

Developing a deworming program for your horse

Internal parasites or worms are a constant concern for equine owners. Parasites can cause illness, digestive upset and damage, and colic episodes. All horses have some present in their system. The horse picks up parasites from its environment and through other horses' manure. These parasites develop from the larvae stage to adult stage inside the horse while robbing the horse of nutrients and damaging the digestive tract lining and other parts of the body. The different classes of parasites that can affect a horse are:

Large and Small Strongyles : found in all age classes of horses. The larvae of large strongyles migrate through parts of the body, and burrow into the walls of the arteries that are the primary blood supplier to the small and large intestine. This migration can result in the formation of blood clots, disrupting the blood flow to the intestines. Small strongyles attach to the large intestine wall and can cause diarrhea, loss of appetite, and colic.

Pin Worms: Pin worms are found in horses of all ages. Horses ingest eggs from feed or water contaminated with manure, or by licking walls or fences. The lar-

vae mature in the horse's intestines, then as adults, the females move to the rectum and deposit sticky eggs around the anal area. The damage caused by pinworms is external due to intense itching and scratching of the tail area and loss of tail hair.

Ascarids (Round Worms): These internal parasites are mainly a problem in young horses under a year of age. The round worms cause poor growth, rough hair coat, pot belly, chronic respiratory problems and sometimes death. Most of their damage is caused by their migration to the liver and lungs.

Bots: The adult bot fly lays eggs on the horse's legs, chest, throatlatch or chin areas. Some can hatch due to licking. The larvae burrow into the horse's mouth tissue causing ulcers. After about 3 weeks they emerge and move to the stomach and small intestine where they suck blood, causing inflammation and ulceration of the lining. Bot flies lay their eggs in the fall so control should be addressed by removing the eggs on the horse's body and deworming with a bot specific product (see chart) after the first hard frost.

Tapeworms: Tapeworm

eggs are ingested by mites that are, in turn, ingested by the horse while grazing or eating hay. They travel to the area where the small intestine and cecum meet. High numbers can cause colic. These parasites are less of a problem in dry areas of the country.

Deworming management is important to keep parasite counts low. Fecal exams can help determine the types and number of parasites present. Owners can check with the Extension Office or they can take fresh samples of manure to their local veterinarian to run the fecal exam and provide feedback on what worms are present. Resistance to worming products is becoming more of a concern, so only use dewormers when needed and in proper amounts. Some horses will naturally carry a heavier parasite load than others and may require a specific worming program. This is called selective deworming. Some programs schedule a change of product with each deworming. It is important to change class of dewormers and not just product name. This is called rotational deworming.

If a new horse arrives on the property without any previous

management history, it is advisable to be cautious with the first deworming. If the horse is heavily infested with parasites, deworming with a very broad and effective dewormer; i.e., an Ivermectin product, could cause an extensive kill, causing digestive blockage and

colic. It is sometimes better to give a less effective or less broad dewormer such as a Benzimidazole or Pyrimidine product to avoid digestive concerns. Recording the weight, product and amount given each time is part of a good management system.

Class of Dewormer	Product Names	Parasite Information
Ivermectin	Egamon, Equimectrin, Zimectrin, Rotectin-1	Does not kill encysted strongyles or tapeworms; resistance concerns with ascarids
Ivermectin + praziquantel	Zimecterin Gold	Same as Ivermectin, plus kills tapeworms
Benzimidazoles	Panacur	Does not kill bots or tapeworms, resistance concern with strongyles
	Safeguard	Does not kill bots or tapeworms
	Equivet-Tz	Does not kill bots or tapeworms
	Anthelcide EQ, Equi-cide, Benzelmin	Does not kill bots or tapeworms
Phenylguanidine	Cutter	Does not kill bots or tapeworms
Moxidectin	Quest	Not tapeworms, does kill encysted strongyles; resistance concerns with ascarids
Moxidectin + praziquantel	Quest Plus	Same as Moxidectin plus kills tapeworms
Pyrimidines	Strongid F, Rotectin-2, Pyrantel Pamoate	Not effective against bots, double dose effective against tapeworms; resistance concerns with small strongyles and ascarids
	Strongid C, Strongid C 2X	Kills larval stage only, need to include Ivermectin twice a year

A huge thank you: regarding the spiritual cleaning & blessing of the new K-8 warm springs school grounds

To the following Folks and Departments:

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WaaShat leader and the drummers, all of you are truly amazing in the work you have conducted in this area where the school will be built. All of the students who attend our new school will know that they are special and blessed.

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All the others who contributed time, effort and/or energy to this event, a sincere thanks.

From: Valerie Switzler Director of Culture & Heritage and Arlene Boileau, OSU Extension.

Tips for first-time gardeners

If you're completely new to vegetable gardening and want to enjoy your own homegrown tomatoes and summer squash this year, the Oregon State University Extension Service can provide the information you need to get started.

