

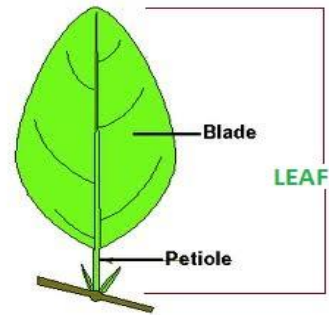
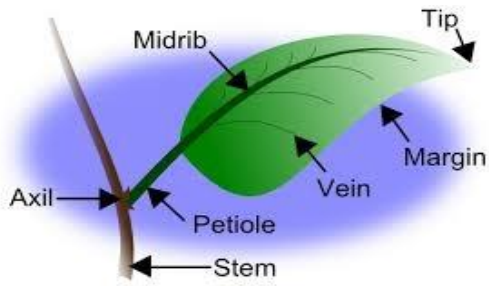
Plant Response report **CROP TYPE** names are shown in **bold** in column 1 below

CROP TYPE	SUGGESTED TIMING	SUGGESTED PLANT PARTS TO SAMPLE	QUANTITY REQUIRED
Almond	Mid to late January	Normal sized leaves from non-fruiting spurs on spur bearing cultivars, or mid-shoot on current season's extension growth on young trees, or non-spur bearing cultivars	2 leaves per tree from 30-40 trees
Apple	Early to mid season	Youngest mature leaf (blade & petiole). Mid portion of the current season's non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 30-40 trees
Apricot	Fruit set	Youngest mature leaf (blade & petiole). Mid portion of the current season's non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 30-40 trees
Asparagus	When in Fern	Upper 30cm of Fern	10-15 ferns
Avocado	Mid to late summer flush	Youngest mature leaf (blade plus petiole). Shoots that are not flushing nor fruiting. Select from the canopy of the trees at shoulder height, and exclude boundary trees.	1 leaf per tree from 30-40 trees
Banana	Sample during periods of active growth from medium sized suckers with broad leaves. Weather conditions may influence the timing	Strips of leaf blade 15-20 cm wide from each side of the mid-rib of the 3rd youngest leaf.	5-10 strips
Barley	Mid to Late Tillering (when the leaves have formed, and the leaf-sheaths are lengthening and becoming erect) - prior to stem extenuation.	Youngest mature leaf blade	50-60 leaf blades
Basil	Summer season during active growth	Youngest mature leaf (blade & petiole).	20-30 leaves
Bean (French, dwarf, snap & runner)	Early flowering (pods <10cm long)	Youngest mature leaf blade (without petiole).	20-30 leaf blades
Beetroot	Early maturing (when the root is 4 - 7.5cm in diameter)	Youngest mature leaf (blade & petiole).	20-30 leaves
Blackberry	During fruit set.	Youngest mature leaf (blade & petiole). Current season's non-fruiting canes.	30-40 leaves
Blackcurrant	During fruit ripening.	Youngest mature leaf (blade & petiole) from the mid third of the current season's extension growth.	30-40 leaves
Blueberry	pre harvest to early harvest	Youngest full-sized leaf (blade & petiole) from current season's fruiting shoots.	40-50 leaves
Boysenberry	During fruit set.	Youngest mature leaf (blade & petiole). Current season's non-fruiting canes.	30-40 leaves
Brassica	Mid-growth, or when the plant is starting to head.	For cabbages and cauliflower beginning to head sample the wrapper leaf. For all others, sample recently matured leaves.	15-20 leaves
Broccoli	Heading	Youngest mature leaf.	15-20 leaves
Brussels Sprout	Mid growth when the plants are beginning to head (heart, 7cm)	Youngest mature upper leaves.	15-20 leaves
Cabbage	Mid growth, as the plant is beginning to head.	Youngest mature wrapper leaf.	15-20 leaves
