

PLANT ANALYSIS SAMPLING PROCEDURES



SAMPLE PREPARATION

Collect about one pint of loosely packed tissue per sample. One cupful may be sufficient if gathering petioles. Submit in plant tissue sample bags or plain paper bags if possible. Plastic bags are not advised. Consider sampling "Good" and "Bad" areas for comparison. If in doubt, sample *most recently mature leaves (MRM)*. Samples are washed at the lab only on request (additional \$1 per sample)

PLANT ANALYSIS RATINGS

Ratings are a function of factors such as plant type, and time and method of sampling. They may become misleading if the client provides insufficient information to the lab when submitting samples, or if wrong plant parts or test packages are selected.

*Ratings are provided only on request. See **CAUTION!** at end of page2.*

Please follow these simple instructions if ratings are required:

- Always enter "crop" or variety (up to 14 characters).
 - The **standard report** provides data and ratings in a numeric format. At the bottom of the report the average of the sufficiency range is reported as a norm for the indicated crop. For this reason, do not include more than one crop per report.
 - The **graphical report** form is limited to 1 sample and 1 "crop" per page. Therefore, order of crops listed is not important in this case.
- Enter the CROP CODE *exactly* as shown here for your crop (*limited options*).
- Enter your sample reference, such as field # (up to 5 alphanumeric characters).

e.g. Sample ID: 23-SB ZINFANDEL BLM P = Zinfandel grapes sampled at bloom stage and petioles were sampled. (Note that rootstock may have an impact though.)

KEY TO STAGES OF GROWTH

BLM bloom sampling	EGF early green fruit	PBL prebloom
VER veraison	PRE preharvest	EBL early bloom
HAR harvest	ERF early ripe fruit	FBL full bloom
ESN early season	FRF full ripe fruit	LBL late bloom
MSN midseason/growth	MIT mid tillering	FSQ first square
LSN late season	MAT maximum tillering	EBL first bloom
VEG vegetative growth	PAI panicle initiation	PBL peak bloom
EFL early flowering	SIL silking	FOB first open boll
BUT buttoning	TAS tasseling	ESN 3-4 leaf
BUL fruit bulking	EFG early fern growth	TIL tillering
HEA early heading	MID midgrowth	JNT jointing
PRE preharvest	MFG mature fern growth	BOO booting
HAR first harvest	MRM most recently mature	HEA heading

KEY TO PLANT PARTS

B blade	L leaf/leaflet	S stem/midstem/seedling
C center/cluster	M midrib	T tops
F flag leaf	P petiole	U underground stem
H hulls	R root	W whole above-ground portion

AVAILABLE LIST OF CROP CODES

ALFALFA -	EBL-T (PT2)	[EBL-C (SO ₄ -S) + EBL-S (PO ₄ -P + K) + EBL-W (B + Mo)]
Whole Bale = HAR-W	Top 6-inch	[center leaves + center stems + whole top third]
ALMONDS/PLUMS/PRUNES/CHERRIES/APRICOTS/SHIPP APRICOTS/CANNG APRICOTS -	MAR-L APR-L MAY-L MSN-L (Jun-Jul) LSN (Aug-Sep) HAR-H (boron in hulls)	Select MRM leaves from non-fruiting, non-expanding spurs.
ARTICHOKES -	EBL-P	FBL-P (midharvest) HAR-P (lower 6-inch petiole) HAR-L
ASPARAGUS -	MFG-T (top 12" of fern for total nutrients)	MID-T (top 4" fern for NO ₃ -N, PO ₄ -P, K)
AVOCADOS -	LSN-L (mid Aug-mid Oct. Select 5 to 7-month-old spring cycle terminal leaves)	
BANANAS -	HAR-L (center strip of 2 nd to 3 rd fully developed leaf from top)	
BEANS -	EBL-B (MRM trifoliolate leaf or blade)	ESN-P PBL-P EBL-P
	Do not include petiole here	Include petiole here
BEEF/TABLE -	ESN-L (5 weeks after seeding)	PRE-L (9 weeks after seeding)
BLUEBERRIES -	MSN-L (midshoot leaves off current season's growth, near/at harvest, Jun-Aug)	
BROCCOLI -	BUT-L	ESN-M BUT-M PRE-M
BRUSSELS SPRTS -	MID-L or MID-M (midgrowth, early sprouts)	PRE-M
CABBAGE -	HEA-L or HEA-M (2- to 3-month-old wrapper leaves or midribs)	
CANEERRIES/RASPBERRIES/BLACKBERRIES/BOYSENERRIES -	ESN-L (pre/early bloom)	
	MSN-L (Jun-Aug)	MRM leaves from laterals of primo canes.
CARROTS -	MSN-L (tallest leaf)	MSN-P (petiole of tallest leaf) After 4" tall/60 days after seeding.
CAULIFLOWER -	BUT-L	ESN-M BUT-M PRE-M
CELERY/-	MID-L or MID-P (4 to 6 wks after seeding)	PRE-L or PRE-P (preharvest)
CELERIAC	MRM leaf, or petiole below 1 st node.	Petiole above 1 st node of MRM leaf.
CHARD -	ESN-L (5 weeks after seeding)	PRE-L (9 weeks after seeding)
CHESTNUTS -	MSN-L (MRM leaves on current season's growth)	
CHINESECABBAGE -	HEA-L	HEA-M
CITRUS -	LSN-L	Select terminal spring-flush leaves from non-fruiting shoots in Sep-Oct.
CLOVER -	EBL-T (top third of plant)	
COFFEE -	NON-L (non-bearing, 4 th pair from tips)	BEA-L (bearing branch, 4 th pair from tips)
		Sample after flowering/before cherry ripening
CONIFERS -	No code except for seedlings. Select 3 rd whorl or terminal 3" cuttings from current season's growth, ¼ to ½ way down from top, mid Sep-mid Dec.	S (whole seedlings, including washed roots, after mid Oct)
CORN-	ESN-W (6"-16" tall)	MSN-L (pretassel) TAS-L (tasseling) SIL-L (silking)
	whole seedling	3 rd leaf/45-80 days opposite/below primary ear
	ESN-M (6"-12" tall)	MSN-M (3ft-6ft tall) TAS-M (tasseling-silking)
	Select basal 4"-5" of midrib if requiring NO ₃ -N, PO ₄ -P, and K.	Above primary ear

