

Ask the Vet

by Gail Kocian

Photosensitivity

This month we have a question from a TLBAA member in Louisiana:

"I have a cow that has sun sensitivity. We took her in to my vet and he treated her as best he could and said she would get over it and probably not have it again and to keep her in the shade for 30 days. We kept her in the hall of the barn for about 60 days and she looked pretty good. Turned her into a nearby pasture with quite a few trees and 3 days later she was red and sunburned looking again. We got her back up and kept her for about 30 more days. We just now turned her out in front of the barn. If she can't be in the sun this time of year, she will really have a hard time in the summer. I hear sometimes their skin and flesh just peels off. What can we do to get her over this? She's a real nice cow."

Why is this cow getting sunburned time and time again even after she's been treated and kept in the shade?

This cow's skin reaction to the sun is known as photosensitivity. Basically it's an allergic response to the sun, similar to sunburn in humans. There's more going on here than just sunburn because a healthy cow doesn't normally get sunburned. She could have liver problems. Photosensitivity is a sign that an animal's liver may not be functioning correctly. The impaired liver does not metabolize chlorophyll properly. So cattle will be sunburned when exposed to direct sun.

What does chlorophyll have to do with this cow being sunburned?

If a cow's liver is damaged or diseased it does not metabolize and excrete plant pigments (chlorophyll) properly and toxins build up in the liver. When these toxins aren't passed out they enter the blood stream. The toxins in the blood at the surface of unpigmented skin result in sunburn when the animal is exposed to the harmful ultraviolet rays of the sun.

Since this cow is getting sunburned when she's out in the pasture and then healing up when she's in shaded areas, does that mean she has permanent liver damage and will always have photosensitivity?

No, not necessarily. She may be grazing in a pasture where poisonous plants are present and they could be responsible for her liver being temporarily impaired. It's quite possible she will exhibit signs of photosensitivity only while she's in that partic-

ular pasture. If she is moved into another area where these plants aren't growing, she may recover completely from photosensitivity over a period of time. Also, young green plants have more chlorophyll so photosensitivity in cattle is more common in spring than later in the growing season when forage is mature.

If this cow's liver has been permanently damaged, she will more than likely have this skin disease for the rest of her life. She will be sunburned during warmer seasons and when she is in strong sunlight.

What could have damaged her liver?

As mentioned before, poisonous plants cause liver damage, but there are several other things: Liver abscess, diseases such as leptospirosis, internal parasites and liver flukes will also cause liver damage. Liver flukes are common in regions where there is more moisture and standing water in pastures.

Eating poisonous plants like lupine, bitterweed, mushrooms, St. John's wort, cocklebur, paintbrush, alfalfa, buttercup, lantana and even Bermuda grass and young wheat plants is the main cause of plant-related liver impairment. The plants have to be eaten in large quantities though; just a small amount won't usually cause liver problems. There are a lot of other poisonous plants and some only grow in certain regions of the country.

Hay can be a major cause of plant-related poisoning in cattle due to the large amount of hay that an animal can consume. If hay has been harvested incorrectly or put up when wet, toxins can be present. Moldy hay is toxic to cattle if eaten in large quantities. Plant toxins will also be present if the hay was harvested along with a large quantity of poisonous plants.

Is there a way to tell if the cow has permanent or temporary liver damage?

Having a liver function test performed will show the degree of damage to the cow's liver.

Are all cattle affected by photosensitivity? Does it make a difference what part of the country they're in?

Usually older and light-colored cattle are more likely to get sunburned. The unpigmented areas of skin are where the sunburn shows up - mainly on the back, face (particularly the muzzle) and the udder of the animal. Cattle with pigmented skin are just as vulnerable to liver damage, but the sunburn shows up more on the lighter-colored animals.

The Southern states seem to have the

most photosensitivity cases, but cattle in other parts of the U.S. and the world are also affected by this skin disease.

What is the treatment for photosensitivity?

Keeping the animal in shaded areas and avoiding contact with direct sunlight will ease the discomfort considerably. If the sunburned areas have lesions, antibiotics should be given to combat infections and steroids may be administered to bring down the swelling and ease the itching.

•If cattle are exhibiting signs of photosensitivity, it may be plant related. Check your pasture for poisonous plants and have your hay tested for toxins.

•To get a complete list of poisonous plants that may be growing in your pasture, contact your County Extension Office. An agent can tell you which poisonous plants are growing in your area and how to rid your pasture of these harmful and potentially dangerous plants.

• Have your hay tested. Contact your County Extension Office for information on how the tests are performed, what the test results will show and the cost of testing. Many times these tests are free and performed at state Agricultural Colleges.

For more information on photosensitivity check out these sources:

The Merck Veterinary Manual

Storey's Guide to Raising Beef Cattle by Heather Smith Thomas

Beef Cattle Production by John F. Lasley

Have a question that you'd like to ask a vet, but always forget when you have the chance? Well, now you have a chance to ask that important question and have your answer shared with other Trails' readers.



To get your questions submitted, simply type your question and send it to [Trails Editor Brenda Cantrell at Brenda@tlbaa.org](mailto:Brenda@tlbaa.org) or fax (817) 625-1388 or mail to: 2315 N. Main Street, Suite 402, Fort Worth, TX 76164. Your questions will be sent to Gail and she will be in hot pursuit to get you the answer.

We are looking forward to hearing from you and getting you the answers you need!