

# Poisonous Plant Issues for Small Ruminants in the Pasture

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**It is estimated that \$51 million livestock losses occur in the United States each year.**



**If a true estimate of livestock loss due to poisonous plants was obtained in Florida it would be surprising just how significant of a problem this is.**

# Poisonous Plants are a serious problem to agriculture.



Pokeberry

- Lower ranch profits
- Cause illness in farm animals
- Devastating veterinary bills
- Supposed respiratory losses are actually poisonings

# Loss can be experienced by:

- ✓ mortality
- ✓ debilitation
- ✓ chronic illness
- ✓ abortions
- ✓ photosensitization
- ✓ weight loss
- ✓ forage loss
- ✓ birth defects

**The young and the old animal  
are especially at risk.**



**Diagnosis is very difficult at times.  
Only a few plants can be detected chemically in tissue samples or body fluids.**



Cherry Trees



**Clinical signs and/or post-mortem lesions must be consistent with plant diagnosis.**



# Pathologic abnormalities make I.D. easy



Lantana

**Local veterinarians will likely not be able to identify specific plants**



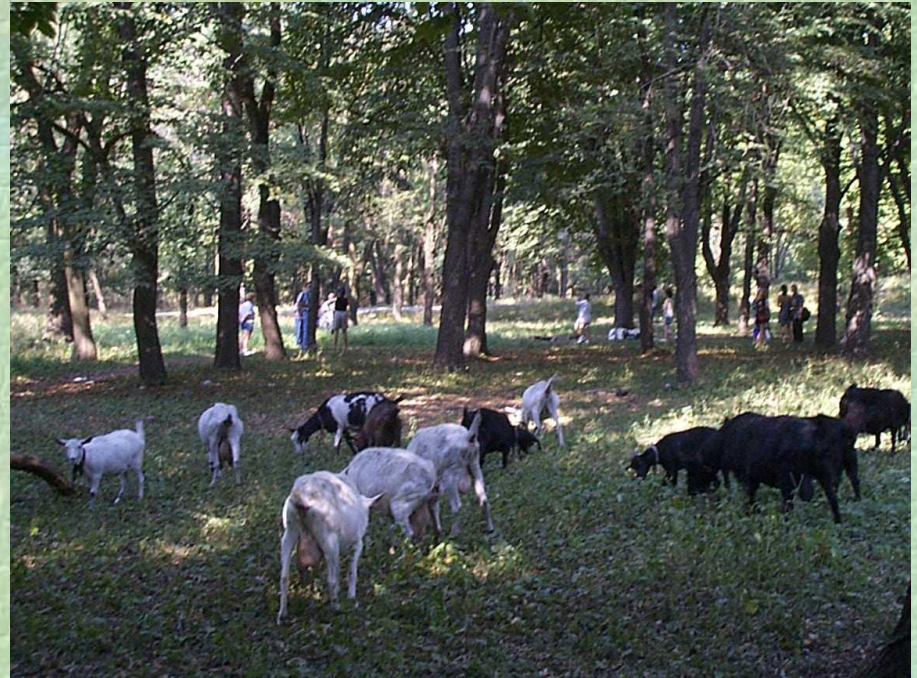
Bracken Fern



Cherry Laurel

# Difficult I.D. can be caused by:

- a variety of lesions
- no lesions
- several toxic plants ingested



# Plant toxicity levels vary by:

- season
- age and maturity of the plant
- portion of plant eaten
- climatic condition
- environmentally caused stress to plants

# Individual animals also respond very differently due to::

- toxicant dose
- animal age
- animal sex
- concurrent disease
- interactions between toxicants
- genetic variation
- nutritional status of the animal
- mental state of the animal

# Realistic Picture:



**Poisonous plants are not “chasing” your animals!  
Rarely does an animal seek out and consume  
poisonous plants even if it does not have an adequate  
food supply.**

# Most Poisonings are due to:

- poor management
- contamination of food stuff
- lack of knowledge about plants
- young stock exposed to poisonous plants and nothing else “green”

# Owners are not without help!



- **Eyewitness accounts**
- **UFL Extension information**
- **County agricultural agent**
- **Guides**
- **Self-training**



**Make a  
conscious  
decision that  
this is  
important  
enough to  
spend some  
time to learn.**





# **Increase your basic knowledge by:**

- **practical guidance**
- **common sense**

**Most poisonous plants are annuals – opportunists that grow where the ground has been disturbed and fertility is low so grass is thin.**



**Plants that accumulate nitrate and cyanide are responsible for the most morbidity or mortality in Florida, i.e.: crotalaria, lantana, cassia**



Crotalaria



Lantana



Cassia

**The secondary cause of livestock poisoning is contamination of processed feeds.**



**Low quality grains are risky because of seeds of toxic plants.**



Non-indigenous  
toxic plants and  
weeds are often  
toxic and can  
become invasive  
exotics.

