



ARL Plant Sampling Guide

Last Updated 2/2/05

CROP TYPE	RECOMMENDED SAMPLE PERIOD	PART TO SAMPLE	QUANTITY	RECOMMENDED EXTRA TESTS
Almonds	January-February	Youngest mature leaf blade + petiole from the mid portion of current seasons non-fruiting extension growth	40-60 leaves	
Alstroemeria	Pre-flowering	Youngest mature leaf from the mid portion of non-budding stems	25-30 leaves	
Apple	January-February	Youngest mature leaf blade + petiole from the mid portion of current seasons non-fruiting extension growth	40-60 leaves	
Apricot	January-February	Youngest mature leaf blade + petiole from the mid portion of current seasons non-fruiting extension growth	40-60 leaves	Chloride
Asparagus (Fern)	February-March	Fern from the upper 30cm portion of the plant	10-15 ferns	
Asparagus (Spears)	At spear emergence	Upper 9cm of emerged spear	20-30 spears	
Avocado	April-May	2-4th fully expanded young leaf + petiole from bud on non-fruiting terminals	40-50 leaves	Chloride
Barley (Tillering)	Late tillering – start of stem elongation (Zadoks scale: 30, Feekes score: 5)	Whole above ground plant	30-40 plants	
Barley (Ear Emergence)	When head just emerges from the boot (Zadoks scale: 51, Feekes score: 10.1)	Whole above ground plant	20-30 plants	
Bean	Early flowering	Youngest mature leaf	20-30 leaves	Molybdenum
Beetroot	Mid Growth to early maturity	Youngest mature leaf blade + petiole from fully developed leaves	20-30 leaves	
Blackberry	During fruit set	Youngest mature leaf blade + petiole from the mid portion of current seasons non-fruiting canes	40-60 leaves	
Blackcurrant	2-3 weeks prior to fruit ripening	Youngest mature leaf blade + petiole from the mid portion of current seasons growth	40-60 leaves	
Blueberry	Early harvest	Youngest mature leaf blade + petiole from current seasons fruiting shoots.	40-60 leaves	
Boysenberry	During fruit set	Youngest mature leaf blade + petiole from the mid shoot of current seasons non-fruiting canes	40-60 leaves	
Brassica	Mid-growth	Youngest mature leaf	20-30 leaves	Molybdenum
Broccoli	Early heading	Youngest mature wrapper leaf	20-30 leaves	Molybdenum
Brussel Sprout	Sprout initiation	Youngest mature leaf from upper plant	20-30 leaves	Molybdenum
Cabbage	Mid-growth	Youngest mature wrapper leaf	20-30 leaves	Molybdenum
Calla Lily	Early flowering	Youngest mature leaf	30-50 leaves	
Capsicum	At flowering or early fruiting	Youngest mature leaf blade + petiole from upper third of plant	20-30 leaves	
Carnation	6-8 weeks after planting	4th and 5th pair of leaves from the base of non-flowering stems	40-60 leaves	Molybdenum
Carrot	When root is 1-3cm diameter	Youngest mature leaf with extended petiole removed	30 leaves	Molybdenum
Cauliflower	Mid growth to early heading	Youngest mature wrapper leaf	20-30 leaves	Molybdenum
