

A to Z Poisonous Plants

Plant	Toxic Principle	Action
Akee fruit	Hypoglycin A	Hypoglycemia, hepatotoxic, nephrotoxic
Alfalfa (Medicago sativa)	Saponins Nitrate	Hemolytic GI irritation/Resp/ MetHb
Aloe	Anthraquinones	Irritant purgative
Aster	Selenium	GI irritate/Resp/ hoof/hair abnorm.
Beet	Nitrate Soluble oxalates	GI irritation/Resp/ MetHb Hypocalcemia, calcium oxalate precip, nephrotoxic
Belladonna	Belladonna Alkaloid	Antimuscarinic (atropine-like)
Black nightshade (Solanum)	Solanine Alkaloid	Cardiotoxic/Resp/GI
Bracken fern (Pteridium)	Thiaminase	Destroys vitamin B1 in monogastrics
Broccoli	Thiocyanate Glycoside	Antithyroid
Brussel sprouts	Thiocyanate Glycoside	Antithyroid
Buckthorn	Anthraquinones	Irritant purgative
Buckwheat (Fagopyrum)	Photosensitivity agent	Primary photosensitivity
Buttercup (Ranunculaceae)	Irritant oil: Protoanemonin	Irritant
Cabbage	Thiocyanate Glycoside	Antithyroid
Cascara sagrada	Anthraquinones	Irritant purgative
Castor bean (Ricinus)	Toxalbumins Resins	Hemolysis/ GI irritation Hemolytic/GI irritation
Cauliflower (Brassica)	Thiocyanate Glycoside	Antithyroid
Chocolate bean (Cocoa plant)	Xanthine Alkaloid	Theobromine (CNS/cardiac stim)
Clover	Copper	Hepatotoxic, hemolysis, MetHb
Coffee bean	Xanthine Alkaloid	Caffeine (CNS/cardiac stim)
Coffeeweed	Saponins	Hemolytic
Corn	Nitrate	GI irritation/Resp/ MetHb
Cottonseed (Gossypium)	Gossypol	Cardiotoxic, destroys seminiferous tubules
Diffenbachia	Insoluble Oxalates	Kidney damage, GI irritation

Elephant ear	Insoluble Oxalates	Kidney damage, GI irritation
Ergot (Claviceps)	Ergot Alkaloid	Vasoconstriction/gangrene
Flax	Thiocyanate Glycoside	Antithyroid
Foxglove (Digitalis)	Cardiac Glycoside	Contains digitalis
Goldenwood (Oenopsis)	Selenium	GI irritate/Resp/ hoof/hair abnorm
Greasewood (Sarcobatus)	Soluble oxalates	Hypocalcemia, calcium oxalate precip, kidney damage
Groundsels	Photosensitivity agents Pyrrolizidine Alkaloid	Secondary photosensitivity Hepatotoxic
Halogeton (Halogeton)	Soluble oxalates	Hypocalcemia, calcium oxalate precip, nephrotoxic
Henbane (Hyoscamus)	Belladonna Alkaloid	Antimuscarinic (atropine-like)
Horsebrush (Tetradymia)	Photosensitivity agent	Secondary photosensitivity (undergoes hepatic conversion before photosensitivity occurs)
Horsetail (Equisetum)	Thiaminase	Destroys vitamin B1 in monogastrics
Japanese yew (Taxus)	Taxine Alkaloid	Cardiotoxic/GI
Jimsonweed	Belladonna Alkaloids	Antimuscarinic (atropine-like)
Johnsongrass	Cyanogenic Glycoside Nitrate	Inhibit cytochrome oxidase/ inhibit cellular respiration, GI irritation/Resp/ MetHb
Kale	Thiocyanate Glycoside	Antithyroid
Lamb's quarters (Chenopodium)	Nitrate Soluble oxalates	GI irritation/Resp/ MetHb Hypocalcemia, calcium oxalate precip, nephrotoxic
Lantana	Photosensitivity agent	Secondary photosensitivity
Larkspur	Diterpene Alkaloid	Cardiotoxic
Lechuguilla (Agave)	Photosensitivity agent	Secondary photosensitivity
Lily	N-propyl disulfide	Heinz body anemia
Lily of the Valley (Convallaria)	Cardiac Glycoside	Cardiotoxic
Marijuana (Cannabis)	Resins	CNS depressant, muscle relax

