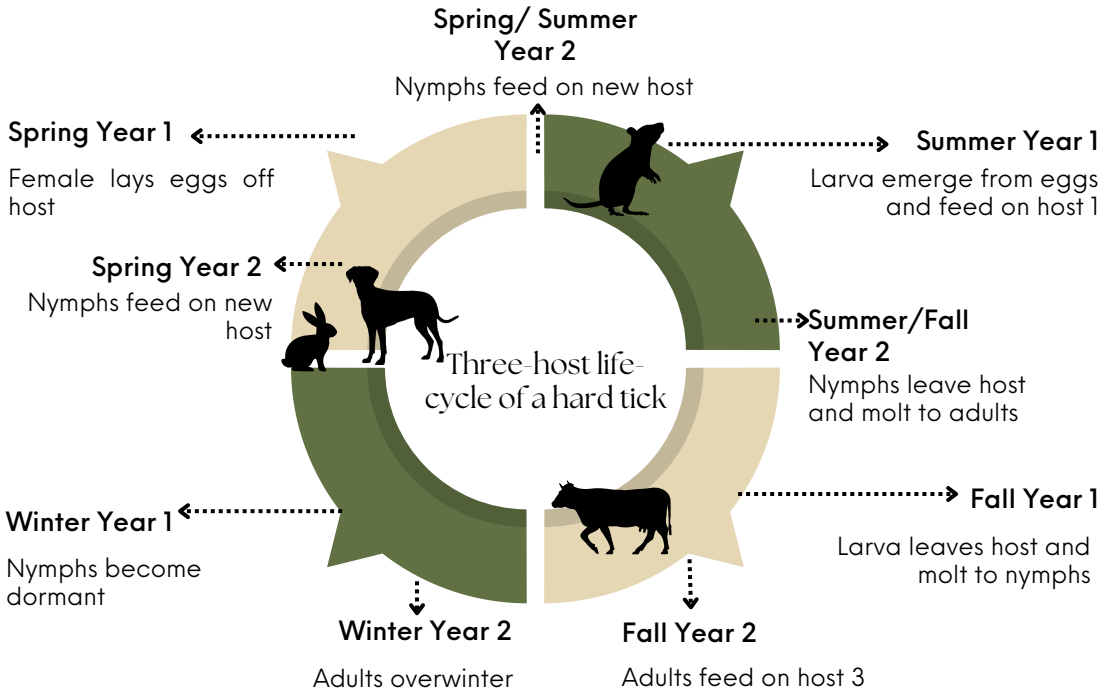
TICKS

Ticks are particularly common at higher elevations, however, the most important ticks in the country are rare or not found in Colorado, which include the Lone Star tick, transmitter of Lyme disease and the black legged tick.

Ticks can have soft or hard bodies and different lice cycles when they are more likely to attack different hosts. Most of the ticks that affect pets and humans belong to the hard body ticks, which usually have a 4 phase life cycle: eggs, larva, nymph and adult, and can live between 1 and 2 years, usually changing hosts as they transition to another phase in their life cycle. Ticks spend most of their time in the environment rather than the hosts.

Similar to fleas, tick prevention for pets and livestock is available in the forms of oral medication for pets, spot on products, collars, spray repellents, shampoos, dusts and pour-on products. Consult with your veterinarian for appropriate products for your animals, time of effectiveness and method of application. It is always good to check yourself and your animals for ticks and remove them as soon as possible. The most commonly available tick repellents in the market contain DEET but other active ingredients against tick are picaridan, IR3535 and oil of lemon eucalyptus.

Avoiding ticks and fleas might be a complicated task, especially for horses, livestock, working and hunting dogs, however you can still manage the environment where they spend time by keeping the vegetation low, pruning trees and bushes around fences.



For more information, visit:

Northern Colorado Pest & Wildlife Control

CSU Extension

Scroll down to pages 7 and 8 to learn more about the most common ticks of CO.

SETTING YOUR VEGETABLE GARDEN UP FOR SUCCESS.

