

Are some plants we eat

actually toxic?



Many plants produce toxins that can be harmful or toxic to other organisms, including animals and humans.

Why do plants produce toxins?

1 For defense against herbivores



2 For protection against pathogens



To successfully compete with other plants (Allelopathy)



The toxins plants produce to repel herbivores also impact humans. These impacts can be both negative and positive.

Cassava is a staple crop for millions of people but is also rich in a toxin called **hydrogen cyanide**. It needs to be processed to make it edible. **Soaking** cassava roots in water is one way to get rid of the toxin.



Cooking at a high temperature will also reduce toxins in some plants like lima beans.

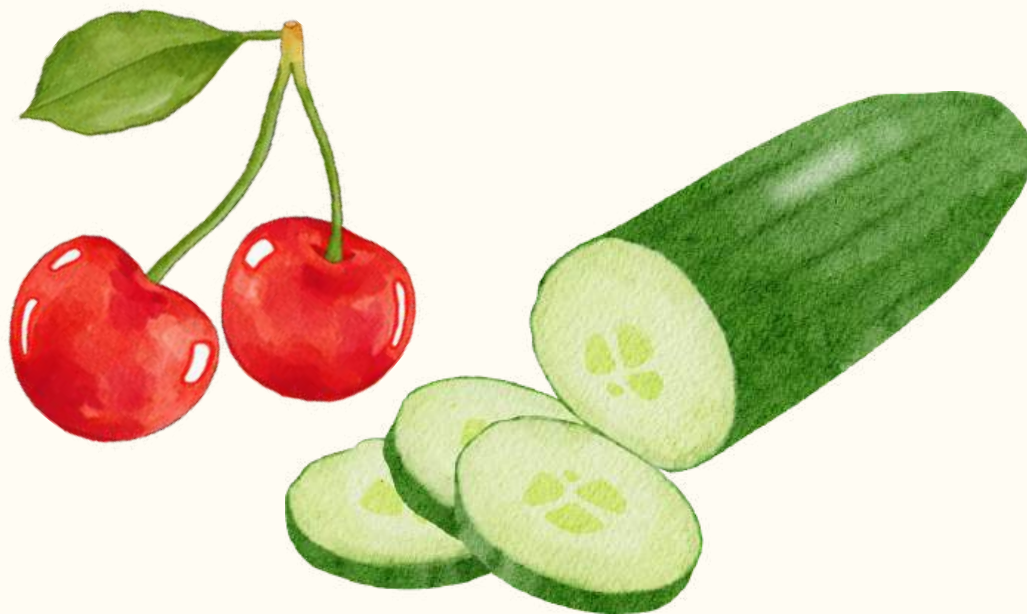




And as always, **plant breeding** comes to the rescue, freeing many of our favourite snacks from nasty toxins!

Wild **almonds** are generally bitter and high in cyanide.

Almonds have been **selected by breeders to be low in the toxin**, giving them the signature sweet flavour.



Similarly, **cherries, cucumbers, sorghum** and many other plants have been bred to remove toxins!




But toxins are not always nasty!
They can also have a **positive impact**.




A chrysanthemum
flower-derived
toxin is often used
as an insecticide!

Here some examples from
agriculture, medicine & research:



A toxin found in
Pacific yew tree is used
as an anti-cancer
chemotherapy drug



A castor bean toxin, called
ricin, is used in labs as it
inhibits protein synthesis!
This helps scientists research
cellular processes.

Ask your questions to Plantastic Discoveries

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