

POTENTIALLY POISONOUS OR OTHERWISE HARMFUL HIGHER PLANTS OF OKLAHOMA

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This paper lists vascular plants native to or naturalized in Oklahoma that have been cited in the literature as being lethal, causing distress, or potentially dangerous to humans and domesticated herbivorous animals. The term "poisonous" is used in the Websterian sense, meaning any "substance that through its chemical action sometimes kills, injures, or impairs an organism". Those plants which most often cause mechanical injury to livestock are also included. Aeroallergenic plants are not included although they are the cause of much human distress. Common cultivated field plants have been included although often they are not included in published floras. Non-native horticultural plants, with the exception of *Ricinus communis*, have not been included. Information on toxicity is from Kingsbury (1) unless otherwise noted. Waterfall (2) is the nomenclatural source and also the authority on occurrence in Oklahoma except as noted, and common name source is Holstun (3).

Any listing, such as this and that of Kingsbury, which is based primarily on literature sources rather than personal experimentation will, by its very nature, surely be incomplete. Much more work will be required to validate or disprove the toxicity of some species which are included on slender evidence.

A considerable list of Oklahoma and Texas plants known to be toxic or potentially so because they can produce cyanogenic compounds has been compiled by Seigler (4). A smaller list of aquatic plants reported to be poisonous to livestock is given by Taylor (5); his list contains fourteen species not described in this paper, but gives no information on toxins or references to original literature reporting the toxicity.

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PLANT	FAMILY	COMMON NAME	AFFECTED PART	TOXIN
** <i>Acer rubrum</i> L.	Aceraceae	red maple	leaves	unknown
** <i>Achillea millefolium</i> L.	Compositae	common yarrow	whole plant	alkaloids and glycosides
<i>Actaea</i> spp.	Ranunculaceae	baneberry	roots, berries	protoanemonin (oil)
<i>Aesculus glabra</i> Willd.	Hippocastanaceae	Ohio buckeye	sprouts, nuts	aesculin (1)
<i>A. pavia</i> L.	Hippocastanaceae	red buckeye	sprouts, leaves, flowers, seeds	narcotic alkaloid (6)
