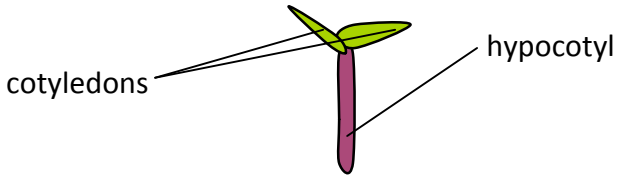
How the seeds are produced

A ‘normal’ tomato plant would, in its early stages, have a stalk with a purple tinge (hypocotyl) and green seed leafs (cotyledons).



Let’s say the cotyledons’ colour is governed by the gene ‘**G**’

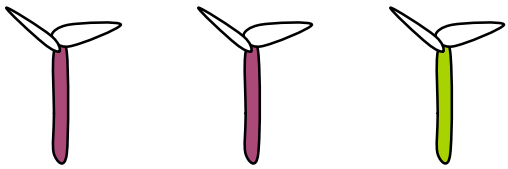
G (dominant) codes for green cotyledons
g (recessive) codes for golden cotyledons

GG **Gg or gG** **gg**

Let’s say the hypocotyl colour is governed by the gene ‘**H**’

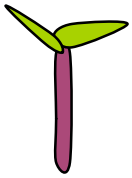
H (dominant) codes for a purple hypocotyl
h (recessive) codes for a hypocotyl with no purple in it

HH **Hh or hH** **hh**



So a ‘normal’ pure breeding seed is

GGHH

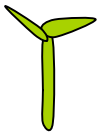


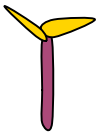
The seeds in an **Eu-Sol Tomato Seeds** pack are bred from naturally occurring mutants.

The first mutant has a recessive trait where its hypocotyl has no purple in it at all. Its cotyledons are normal.

The second mutant has a recessive trait where its cotyledons are golden rather than green. Its hypocotyl is normal.

GG hh x **gg HH**

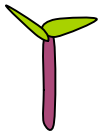


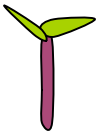


GGhh x ggHH	gH	gH	gH	gH
Gh	GghH	GghH	GghH	GghH
Gh	GghH	GghH	GghH	GghH
Gh	GghH	GghH	GghH	GghH
Gh	GghH	GghH	GghH	GghH

This leads to a seed population entirely formed of seeds with green cotyledons and purple hypocotyls. These seeds were then self-fertilised.

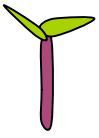
GghH x **GghH**

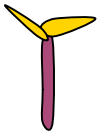


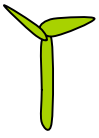


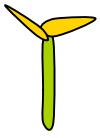
GghH x GghH	Gh	GH	gh	gH
Gh	GGhh	GGhH	Gghh	GghH
GH	GGhH	GGHH	GgHh	GgHH
gh	gGhh	gGhH	gghh	gghH
gH	gGHh	gGHH	ggHh	ggHH

This produces the 9:3:3:1 ratio in the seeds in an **Eu-Sol Seed Pack**.

9: 

3: 

3: 

1: 

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