Gail Langellotto, an OSU horticulturist and statewide coordinator of the Master Gardener program, says there are several things novices can do to make their foray into gardening more successful. Also, "Growing Your Own," a practical guide to gardening with more details, is on the OSU Extension Service website: <http://extension.oregonstate.edu/catalog/html/grow/grow/>.

Among Langellotto's tips:

- Choose raised beds, containers and mounds, Langellotto recommends, if you live in the Willamette Valley, where clay soils do not drain well and remain cold into the spring. If you use containers, which can be just about any size and as casual as old tires, you can garden in any location and move the containers for optimal conditions.

- Choose a site where your garden will get at least eight hours of light, preferably sunshine. "Air drainage can be a problem. If you live on a slope, be sure to avoid cold air drainage in low spots and wind," Langellotto said.

- Get a soil test. Soil supplies 13 essential plant nutrients, primarily nitrogen, phosphorous and potassium. A soil test will tell you if your soil has deficiencies and if it is too acidic or alkaline. See OSU

Extension publications EM 8677 for testing laboratories serving Oregon.

- Build organic matter with compost to correct many deficiencies. Start a compost heap with two parts "brown" materials – leaves, straw, paper, sawdust – to one part "green" materials such as vegetable scraps, coffee grounds, grass clippings and fresh manure from cows, horses or poultry. An easy way to start a new garden spot, while improving soil structure and fertility, is called sheet or "lasagna" mulching. Wet soil thoroughly and add a layer each of overlapping cardboard, compost and six to eight inches of mulch (leaves and grass clippings). In about seven months the soil will be ready for planting.

- Choose easy to grow vegetables that your family likes, adding others in following years as tastes mature,

Langellotto said. She recommends five vegetables that like cool conditions: radishes, peas, leaf lettuce, carrots and spinach. Heatloving veggies that should be planted in warm soil are bush beans, summer squash and tomatoes. Other easy crops are kale and kohlrabi, beets, onions, garlic and annual herbs such as basil, fennel and parsley. Vegetables and fruits that do well in containers are bush beans, beets, carrots, cabbage, swiss chard, cucumbers, leaf lettuce, bell peppers, squash, tomatoes, dwarf apple trees, blueberries, strawberries, turnips, eggplant, kale and green onions.

- Choose high quality seed

for your vegetable garden. Germination rates on the package should be 65 to 80 percent. The package also will tell you when to plant seeds, how long it will take them to germinate, depth of planting and spacing. Although more expensive than growing food from seed, bedding plants already sprouted work best for tomatoes, basil, eggplant and peppers. Check that they are not root bound in the pot and are stocky and deep green, not spindly and light green. "If you run into problems, your OSU county extension office is there to help," Langellotto said. "Master Gardeners are on hand to answer questions."

DID YOU KNOW THAT WE CAN HELP YOU WITH YOUR GARDEN QUESTIONS?

CALL (541) 553-3238 AND WE WILL REFER YOUR QUESTION TO OUR MASTER GARDENER PROGRAM IN DESCHUTES COUNTY WHICH IS FULLY STAFFED AND SERVES ALL OF CENTRAL OREGON

YOU CAN ALSO CHECK OUT THEIR WEBSITE AT: <http://extension.oregonstate.edu/deschutes/horticulture>

Jefferson County Fair & Rodeo
July 24-27



Visit us online! Use your QR code scanner to find info about 4-H activities.



May Photography

Monday, May 13 @ 330-5pm
OSU Training Room
(in Education Building)



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Special Thanks to Sara Rogers & Lisa Dubisar for volunteering their time during the photography workshops!

Celebrate food hero moms

What better way to celebrate Food Hero moms than to have the kids cook in the kitchen! Here are some recipes from foodhero.org that kids can make for their moms:

- Banana Bobs: Bananas dipped in yogurt and rolled in granola.
- My Personal Pizza: Mini pizzas on English muffins.
- Strawberry Swirl: A blend of strawberries and apple juice.

Do you have a creative tip for serving fruits and vegetables to your family? Let us know and you may be featured in Food Hero monthly and win a prize!

Visit <https://www.foodhero.org/contests> for all the details. Send your idea to foodhero@oregonstate.edu with your name and contact information! If you have a photo, send us that too!

Moms and Kids can

- Choose or cut fruit to blend in a smoothie.
- Make pancakes and flip 'em!
- Plan a Mother's Day meal or treat.
- Use small cookie cutters to cut fun shapes in slices of melons or cucumbers or your pancakes.

Strawberry Swirl

Ingredients
1 cup frozen strawberries, thawed
1 cup (8 ounces) apple juice

Directions
1. Combine ingredients in blender and process until smooth.
2. Serve, or freeze for 1 to 2 hours to make a slushy.
3. Refrigerate leftovers within 2 hours.

Note:
If you don't have a blender, mash strawberries with a fork. Add juice and beat with an egg beater until fairly smooth.