** <i>Agrostemma githago</i> L.	Caryophyllaceae	corn cockle	seeds	narcotic alkaloid (6)
** <i>Allium canadense</i> L.	Liliaceae	wild onion	bulb	saponin (1)
** <i>Amaranthus hybridus</i> L.	Amaranthaceae	redroot pigweed	whole plant	githagin alkaloid?
<i>A. retroflexus</i> L.	Amaranthaceae	common ragweed	pollen, leaves	nitrate
d(7) <i>Ambrosia artemisiifolia</i> L.	Compositae	stagger grass	bulbs, leaves	nitrate
** <i>Amianthium muscaetoxicum</i> (Walt.) Gray	Liliaceae	scarlet pimpernel	leaves	jervine (8)
d(7), ** <i>Anagallis arvensis</i> L.	Primulaceae	mayweed	leaves, flowers	unknown
d(7) <i>Anthemlis cotula</i> L.	Compositae	spreading dogbane	young shoots	acrid substance
** <i>Apocynum androsaemifolium</i> L.	Apocynaceae	Indian hemp	young shoots	cardiac glycoside
** <i>A. cannabinum</i> L. var. <i>glaberrimum</i> A.DC.	Apocynaceae	devils-walkingstick	bark, seeds,	cardiac glycoside
d(7), *** <i>Aralia spinosa</i> L.	Araliaceae	jack-in-the-pulpit	raw berries	unknown
<i>Arisaema atrorubens</i> (Ait.) Blume	Araceae	jack-in-the-pulpit	rhizome	oxalates
<i>A. triphyllum</i> (L.) Schott	Araceae	sand sagebrush	rhizome	oxalates
<i>Artemisia filifolia</i> Torr.	Compositae	wild ginger	whole plant	an oil
d(7) <i>Asarum canadense</i> L.	Aristolochiaceae	milkweed	leaves	galitoxin?
** <i>Asclepias asperula</i> (Dene.) Wood.	Asclepiadaceae	broadleaf milkweed	green parts	galitoxin?
** <i>A. latifolia</i> (Torr.) Raf.	Asclepiadaceae	whorled milkweed	green parts	galitoxin?
** <i>A. pumila</i> (Gray) Vail.	Asclepiadaceae	showy milkweed	green parts	galitoxin?
<i>A. speciosa</i> Torr.	Asclepiadaceae	common milkweed	green parts	galitoxin?
<i>A. syriaca</i> L.	Asclepiadaceae	eastern whorled milkweed	green parts	galitoxin?
** <i>A. verticillata</i> L.	Asclepiadaceae	papaw, dogapple	fruits	galitoxin?
d(7) <i>Asimina triloba</i> (L.) Dunal	Annonaceae	asparagus	older parts	galitoxin?
<i>Asparagus officinalis</i> L.	Liliaceae	heath aster	all parts	selenium
<i>Aster ericoides</i> L.	Compositae	wooly loco	green parts	locoine (6)
** <i>Astragalus mollissimus</i> Torr.	Leguminosae	poison vetch	all parts	selenium
<i>A. racemosus</i> Pursh	Leguminosae	fourwing saltbush	all parts	selenium
<i>Atriplex canescens</i> (Pursh) James	Chenopodiaceae	cultivated oats	fungus on hay	nitrate + fungal toxin
** <i>Avena sativa</i> L.	Gramineae			