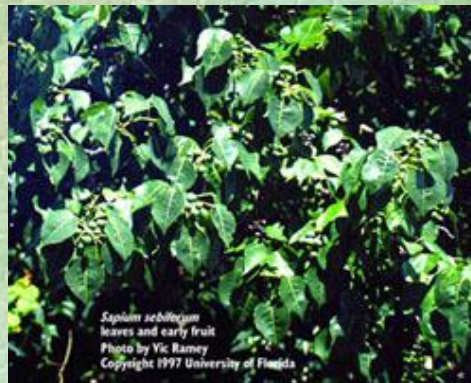
- tropical soda apple
- Brazilian pepper
- Chinese tallow



Tropical Soda Apple



Brazilian Pepper



Chinese Tallow

# Practical Guidance



Corncockle



Common Sneezeweed

- Know when and where animals are at risk
- A change of pasture can be risky
- Young stock are at risk because of body size
- Nursing animals can be at risk if “mama” eats a dangerous weed



**Learn to observe what is normal behavior for your animals.**



# Observations



Great Laurel



Red Buckeye

- Poisoned animals stand alone, act disoriented, hold their head down, stop eating and drinking.
- They look uncomfortable.
- Symptoms are specific for each plant.



**Close to the House Spells  
TROUBLE**

# DANGER!

- Many ornamental plants are toxic.
- Feeding trimmings, clippings and branches is a bad idea.
- Beware of “problem” animals who will eat “anything.”



Stagger Grass



Jimsonweed

# Practical Guidance



Pokeberry



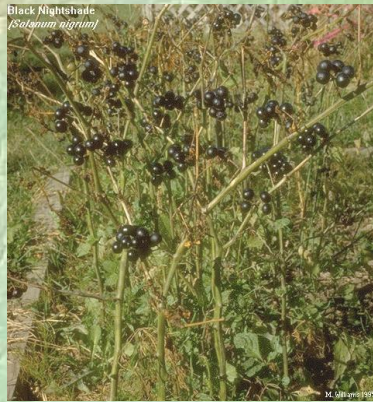
White Snakeroot

- Related animals may have same habits.
- A “taste” can be developed for poisonous plants.
- Even as they get sicker they can feed until they die.

# Some animals have gradually poisoned themselves for years



Black Locust



Black Nightshade

- Plants may have been eaten at a time of year when they were non-toxic.
- A “tough” animal may have been poisoned for years.
- Knowing the toxic portions of the plant is helpful.

**Don't assume all hay is safe!**



# Many poisonous plants remain toxic within dried hay.

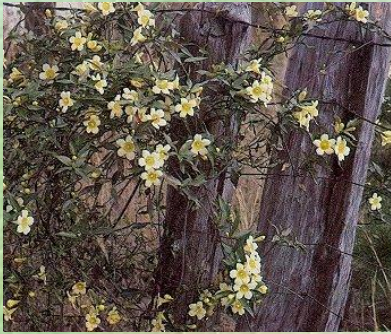
- Monitor hay for removal of weeds.
- If you buy hay from another state, know the poison plants from there.
- Some poison weeds are more toxic when dried.



Sicklepod



# Drought presents a time of high risk.



Yellow Jasmine



Mountain Laurel

- Fertilization during drought can lead to high quantities of nitrogen in weeds.
- Overgrazing can cause poisoning.
- A poisonous plant can become more palatable after applying herbicides.

A photograph of four sheep standing in a field of tall grass. The sheep are covered in dark, speckled spots, likely due to nitrate accumulation. The background is a blurred field of grass. The image is framed by a green textured border at the top and bottom.

Certain conditions combined with improper fertilization of improved grass pastures and crops can cause accumulation of nitrates to toxic levels.

# Acute & Chronic Poisoning



# Plant Identification

- You must become familiar with poisonous plants in your pasture.
- Purchase a good Extension guide with color photos.
- Walk your pasture with someone experienced in poisonous plants.



Fetterbush



Spotted Water Hemlock

# Poisonous Plant Groups

## Respiratory System

- affecting oxygen up take
- hindering oxygen transport
- inhibiting oxygen utilization



Johnson Grass



Goldenrod



Black Cherry

# Poisonous Plant Groups

## Gastrointestinal System

- gut irritating
- gut and oral irritating



Poke Weed



Coffee Weed



Buttercup

# Poisonous Plant Groups

## Damaging Brain & Spinal Cord

- receptor site stimulation
- depression by unknown mechanisms



Death Cap Mushrooms



Rhododendron



False Morel

# Poisonous Plant Groups

## Cardio Toxic Plants

- depression
- stimulation



Oleander



Lily of the Valley



# Poisonous Plant Groups

## Musculoskeletal Toxic Plants

- oxidative
- myocardial degeneration

Sicklepod



# Poisonous Plant Groups

## Hepatotoxic Plants

- liver and kidney damage
- abdominal and thoracic cavity hemorrhage

Sego Palm



# Poisonous Plant Groups

## Other Liver Problematic Toxic Plants



Blue-Green Algae



Cocklebur

# Poisonous Plant Groups

## Toxic to Hoematopoietic System

- coagulation
- hemolysis



Bracken Fern



Red Maple

# Poisonous Plant Groups

## Nephrotoxic

- renal disorder
- cardiac failure



Pig Weed



Oak Trees

# Poisonous Plant Groups

## Other Poisonous Groups

- skin irritants
- abortifacients
- teratogenesis (fetal death)



Hairy Vetch

# Poisonous Plant Groups

**Don't let it overwhelm you!**

**Learn your 8 to 15 weeds by:**

- identification
- symptoms
- treatments (Veterinarians)

# Remember



Black Cherry



Bitter Sneezeweed

- Weed identification is a learned skill.
- Beware of problem animals
- Observe behavior
- Change pastures with care
- Most animals won't eat poisonous plants enough to hurt themselves
- But. . .don't take chances!