

Cotton Sampling & Growth Stages

Timing: Sample at 14 day intervals, from as early as the unfolding of the seventh or eighth leaf (1.7 or 1.8) through to 1 week prior to the final fertiliser application or cutout.

Sample volume: 50-80 petioles

Sampling: Select a representative, 1-2 ha sampling area or a paddock transect (e.g. use same sampling approach taken for soil sampling). From randomly selected plants, collect the youngest fully expanded leaf (YFL), which generally is on the fourth or fifth node below the terminal. Discard the leaf blade and retain the petioles for analysis. Return to the same sampling area for subsequent samples.

Primary Stage	Secondary Stage	Description	Comments
1			Leaf Development
	1.0		Cotyledons completely unfolded
	1.2		2 nd true leaf unfolded. <i>(Leaves are counted from cotyledon node)</i>
	1.7		7 true leaves unfolded
	1.9		9 or more true leaves unfolded (side shoot development may occur earlier)
2			Formation of Side Shoots
	2.1	Vegetative Growth	First vegetative side shoot visible. <i>(Vegetative side shoots are counted from cotyledon node)</i>
	2.3		3 vegetative side shoots visible
	2.9		9 or more vegetative side shoots visible
3			Stem elongation
	3.1	Crop cover	10% of plants meet between rows
	3.5		50% of plants meet between rows
	3.9		Canopy closure: 90% of plants meet between rows
5			Inflorescence Emergence
	5.1	Bud Development	First flower buds detectable. (Pin-head square)
	5.2		First floral buds visible. (Match-head square)
	5.5		Floral buds enlarged
	5.9		Petals visible: floral buds still closed
6			Flowering
	6.1	Flowering	Beginning of flowering (Early bloom): 5-6 blooms / 7.5 meter row
	6.5		Full flowering (mid bloom): 11 and more blooms / 7.5 meter of row
	6.7		Flowering finishing: majority of flowers faded (late bloom)
	6.9		End of flowering
7			Development of fruit and seed
	7.1	Fruiting	About 10% of bolls have attained final size
	7.5		About 50% of bolls have attained final size
	7.9		About 90% of bolls have attained final size
8			Ripening of fruits and seeds
	8.1	Maturing	Beginning of boll opening: about 10% of bolls open. Nodes Above White Flower (NAWF)
	8.3		About 30% of bolls open. Nodes Above Cracked Boll (NACB)
	8.9		About 90% of bolls open

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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