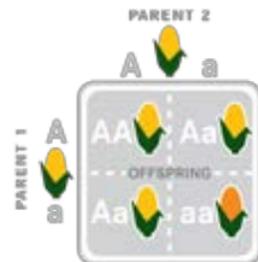


# Glossary of Terms

These are basic definitions to help you better understand the science behind improving plants

<b>Agrobacterium</b>	The soil microbe used in transformation that has the natural ability to transfer the gene into plant cells
<b>Bt</b>	Short for Bacillus Thuringiensis , a soil bacterium, observed in nature to control pests. Bt has a long history in agriculture to protect crops from insects and is used today in organic farming, home gardens and in GMOs
<b>Drought/heat/stress tolerant crops</b>	Crops that can withstand natural stress, like heat, wind and water (this can be done through traditional breeding or genetic modification)
<b>Gene</b>	Sequence of DNA that codes for a particular protein or enzyme. Genes are units of heredity that are transferred from a parent to offspring and are which determine some characteristics of the offspring
<b>Genotyping</b>	Profiling plants based on their genetic makeup, similar to that of a finger print
<b>Germplasm</b>	Every seed's library of genetics used in breeding to create new varieties
<b>GMO</b>	A Genetically Modified Organism is created by taking a beneficial trait from one living organism and introducing it into a new plant to help it thrive in its environment, like drought tolerant corn or pest resistant soybeans.
<b>Herbicide tolerant crops</b>	Crops that have been genetically modified to withstand herbicide application
<b>Hybrid</b>	The product of crossing two parent plants. The goal is to create an offspring with the most desirable traits from both parents
<b>Insect resistant crops</b>	Crops that have genetics that protect the plant from insects (this can be done through traditional breeding or genetic modification)
<b>Markers</b>	A technique in plant breeding used to identify specific genes of interest (i.e. yield, drought tolerance, insect resistance)

<b>Marker assisted breeding</b>	Crossing two plants with desired traits determined by using genetic markers.
<b>Microbe</b>	Tiny organisms like fungi, bacteria and single-celled organisms that live all around us. Just like how they are essential to our health, microbes in the soil play a vital role in farming
<b>Plant Transformation</b>	The process of incorporating a new gene or trait into a plant using Agrobacterium
<b>Phenotyping</b>	Profiling plants based on their observable characteristics, such as plant height, crop size, crop health
<b>Punnett Square</b>	A diagram used to predict the outcome of a particular cross between two parents. This diagram helps scientists, like plant breeders, determine the probability of an offspring, or seed, having a particular genotype. 
<b>Trait</b>	A distinguishing characteristic
<b>Sequencing</b>	The process used to determine a plant's genetics
<b>Stacking</b>	"Stacked traits" refers to the process of combining two or more genes of interest into a single plant, like insect resistance and herbicide tolerance in one seed (this can be done through traditional breeding and genetic modification)