

# **Corn Life Cycle 101, How to Grow What Make Best Health Food Nutrition, 5-10 min Nature Crop Plant**

The vegetative growth stages start from the emergence/VE stage, then the leaf/VN stage which is divided into several substages from V1 to VN, where n represents the number of fully developed leaves in that stage, and finally the tasselling stage (VT). The reproductive growth stage comprises of the silking/R1 stage, the blister/R2 stage, the milk/R3 stage, the dough/R4 stage, the dent/R5 stage, and the maturity/R6 stage. Over 1 billion tons of corn is produced worldwide each year with the United States being the largest corn producer in the world, followed by China and Brazil, and countries like Argentina, Ukraine, and India being major producers. The top corn-exporting countries are the United States, Brazil, Argentina, and Ukraine.

## **The vegetative growth stages (VE-VT)**

The vegetative growth stages start from the emergence/VE stage, then the leaf/VN stage, and the tasselling stage (VT). The emergence stage begins when the first green shoot emerges from the soil and the young corn plants are developing their first leaves and stem, with the size and shape of the leaves typically being long and narrow with a vibrant green color.

The leaf/VN stages of the vegetative growth stages are divided into several substages from V1 to VN, where N represents the number of fully developed leaves in that stage e.g. V5 is the stage that the corn plant has five fully developed leaves. During the leaf stages corn develops roots, stem, and leaves absorbing nutrients and water from the soil. The tasselling stage (VT) usually occurs 50 to 60 days after planting and marks the end of a vegetative phase and the beginning of the

reproductive phase. In this stage, the tassel emerges from the top of the plant stem shedding pollen to the surrounding air, which is then captured by the female reproductive structure.

## **The reproductive growth stages (R1-R6)**

During the silking/R1 stage, the female reproductive structure of the corn plant begins to develop its silks which are essential for pollination to occur as they receive the pollen released from the male reproductive structure. In the blister/R2 stage, the kernels are rapidly increasing in size and filling with starch and other nutrients, and the ear is becoming more prominent.

During the milk/R3 stage, the kernels are still developing and are mostly white and filled with a milky fluid that contains a high percentage of starch and proteins. During the dough/R4 stage, the kernels continue to accumulate dry matter and become more solid resembling dough. In the dent/R5 stage, the kernels reach the maximum dry weight and the endosperm hardens as the starch in the kernel continues to accumulate creating a dent at the crown of the kernel. During the maturity/R6 stage, the plant reaches physiological maturity, the kernel has reached its maximum size and weight, and its moisture content has dropped to around 15 percent