

# POTENTIALLY TOXIC PLANTS IN THE UAE – A BASIC GUIDE

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Toxic plants exist in the UAE either in the wild or cultivated. Toxic compounds are part of a plants normal defence mechanism against herbivory. Generally, herbivorous animals recognize this through smell, taste, texture or post ingestive reactions. Voluntarily ingestion of toxic feed occurs when normal feed aversion mechanisms do not work or the plant is eaten by chance. For many plant poisons there is no specific antidote and treatment is generally supportive. The type and part of the plant ingested and animal species-specific digestive anatomy and physiology influence the potential effects of the toxin and should be considered by the veterinarian before treatment. This basic guide does not describe all the toxic plants growing in the UAE. Common

| Common name   | Latin name                               | Toxic active ingredient  | Toxic parts                                   | Signs of toxicity  | Available                    |
|---|--|--|---|--|------------------------------|
| Elephant's ear  | <i>Colocasia esculenta</i> (Taro)        | Calcium oxalate salts in form of "needles"   | Leaves and stems                              | Stomatitis, gastritis, enteritis. Possible deposits in the kidneys   | Market                       |
| Sodom's apple (Rubberbush, Milkweed)  | <i>Calotropis procera</i>                | Milky latex rich in triterpenes  | Whole plant                                   | Blisters, lesions and eruptions on skin, GI mucosa (if eaten) and cornea/conjunctiva                             | Wild. Ubiquitous in UAE      |
| Cycas palm (Sago palm)  | <i>Cycas revoluta</i>                    | Alkaloid: cycasin  | Leaves and stem                               | Vomiting, diarrhoea, headache, dizziness, seizures   | Market                       |
| Jimson weed (Devil's thorn apple, Angel trumpet)  | <i>Datura spp.</i>                       | Alkaloids: atropine, scopolamine, hyoscyamine  | Whole plant                                   | Tachycardia, seizures, hyperthermia, dry mucosa, mydriasis, respiratory depression, coma                         | Market                       |
| Mountain hemp (Sakra'n, Henbane)  | <i>Hyoscyamus muticus</i>                | Alkaloids: tropanalkaloide, hyoscyamin, scopolamin, atropine and others                                  | Whole plant                                   | Tachycardia, seizures, hyperthermia, dry mucosa, mydriasis, respiratory depression, coma                         | Wild. Ubiquitous in UAE      |
| Iphionia  | <i>Iphionia aucheri</i>                  | Terpenoids and two diterpene glycosides: atractyloside and carboxyatractyloside                          | Whole plant                                   | Hepatic and renal necrosis, death  | Wild. Ubiquitous in UAE      |
| Peregrina (Spicy jatropa)   | <i>Jatropha integerrima</i>              | Di and triterpenes   | Whole plant, seed.                            | Gastroenteritis; sap causes dermatitis   | Market                       |
| Pregnant plant  | <i>Kalanchoe pinnata</i>                 | Cardiac glycoside: bufadienolide   | Whole plant                                   | Dysrhythmias, hypotension  | Market                       |
| Yellow / Red sage   | <i>Lantana camara</i>                    | Triterpenoid: lantodene  | Whole plant, unripe berries                   | Acute poisoning: gastroenteritis, weakness, paresis, death. Chronic: ulceration and sloughing of skin and mucosa | Market                       |
| Four o'clock plant  | <i>Mirabilis jalapa</i>                  | Alkaloid: trigonelline   | Seeds and roots                               | Gastroenteritis, confusion, tachycardia, hypotension   | Seeds in markets             |
| Oleander* (Desert rose ( <i>Adenium obesum</i> ) is reported to have the same toxicity) | <i>Nerium oleander and N. mascatense</i> | Cardio active glucosides, the most important are oleandrine, nerine, rosagenine, oleandroside, nerioside | Whole plant, water near the roots and dry sap | Dysrhythmias, CNS signs, seizures, tremors, collapse, coma. Sap causes irritation of skin and mucosa             | Wild and in markets          |
| Ornamental tobacco  | <i>Nicotiana spp.</i>                    | Alkaloid: nicotin  | Whole plant                                   | Nervous symptoms, ataxia, seizures, paralysis, death   | Seeds in garden centres      |
| Castor bean   | <i>Ricinus communis</i>                  | Ricin, protein made from 2 subunits: N-glycoside hydrolase and lectin                                    | Whole plant, seeds.                           | Gastroenteritis (12-24 hours after the ingestion), depression, fever, cardiac alterations, seizures              | Occasionally seen in gardens |

and Latin names cited in this article can be used as keywords for identification of these plants on the internet. The plants listed below are all toxic and the best way to avoid poisoning is prevention.

## Acknowledgements

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## References

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Jongbloed, M. 2001. Ras Al Khaima and its surroundings. In: The Green Guide of the Emirates. Motivate Publishing. Dubai, UAE. 40-43, 58.

## Useful websites

<http://www.enhg.org/>  
Emirates Natural History Group

<http://www.ansci.cornell.edu/plants/index.html>  
Cornell University Poisonous Plants Informational Database

<http://www.library.uiuc.edu/vex/toxic.htm>  
Veterinary Medicine Library of Indiana

<http://chppm-www.apgea.army.mil/ento/PLANT.HTM>  
US Army Center for Health Promotion and Preventive Medicine



Fig 1 Sodom's apple.