CODE:

* known human deaths

** known livestock deaths

*** known deaths of smaller animals

d causes dermatitis

m mechanical injury

p photosensitizer

	Leguminosae	false indigo	green parts	quinolizidine alkaloids (1) emetetic, cathartic substances (6) mustard oil?
<i>Baptisia leucaniba</i> T. & G.				
** <i>Barbarea vulgaris</i> R. Br.	Cruciferae	yellow rocket	green parts	
** <i>Berula puzilla</i> (Nutt.) Fern.	Umbelliferae	water parsnip	green parts	
** <i>Bidens frondosa</i> L.	Compositae	devils beggarticks	all parts	
** <i>Brassica kaber</i> (DC.) Wheeler	Cruciferae	wild mustard	fruit, seeds	
** <i>B. napus</i> L.	Cruciferae	rape	fruit, seeds	
<i>B. nigra</i> (L.) K. Koch	Cruciferae	black mustard	seeds	
<i>Bromus inermis</i> Leyss.	Gramineae	smooth brome	ergot-infected leaves	
<i>B. unioloides</i> HBK	Gramineae	rescuegrass	all parts	
d(7) <i>Campsis radicans</i> (L.) Seem.	Bignoniaceae	trumpetreeper	leaves, flowers	
** <i>Cannabis sativa</i> L.	Cannabinaceae	marijuana, hemp	green or dried pistillate flowers	
<i>Cardaria draba</i> (L.) Desv.	Cruciferae	hoary cress	green parts	
<i>Carduus nutans</i> L.	Compositae	musk thistle	all parts	
<i>Cassia fasciculata</i> Michx.	Leguminosae	partridgepea	green, dried (in hay), seeds	
<i>C. occidentalis</i> L.	Leguminosae	coffee senna	green, dried, seeds	
*** <i>C. tora</i> L.	Leguminosae	sicklepod	seeds	
<i>Castilleja</i> spp.	Scrophulariaceae	paintbrushes	all parts	
d(7) <i>Catalpa bignonioides</i> Walt.	Bignoniaceae	southern catalpa	flowers	
d(7) <i>C. speciosa</i> Warder	Bignoniaceae	northern catalpa	flowers	
<i>Celastrus scandens</i> L.	Celastraceae	bittersweet	berries suspect	
<i>Cenchrus pauciflorus</i> Benth.	Gramineae	sandbur	fruits	
<i>Centaurea solstitialis</i> L.	Compositae	yellow starthistle	shoots	
** <i>Centaureum beyrichii</i> (T.&G.) Robins.	Gentianaceae	rock centaury	green parts	
<i>Cercocarpus montanus</i> Raf.	Rosaceae	mountain mahogany	leaves, stems	
<i>Cephalanthus occidentalis</i> L.	Rubiaceae	common buttonbush	leaves	
<i>Chenopodium album</i> L.	Chenopodiaceae	common lambsquarters	leaves	
<i>C. ambrosioides</i> L.	Chenopodiaceae	mexican tea	seeds	
d(7) <i>Chrysanthemum</i> spp.	Compositae	chrysanthemum	leaves	
<i>Chrysothamnus nauseosus</i> (Pall.) Britt.	Compositae	rubber rabbitbrush	green parts	
* & ** <i>Cicuta maculata</i> L.	Umbelliferae	spotted water hemlock	tuberous roots	
d(7) <i>Clematis virginiana</i> L.	Ranunculaceae	Virginia clematis	leaves	
<i>Cleome serrulata</i> Pursh	Capparidaceae	Rocky Mountain beplant	all parts	