Cannabis	Vegetative growth prior to flowering	Youngest mature leaf (blade & petiole) from new growth	25 leaves (dried only - max 5 grams per sample to be submitted)
Canola	Pre-flowering	Youngest mature leaf	40-50 leaves
Capsicum	At flowering or early fruiting.	Youngest mature leaf (blade & petiole).	20-30 leaves
Carrot	Mid-growth	Youngest mature leaf	30-40 leaves
Cauliflower	When the head first appears (buttoning).	Youngest mature wrapper leaf (whole leaf)	15-20 leaves
Celery	When plants are half grown.	Youngest mature leaf (blade & petiole).	20-30 leaves
Cherry	Mid-late season (Jan-Feb)	Youngest mature leaf (blade & petiole). Mid-shoot leaves from the middle of the current season's non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 30-40 trees
Cherry fruit (EEM exclusive)	At harvest	Fruit	30-40 pieces of fruit
Chestnut	Mid season	First fully expanded leaf (blade + petiole) on current seasons wood	2 leaves per tree from 30-40 trees
Chick Pea	Vegetative	Youngest mature leaf (YML)	50-60 leaves
Chinese Cabbage	From mature plants	Youngest mature leaves from new growth	12-15 leaves
Citrus	Sample when leaves are 5-7 months old	Healthy mature leaves (blade & petiole) from the middle of non-fruiting extension growth taken at shoulder height	2 leaves per tree from 20-30 trees
Subterranean Clover	Pre-start flowering	Whole Leaves (leaf blade plus petiole)	approx 100 grams
White Clover	Pre-start flowering	Whole Leaves (leaf blade plus petiole)	approx 100 grams
Cocksfoot	First flowering	Whole shoot above 5cm	50-60 leaves
Cotton	Vegetative to flowering (some data collected at 42 DAS)	Youngest mature leaf blade unless stated otherwise	40-60 leaves
Crisp Head Lettuce	Heading	Whole leaf	15-20 leaves
Cucumber (Protected cropping)	Early flowering.	Youngest mature leaf (blade & petiole). 30-45 cm from the growth tip of the plant.	20-30 leaves
Custard Apple	Unknown	Youngest mature leaf (blade & petiole).	2 leaves per tree from 20-30 trees

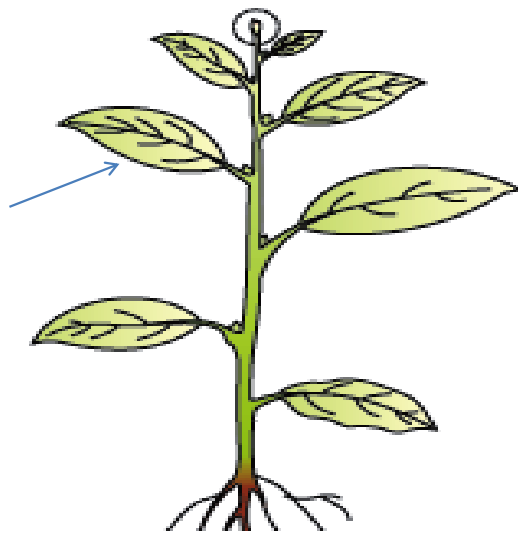
Eggplant (Protected cropping)	When in full bloom at a mid growth stage.	Youngest mature blade, minus petiole.	30-40 leaves
Eucalyptus Globulus (Tas Blue Gum)	Juvenile plants	Youngest mature foilage	Collect 2 leaves per plant from 30-40 trees
SHINING GUM (Eucalyptus Nitens)	Juvenile plants	Youngest mature foilage	Collect 2 leaves per plant from 30-40 trees
Faba Bean	Early flowering	Youngest mature leaf	50-60 leaves
Feijoa	Late summer	Youngest mature leaf (blade & petiole). Mid portion of the current season's non-fruiting laterals (extension growth), taken at shoulder height.	30-40 leaves
Field Pea	Pre-flowering	Youngest mature leaf (blade + petiole)	40-50 leaves
Fig	Mid summer	First full-sized basal leaf from moderately vigorous shoots	Collect approx 50 leaves (1-2 per tree) for analysis.