COTTON - FSQ-P (PT5) EBL-P (PT5) FBL-P or L FOB-P (PT5) PRE-P (PT5)
Usually before early July, ~end July, ~end August, ~mid September.
Select from 4th to 5th node from tip of plant at all stages of growth.

CRANBERRIES - LSN-T (tops above fruiting uprights on current season growth, mid-Aug to mid-Sep)

FEIJOAS/GUAVAS - MSN-L (3rd pair of leaves back from fruiting terminals, Jul-Aug)

FILBERTS/HAZELNUTS - MSN-L (MRM midshoot leaves from current season's growth, Jul-Aug)

FLOWERS - No code, but generally select MRM leaves.

GARLIC/ - ESN-L (before bulbing) BUL-L (bulbing) LSN-L (post-bulbing)
CHIVES Discard lower white section of MRM leaves.

GINSENG - No code, but select MRM leaves.

GRAPES - PBL-P or B or L Usually before May. Select petioles P, only from unshaded leaves.
BLM-P or B or L Select from opposite the basal cluster when ¾ calyptras fallen off.
MSN-P or B or L Berry filling. Select 2nd leaf away from last cluster.
VER-P or B or L Berry softening. Select 6th to 7th leaf from growing tip.
HAR-P or B or L Select MRM leaf, usually 6th to 7th leaf from growing tip.
Petioles are better for determining sodium and chloride toxicities.
Blades are better for determining boron toxicities.

GRASS/PASTURE/TIMOTHY/ORCHARDGRASS/ - No code, but select whole tops.

HOPS - JUN-P JUL-P AUG-P
Select petioles from MRM leaves on main vine, 5 to 6 ft from ground. Sap will stain!

KIWIFRUIT - MAY-P or MAY-L MSN-P or MSN-L NOV-P or NOV-L
Select 1st to 3rd leaf beyond fruit, or mid-cane leaves on non-bearing vines.

LETTUCE/ - ESN-L or ESN-M (4th to 6th leaf stage) HEA-L or HEA-M HAR-L or HAR-M
ENDIVE FES-M FHE-M FHA-M Select MRM leaves L, or midribs M. F = Fall planting

LITCHI - No code, but select MRM leaves.

MACADAMIAS - No code, but select leaves from 2nd whorl below bud before new flush.

MELONS/CANTALOUPE/SQUASH/PUMPKINS/CUCUMBERS [GH CUCUMBER/LETTUCE]
WATERMELONS VEG-P or VEG-L EFL-P or EFL-L BUL-P or L HAR-P or L [MRM-L]
CUCURBITS- Select MRM leaves, 5th to 6th from growing tip. [GH = GREENHOUSE PROD]

MINT - EBL-L Select leaves from top 6" of first unbranched stem. Test for total levels.
ESN-S MAY-S JUN-S JUL-S AUG-S Test for nitrate nitrogen only.
Select top 6" of first unbranched stem, stripped of leaves.

NECTARINES/OLIVES/PEACHES/FREEST PEACHES/CLING PEACHES/FIGS -
MAR-L APR-L MAY-L MSN-L (June-July) LSN (Aug-Sep)
Select basal to midshoot leaves/leaflets from current season's fruiting shoots.