probably similar to protoanemonin nitrates

cicutoxin

ascaridole, an anthelmintic

unknown (9)

unknown

cyanogenic glycoside

glycoside

oxalates, nitrates

unknown cathartic substance (6)

unknown cathartic substance (6)

unknown cathartic substance (6)

selenium

tetrahydrocannabinols

an irritant

nitrates

unknown cathartic substance (6)

green, dried, seeds

seeds

all parts

leaves, flowers

green or dried pistillate flowers

green parts

all parts

green, dried (in hay), seeds

green, dried, seeds

seeds

all parts

flowers

berries suspect

fruits

shoots

green parts

leaves, stems

leaves

leaves

seeds

leaves

green parts

tuberous roots

leaves

all parts

d(7)	<i>Cnidioscolus texanus</i> (Muell. Arg.) Small	Euphorbiaceae	Texas bullnettle	leaf hairs	
	<i>Cocculus carolinus</i> (L.) DC.	Menispermaceae	redberry moonseed	seeds suspect	selenium
	<i>Comandra pallida</i> A. DC.	Santalaceae	bastard toadflax	all parts	coniine and other
*	<i>Conium maculatum</i> L.	Umbelliferae	poison hemlock	all parts	similar alkaloids
d(7)	<i>Conyza canadensis</i> (L.) Crang. = <i>Erigeron canadensis</i> <i>Corydalis aurea</i> Willd. var. <i>occidentalis</i> Engelm.	Compositae	horseweed	leaves	
	<i>C. flavula</i> (Raf.) DC.	Fumariaceae	golden corydalis	all parts	alkaloids
**	<i>Crotalaria sagittalis</i> L.	Fumariaceae	corydalis	all parts	alkaloids
	<i>Croton capitatus</i> Michx.	Leguminosae	rattlebox	hay contaminant	monocrotaline (6)
	<i>C. texensis</i> (Kl.) Muell. Arg.	Euphorbiaceae	wooly croton	seeds	croton oil (10)
	<i>Cuscuta</i> spp.	Euphorbiaceae	Texas croton	seeds	croton oil (10)
		Convolvulaceae	dodder	all parts suspect	unknown
				when on clover	
p **	<i>Cynodon dactylon</i> (L.) Pers.	Gramineae	bermudagrass	leaves (p)	ergot alkaloids produced
				ovary (**)	by fungus
d(7)	<i>Cypripedium</i> spp.	Orchidaceae	lady's slipper	leaves	
*	<i>Datura meteloides</i> Dunal	Solanaceae	sacred datura	seeds, leaves	hyoscyamine, atro-
*	<i>D. stramonium</i> L.	Solanaceae	jimsonweed	all parts	pine, scopolamine
					nitrate, atropine,
					hyoscyamine, sco-
					polamine
					nitrate?
					delcosine (11)
d(7)	<i>Daucus carota</i> L.	Umbelliferae	wild carrot	leaves	
d(7), **	<i>Delphinium ajacis</i> L.	Ranunculaceae	larkspur	(d) leaves, seeds;	
**	<i>D. tricornis</i> Michx.	Ranunculaceae	dwarf larkspur	all parts toxic	
**	<i>D. virescens</i> Nutt.	Ranunculaceae	plains larkspur	all parts	delphinine
				young growth	delphinine
				especially	
**	<i>Descurainia pinnata</i> (Walt.) Britt.	Cruciferae	tansymustard	green parts	unknown
**	<i>Dicentra cucullaria</i> (L.) Bernh.	Fumariaceae	Dutchman's breaches	leaves, early fleshy under-	cucullarine (6)
				ground growth	
d(7)	<i>Dirca palustris</i> L.	Thymelaeaceae	leatherwood	leaves	
	<i>Dryopteris filix-mas</i> (L.) Schott.	Polypodiaceae	male fern	leaves	thiaminase
	<i>Echinochloa crusgalli</i> (L.) Beauv.	Gramineae	barnyardgrass	all parts	nitrate
	<i>Eleusine indica</i> (L.) Gaertn.	Gramineae	goosegrass	all parts	nitrate
	<i>Elymus</i> spp.	Gramineae	wildrye	ergotized plant	alkaloids
	<i>Euonymus atropurpureus</i> Jacq.	Celastraceae	eastern wahoo	leaves, bark,	unidentified
				fruit	purgative
	<i>Eupatorium perfoliatum</i> L.	Compositae	boneset	all parts	nitrate (1)
	<i>E. purpureum</i> L.	Compositae	thorough wort	all parts	tremetol (6)
*	<i>E. rugosum</i> Houtt.	Compositae	white snakeroot	all parts	nitrate
d(7)	<i>Euphorbia corollata</i> L.	Euphorbiaceae	flowering spurge	sap	acrid substance
*	<i>E. marginata</i> Pursh.	Euphorbiaceae	snow-on-the- mountain	sap	unknown (6)

