

# Plant Tissue Sampling Guide — preliminary draft

NCA&CS Agronomic Division June 15, 2010

Crop	Growth Stage		Plant Part		Plant Position	Number of leaves to collect	Extra tests	Cost
	Description	Code	Description	Code	Code			
Apple	5–10 weeks after full bloom (mid-June to mid-July)	M	Leaves near base of current year's growth OR from spurs; 4–8 leaves per plant / 20–30 plants OR most recently mature leaf from mid-shoot	M	U	50–100	—	\$5
Asparagus	Mid-summer	E	Top 4–6" most recently mature fronds	M	U	20–30	—	\$5
	Late-summer	M	Top 18" most recently mature fronds					
Beans (lima, snap, mung)	Seedlings (less than 12")	S	All the above ground portion	W	U	20–30	—	\$5
	Prior to, or during initial bloom	E, B	Most recently mature leaves	M				
Blackberry	Post-harvest	M	Most recently mature leaves on primocane (non-fruiting laterals)	M	U	20–40	—	\$5
Blueberry	First two weeks after harvest (~July)	M	Most recently mature leaves from mid-portion of current season's growth	M	U	50–60	—	\$5
Brassica crops (broccoli, cabbage, cauliflower, collards, kale, turnip greens)	Prior to heading	E	First mature leaf from center of whorl	M	U	10–20	Mo	\$7
	Mid-growth		Wrapper or outer undamaged leaf leaves per plant					
	Pre-harvest	M	Wrapper or outer undamaged leaf leaves per plant					
Corn (sweet)	Prior to tasselling	E	First fully developed leaf below the whorl with a collar	M	U	20–30	—	\$5
	At tasselling	B, F	Leaf opposite and below the uppermost developing ear (earleaf)	E	U	20–30	—	\$5
Cucumber	All growth stages	S, E, B, F, M	Most recently mature leaves (4 <sup>th</sup> to 5 <sup>th</sup> leaf from a growing point)	M	U	15–20	—	\$5
Grapes (muscadine)	Mid- to late summer but prior to final swelling of fruit (end of bloom through Aug); Best Time → June to early July	B, F	Most recently mature leaf opposite fruit cluster from well-exposed shoot (generally the 1st or 2nd fruit cluster from the base of the shoot)	M	U	60–80	—	\$5
Grapes (vinifera)	Full bloom through veraison (ripening of fruit)	B, F	PETIOLE ONLY from most recently mature leaf opposite fruit cluster from well-exposed shoot (generally the 1st or 2nd fruit cluster from the base of the shoot)	P	U	80–100	—	\$5
Melons (watermelon, muskmelon)	Prior to or during flowering; prior to fruit set	E, B	Mature leaves near the growing tip of the plant (generally the 5th leaf from the growing tip)	M	U	12–30	—	\$5

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	Description	Code	Description	Code	Code			
Peach	Mid-season; 12–14 weeks after bloom	F, M	Leaf near base of current year's growth OR from spurs; 4–8 leaves per plant / 20–30 plants	M	U	50–100	—	\$5
Pepper (sweet, bell)	Prior to bloom	E	Most recently mature leaves	M	U	20–30	—	\$5
Potato (Irish)	Prior to or during early bloom	E, B	Most recently mature leaf (3 <sup>rd</sup> to 6 <sup>th</sup> leaf from the growing tip)	M	U	20–30	—	\$5
	Early flowering to tubers 1/2 grown	M	Most recently mature leaf (3 <sup>rd</sup> to 6 <sup>th</sup> leaf from the growing tip)	M	U	20–30	—	\$5
Root Crops (carrot, onion, beets)	Prior to root or bulb enlargement	M	Center mature leaves	M	U	20–30	—	\$5
Strawberry	Early	E Weeks 1–8	Most recently mature leaves and petioles. Separate petiole in the field	M	U	50–75	Petiole NO <sub>3</sub> -N	\$7
	Bloom/Fruit: Initiated when there are 5–10 blooms on >75% of the plants; 2–3 blooms on most plants; Harvest usually begins at B/F week 5 or 6	B/F Weeks 1–12	Most recently mature leaves and petioles. Separate petiole in the field	M	U	50–75	Petiole NO <sub>3</sub> -N	\$7
	Mature	M Weeks 1–4	Most recently mature leaves and petioles. Separate petiole in the field	M	U	50–75	Petiole NO <sub>3</sub> -N	\$7
Sweetpotato	Mid-growth; prior to root enlargement	E	Most recently mature leaf	M	U	20–30	—	\$5
Tomato	Early growth (5-leaf stage through first flower)	S, E	Most recently mature leaves (3 <sup>rd</sup> to 5 <sup>th</sup> compound leaf back from the growing point)	M	U	20–25	—	\$5
	Early flower through first fruit set	B						
	First fruit set through harvest	F, M						