Fodder Beet	50-80 days after sowing	Youngest mature leaf.	20-30 leaves
Garlic	Bulbing.	Youngest matured leaves (without the white).	15-20 leaves
Ginger	2-3 months after planting	Leaf blade (excluding sheath or petiole). Published standards refer to upper leaf blade only	10-15 leaves
Gooseberry	During fruit set.	Youngest mature leaf (blade & petiole). Current season's non-fruiting canes.	30-40 leaves
Grape	When the majority of vines are flowering	Petioles (leaf stalk) of a basal leaf opposite a bunch cluster. Remove petioles immediately after sampling.	40-50 petioles
Grapefruit	Late summer	5 -7 month old leaf (blade & petiole). Spring flush growth from non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 20-30 trees
Hazelnut	Late summer	Leaf with petiole. Mid-shoot leaves from current seasons growth.	2 leaves per tree from 20-30 trees
Hemp	Summer	10cm base section plus 10cm section 1 metre from growing tip	total of 10 plants (20 pieces)
Honeydew Melon	Mid-growth	Youngest mature leaf	15-20 leaves
Hops	Mid-season.	Youngest mature leaf	20-30 leaves
Hydrangea	Mature	Youngest mature leaf blade (no petiole).	20-30 leaf blades
Kale (Forage)	At mid-growth.	Youngest mature leaf.	20-30 leaves
Kiwifruit - Gold (PR early)	September-October (Before fruit set)	Leaf & petiole of youngest mature leaf	2 leaves each from 20 vines
Kiwifruit - Gold (PR late)	November-January & February-March seasons	Leaf & petiole. Second leaf past the final fruit cluster on the fruiting lateral	2 leaves each from 20 vines
Kiwifruit - Green (PR early)	October-November (Before fruit set)	Leaf & petiole of youngest mature leaf	2 leaves each from 20 vines
Kiwifruit - Green (PR late)	Summer (Dec - Feb) & Autumn (March-April)	Leaf & petiole. Second leaf past the final fruit cluster from non-terminated female vines	2 leaves each from 20 vines
Lemon	Late summer (February to March)	5 -7 month old leaf (blade & petiole). Spring flush growth from non-fruiting laterals (extension growth), taken at shoulder height	2 leaves per tree from 20-30 trees
Lettuce (Protected cropping)	When the head has reached half size.	Wrapper leaf.	15-20 leaves
Lillium	Unknown	Most recently mature leaves	40-50 leaves
Linseed	Pre-flowering	Youngest mature leaf (blade + petiole)	40-50 leaves
Lucerne	At early flowering (10% of crop)	Mid-stem leaves	100+ leaves
Lupin	Pre-flowering	Youngest mature leaf (Data refers to L. angustifolius unless otherwise stated).	30-40 leaves
Lychee	Sample leaves behind flower clusters 1-2 weeks after panicle emergence during May-July (in SE Qld)	Most recently matured leaf behind the fruiting panicle or behind the flush in non-bearing trees. Avoid insect damaged trees.	Collect 4 pairs of leaves from each of 20 trees.