Milk vetch (Astragalus)	Selenium	GI irritate/Resp/ hoof/hair abnorm
Milkweed (Asclepias)	Cardiac Glycoside Resin	Cardiotoxic, CNS depressant, muscle relax
Monk's hood	Diterpene Alkaloid	Cardiotoxic
Mushroom (Amanita muscaria)	Muscarine Alkaloid	SSLUD, bronchoconstriction
Mustard	Irritant oil	Release isothiocyanate, a GI irritant
Oak (Quercus)	Tannins	GI irritation/ nephrotoxic
Oats	Nitrate	GI irritation/Resp/ MetHb
Oleander (Nerium)	Cardiac Glycoside	Cardiotoxic
Onion	N-propyl disulfide	Heinz body anemia
Paintbrush (Castilleja)	Selenium	GI irritate/Resp/ hoof/hair abnorm
Pigweed (Amaranthus retroflexus)	Soluble oxalates	Hypocalcemia, Calcium oxalate precip, nephrotoxic
Pigweed (Amaranthus)	Nitrate	GI irritation/Resp/ MetHb
Potato (Solanaceae)	Solanine Alkaloid	Cardiotoxic/Resp/GI
Precautory bean	Toxalbumins	Hemolysis/ GI irritation
Prince's plume (Stanleya)	Selenium	GI irritate/Resp/ hoof/hair abnorm
Radish	Irritant oil	Release isothiocyanate, a GI irritant
Ragwort	Pyrrolizidine Alkaloid	Hepatotoxic
Rapeseed	Thiocyanate Glycoside	Antithyroid
Rattle box (Crotolaria)	Pyrrolizidine Alkaloid	Hepatotoxic
Red oak (Quercus)	Tannins	GI irritation/ nephrotoxic
Rhubarb (Rheum)	Soluble oxalates	Hypocalcemia, calcium oxalate precip, nephrotoxic
Saltbrush (Atriplex)	Selenium	GI irritate/Resp/ hoof/hair abnorm
Senecio (Senecio)	Pyrrolizidine Alkaloid	Hepatotoxic
Senna	Anthraquinones	Irritant purgative
Sorghum	Cyanogenic Glycoside Nitrate	Inhibit cytochrome oxidase/ inhibit cellular respiration,GI irritation/Resp/ MetHb
Sorrel (Oxalis)	Soluble oxalates	Hypocalcemia, calcium oxalate precip, kidney damage

Soursop (Oxalis)	Soluble oxalates	Hypocalcemia, calcium oxalate precip, kidney damage
Soybean	Thiocyanate Glycoside	Antithyroid
Squill (Ureginea)	Cardiac Glycoside	Contains ouabain
St. John's Wort (Hypericum) Aka Klamath weed	Photosensitivity agent	Primary photosensitivity (directly causes photosens.)
Subterranean clover (Trifolium)	Estrogen	Infertility
Sudan grass	Cyanogenic Glycoside Nitrate	Inhibit cytochrome oxidase/ inhibit cellular respiration, GI irritation/Resp/ MetHb
Sweet clover (Melilotus)	Nitrate Coumarin Glycoside	GI irritation/Resp/ MetHb Warfarin-like; antagonize II, VII, IX, and X clotting factors
Thornapple (Datura)	Belladonna Alkaloids	Antimuscarinic (atropine-like)
Tobacco (Nicotiana tobacum)	Nicotine Alkaloid	Nicotinic cholinergic
Tomato (Solanaceae)	Solanine Alkaloid	Cardiotoxic/Resp/GI
Turnip	Thiocyanate Glycoside	Antithyroid
Wheat	Nitrate	GI irritation/Resp/ MetHb
Wild cherry (Prunus)	Cyanogenic Glycoside	Inhibit cytochrome oxidase/ inhibit cellular respiration
Woody aster (Xylorrhiza)	Selenium	GI irritate/Resp/ hoof/hair abnorm

**Poisonous Plants Sorted by Toxic Principle (In the order Dr. Shokry presents them)
by Merryl Reiss, 12/02**

Toxic Principle	Plant	Action
Belladonna Alkaloids	Belladonna	Antimuscarinic (atropine-like)
	Jimsonweed	Antimuscarinic (atropine)
	Thornapple (Datura)	Antimuscarinic (atropine)
	Henbane (Hyoscamus)	Antimuscarinic (atropine)
Pyrrolizidine Alkaloid	Rattle box (Crotolaria)	Hepatotoxic

	Ragwort	Hepatotoxic
	Groundsel	Hepatotoxic
	Senecio (Senecio)	Hepatotoxic
Ergot Alkaloid	Ergot (Claviceps)	Vasoconstriction/gangrene
Taxine Alkaloid	Japanese yew (Taxus)	Cardiotoxic/GI
Solanine Alkaloid	Black nightshade (Solanum)	Cardiotoxic/Resp/GI
	Potato (Solanaceae)	Cardiotoxic/Resp/GI
	Tomato (Solanaceae)	Cardiotoxic/Resp/GI
Nicotine Alkaloid	Tobacco (Nicotiana tobacum)	Nicotinic cholinergic
Xanthine Alkaloid	Coffee bean	Caffeine (CNS/cardiac stim)
	Chocolate bean (Cocoa plant)	Theobromine (CNS/cardiac stim)
Muscarine Alkaloid	Mushroom (Amanita muscaria)	SSUD, bronchoconstriction
Cyanogenic Glycoside	Wild cherry (Prunus)	Inhibit cytochrome oxidase/ inhibit cellular respiration
	Johnsongrass	Inhibit cytochrome oxidase/ inhibit cellular respiration
	Sudan grass	Inhibit cytochrome oxidase/ inhibit cellular respiration
	Sorghum	Inhibit cytochrome oxidase/ inhibit cellular respiration
Thiocyanate Glycoside	Rapeseed	Antithyroid
	Kale	Antithyroid
	Broccoli	Antithyroid
	Cabbage	Antithyroid
	Brussels sprouts	Antithyroid
	Turnip	Antithyroid
	Cauliflower (Brassica)	Antithyroid
	Soybean	Antithyroid
	Flax	Antithyroid
Coumarin Glycoside	Sweet clover (Melilotus)	Warfarin-like; antagonize II, VII, IX, and X clotting factors
Irritant oil	Mustard	Release isothiocyanate, a GI irritant
	Radish	Release isothiocyanate, a GI irritant
Irritant oil: Protoanemonin	Buttercup (Ranunculaceae)	Irritant

