



<p style="text-align: center;"><b>LATIN (Plant family)</b></p>	<p style="text-align: center;"><b>COMMON NAME</b></p>	<p style="text-align: center;"><b>SAMPLE TOXIN</b></p>
<p style="text-align: center;"><i>Lathyrus odoratus</i> (Leguminosae)</p>  	<p style="text-align: center;"><b>Sweet pea</b></p>	<p>The lathyrus genus contains three neurotoxins of the NPAA (nonprotein amino acids) variety. Beta-oxalyl-diamino-propionic acid (Beta-ODAP) (<i>L. sativus</i>), Diamino-butyric acid (DABA) (<i>L. sylvestris</i>) and the nitrile containing beta-amino-propionitrile (BAPN) found in this species, <i>L. odoratus</i> .</p> <div style="text-align: center;"> <math display="block">  \begin{array}{c}  \text{H} \qquad \qquad \text{H} \\    \qquad \qquad \quad   \\  \text{N} \equiv \text{C} - \text{C} - \text{C} - \text{NH}_2 \\    \qquad \qquad \quad   \\  \text{H} \qquad \qquad \quad \text{H}  \end{array}  </math> <p>beta-amino-propionitrile</p> </div> <p>The bone deforming (osteolathyrogenic) properties of <i>Lathyrus odoratus</i> are due to the presence of BAPN. This compound affects the cross-linking of collagen during bone and connective tissue formation. The resultant disease is known as osteolathyrism. Recent studies in Bangladesh suggest that a metabolic precursor for this compound, 2-cyanoethyl-isoxazolin-5-one is present in the vegetative parts and immature seeds of <i>L. sativus</i>. It appears responsible for the osteolathyrogenic symptoms observed in some neurolathyrism patients who had consumed vegetative parts of <i>L. sativus</i>.</p> <p style="text-align: right;"><a href="http://www.general.uwa.edu.au/u/enneking/Bibintro.htm">www.general.uwa.edu.au/u/enneking/Bibintro.htm</a></p>

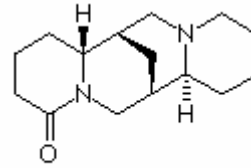
***Lupinus texensis***  
(Leguminosae)



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**Lupine**


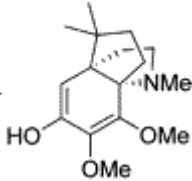


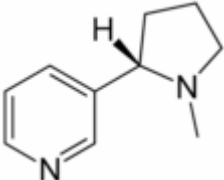
Different species of lupine have different toxicities. According to reports, *L. leucophyllus* (velvet or wooly-leaved lupine) is the most toxic and should never be grazed since all stages of plant growth are toxic. Toxicity in lupine is believed to result primarily from the alkaloid D-lupanine.



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The signs of lupine poisoning can develop within an hour or may take as long as a day. The signs are related to the nervous system and resemble the signs seen with excessive consumption of nicotine (tobacco): twitching, nervousness, depression, difficulty in moving and breathing, and loss of muscular control. If large quantities were consumed, convulsions, coma, and death by respiratory paralysis may occur. In cows that graze lupine, skeletal birth defects in calves can occur, and the syndrome is called "crooked calf".

<http://www.vet.purdue.edu/depts/addl/toxic/plant06.htm>

<p><i>Menispermum canadense</i> (<a href="#">Menispermaceae</a>)</p> 	<p><b>Moonseed</b></p>	<p>The fruit of Canada moonseed are poisonous and can be fatal. While foraging for wild grapes one should examine the seeds of the fruit to make sure one is not eating moonseeds: moonseeds are crescent, while grapes have circular seeds.</p> <p><u>Contains acutumine:</u></p>  <p><a href="http://en.wikipedia.org/wiki/Canadian_Moonseed">http://en.wikipedia.org/wiki/Canadian_Moonseed</a></p>
<p><i>Nicotiana tabacum</i> (<a href="#">Solanaceae</a>)</p>  	<p><b>Tobacco</b></p>	<p>Tobacco contains nicotine, an alkaloid that acts on the nicotinic acetylcholine receptors. In small concentrations it increases the activity of these receptors, among other things leading to an increased flow of adrenaline, a stimulating hormone. The release of adrenaline causes an increase in heart rate, blood pressure and respiration, as well as higher glucose levels in the blood.</p>  <p>Nicotine is also found in smaller concentrations in the leaves of other Solanacea family members including tomatoes, potatoes, eggplants and green peppers.</p> <p><a href="http://en.wikipedia.org/wiki/Nicotine">http://en.wikipedia.org/wiki/Nicotine</a></p>