Macadamia	Summer flush leaves should be sampled in Spring when leaf nutrients are more stable and leaves are 6-7 months old (and before new growth from terminal buds exceed 1cm in length)	Mature Leaf (with petiole) from second or third whorl of current seasons growth.	2 leaves per tree from 20-30 trees
Maize	From Tasselling to initial Silk	Whole leaf from the ear node (ear leaf)	15-20 leaves
Mandarin	Late summer	5 -7 month old leaf (blade & petiole). Spring flush growth from non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 20-30 trees
Mango	Sampling recommended after flowering	Collect leaves from non-bearing branches.	2 leaves per tree from 20-30 trees
Nashi	Mid season (January and February).	Youngest mature leaf (blade & petiole). Mid portion of the current season's non-fruiting laterals (ext growth) taken at shoulder height.	2 leaves per tree from 20-30 trees
Navy Bean	Not stated	Youngest mature leaf (blade + petiole)	30-40 leaves
Nectarine	Mid season (January and February).	Youngest mature leaf (blade & petiole). Mid portion of the current season's non-fruiting laterals (ext growth) taken at shoulder height.	2 leaves per tree from 20-30 trees
Oat	Mid to late tillering. Just prior to stem extension.	Youngest mature leaf blade	50-60 leaves
Oak	Summer	Youngest mature leaves from new growth	15-20 leaves
Okra	15 weeks	Youngest mature leaves from new growth	10-15 leaves
Olive	Mid-summer (January)	Fully expanded basal to mid-shoot leaves	40-50 leaves
Onion	Mid-growth	Youngest mature leaf blade	30-40 leaf blades
Orange	Late summer	5 -7 month old leaf (blade & petiole). Spring flush growth from non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 20-30 trees
Pak-choi	Summer	leaf blades from fully expanded leaves	15 leaf blades
Parsley	Summer	mature leaves from new growth	15 leaves

Parsnip	Mid growth when the root is 1 - 3 cm in diameter.	Youngest mature leaf.	20-30 leaves
Passionfruit	May to August, prior to active vegetative growth	Youngest fully expanded leaf (blade & petiole)	20-30 leaves
Pawpaw	Spring	Petiole of the youngest fully expanded leaf subtending to the most recently opened flower	1 petiole per tree from 10-15 trees
Pea	Mid-growth	Leaflet of the youngest mature compound leaf	30-40 leaflets
Peach	Summer (January or February)	Leaves from the middle of current season's extension growth	2 leaves per tree from 20-30 trees
Peanut	Pre-flowering to flowering	Youngest mature leaf blade	40-50 leaves
Pear	Late January to mid February	Entire leaf (blade & petiole) from a mid shoot position on the current season's non-fruiting laterals (extension growth), taken at shoulder height.	2 leaves per tree from 20-30 trees
Pecan	Shell hardening to early kernel development	Pairs of leaflets from midway along youngest fully expanded leaf on fruiting wood. Select from branches up to 2m above ground.	10 leaflets from each of 10 trees to represent a planting
Perennial Rye Grass	At a vegetative growth stage, usually late spring or autumn flush.	Leaf blades. Cut at grazing height.	approx 100 grams
Persimmon	Anthesis	Youngest mature leaf (blade & petiole) from non-fruiting shoots.	2 leaves per tree from 20-30 trees
Phalaris	Vegetative, 3-5 weeks re-growth	Youngest mature leaf blade	80-100 leaf blades
Pineapple	Prior to flower induction	During vegetative growth, sample the YFEL (known as the D leaf) which is generally the oldest leaf on the plant. and retain the bottom 150mm (the basal white tissue)	Collect at least 10 leaves from throughout the area tested
PINE SEEDLING (Radiata)	Seedling	Whole plant above ground unless otherwise noted	10-20 seedlings
PINE MATURE (Radiata)	Plantation trees in summer	Needles from 10-15 terminal cuttings	10-15 terminal cuttings
Pistachio	During a one month period prior to harvest	Single leaflets selected from the terminal or 2 opposite sub-terminal leaflets of leaves located in the middle of non-bearing branches	Select at least 6 leaflets from 5 trees chosen to represent a management area.