BY KARLA MELGAR

It is that time of the year to start thinking about the layout of your gardens, the amendments you will use and the vegetables you would like to grow. If you are just starting a new garden, this guide will help you select some tools to give you a productive summer garden.

The first step is deciding what the right method is to start your garden: raised beds or rows?

GARDENING SOIL TYPES.

Garden soil: Intended for in-ground gardens but can be used as bed filler too. Higher price than premium top soil.

Potting mixes: Most expensive mix, composed mostly by woody materials, vermiculite, perlite and fertilizers.

Topsoil: Can be bought in large bulks from landscape companies or at hardware stores. The most basic ones are mostly composed of clay and sand. Cheapest option but needs the addition of organic materials to improve texture, infiltration and nutrient availability.

RAISED BEDS

Raised beds can have multiple advantages: they require less watering and weeding, and may allow for better air and water filtration if composed correctly, but may be more costly than row beds on the soil, at least as you start building them. Raised beds can be built out of inexpensive lumber or landscaping timber, tin or you can even use recycled plastic containers.

Beds can be built of any length but its important to make them no wider than 4ft, to avoid stepping on the bed and as deep as possible to allow root development. The spacing between beds should allow enough space to walk and move a wheelbarrow or any equipment necessary.

The next most important thing is to prepare the soil for the bed. To make things simple, you can buy pre-mixed soil for raised beds but buying separate ingredients may be more cost effective for multiple beds or larger beds. If you are planning on mixing your own soil, make sure to make a mixture that consists of 50-60% topsoil and 40-50% compost.

Topsoil can be bought in bulk at landscaping companies and delivered by the truckload, but if you are thinking smaller scale, topsoil is available at garden and hardware stores in bags. There are a varying range of prices and varieties available, and the most basic ones are mostly composed of clay and sand. This might be the cheapest option but will need to be amended with compost and organic materials. Premium top soil have small amounts of forestry products like sawdust, pine shavings, and or peat moss, which allows for better structure and moisture retention.

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WANT TO LEARN MORE ABOUT GARDENING? CLICK ON THE ICON BELOW FOR MORE INFORMATION

PlantTalk COLORADO™

SIGN UP FOR ONE OF THESE UPCOMING WEBINARS:

Edible gardening - April 28th, 12-1 pm MT

A Colorado Insect Update - May 10th, 12-1 pm MT

Native Colorado Pollinators- June 14, 12 -1 pm MT

OR WATCH A RECORDED WEBINAR:

Seed starting - Recorded webinar

Tremendous Tomatoes - Recorded webinar

SOIL AMENDMENTS

Adding some amendments to previosuly used soil or new top soil has the capacity of improving soil structure, water infiltration and water holding capacity. This will allow your plant's roots to develop correctly. The following list has a few options of materials to incorporate into your soils. These materials can make up to 20% of your soil.

- Peat moss: has an outstanding ability to hold water and improve aeration. It should only be included if your soil mixture doesn't have it already. Too much peat moss can be detrimental for water drainage.
- Sand: also known as builder's sand or sharp sand. Is an inexpensive way to improve aeration and drainage in the soil.
- Perlite: Provides drainage and aeration. Works similar to sand but is lighter and allows more aeration.
- Vermiculite: Is a type of clay that can boost drainage and aeration but also hold nutrients and moisture into the soil.
- Coconut coir: A good alternative to peat moss and a more sustainable option. Great addition in arid and dry regions.
- Biochar: This byproduct of heating organic wastes can improve soil structure and give a nutrient boost.
- Mulch: Can be placed at the top of beds around plants to hold moisture and prevent weeds.

ROW GARDENING

If you are planning for a row garden there are several methods to follow. Rows in a garden can be worked on by preparing the soil with a light till before planting. Several types of equipment can be used to build beds such as rototillers, spades or hoes but you can also prepare a no-dig garden with similar materials to those of a raised bed.

As you start a new plot for gardening, try to remove as many plants as possible before preparing the soil. Follow this activity by a light rototilling (or turn over the soil with a spade or hoe) to break up the compaction on the top layer. Remove the larger debris remaining on top of the soil and spread some organic matter in the form of compost or nutrient-rich topsoil and incorporate into the soil by rototilling again. This process is important for new garden plots, but previous gardens may not require rototilling.