<i>Lespedeza stipulacea</i> Maxim.	Leguminosae	Korean lespedeza	moldy hay	cyanogenic glycoside
<i>Linum lewisii</i> Pursh	Linaceae	flax	stem, leaves	
** <i>L. rigidum</i> Pursh	Linaceae	flax	may be toxic only to sheep	
<i>Lobelia cardinalis</i> L.	Campanulaceae	cardinalflower	all parts	pyridine alkaloids
* <i>L. inflata</i> L.	Campanulaceae	Indian tobacco	all parts	pyridine alkaloids
<i>L. siphilitica</i> L.	Campanulaceae	blue cardinalflower	all parts	pyridine alkaloids
<i>Lolium perenne</i> L.	Gramineae	rvegrass	stems, leaves	unidentified fungus suspect
<i>L. temulentum</i> L.	Gramineae	darnel	leaves	
** <i>Lupinus pusillus</i> Pursh	Leguminosae	low lupine	stems, leaves	lupinine, lupanine,
** <i>Lycium balimifolium</i> Mill.	Solanaceae	mattimonyvine	stems, leaves	sparteine (6) probably solanaceous alkaloids
d(7) <i>Maclura pomifera</i> (Raf.) Schneider	Moraceae	osageorange	latex sap	nitrates, saponins resinoids
p <i>Medicago polymorpha</i> L.	Leguminosae	bur clover	all parts	
p <i>M. sativa</i> L.	Leguminosae	alfalfa	all parts	dicoumarol
* & ** <i>Melia azedarach</i> L.	Meliaceae	chinaberry	fruit, leaves, bark, flowers	
** <i>Melilotus alba</i> Desv.	Leguminosae	white sweetclover	mold on stem & leaves in hay	dicoumarol
** <i>M. officinalis</i> (L.) Lam.	Leguminosae	yellow sweet- clover	mold on stem & leaves in hay	dicoumarol
* <i>Menispermum canadense</i> L.	Menispermaceae	common moonseed	berries	isoquinoline alkaloids (10)
<i>Mirabilis jalapa</i> L.	Nyctaginaceae	prairie four-o'clock	roots, seeds	nicotine unknown
<i>Modiola caroliniana</i> (L.) G. Don	Malvaceae	bristly mallow	stems, leaves	
* & ** <i>Nicotiana trigonophylla</i> Dunal	Solanaceae	desert tobacco	leaves	unknown probably a colchicine type alkaloid (1), cardiac glycoside (10) oxalates
** <i>Nolina texana</i> Wats.	Liliaceae	Texas sacahuista	flowers	
** <i>Nymphaea tuberosa</i> Paine	Nymphaeaceae	white waterlily	leaves	unknown
** <i>Onoclea sensibilis</i> L.	Polypodiaceae	sensitive fern	leaves	
** <i>Ornithogalum umbellatum</i> L.	Liliaceae	star-of-Bethlehem	bulb	probably a colchicine type alkaloid (1), cardiac glycoside (10) oxalates
<i>Oxalis corniculata</i> L.	Oxalidaceae	creeping wood- sorrel	all parts	unknown
** <i>Oxytropis lambertii</i> Pursh	Leguminosae	Lambert crazyweed	all parts	ergot alkaloid
** <i>O. sericea</i> Nutt.	Leguminosae	white loco	all parts	
** <i>Parthenocissus quinquefolia</i> (L.) Planch.	Vitaceae	Virginia creeper	berries suspect	selenium furan ketones (13)
** <i>Paspalum dilatatum</i> Poir.	Gramineae	dallisgrass	ovary parasitized by <i>Claviceps</i> sp.	
d(7), p <i>Pastinaca sativa</i> L.	Umbelliferae	wild parsnip	all parts	selenium furan ketones (13)
<i>Penstemon</i> spp.	Scrophulariaceae	penstemon	all parts	
<i>Perilla frutescens</i> (L.) Britt.	Labiatae	beefsteak plant	all parts	selenium furan ketones (13)
d(7) <i>Phacelia</i> spp.	Hydrophyllaceae	phacelia	leaves	

