

# Toxic Plants and Small Ruminants: Wild Cherry

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## INTRODUCTION

### The Plant:

The **wild cherry** plant (*Prunus serotina*) has cyanogenic precursors. Due to its cyanogenic nature, under certain conditions (i.e. plant stress), a glycoside in the leaves is turned into hydrocyanic acid (cyanide) and sugar. Animals are thus attracted to the sweet-tasting leaves and tend to eat large quantities of the toxic plant. The cherry seeds are also cyanogenic, but the cherries' flesh is safe to eat.

**Ruminants are more at risk than monogastric animals.**

### Conditions that Cause Leaves to Wilt:

- Frost
- Drought
- Storms (i.e. broken limbs)
- Physical damage to the plant

### What to Look for:

- The plants can grow as either a tree or a shrub
- Young branches have scaly, red-brown bark
- A mature tree has dark gray to black bark
- Leaves are leathery to the touch
- Flowers are white and very fragrant
- Cherries are dark red
- Wild cherry commonly grows around fences and in open woods

### The Wild Cherry Plant<sup>11</sup>



(L: showcases the relative size and color of the cherries, R: showcases the texture, shape and pattern of the leaves)

## PREVENTION

The best way to prevent livestock from ingesting this plant is to remove the plant completely. Wild cherry is the greatest threat to your livestock during its peak in the summer season.

### What happens if debris is already in the pasture?

If there were a storm the previous night and there are leaves and tree limbs and you not sure if it came from a lethal plant or not. It is best to restrict the access of your livestock in that area until all plant material is cleared. Cyanide is volatile, so if there are only little of the leaves that spread around the pasture, you can wait till the leaves turn brown and are completely dry up.

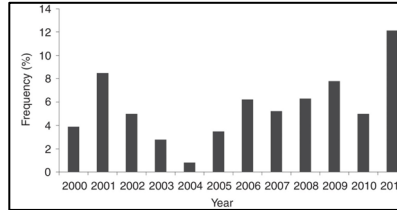
### How to remove the plant:

Woody plants can be controlled with mowing if the plant is a small bush but for a mature cherry tree, the best solution is physically removing the tree. Cherry wood has value on the commercial market; thus the removal of the tree may result in supplemental income. In addition, chemical herbicide application is also an additional option for control, however, is not recommended as you may harm other nearby plants as well as lose any potential income from the harvest of the trees. Herbicide application is not recommended to be done if the tree is along roadsides or in parks due to the safety hazard of dead trees.

### Goat Experiencing Neurological Issues from Cyanide Toxicity<sup>7</sup>



## Frequency of Domestic Animals Exposed to Toxic Plants<sup>2</sup>



Obtained from an Italian survey from the Poison Control Centre of Milan.

## TREATMENT

If symptoms are occurring, call the veterinarian immediately. An antidote of sodium nitrate may be available but must be administered intravenously by a veterinarian within a few minutes of clinical signs to be effective. Do not handle the affect animals any more than necessary. The stress can worsen the effects of cyanide poisoning. Affected animal will usually die within 30-45 minutes of symptoms. If the animal is still alive 2-3 hours after exposure, the chances of survival are high. Recovery is rare.

### The difference between cyanide and nitrate poisoning

Diagnosing cyanide poisoning accurately is essential because the symptoms are like that of nitrate poisoning. A distinct difference between cyanide and nitrate poisoning is the color of blood. In cyanide poisoning, blood will be a bright cherry red color. While in nitrate poisoning, blood will appear a dark chocolate brown color and the tongue and eyes will turn blue. It is important to know the difference because administering sodium nitrate to an animal with nitrate poisoning can make the condition worsen.

## SYMPTOMS

### Ingestion of wilted wild cherry leaves may lead to cyanide poisoning

Symptoms can occur as soon as 15-20 minutes post ingestion. Cyanide poisoning decreases oxygen flow to the brain and cause:

- Increased salivation
- Tachypnea
- Weak Pulse
- Incoordination
- Convulsions
- Red mucous membranes

**It is important to note that death may occur before these symptoms are observed and your veterinarian should be contacted if you suspect cyanide poisoning in any of your animals.**

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