ONIONS - ESN-P or ESN-L (tallest leaf before bulb enlargement) MSN-P or L LSN-P or L
ESN-R (washed roots before bulb enlargement) More reliable for NO₃-N readings.

ORNAMENTALS - No code, but select MRM leaves for general guidelines.

PALMS - No code, but select middle leaflets from MRM leaves, discarding the petiole/midrib.

PAPAYAS - PBL-P (when flower buds are just visible in the axil)
PARSLEY - No code
PEAS - EBL-L (Select MRM leaves, usually 3rd to 5th from growing tips)

PECANS - MSN-L (paired midshoot leaflets from non-fruiting shoots in July) LSN-L (Aug-Sep)

PEPPERS - VEG-P or VEG-L EFL-P or EFL-L EGF-P or L PRE-P or L MRM leaves
[GH PEPPERS = MRM-L]

PERSIMMONS - LSN-L (MRM leaves from non-fruiting shoots, Sep-Oct)

PINEAPPLES - EFL-L (leaf at early inflorescence, discarding white base)

PISTACHIOS - MAR-L APR-L MAY-L MSN-L (Jun-Jul) LSN-L (Aug-Sep) Select terminal leaflets

POTATOES - ESN-P or ESN-L MSN-P or MSN-L LSN-P or LSN-L
prebloom-50 days fullbloom-70 days 90 days
Select MRM leaves, usually 4th to 5th from growing tip. Petioles = PT6 Leaves = PT2

RICE/ MIT-L (35-55 days) MAT-L (55-65 days) PAI-L (60-80 days) BOO-F (flag)
WILD RICE - May-June June-July panicle initiation Boot/headling
After 5th leaf stage Select MRM "Y" leaf Leaf below ear

ROSEMARY - No code, but select 2" to 3" terminal cuttings in summer.

SAFFLOWER - -L (midstem leaves) To determine total levels of nutrients.
ESN-S (8"-12" bolted) PBL-S EBL-S Select stem half way down, discarding leaves.

SORGHUM - ESN-W (12" tall) MSN-L (37-65 days) HEA-L (2nd to 3rd leaf below head)

SPINACH - ESN-L (30-50 days) PRE-L MID-P

STRAWBERRIES - MSN-P or MSN-L (early fruiting stage) MSN-B for SO₄-S

SUDAN GRASS - No code, but select whole tops, 5 weeks between clippings.

SUGARBEET - ESN-P MSN-P or MSN-B PRE-P
6" to 8" growth 5 to 6 weeks prior to harvest

SUGARCANE - MSN-L (4th to 6th leaf from top) MSN-N (discard midrib for nitrogen, N)

SUNFLOWERS - PBL-L (3rd to 4th leaf below flower bed)

SWEET POTATOES - MSN-P or MSN-L (MRM leaves during first half of growing season)
Also VEG-P (vining) and BUL-P (root bulking) but for NO₃-N only

SWEET CORN - TAS-L (6th leaf from base) SIL-L (leaf opposite 1st ear) For total levels.
ESN-M (6" to 12" tall) MSN-M (3ft to 6ft tall) TAS-M (tasseling-silking)
Select basal 4" to 5" of midrib for NO₃-N, PO₄-P, and K.

TOMATOES - CANN PR CH GR FM TRELLIS [GH TOMATOES = MRM-L]
[Also EGGPLANTS] VEG-P or L EFL-P or L EGF-P or L (1" diam) ERF-P or L (10-20% red)
[but only MRM-B] Select MRM leaves, usually 4th to 5th from top, or opposite top flowering cluster.
[at 1st small fruit] Also FRF-P (full ripe, for fresh market tomatoes – FM TOMATOES)

TURF - No code, but specify variety for accurate ratings.

WALNUTS - MAR-L APR-L MAY-L MSN-L (June-July) LSN-L (Aug-Sept)
Select terminal leaflets from non-fruiting fully expanded spur leaves.

WHEAT/BARLEY/OATS - ESN-W or ESN-U (3rd to 4th leaf stage) TIL-T or TIL-S
GRAIN/MIXED GRAIN JNT-T or JNT-S BOO-T or BOO-S HEA-T
W = whole tops U = 2" stem underground S = 2" stem aboveground T = top 4 leaves

CAUTION! Official ratings for elements other than NO₃-N, PO₄-P, and soluble K on petioles or midribs may not exist. Therefore, interpret with caution when requesting the PT2 or PT5A package.