Cardiac Glycoside	Foxglove (Digitalis)	Contains digitalis
Cardiac Glycosides cont'd	Oleander (Nerium)	Cardiotoxic
	Squill (Ureginea)	Contains ouabain
	Milkweed (Asclepias)	Cardiotoxic
	Lily of the Valley (Convallaria)	Cardiotoxic
Anthraquinones	Cascara sagrada	Irritant purgative
	Aloe	Irritant purgative
	Senna	Irritant purgative
	Buckthorn	Irritant purgative
Saponins	Alfalfa (Medicago sativa)	Hemolytic
	Coffeeweed	Hemolytic
Soluble oxalates	Pigweed (Amaranthus retroflexus)	Hypocalcemia, Calcium oxalate precip, kidney damage
	Beet	Hypocalcemia, calcium oxalate precip, kidney damage
	Halogeton (Halogeton)	Hypocalcemia, calcium oxalate precip, kidney damage
	Lamb's quarters (Chenopodium)	Hypocalcemia, calcium oxalate precip, kidney damage
	Rhubarb (Rheum)	Hypocalcemia, calcium oxalate precip, kidney damage
	Greasewood (Sarcobatus)	Hypocalcemia, calcium oxalate precip, kidney damage
	Sorrel (Oxalis)	Hypocalcemia, calcium oxalate precip, kidney damage
	Soursop (Oxalis)	Hypocalcemia, calcium oxalate precip, kidney damage
Resins	Milkweed (Asclepias)	CNS depressant, muscle relax
	Marijuana (Cannabis)	CNS depressant, muscle relax
	Castor bean (Ricinus)	Hemolytic/GI irritation
Copper	Clover	Hepatotoxic, hemolysis, MetHb
Selenium	Aster	GI irritate/Resp/ hoof/hair abnorm.
	Woody aster (Xylorrhiza)	GI irritate/Resp/ hoof/hair abnorm
	Prince's plume (Stanleya)	GI irritate/Resp/ hoof/hair abnorm
	Milk vetch (Astragalus)	GI irritate/Resp/ hoof/hair abnorm

	Goldenwood (Oenopsis)	GI irritate/Resp/ hoof/hair abnorm
	Paintbrush (Castilleja)	GI irritate/Resp/ hoof/hair abnorm
	Saltbrush (Atriplex)	GI irritate/Resp/ hoof/hair abnorm
Nitrate	Pigweed (Amaranthus)	GI irritation/Resp/ MetHb
	Oats	GI irritation/Resp/ MetHb
	Johnsongrass	GI irritation/Resp/ MetHb
	Sudangrass	GI irritation/Resp/ MetHb
	Sorghum	GI irritation/Resp/ MetHb
Nitrates cont'd	Corn	GI irritation/Resp/ MetHb
	Beet	GI irritation/Resp/ MetHb
	Lamb's quarters	GI irritation/Resp/ MetHb
	Sweet clover	GI irritation/Resp/ MetHb
	Alfalfa	GI irritation/Resp/ MetHb
	Wheat	GI irritation/Resp/ MetHb
Photosensitivity agents	St. John's Wort (Hypericum) Aka Klamath weed	Primary photosensitivity (directly causes photosens.)
	Buckwheat (Fagopyrum)	Primary photosensitivity
	Horsebrush (tetradymia)	Secondary photosensitivity (undergoes hepatic conversion before photosensitivity occurs)
	Lechuguilla (Agave)	Secondary photosensitivity
	Lantana	Secondary photosensitivity
	Groundsels	Secondary photosensitivity
Thiaminase	Horsetail (Equisetum)	Destroys vitamin B1 in monogastrics
	Bracken fern (Pteridium)	Destroys vitamin B1 in monogastrics
Gossypol	Cottonseed (Gossypium)	Cardiotoxic, destroys seminiferous tubules
Estrogen	Subterranean clover (Trifolium)	Infertility
Insoluble Oxalates	Diffenbachia	Kidney damage, GI irritation
	Elephant ear	Kidney damage, GI irritation
Toxalbumins	Castor bean	Hemolysis/GI irritation
	Precatory bean	Hemolysis/ GI irritation
Tannins	Red oak (Quercus)	GI irritation/ nephrotoxic
Diterpene	Larkspur	Cardiotoxic

Alkaloids	Monk's hood	
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Recommended websites for poisonous plants:

<http://www.ansci.cornell.edu/plants/index.html>; follow up by clicking on Search Poisonous Plants database by name, species affected, primary poison, etc.

<http://www.vet.purdue.edu/depts/addl/toxic/cover1.htm>