Celery	Mid growth	Youngest mature leaf blade + petiole	20-30 leaves	Molybdenum
Cereal (Tillering)	Late tillering – start of stem elongation (Zadoks scale: 30, Feekes score: 5)	Whole above ground plant	30-40 plants	
Cereal (Ear Emergence)	When head just emerges from the boot (Zadoks scale: 51, Feekes score: 10.1)	Whole above ground plant	20-30 plants	
Cherry	January-February	Youngest mature leaf blade + petiole from the mid-portion of current seasons extension growth	40-60 leaves	Chloride
Chestnut	January-February	Youngest mature leaf blade + petiole from the current seasons non-fruiting shoots	40-60 leaves	
Choumoellier	Mid-growth to early bloom	Youngest mature leaf	20-30 leaves	Molybdenum
Chrysanthemum	Early to mid flowering	5th or 6th leaf from tip of flowering stem	20-30 leaves	
Citrus	February- March	Youngest mature leaf blade + petiole from non-fruiting spring extension growth	40-60 leaves	
Courgette	Early flowering	Youngest mature leaf blade + petiole	15-20 leaves	Molybdenum
Cucumber (glasshouse)	Early flowering	Youngest mature leaf blade + petiole taken 30-45 cm from growth tip of plant	20 leaves	Molybdenum
Cymbidium	Unpinched plant	Mature 5th or 6th leaf pair from stem tip	20-30 leaves	
Egg Plant	Mid growth or full bloom	Youngest mature leaf blade without petiole	20-30 leaves	
Feijoa	February-March	Youngest mature leaf blade + petiole from mid portion of current seasons non-fruiting extension growth	40-60 leaves	
Garlic	Bulbing	Youngest mature leaf from upper third of plant	30-50 leaves	
Gooseberry	During fruit set	Youngest mature leaf blade + petiole from current seasons non-fruiting canes	40-60 leaves	
Grape (Leaf blade)	Verasion	Mid shoot leaves without petiole	30-40 leaves	
Grape (Petiole)	Flowering November-December	Petiole taken from opposite the basal cluster	70 petioles	
Grapefruit	February - March	Youngest mature leaf blade + petiole from non-fruiting spring extension growth	40-60 leaves	
Gypsophila	Mid-season	Youngest mature leaf	40-60 leaves	
Hazelnuts	February - March	Leaf blade + petiole from mid-shoot leaves from current season's growth.	40-60 leaves	Chloride
Hops	Mid season	Youngest mature leaf blade taken from mid seasons growth	20-30 leaves	Molybdenum, Chloride
Kale	Mid-growth	Youngest mature leaf	20-30 leaves	Molybdenum
Kiwifruit	Spring (before fruitset) Autumn (after fruitset)	Before fruitset, youngest fully expanded leaf + petiole from current seasons cane. After fruitset, second youngest mature leaf blade + petiole past final fruit cluster on fruiting cane	20-30 leaves	Molybdenum (2-3 yrs), Chloride
Kumara	Early to mid tuber development	Youngest mature leaf blade plus petiole	20-30 leaves	
Lemon	February - March	Youngest mature leaf blade + petiole from non-fruiting spring extension growth	40-60 leaves	