<i>Physalis heterophylla</i> Nees	Solanaceae	groundcherry	leaves & unripe fruits	unknown (14)
* & ** <i>Phytolacca americana</i> L.	Phytolaccaceae	common pokeweed	roots most toxic	triterpenes (1), saponins (10) unknown
<i>Pinus ponderosa</i> Dougl., var. <i>Scopulorum</i> Engelm.	Pinaceae	western yellow pine	needles & buds	unknown
** <i>P. taeda</i> L.	Pinaceae	loblolly pine	needles	unknown
<i>Pisum sativum</i> L.	Leguminosae	garden pea	ensilage from pods and vines	podophyllin
** <i>Podophyllum peltatum</i> L.	Berberidaceae	mayapple	stems, leaves, roots, flowers	podophyllin
d(7) <i>Polygonum pensylvanicum</i> L.	Polygonaceae	Pennsylvania smartweed	sap, leaves	nitrate?
<i>Portulaca oleracea</i> L.	Portulacaceae	common purslane	all parts	oxalates
** <i>Prosopis glandulosa</i> Torr. Cock.	Leguminosae	mesquite	pod and seeds	cause impaction
* & ** <i>Prunus serotina</i> Ehrh.	Rosaceae	black cherry	young fresh leaves	cyanogenic glycoside
* & ** <i>P. virginiana</i> L.	Rosaceae	common choke-cherry	fresh leaves	cyanogenic glycoside
<i>Psoralea argyrophylla</i> Pursh	Leguminosae	scurf pea	seeds	probably coumarins (10)
<i>P. tenuiflora</i> Pursh	Leguminosae	scurfy psoralea	seeds suspect	thiaminase
** <i>Pteridium aquilinum</i> (L.) Kuhn	Polyodiaceae	eastern bracken	mature leaves	probably tannins and other toxins (10)
** <i>Quercus gambelii</i> Nutt.	Fagaceae	gambel oak	acorns, young shoots	probably tannins and other toxins (10)
** <i>Q. bavaridii</i> Rydb.	Fagaceae	sand shinnery oak	acorns, young shoots	probably tannins and other toxins (10)
d(7), ** <i>Ranunculus abortivus</i> L.	Ranunculaceae	smallflower buttercup	leaves	protoanemonin (1, 6)
d(7), ** <i>R. parviflorus</i> L.	Ranunculaceae	buttercup	leaves	protoanemonin (1, 6)
d(7), ** <i>R. sceleratus</i> L.	Ranunculaceae	celeryleaf buttercup	leaves	protoanemonin (1, 6)
<i>Reverchonia arenaria</i> Gray	Euphorbiaceae	spurge	stems, leaves	resinoids
<i>Rhododendron canescens</i> Sweet	Ericaceae	Canadian rhododendron	leaves suspect	resinoids
<i>R. oblongifolium</i> (Small) Millais	Ericaceae	rhododendron	leaves suspect	resinoids
d <i>Rhus radicans</i> L.	Anacardiaceae	poison ivy	all parts	catechols
* & ** <i>Ricinus communis</i> L.	Euphorbiaceae	castor bean	seeds	ricin
<i>Robinia pseudoacacia</i> L.	Leguminosae	black locust	inner bark, seeds, young leaves	robin (phytotoxin), robitin (glycoside) (10)
<i>Rudbeckia hirta</i> L.	Compositae	hairy coneflower	stem, leaves	unknown
<i>R. laciniata</i> L.	Compositae	coneflower	stem, leaves	unknown
** <i>Rumex acetosella</i> L.	Polygonaceae	sorrel	all parts	nitrate, oxalates
** <i>R. crispus</i> L.	Polygonaceae	curly dock	all parts	nitrate, oxalates