After incorporating organic matter you can start building the beds, leaving enough space in between rows to walk and reach the middle of the row.

PICK THE RIGHT SUMMER VEGETABLES

Vegetable gardening has become so popular that you can easily find seed varieties that are more suited either for row planting or containers. You can also find plants in local farmers markets but with more limited options for varieties. Additionally vegetables can be cool or warm season, so make sure to pick your summer vegetable accordingly.

More information about vegetable gardens can be found here.

Warm season vegetables: Plant mid-May, early June

- Tomatoes: best in warm deep garden soil. when buying transplants, the condition of plant is more important than variety,
- Peppers: Can be sown in April along the Front range and transplanted into the field on June 1. Arrange plants 1ft apart from each other. Drainage can be a major issue for peppers.
- Cucumbers and squash: Extremely frost sensitive. Its normal that first flower don't produce fruit.

Cool season vegetables: Plant mid-April to early May or mid-July to mid-Agusut

- Broccoli, cabbage, cauliflower, kale: plant mid-july. Keep soils moist and fertilizie lightly but frequently.
- Carrots: use short root varieties, keep soils moist to avoid strong flavored roots. Thin early.
- Leaf lettuce: avoid planting in hot weather, water frequently and fertilize lightly but often.

AMINOPYRALIDS: RESTRICTIONS FOR GRAZING, COMPOST AND MANURE

By Jennifer Weisbrod - Pesticide Safety Education Program Coordinator, Extension Educator- University of Nebraska,-Lincoln Leslie Johnson - Animal Manure Management Extension Educator - University of Nebraska-Lincoln, Melissa Bartels - Former Extension Educator - University of Nebraska-Lincoln,

The prices of synthetic fertilizers have increased significantly over the last year, leaving growers and even homeowners facing the decision of finding alternative sources of nutrients.

One great option is the use of manure or compost from a local farm or from your own operation. The use of manure in gardening can loosen compacted soil, increase carbon in the soil and reduce surface runoff and leaching, all while providing nutrients that your plants need. While this option is great, it is important to be aware of the potential carryover of herbicides in manure from grazing animals.

Recently, a group of herbicides has been identified as a concern for manure and compost. When herbicides are sprayed onto forages, plants take up the chemicals. If these forages are then utilized as a carbon source in making compost, residues will be present in the finished compost product. Often these same chemicals are used on grazing land. Even though it may be completely safe for grazing livestock to consume the plants, the resulting manure will contain herbicide residues.

The concern with these herbicide residues in manure and compost is the potential for damaging sensitive plants and crops. Use of manure or compost with these residues present could cause damage to plants, reduce productivity of plants or cause plant death. Additionally, the residues may remain within the soil for an extended period of time if they are present within the manure.

EPA REVIEW OF PYRIDINES

The EPA reviews all registered pesticides at least every 15 years to determine if the chemical is still able to function as intended without negatively affecting human health or the environment. As such, concerns with a product moving off target, not degrading, or causing harm to non-target organisms are often addressed during this review process.

Currently, the EPA is reviewing a group of Pyridines for their persistence in organic matter such as plants, parts of plants, and manure from livestock that have grazed treated plants.

The list of active ingredients being addressed by the EPA for residue concerns in manure and compost from herbicide's are as follows: Clopyralid, Triclopyr, Fluroxypyr, Aminopyralid, Aminocyclopyrachlor (ACP), Dithiopyr and Picloram.

