

# MUTANT MILLETS

## Vocabulary



*Use these terms while you study your plants, collect data and make observations.*

### Architectural Features of Grasses

**Awn/bristle:** A slender, hair-like structure found on the spikelets of many grasses.

**Blade:** The upper portion of the leaf, which is divided from the sheath by the collar and the ligule.

**Collar:** The area on the outer side of the leaf where the blade and the sheath join.

**Culm:** The stem of a grass.

**Florets:** A small flower.

**Glume:** One of a pair of dry membranous bracts at the base of the spikelet of grasses.

**Inflorescence:** The part of a plant that consists of a cluster flower bearing stalks.

**Internode:** The part of a plant stem between two nodes.

**Lemma:** The outer bract that encloses the flower in a grass spikelet.

**Ligule:** The structure that clasps the stem at the junction of blade and sheath.

**Node:** The point on a plant stem from which the leaves or lateral branches grow.

**Palea:** The inner bract that encloses the flower in a grass spikelet.

**Panicle:** A branched cluster of flowers in which the branches are racemes.

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**Plant Architecture:** Structures of the plant, leaves, stems, roots, and the patterns they take.

**Raceme:** A type of inflorescence that is unbranched and bears flowers having short stalks along the axis.

**Shatter:** When the seed head breaks apart, releasing seeds.

**Sheath:** The tubular portion of the leaf, which wraps around or encloses the stem.

**Spike:** An inflorescence consisting of a raceme of flowers growing directly from the stem.

**Spikelet:** A flowering structure common to grasses, where a reduced flower is encased in several protective structures.

**Tiller:** A shoot that arises from the base of the stem in grasses.

## Other Important Terms

**Adaptive Value:** The ability of a new trait to add to an individual or species' chances of survival.

**Albino:** No color: white

**Gene Frequency:** How often a gene appears within a population.

**Genetic Engineering:** Technology where DNA from one organism is placed into a different organism.

**Genotype:** The two specific alleles an individual has for a trait.

**Model Organism:** An organism chosen by scientists for study, usually based on characteristics such as short generation time, high reproductive rates, easily observed characteristics, and close relative relationship to other organisms.

**Mutagenic Agent:** Any substance that can change DNA, including UV radiation, asbestos, and certain chemicals.

**Mutation:** A change in DNA base pairs

**Necrosis:** Death of tissue.

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**Phenotype:** The observable characteristics of an organism, as determined by its genetic makeup.

**Selective Breeding:** The process where humans control the reproduction of a species to favor certain desirable traits.

**Serrated:** Having notched or jagged edges.

**Silent Mutation:** A change in DNA that does not produce a change in the phenotype.

**Variegated:** Plants with a variety of colors on the same leaf.

**Variation:** The amount of diversity within a species or population.

**Virescent:** Not fully green as compared to the wild type.

**Wild Type:** Considered the typical phenotype for the species, considered “normal” when compared to new, possibly mutant traits.