Liver Disease and Photosensitization

Plants causing liver disease and photosensitization (sensitivity to sunlight) are often grouped together, as photosensitization is often, but not always, a secondary symptom of liver disease caused by poisonous plants. As chlorophyll breaks down, it becomes phylloerythrin, a phototoxic compound. In healthy animals, the liver filters phylloerythrin from the blood, preventing any damage. If the liver is compromised by toxins, it is unable to remove the compound from the blood and photosensitization occurs. Some plants contain compounds that, once absorbed into the bloodstream, react to UV exposure, without any effect on the liver. Photosensitization resembles severe sunburn. Plants from a variety of families can impact liver health or cause related nutrient deficiencies. Photosensitization symptoms are most significant on white skinned animals or white skinned portions of animals, around the face, and near hooves.

Common Pasture Plants Affecting the Liver and Blood and/or Causing Photosensitization	
Alliums pp.	Onion
Descuriania sophia	Flixweed/Tansy mustard
Equisetum spp.	Horsetail and Scouring rush
Hypericum perferatum	St. Johnswort
Pteridium aquilinum	Western bracken fern
Thermopsis rhombifolia	False lupine
Tribulus terrestris	Puncture vine
Trifolium spp.	Clover
Vaccaria pyramidata	Cowcockle
Xantium strunarium	Cocklebur

Oregon State University OSU Extension Service

Provided by Karin Neff, Andy Hulting, Mylen Bohle and David Hannaway