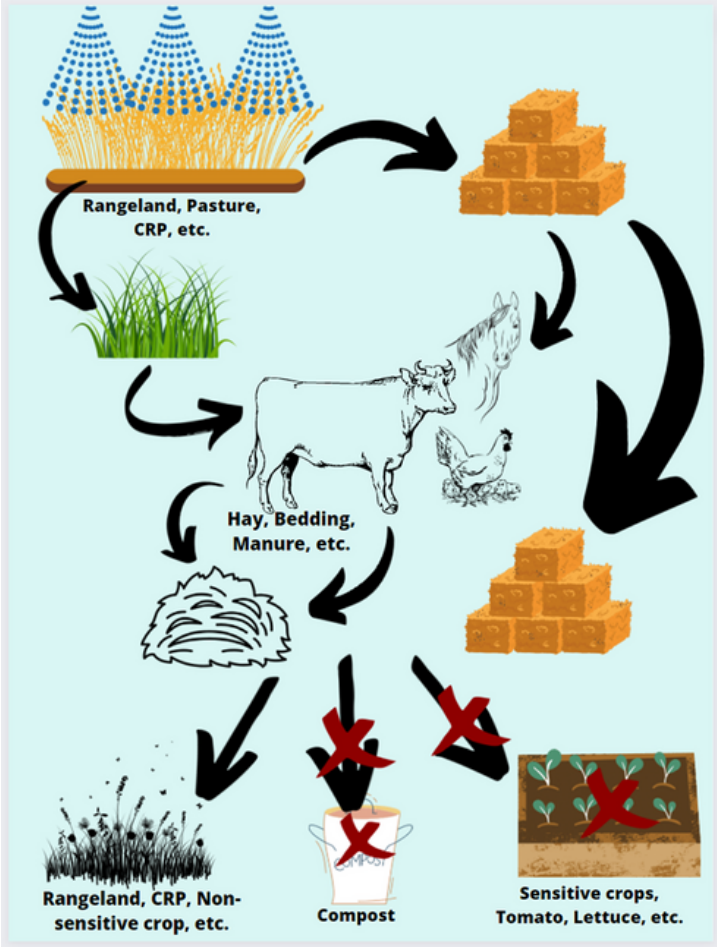

Figure 1. Example graphic from a pesticide label with grazing and composting restrictions.

BEFORE SPRAYING

Before treating a field for weeds with these active ingredients, determine if you intend to use this field for grazing livestock or if you will use plant residues for compost within the next year. If you do not intend to graze or compost, then many of the concerns regarding pyridines will not apply.

However, if you intend to graze or compost from a treated field, it is especially important to examine the labels of your herbicide for grazing restrictions. Figure 1 shows just one example of what a label might say to indicate that product should not be used on anything that will end up grazed or composted.

It may also be useful to look for any of the active ingredients listed above. Older labels may not have grazing restrictions or may have less stringent restrictions on them. Some labels have the grazing restrictions on the first page, but not all, so be sure to look at the Restrictions section of the label and the Use Precautions section for more information.
If you are uncertain on the best plan of action, call your local extension office to connect with an agronomist who can help you determine a plan of action.

HOMEOWNERS:

If you are planning to use compost or manure from your own yard or facility, make sure to check any pesticide labels used within the last year.

Figure 1 shows one example of what a label might say to indicate that product should not be used on anything that will end up grazed or composted. Always check the active ingredient section of the products.

For homeowners receiving manure or compost from a nearby operation, it is important to ask questions about products that were used to ensure there were no restrictions on movement of the manure.

A list of pesticides that contain a form of aminopyralid is provided below. This list does not include hebicides iwth active ingredients Clopyralid, Triclopyr, Fluroxypyr, Aminocyclopyrachlor (ACP), Dithiopyr and Picloram, which are also under review for similar reasons. For more information on registered pesticides visit CDA's Ag license website

Herbicides with Aminopyralid Potassium Salt

- Chaparral
- Duracor
- Opensight
- Terravue

Herbicides with Aminopyralid, triisopropanolamine salt, or Aminopyralid-Tripromine, or Triisopropanolamine salt of aminopyralid

- Capstone
- Forefront HL
- Forefront R&P
- GrazonNext HL
- Pastural L
- Pastural L HL
- Whetsone Herbicide
- Gunslinger Amp Pasture herbicide
- Milestone
- Milestone VM plus
- NativeKlean

There are facilities that will test for pesticide residues, but the cost is high and doesn't provide any recommendations for leftover compost or manure. It's more important to keep records of what was used even if it's a general use product and follow the label requirements to reduce the potential for damage of sensitive areas such as yards and gardens.

