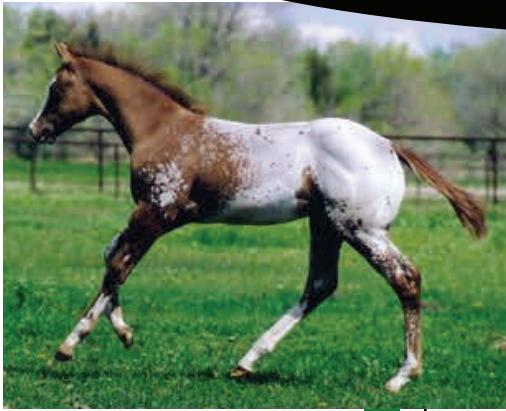


Non-Toxic Solutions for Pest Control in Livestock



A few eco-friendly tips for controlling pests such as house, stable, face, horn, horse, black and deer flies and deer flies as well as mosquitos.

You should ALWAYS check with your veterinarian before trying any pest management treatment on any animal.

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No matter what we do, it seems that there are always some type of pest bothering either us or our livestock in and around the barn. For the most part they are just bothersome to us, but for livestock some of these pests can cause serious health problems if left unchecked. There are a multitude of insect management products on the market but most contain hazardous chemicals that can potentially cause serious human health and environmental problems. Sometimes they can also cause insecticide resistance or inadvertently destroy natural enemies of the target pests. As a result, many people are turning to natural products and solutions to control these unwanted pests. But first, there are many things a person can do that will keep pests to a minimum:

1. Eliminate all sources of standing water. This is the favorite breeding ground of mosquitoes. Make sure watering buckets are changed regularly and remove any old tires!
2. Keep manure cleaned up and as far away as possible from all livestock areas. It takes house and stable flies 10 to 21 days to go from egg to adulthood, so breaking their breeding cycle means getting fresh manure out of their reach weekly.
3. Repair leaking plumbing. Dripping water creates a moist environment ideal for fly eggs. Periodically check faucets, pipes and waterers for leaks, and when you repair them, fill in any puddles they've caused.
4. Keep stalls dry. Stable flies are attracted to the smell of urine, and they lay their eggs in urine-soaked bedding as well as manure. Remove wet bedding from stalls at least once, preferably twice, a day. Sprinkling a little hydrated lime over wet spots on the stall floor can help deodorize and dry them out -- reducing their appeal to egg-layers
5. Do not spread fresh, uncomposted manure on pastures you intend to use before the manure decomposes.
6. Don't overcrowd pastures.

Once you are practicing best management techniques for reducing pests on your farm, there are products you can purchase or make yourself to help in your war on pests.

Fly Predators It sounds strange, but you can buy bugs to eat other bugs. Not only that, but these fly parasites look like tiny little flies themselves. But instead of harassing your livestock (and you), they eat fly pupae of most pest flies including house, horn, face and stable flies. Yummy! There are several companies on the internet that sell them and also can be found



in some agricultural / livestock supply catalogs. When a batch arrives in the mail, you simply open up the bag they're in, distribute them at dusk around places where flies might lay eggs, and let them go to town. The U.S. Dept. of Agriculture reports that in studies, fly predators worked very well, keeping the area generally free from pest flies for 30-90 days.

Bug Zappers control insects by attracting them with light and other attractants then kill them with a light electrical shock. They can be hung around the barn and obviously must be plugged in to an electrical outlet. The one downfall of bug zappers is that beneficial insects are also often killed and some recent studies have also questioned their overall effectiveness.

Natural Insect Repellent Sprays—there are many natural insect repellents made from essential oils on the market today, found on the internet and in farm / live-stock supply catalogs. The most common active ingredient in natural commercial products is citronella, an oil distilled from lemon grass leaves. Despite its reputation as a non-toxic insect repellent, it can irritate eyes and you should always check with your veterinarian before using anything on any animal especially if it is pregnant or nursing. Some owners prefer to make their own homemade recipes. Here are some recipes that have been reported to work well:

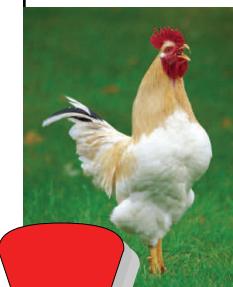
Recipe #1:
1/2 teaspoon oil of myrrh
2 cups water
1/2 cup cider vinegar
1/4 teaspoon of citronella oil

Recipe #2
2 cups apple cider vinegar
2 cups cold (prepared) tea, such as sage or chamomile tea
20 drops eucalyptus oil
20 drops citronella oil
10 drops lavender oil
10 drops tea tree oil
10 drops cedar oil
20 drops emulsifier, such as polysorbate 20

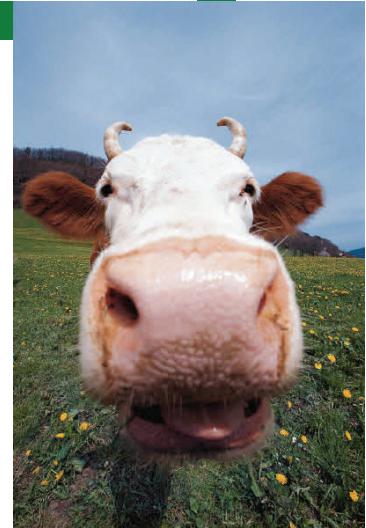
Garlic - Ever notice how a distinct smell will stay on your breath and skin for hours or days after a garlicky meal? The strong oils in garlic are excreted through the skin and lungs, providing a potent scent that can repel insects. Fresh garlic can be tricky to feed to livestock, but powdered garlic can easily be added to the feed. Start with a very small amount, until they get used to the new flavor and slowly increase the dose to a tablespoon or two each day. Again, this is something that you

should check with your veterinarian first and if you want to use this with milk-ing cows, it just might make the milk taste like garlic—something you might not want!

Keeping pests away from your livestock is a job in itself indeed! Hopefully this pamphlet will give you a few more ideas on wining the battle against these bothersome pests.



Please Note: You should ALWAYS check with your veterinarian before trying any new pest management treatment on any livestock.



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