

Maize & Sweet Corn Sampling & Growth Stages

Timing: Begin sampling at primary stage 1 (leaf development) or 3 (stem elongation) and sample as required

Sample volume: Stage 1: 20-30 plants; stage 3 onwards: 15-20 stem segments

Sampling: Select plants from a representative area of the crop. Sample entire plant at stage 1. From Stage 3 plus cut a 7-10 cm stem piece from above ground level.

Primary Stage	Secondary Stage	Description	Comments
1			Leaf development
	1.3		3 leaves unfolded
	1.6		6 leaves unfolded
3			Stem elongation
	3.1		First node detectable
	3.9		9 or more nodes detectable
5			Inflorescence emergence, heading
	5.1	Tassel emergence	Beginning of tassel emergence tassel detectable at top
	5.3		Tip of tassel visible
	5.5		Middle of tassel emergence: middle of tassel begins to separate
	5.9		End of tassel emergence: tassel fully emerged and separated
6			Flowering, anthesis
	6.1	Pollination	Male: Stamens in middle of tassel visible Female: Tip of ear emerging from leaf sheath
	6.3		Male: Beginning of pollen shedding Female: Tips of stigmata visible
	6.5		Male: Upper and lower parts of tassel in flower Female: Stigmata fully emerged
	6.7		Male: Flowering completed Stigmata drying
	6.9		End of flowering: stigmata completely dry
7			Development of fruit
	7.1	Mid cob	Beginning of grain development: kernels at blister stage, about 16% dry matter
	7.5		Kernels in middle of cob yellowish white (variety dependent) content milky, about 40% dry matter
	7.9		Nearly all kernels have reached final size
8			Ripening
	8.5	Mature cob	Dough stage; kernels yellowish to yellow (variety dependent), about 55% dry matter
	8.7		Physiological maturity: black dot/layer visible at base of kernels, about 60% dry matter
	8.9		Fully ripe: kernels hard and shiny, about 65% dry matter

Growth Stage numbering system is in accordance to the extended BBCH, a uniform coding of phenologically similar growth stages for all plant species

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