<i>Salsola kali</i> L.	Chenopodiaceae	Russian thistle	all parts	nitrates
** <i>Salvia reflexa</i> Hornem.	Labiatae	annual sage	all parts	nitrates?
<i>Sambucus canadensis</i> L.	Caprifoliaceae	American elder	root, stem, leaves	cyanogenic glycoside
d(7) <i>Sanguinaria canadensis</i> L.	Papaveraceae	bloodroot	red sap	sanguinarine (10), berberine & protopine (1)
<i>Saponaria officinalis</i> L.	Caryophyllaceae	bouncing bet	seeds	saponins (1), githagenin (10) githagenin (10)
*** <i>S. vaccaria</i> L.	Caryophyllaceae	cow cockle	green parts, seeds	nitrates longilobine (6)
<i>Scirpus americanus</i> Pers.	Cyperaceae	American bulrush	stems, leaves	
** <i>Secale cereale</i> L. (15)	Graminae	rye	all parts	
** <i>Senecio longitobus</i> Benth.	Compositae	threadleaf groundsel	stem, leaves	
** <i>S. plattensis</i> Nutt.	Compositae	squaw-weed	stem, leaves	longilobine (6)
** <i>S. riddellii</i> T. & G.	Compositae	Riddell groundsel	all parts	riddelline (6)
** <i>Sesbania vesicaria</i> (Jacq.) Ell.	Leguminosae	bagpod sesbania	flowers and seeds	saponins
m <i>Setaria lutescens</i> (Wiegel) F. T. Hubb.	Gramineae	yellow foxtail	barbs on fruits	
d(16) * & ** <i>Solanum carolinense</i> L.	Solanaceae	horsenettle	berries	solanine & other alkaloids (6)
** <i>S. elaeagnifolium</i> Cav.	Solanaceae	silverleaf night- shade	berries	solanine, alkaloids (6)
<i>S. nigrum</i> L.	Solanaceae	black nightshade	leaves and green berries	solanine, alkaloids (6)
m <i>S. rostratum</i> Dunal	Solanaceae	buffalobur	green fruits	
<i>S. torreyi</i> Gray	Solanaceae	horse nettle	green fruits	
** <i>S. triflorum</i> Nutt.	Solanaceae	cutleaf night- shade	berries	solanine & other alkaloids (6)
** <i>Solidago mollis</i> Bartl.	Compositae	goldenrod	leaves	irritant resin
** <i>S. odora</i> Ait.	Compositae	goldenrod	leaves when rust infected	nitrates
** <i>S. speciosa</i> Nutt.	Compositae	goldenrod	leaves when rust infected	
<i>Sonchus</i> spp.	Compositae	sowthistle	all parts	nitrates and nitrates and
** <i>Sorghum halepense</i> (L.) Pers.	Gramineae	johnsongrass	young leaves	cyanogenic glycoside cyanogenic glycoside anthelmintic overdose (14)
p, ** <i>S. bicolor</i> (L.) Moench	Gramineae	sudangrass	young leaves	
<i>Spigelia marilandica</i> L.	Loganiaceae	pinkroot	all parts?	nitrates
<i>Stellaria media</i> (L.) Cyrill	Caryophyllaceae	chickweed	all parts	
m <i>Stipa</i> spp. (those with persistent awns)	Gramineae	needlegrass	mature fruits	
** <i>Suckleys suckleyana</i> (Torr.) Rydb.	Chenopodiaceae	poison suckleya	stem, leaves	
* <i>Tanacetum vulgare</i> L.	Compositae	tansy	leaves, flowers	cyanogenic glycoside tanacetin (an oil) (10)
<i>Thlaspi arvense</i> L.	Cruciferae	field pennycress	seeds	mustard oil
m, p, ** <i>Tribulus terrestris</i> L.	Zygophyllaceae	puncturevine	leaves, fruits	nitrates

p	<i>Trifolium hybridum</i> L.	Leguminosae	alsike clover	stem, leaves	cause impaction
**	<i>T. incarnatum</i> L.	Leguminosae	crimson clover	mature flowers	
p	<i>T. pratense</i> L.	Leguminosae	red clover	stems, leaves	
	<i>T. repens</i> L.	Leguminosae	white clover	all parts	
**	<i>Triticum aestivum</i> L. (15)	Gramineae	wheat	all parts	cyanogenic glycoside nitrates
d(7)	<i>Urtica dioica</i> L.	Urticaceae	stinging nettle	leaf hairs	unknown
**	<i>Verbesina encelioides</i> (Cav.) B. & H.	Compositae	crownsbeard	all parts	nitrates
**	<i>Vicia angustifolia</i> Reichard	Leguminosae	narrowleaf vetch	seeds	β -cyano-L-alanine
**	<i>V. sativa</i> L.	Leguminosae	common vetch	seeds	β -cyano-L-alanine
**	<i>V. villosa</i> Roth	Leguminosae	hairy vetch	seeds	cyanogenic glycoside
m, **	<i>Xanthium strumarium</i> L.	Compositae	heartleaf cockle- bur	seeds, seedlings	hydroquinone
**	<i>Xanthoxylum americanum</i> Mill.	Rutaceae	prickly ash	leaves	
**	<i>Zea mays</i> L.	Gramineae	corn, maize	fungus on leaves	nitrates
**	<i>Zigadenus nuttallii</i> Gray	Liliaceae	death camas	bulb, young shoots	veratramine (1) zygadenine (6) zygocine (10)