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Lettuce (glasshouse)	Early heading	Wrapper leaf	20-30 leaves	
Lisianthus	Early flowering	Youngest mature leaf	30-50 leaves	
Lucerne	Active growth period	Top 15 cm of plant	20-30 plant tops	Iodine
Macadamia	April- May	Youngest mature leaf + petiole below non-fruiting or flushing growth terminals	40-60 leaves	Chloride
Maize (50% Silking)	At 50% silking	Ear leaf (leaf directly at base of cob)	20-25 leaves	
Maize (At 30 cm)	Sedling (if nutrient disorder suspected)	Whole shoot	30-40 plants	
Maize (At 40 cm)	Sedling (if nutrient disorder suspected)	Youngest fully expanded leaf	20-25 leaves	
Mandarin	February-March	Youngest mature leaf blade + petiole from non-fruiting spring extension growth	40-60 leaves	
Mixed Pasture	Active growth period –Spring and Autumn	Cut representative sample of pasture at grazing height	500g	Iodine
Nashi	January-February	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	
Nectarine	January-February	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	Chloride
Oats (Tillering)	Late tillering – start of stem elongation (Zadoks scale: 30, Feekes score: 5)	Whole above ground plant	20-30 plants	
Oats (Ear emergence)	When head just emerges from the boot (Zadoks scale: 51, Feekes score: 10.1)	Whole above ground plant	30-40 plants	
Olive	January-February	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	Chloride
Onion	Mid-growth	Youngest mature leaf	30-50 leaves	Molybdenum
Orange	February-March	Youngest mature leaf blade + petiole from non-fruiting spring extension growth	40-60 leaves	
Oriental Lily	Early flowering	Youngest mature leaf	30-40 leaves	
Parsnip	Mid-growth -root is 1-3 cm in diameter	Youngest mature leaf	20-30 leaves	Molybdenum
Passionfruit	September	Youngest mature leaf blade + petiole from actively growing laterals	20-30 leaves	
Pea	Between late flowering and harvest	Youngest mature compound leaf	20-30 leaves	Molybdenum
Peach	January-February	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	Chloride
Pear	January-February	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	
Persimmon	February-March	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	
Pinus Radiata	February-March	Current seasons full length foliage from second order branches taken from the tree crown (top third)	15-20 tips	
Plum	January-February	Youngest mature leaf blade + petiole from mid portion of current non-fruiting extension growth	40-60 leaves	
Potato (Petiole)	Beginning early season approximately 50 days after emergence (Russet Burbank)	Petiole from the fourth or fifth leaf from tip	30 petioles	Molybdenum
Potato (Leaf and petiole)	Early flowering to full bloom	Youngest mature leaf blade + petiole taken from growing tips	20-30 leaves	Molybdenum
Protea	Mid-season	Youngest mature leaf	40-50 leaves	
Pumpkin/Squash	During fruit set	Youngest mature leaf blade + petiole	20-30 leaves	Molybdenum
Radish	When tuber is half grown	Youngest mature leaf blade + petiole	20-30 leaves	
Raspberry	2-3 weeks post harvest	Youngest mature leaf blade + petiole from the terminal 15 cm of non-fruiting canes	40-50 leaves	
Rose	Flowering	Youngest mature leaf blade + petiole from upper part of the flowering stem	20-30 leaves	
Ryegrass	Active growth period	Leaf blades cut at grazing height	500g	Iodine
Sandersonia (Early season)	At bud formation	Youngest mature leaf taken from 3-4 leaf from tip	40-50 leaves	
Sandersonia (Mid season)	After bud formation	Youngest mature leaf taken from 3-4 leaf from tip	40-50 leaves	
Silverbeet	Half-grown	Youngest mature leaf blade + petiole	20-30 leaves	Molybdenum
Spinach	4-6 weeks old	Youngest mature leaf blade + petiole	20-30 leaves	Molybdenum
Strawberry	Early maturity November-December	Youngest mature leaf	30-50 leaves	Chloride
SweetCorn	Sedling (if nutrient disorder suspected)	5th leaf from plant tip taken when plants are between 30 and 70 cm tall	20-25 leaves	
Tamarillo	February –March	Youngest mature leaf blade plus petiole taken from well developed, actively growing laterals	20-30 leaves	
Tomato (field)	Early fruit maturity	Youngest mature compound leaf + petiole taken from the top third of the plant	20-30 leaves	
Tomato (glasshouse)	Early fruit maturity	Youngest mature compound leaf + petiole taken from the top third of the plant	20-30 leaves	
Turnip	When root is half grown	Youngest mature leaf	20-30 leaves	Molybdenum
Walnut	December-January	Terminal leaflet of basal leaves from shoots of average vigour taken at mid season growth	60-100 leaves	Chloride
Wheat (Tillering)	Late tillering – start of stem elongation (Zadoks scale: 30, Feekes score: 5)	Whole above ground plant	30-40 plants	
Wheat (Ear Emergence)	When head just emerges from the boot (Zadoks scale: 51, Feekes score: 10.1)	Whole above ground plant	20-30 plants	
White Clover	Active growth period	Leaf plus petiole	50 leaves	
Brassica	Current diet	Whole plant	2 kg	Feed Quality
Compound feed/Meal	When Purchased	Representative sample	500 g	Feed Quality
Hay	Mature	Representative sample of hay comprising at least 6 grab samples from at least 6 bales	500 g	Feed Quality
Mixed Pasture	Current diet	Representative sample of pasture taken at grazing height	500 g	Feed Quality
Silage\ Baleage	Preharvest, Ensiled, At feed out	Representative sample of silage comprising at least 6 grab samples from the stack or bale	1 kg	Feed Quality

Notes to changes highlighted in yellow

1. Compound feed/ Meals previously on two separate rows now combined on one row
2. Silage changed to silage/baleage and timing changed to include preharvest, ensiled, at feed out
3. potato petiole has had timing change to include through the whole season for variety Russet Burbank
4. Sweetcorn added to plant sampling guide.