

# POISONOUS PLANTS FOR DOMESTIC ANIMALS IN CATALONIA

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## Introduction

Due to the growing number of domestic animals, owners as well as the animals are at risk of plant poisoning. That is why plant poisoning needs to be considered in the differential diagnosis.

Frequently, plant poisoning is not properly diagnosed because the identification is quite difficult, expensive and time consuming. It is advisable that the veterinary recognizes the most commonly plants involved in this type of disease.

This work has an informative purpose that the veterinarian can include the toxicity of the plants in the differential diagnosis of a disease, especially in livestock or dogs and cats living with house plants.

A reference Veterinary Poison Control Center in the European Union, which could centralise and provide useful information on plant poisonings, is lacking, thus dificulting a correct diagnostic by veterinarians.

## Material and methods

A plant selection has been made (grand variety of plants found in Catalonia, house plants and hybrids) based on the clinical evidence.

As an informative work is based on PubmedMedline and ScienceDirect academic articles, electronical resources and several web sites.

## Results

Poisoning appears to be an uncommon cause of illness in animals compared to other clinical problems. One reason for this may be a lack of information on the most common toxicants affecting the domestic species so consequently there is little information available to guide and facilitate diagnosis.

Another difficulty with the investigation of causes of poisoning is that neither the veterinary nor the owner are required to inform the case. This leads to poor and limited dissemination of toxic epidemiological data, with little or no availability to veterinarians in other regions or countries.

Generally, but with some exceptions, poisonous plants are not appetizing and the poisoning happens in exceptional conditions.

## Conclusion

There is a huge variety of plants that could be toxic and to identify them is difficult.

The differential diagnosis considering plant poisoning is quite uncommon.

Livestock can be poisoned by lots of different plants, but it is only considered a problem when there is a high economic loss.

Scientific name	Common name	Family	Toxins	Poisonous parts	Species
<i>Rumex spp.</i>	Dock	Polygonaceae	Soluble calcium oxalates	Leaves > seeds > stems	Sheep, cattle
<i>Lilium spp.</i>	Easter lily	Liliaceae	Unknown	All parts	Cat
<i>Quercus spp.</i>	Oak trees	Fagaceae	Tannins (gallotannin)	Acorns, young leaves	Cattle, sheep, horse

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<i>Nerium oleander</i>	Oleander	Apocynaceae	Cardiac glycosides (oleandrin)	All parts	All species
<i>Digitalis purpurea</i>	Foxglove	Scrophalariaceae	Cardiac glycosides (digitoxin, digoxin)	Especially the seeds	All species
<i>Taxus baccata</i>	European yew	Taxaceae	Cardiac glycosides (taxine)	All parts, but not the red aril	All species
<i>Rhododendron spp.</i>	Rhododendrons, azalea	Ericaceae	Grayanotoxin	Flowers, stems, leaves, nectar, honey	All species

Scientific name	Common name	Family	Toxins	Poisonous parts	Species
<i>Ilex spp.</i>	European holly	Aquifoliaceae	Saponins	Berries, leaves	Dog, cat
<i>Hedera helix</i>	English ivy	Araliaceae	Saponins (hederin)	Berries, leaves	All species
<i>Dieffenbachia</i>	Dieffenbachia, dumb cane	Araceae	Insoluble calcium oxalates, proteolytic enzyme	Especially the seeds	Dog, cat
<i>Melia azedarach</i>	Chinaberry tree	Meliaceae	Tetranortriterpene s (meliatoxins)	Especially the fruit	All species
<i>Ricinus communis</i>	Castor bean	Euphorbiaceae	Lectins (ricin)	Especially the seeds	All species
<i>Colchicum autumnale</i>	Meadow saffron, autumn crocus	Liliaceae	Colchicine	Especially the bulb	Cattle, sheep and horse

Scientific name	Common name	Family	Toxins	Poisonous parts	Species
<i>Allium cepa</i>	Garlic	Liliaceae	N-Propyl sulfide	Bulbs, leaves	Dog, cat, cattle
<i>Mercurialis annua</i>	Annual mercury	Euphorbiaceae	Saponins	All parts	Cattle, sheep
<i>Melilotus officinalis</i>	Yellow sweet clover	Fabaceae	Dicoumarol	Stems	Cattle
<i>Ferula communis</i>	Giant fennel	Umbelliferae	Dicoumarol (ferulenol)	Especially the roots	Cattle, sheep

Scientific name	Common name	Family	Toxins	Poisonous parts	Species
<i>Hypericum perforatum</i>	St. John’s wort	Clusiaceae	Hypericin, hyperforin	All parts	Cattle, goat, sheep, horse, dog, cat
<i>Lantana camara</i>	Lantana, red sage, yellow sage	Verbenaceae	Triterpenes (lantadene A and B)	Green berries	Cattle, sheep
<i>Senecio vulgaris</i>	Ragwort, groundsel	Compositae (Asteraceae)	Pyrrolizidine alkaloids	All parts	Cattle, horse
<i>Xanthium strumarium</i>	Cocklebur	Compositae (Asteraceae)	Carboxyatractyloside	Seeds, seedlings	Cattle, sheep, pig

Scientific name	Common name	Family	Toxins	Poisonous parts	Species
<i>Lupinus spp.</i>	Lupine	Fabaceae (Leguminosae)	Quinolizidine alkaloids (anagyrine, ammodendrine)	Especially the seeds	Livestock
<i>Conium maculatum</i>	Poison hemlock	Umbelliferae (Apiaceae)	Piperidine alkaloid (coniine, γ-coniceine)	All parts	Livestock
<i>Nicotiana glauca</i>	Tree tobacco	Solanaceae	Piperidine alkaloid (anabasine)	All parts	Livestock

Scientific name	Common name	Family	Toxins	Poisonous parts	Species
<i>Cycas revoluta</i>	Sago palm	Cycadaceae	Cycasin, β-methylamino-L-alanine	Seeds, young leaves	Dogs
<i>Datura stramonium</i>	Jimson weed	Solanaceae	Tropane alkaloid	All parts, mainly seeds and leaves	Dog, cat, cattle, horse

<div></div>	NEPHROTOXIC PLANTS	<div></div>	HEMOLYTIC TOXIC PLANTS	<div></div>	TERATOGENIC PLANTS
<div></div>	CARDIOTOXIC PLANTS	<div></div>	HEPATOTOXIC PLANTS	<div></div>	NEUROLOGICAL PLANTS
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