COMMON TICKS IN COLORADO

The following list provides an insight into the most common ticks in Colorado and the diseases transmitted to humans.

Common name	Scientific name	Host	Disease	Symptoms
Winter tick	*Dermacentor albipictus*	Deer, elk, horses and other large domestic animals		
Mountain wood tick	*D. andersoni*	Small rodents, porcupines, dee, horses, cattle and large domestic animals most common species that bites people	Colorado tick fever, Tick paralusis (rare, reversible when tick is removed) Tularemia	Generally, flu-like symptoms, including ache, fever, chills fatigue. Lasts for 1-3 days, most common disease transmitted by ticks, underreported
	D. parumapertus	Primarly jack rabbits and cottontail rabbits		
American dog tick	*D. variablis*	Small rodents, dogs, raccoons, and other animals, occasionally bites people.	Colorado tick fever Rocky mountain spotted fever (bacteria) Tularemia	Rocky mountain spotted fever has a characteristic rash.
Rabbit tick	*Haemaphysalis leporis-palustris*	Rabbits, jack rabbits		
	Ixodes cookie	Rodents and carnivores, occasionally feeds on people	Loamy soils Bunch grass, mid-tall grass	
	I . kingi	Prairie dogs and associated animals	Clay soils, sandy soils Open sod-forming, mid-grass	
	I . sculptus	Burrowing rodents such as ground squirrels and predators		

COMMON TICKS IN COLORADO

Common name	Scientific name	Host	Disease	Symptoms
	I . spinipalpis	Rabbits, wood rats and Peromyscus mice		
	I . texanus	Weasels, skunks and martens		
	Ornithodoros hermsi	Chipmunks, rock squirrels and other rodents	Relapsing fever/borreliosis (from a bacteria)	Very rare, rapidly developing fever. Human infections happen when camping in rustic cabins inhabited by infected rodents.
Brown dog tick	*Rhipicephalus sanguineus*	Dogs, rarely feeds on people, may reproduce inside the home		
	Otobius lagophilus	Primarily cottontail rabbit and jackrabbits		
Ear tick	*Otobious megnini*	Large ungulate mammals, mostly pronghorn		

RESOURCES AND EVENTS

PASTURE MANAGEMENT- WHERE TO START?

Small Acreage Management With Dr. Joe Brummer
April 27th, 5:30 p.m. MT
Learn the basics of managing pastures, how to keep pastures healthy, weed management and get answers to your questions.
Register here
For more information contact: kmelgar@colostate.edu

RATTLESNAKE HIKE

Boulder County
April 30, 1:00 pm
Join volunteer naturalists on a moderate trek through prime rattlesnake habitat and learn about these often misunderstood and feared creatures. Meet at the shelter to share in a discussion. You'll walk away from this program feeling much more comfortable about sharing open space with these scaly friends. Near Lyons. Location provided when registering.
Register here

PLANT THIS, NOT THAT

CSU Extension: El Paso County
ONLINE April 26th, 12 p.m. MT
Cost: $5
Are you interested in planting native plants but don't know which ones to choose? Join us for a comparison of common trees, shrubs, perennials and grasses and their native counterparts.
Register here

COLORADO NATIVE PLANT MASTER WALKS

Join the Colorado Native Plant Masters on one of their guided walks at any of these different regions. Click on the location to find more information about schedule and registration:
Strasmore Visitor and Nature Center - June 22, 26 and July 6th from 8:30 am to 12:30
Strasmore Visitor and Nature Center - Wildflower walk - July 7 from 8:30 to 11 am
Pikes Peak -meet at North Pole - July 20 form 7:45 am to 12 pm

Have you got any services to provide?

WE ARE LOOKING TO BUILD OUR CONTRACTORS LIST

If you know of any service providers for small acreages, or you provide services, send your information to kmelgar@colostate.edu
Let's get you connected with other small acreage owners!