Plum	Mid to late Summer	Leaves from the middle of current season's extension growth	2 leaves per tree from 20-30 trees
Poppy	At Hook stage	Whole leaf	20-30 leaves
Potato	Early flowering unless stated	Youngest mature leaf (blade & petiole).	20-30 leaves
Pumpkin	Early fruiting	Youngest mature leaf (blade & petiole) - 9th node	15-20 leaves
Radish	When the root is half grown	Youngest mature leaf (blade & petiole).	30-40 leaves
Raspberry	Two to three weeks after the final pick.	5th to 12th leaves from the terminal 15 cm of the primocane	30-40 leaves
Rice	3-5 (Feeke's Scale) which is mid to late tillering (tiller formation to leaf sheaths strongly erected).	Youngest emerged leaf blade.	40-50 leaves
Rockmelon	At harvest	Youngest mature leaf blade	20-30 leaf blades
Rose (Greenhouse)	From when buds are approximately pea size till the petals begin colouring.	Five leaf leaflets, including petioles, from flowering shoots.	15-20 leaflets
Silverbeet	When half grown and the base of the plant is 4 - 6 cm in diameter.	Youngest mature leaf. One leaf per plant	20-30 leaves
Sorghum	Vegetative & early flowering	3rd Leaf Blade below Head	20-30 leaf blades
Soy Bean	At flowering	Upper most mature leaf blade (ie third and fourth leaf blade below apex)	30-40 leaves
Spinach	4-6 weeks old (30 to 50 days after sowing).	Youngest mature leaf (blade & petiole).	40-50 leaves
Strawberry - generic	During growth	Leaf blades (excluding or including petioles) from youngest mature leaves.	30-40 leaf blades
Sugar Beet	50-80 days after sowing	Youngest mature leaf.	20-30 leaves
Sugar Cane	During rapid growth	20 cm section of the top visible dewlap leaf	approx 10 leaf sections
Swede	Bulb development to when bulb is half	Youngest mature leaf.	20-30 leaves
Sweet Corn	80% of crop in silk	Whole leaf from the ear node.	15-20 leaves
Sweet Potato	28 days after transplanting	Youngest mature leaf blade	20-30 leaf blades
Tall Fescue	Cut in summer	Whole shoot	40-60 shoots
Tea	At maximum growth (plucking)	Youngest mature leaf.	40-60 leaves
Tomato (Greenhouse)	When first fruits mature.	Youngest mature compound leaf (blade plus petiole). 20 cm from the top of the plant.	20-30 compound leaves
Tomato - generic	Flowering at 2nd Node	Youngest mature compound leaf (blade plus petiole).	20-30 compound leaves
Triticale	Late tillering. When the leaves have formed, and the leaf-sheaths are lengthening and becoming erect (just prior to extension).	Whole above ground portion of the plant. Random sites throughout the sampling area.	20-30 plants
Turf	Undefined	Whole leaf (no roots). Cuttings are okay	100 grams of leaf material
Turnip	When the root is half grown.	Youngest mature leaf.	20-30 leaves
Walnut	Summer - December to January.	Leaf with petiole. Terminal leaflet of basal leaves from shoots of average vigour.	2 leaves per tree from 20-30 trees
Watercress	Middle of growing season	Youngest mature leaves from new growth	30-40 leaves
Watermelon - generic	Mid-growth	Youngest mature leaf	15-20 leaves
Wheat	Mid to Late Tillering	Youngest mature leaf blade	50-60 leaves
Zucchini	Early flowering.	Youngest mature leaf (blade & petiole).	15-20 leaves

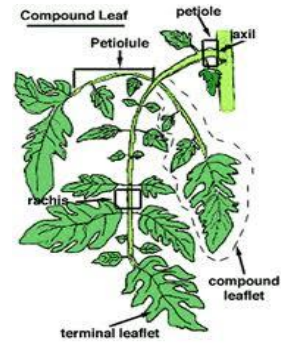
Definition of Terms and Abbreviations used:



Youngest Mature Leaf, also known as Youngest Fully Expanded Leaf (YFEL). Normally the 4th or 5th leaf down from the growing tip



Compound leaf on Tomato plant



PLEASE USE THE CROP TYPE NAMES LISTED IN BOLD IN COLUMN 'A' WHEN COMPLETING AGVITA'S SAMPLE SUBMISSION FORMS, OR WHEN YOU HAVE TROUBLE WITH A PLANT RESPONSE REPORT NOT RECOGNISING A CROP NAME.

