

What is a

plant
mutation?



Does a very
strange looking
plant come to
mind?



A mutation **does not really**
look like any of these!



But it can look like both of these:

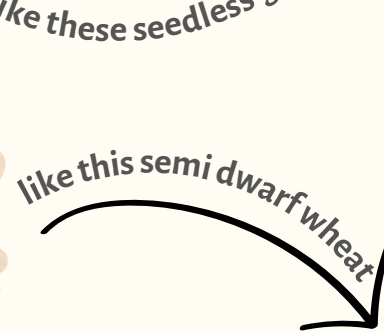


A mutation...

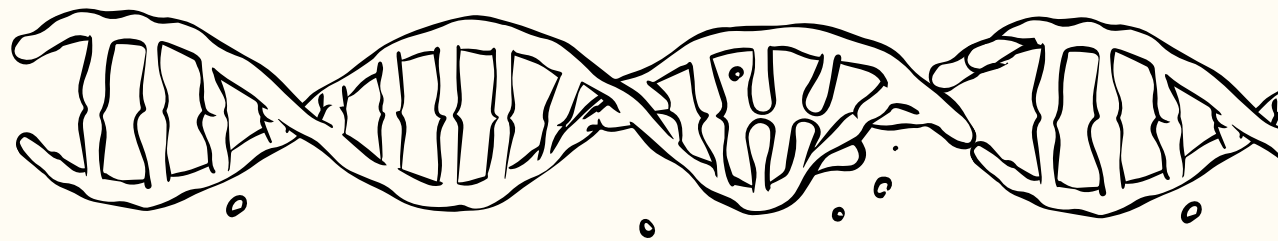
... occurs in **nature**



or can be
triggered intentionally

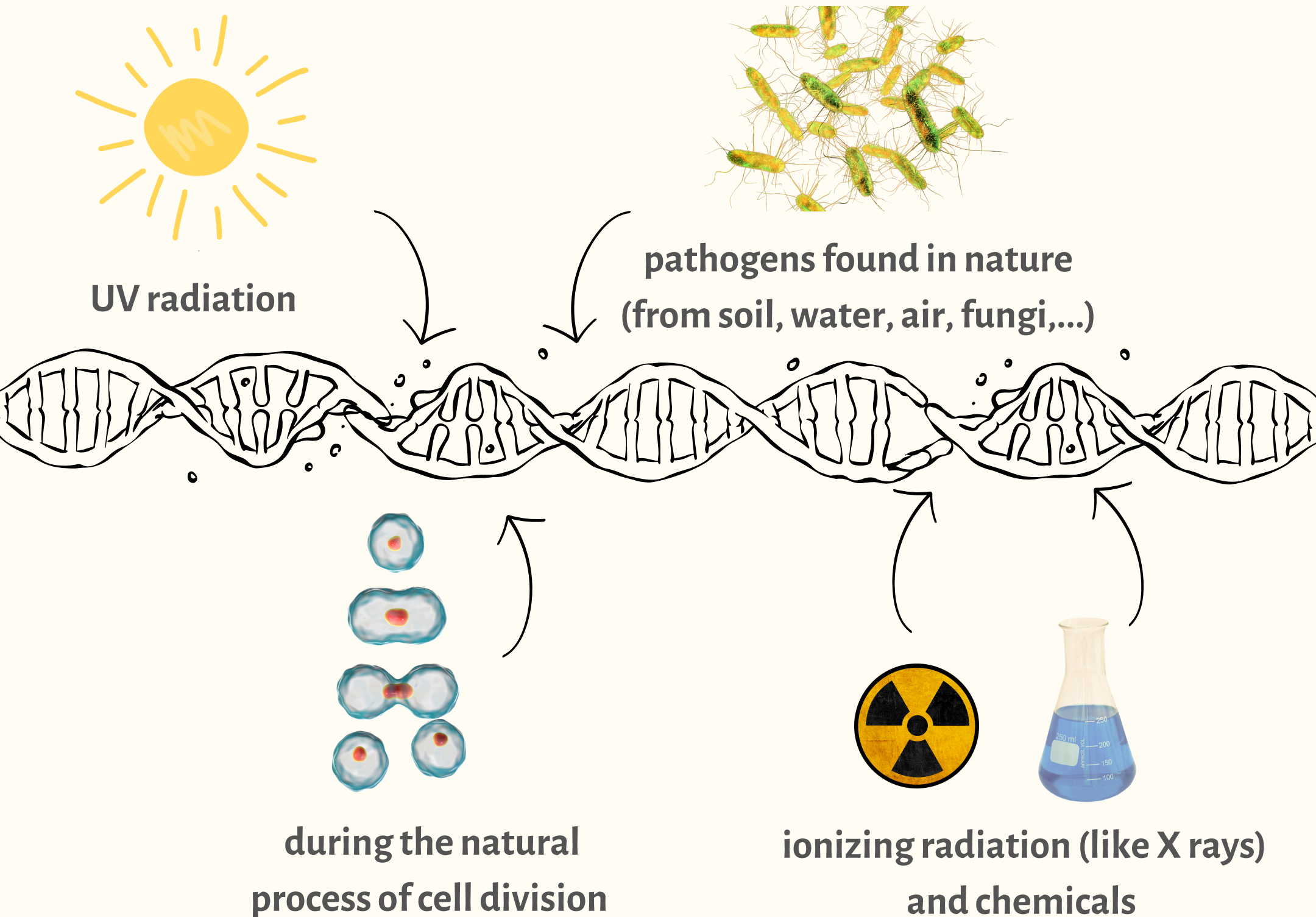


... is a **change in the genetic material (DNA)**



... generates **genetic diversity** and can lead to **variations in traits**

So, how exactly can it happen?



Are mutated plants a part of our food system?

Of course!



One example are **seedless grapefruits**, found in nature as a result of occasional mutations.

Farmers began to **select** and **multiply** these seedless mutants.

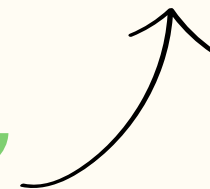
They established **grapefruit varieties** that **consistently produced fruits without seeds**.

Wait a second...

What about mutations triggered by humans, like exposure to radiation or chemicals?



Many of our staples, like wheat, are all bred with **conventional breeding techniques** - **exposure to radiation** is one of them and it has been used **since the 50ies**.



One of the alternatives: we could use **new genomic techniques** and **avoid using radiation to create random mutations**. NGTs are much more precise and effective.