Vegetable Crop Tissue Sampling Guid



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Taking plant tissue samples correctly is the best way to make sure Laboratory Services results will be accurate. Our fact sheet, <u>How to Take a Plant Tissue Test</u>, explains how to sample correctly.

Different crops require different sampling times and plant parts to sample. Table 1 shows which growth stage and plant part to sample for vegetable crops.

TABLE 1.
GROWTH STAGES AND PLANT PARTS FOR VEGETABLE CROP SAMPLES.

Broccoli Brussel sprouts Early sp Cabbage 8 week	bloom—1st bloom s after seeding (mid- fore or at plant heading	Recent matured leaves Leaves from the 3rd to 5th node (place on the crop stem where the leaves are attached) from the top Recent mature leaves Young mature leaf from center whorl				
Broccoli Brussel sprouts Early sp Cabbage 8 week	s after seeding (mid- fore or at plant heading	stem where the leaves are attached) from the top Recent mature leaves Young mature leaf from center whorl				
season) Broccoli Brussel sprouts Cabbage 8 week	fore or at plant heading prouts	Young mature leaf from center whorl				
Brussel sprouts Early sp Cabbage 8 week	prouts	,				
Cabbage 8 week						
	a after transplanting	Young mature leaf from center whorl				
Carrots 60 days	s after transplanting	Wrapper leaf				
	after seeding	Recent mature leaves				
Cauliflower Just bef	fore or at plant heading	Young mature leaf from center whorl				
Celery At mate	urity	Outer petiole (leaf stem)				
Cucumber Early bl	oom—before fruit set	Recent mature leaves				
Lettuce Half siz	e head	Most mature leaf—wrapper leaf				
Peppers Prior to	blossoming	4th–5th leaf from growing tip				
Potatoes Early bl	oom	4th leaf from growing tip (including stem)				
Pumpkin 5–8 wk	s after seeding	Recent mature leaves—5th & 6th leaf from tip				
Spinach 30 days	after seeding	Recent mature leaves				
Squash Early fro	uit	Recent mature leaves—5th & 6th leaf from tip				
Sweet onion Prior to	bulb initiation	Recent mature leaves				
Tomato 1st flow	ver	4th–5th leaf from growing tip				
Watermelon 1st fruit		Recent mature leaves—5th & 6th leaf from tip				

TABLE 2. VEGETABLE CROP SUFFICIENCY TABLE

Crop*	N %	P %	K %	Ca %	Mg %	B ppm	Zn ppm	Cu ppm	Mn ppm	Fe ppm
Beans, Dry	4.0	0.2	1.2	_	0.10	10	14	4	14	_
Beans, Snap	3.0-4.0	0.3-0.5	2.0-3.0	0.8–1.5	0.2-0.5	15–40	20-40	15-40	20-100	25–200
Beets	2.6–4.0	0.2-0.3	1.7–4.0	1.5–3.0	0.3-1.0	60-80	15–30	5–10	70–200	40–200
Broccoli	3.0–4.5	0.3-0.5	1.5–4.0	1.2-2.5	0.2-0.4	30–50	45–95	5–10	25–150	40–300
Brussel sprouts	2.2-5.0	0.2–0.6	2.4–3.5	0.4–4.0	0.2-0.4	30–70	20–80	5–10	20–200	40–300
Cabbage	3.0-6.0	0.3-0.6	2.0-4.0	1.5–2.0	0.3-0.6	20–40	30–50	3–7	20–40	30–60
Carrots	1.8– 2.5	0.2-0.4	2.0-4.0	2.0-3.5	0.2-0.5	20–40	20–60	4–10	30–60	30–60
Cauliflower	2.2-4.0	0.3-0.7	1.5-3.0	1.0-2.0	0.3-0.6	30–50	30–50	5–10	50-80	30–60
Celery	1.5–1.7	0.3-0.6	5.0-7.0	1.3–2.0	0.3-0.6	20–40	20–40	1–3	5–10	20–30
Cucumber	2.5–5.0	0.3-0.6	1.6–3.0	1.3–3.5	0.3-0.6	20–60	20–50	5–20	30–100	40–100
Lettuce	2.0-3.0	0.3-0.5	2.5-5.0	1.4–2.0	0.3-0.7	15–30	25–50	5–10	20–40	50–150
Peppers	4.0-5.0	0.3-0.5	5.0-6.0	0.9–1.5	0.4–0.6	20–50	25–80	5–10	30–100	30–150
Potatoes Critical low Concentra- tion	2.5	0.2	1.2	1.5	0.1	2.0	14.0	2.0	15	_
Pumpkin	3.0-4.0	0.3-0.4	2.0-3.0	0.9–1.5	0.3-0.5	20–40	20–50	5–10	40–100	40–100
Spinach	3.0–4.5	0.3-0.5	3.0-4.0	0.6–1.0	1.0–1.6	20–40	50–70	5–7	50–100	
Squash	3.0–5.0	0.3–0.5	2.0-3.0	1.0–2.0	0.3–0.5	25–40	20–50	5–20	40–100	40–100
Sweet onion	2.0-3.0	0.2-0.5	1.5–3.0	0.6–0.8	0.2-0.3	10–25	15–20	5–10	10–20	
Tomato	2.8–4.0	0.2-0.4	2.5-0.4	1.0–2.0	0.3-0.5	20–40	5–40	5–15	30–100	40–100
Watermelon	2.0–3.0	0.3–0.5	2.3–3.5	1.0–2.0	0.3-0.5	20–40	20–40	5–10	20–100	30–100

Ontario Ministry of Agriculture, Food and Rural Affairs (critical to normal concentrations)

There are a number of Crop Sufficiency Tables that are available from various jurisdictions. Most crop sufficiency ranges are similar. If you use a different Sufficiency Table, be sure to sample at their specific growth stage.



Broccoli or cauliflower – young mature leaf from center whorl

Potatoes – includes 4th leaf from growing tip

Carrots – recently matured leaves



Cabbage – wrapper leaf

