

# Fresh Market Potato Sampling & Growth Stages

**Timing:** Begin sampling at stage 1.7 (vegetative, pre tuber) and go to stage 4.6 (late tuber bulking)

**Sample Volume:** 30 petioles

**Sampling:** Collect samples from a representative area in the crop. Return to the same area for subsequent samples. Collect 1 leaf per plant; select the youngest fully expanded leaf (YFEL), usually the third or fourth leaf from the top.

**Plant part for analysis:** Discard the leaflets and retain the petioles for analysis. Use plastic bags only.

*Growth stages describe the stage most plants within a crop have reached (60% or more).*

Primary Stage	Secondary Stage	Description	Comments
1	<b>Early vegetative growth</b>		
	1.5	Emergence	5 Leaves on main stem
	1.7	Pre-tuber	Full emergence, no swelling of stolons
	1.8	Begin of tuber Initiation	Tuber twice the diameter of stolon
2	<b>Mid vegetative growth</b>		
	2.3	Tuber set	Tubers developed on 30% of stolons
	2.7		Tubers developed on 70% of stolons
3	<b>Crop cover (row closure)</b>		
	3.1	Late tuber initiation	Tuber 1 - 2 cm diameter
	3.3		Tuber 2 - 2.5 cm diameter
4	<b>Tuber Formation</b>		
	4.1	Early tuber bulking Foliage erect	Tuber 2.5 - 3 cm diameter
	4.2		Tuber 3 - 4 cm diameter
	4.3		Tuber 4 - 5 cm diameter
	4.4	Mid tuber bulking Foliage horizontal	Tuber 5 - 6 cm diameter
	4.5		Tuber 6 - 8 cm diameter
	4.6		Tuber 8 - 10 cm diameter
	4.7		Tuber 10 - 12 cm diameter
	4.8	Late tuber bulking Vegetative growth ceased	Tuber sizes per plant even out
	4.9		Tuber skin set

*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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