Sampling Plants

Key to Stages of Growth

BLM	bloom sampling	EGF	early green fruit	PBL	prebloom
VER	veraison	PRE	preharvest	EBL	early bloom
HAR	harvest	ERF	early ripe fruit	FBL	full bloom
ESN	early season	FRF	full ripe fruit	LBL	late bloom
MSN	midseason/growth	MIT	mid tillering	FSQ	first square
LSN	late season	MAT	maximum tillering	EBL	first bloom
VEG	vegetative growth	PAI	panicle initiation	PBL	peak bloom
EFL	early flowering	SIL	silking	FOB	first open boll
BUT	buttoning	TAS	tasseling	ESN	3-4 leaf
BUL	fruit bulking	EFG	early fern growth	TIL	tillering
HEA	early heading	MID	midgrowth	JNT	jointing
PRE	preharvest	MFG	mature fern growth	BOO	booting
HAR	first harvest	MRM	most recently mature	HEA	heading

Key to Plant Parts

B	blade	L	leaf/leaflet	S	stem/midstem/seedling
C	center/cluster	M	midrib	T	tops
F	flag leaf	P	petiole	U	underground stem
H	hulls	R	root	W	whole above-ground portion

Available List of Crop Codes

ALFALFA	EBL-T (PT2) Top 6-inch [EBL-C (SO ₄ -S) + EBL-S (PO ₄ -P + K) + EBL-W (B + Mo)] [center leaves + center stems + whole top third]
ALMONDS /	MAR-L
APPLES / PEARS /	APR-L
ASIAN PEARS /	MAY-L
PLUMS / PRUNES /	MSN-L (Jun-Jul)
CHERRIES /	LSN (Aug-Sep)
APRICOTS / SHIPP	HAR-H (boron in hulls)

APRICOTS / CANNG APRICOTS	Select MRM leaves from non-fruiting, non-expanding spurs.
ARTICHOKES	EBL-P FBL-P (midharvest) HAR-P (lower 6-inch petiole) HAR-L
ASPARAGUS	MFG-T (top 12" of fern for total nutrients) MID-T (top 4" fern for NO ₃ -N, PO ₄ -P, K)
AVOCADOS	LSN-L (mid Aug-mid Oct. Select 5 to 7 month old spring cycle terminal leaves)
BANANAS	HAR-L (center strip of 2nd to 3rd fully developed leaf from top)
BEANS	EBL-B (MRM leaf or blade) ESN-P PBL-P EBL-P
BEET / TABLE	ESN-L (5 weeks after seeding) PRE-L (9 weeks after seeding)
BLUEBERRIES	MSN-L (midshoot leaves off current season's growth, near/at harvest, Jun-Aug)
BROCCOLI	BUT-L ESN-M BUT-M PRE-M
BRUSSELS SPRTS	MID-L or MID-M (midgrowth, early sprouts) PRE-M
CABBAGE	HEA-L or HEA-M (2 to 3 month old wrapper leaves)
CANEBERRIES / RASPBERRIES / BLACKBERRIES / BOYSENBERRIES	ESN-L (pre/early bloom) MSN-L (Jun-Aug) MRM leaves from laterals of primo canes.
CARROTS	MSN-L (tallest leaf) MSN-P (petiole of tallest leaf) After 4" tall/60 days after seeding.
CAULIFLOWER	BUT-L ESN-M BUT-M PRE-M
CELERY / CELERIAC	MID-L or MID-P (4 to 6 weeks after seeding) MRM leaf, or petiole below 1st node. PRE-P (preharvest) Petiole above 1st node of MRM leaf.
CHARD	ESN-L (5 weeks after seeding) PRE-L (9 weeks after seeding)
CHESTNUTS	MSN-L

(MRM leaves on current season's growth)

CHINESE CABBAGE	HEA-L or HEA-M
CITRUS	LSN-L Select terminal spring-flush leaves from non-fruiting shoots in Sep-Oct.
CLOVER	EBL-T (top third of plant)
COFFEE	NON-L (non-bearing, 4th pair from tips) BEA-L (bearing branch, 4th pair from tips) Sample after flowering/before cherry ripening
CONIFERS	No code except for seedlings. Select 3rd whorl or terminal 3" cuttings from current season's growth, 1/4 to 1/2 way down from top, mid Sep-mid Dec. S (whole seedlings, including washed roots, after mid Oct)
CORN	ESN-W (6"-16" tall) whole seedling MSN-L (pretassel) 3rd leaf/45-80 days TAS-L (tasseling) opposite/below ear ESN-M (6"-12" tall) MSN-M (3-6 ft tall) TAS-M (tasseling-silking) Select basal 4-5" of midrib if requiring NO ₃ -N, PO ₄ -P, and K.
COTTON	FSQ-P (PT5) EBL-P (PT5) Usually before early July FBL-P or FBL-L end July FOB-P (PT5) end August PRE-P (PT5) mid September Select from 4th to 5th node from top of plant at all stages of growth.
CRANBERRIES	LSN-T (tops above fruiting uprights on current season's growth, mid-Aug to mid-Sep)
FEIJOAS / GUAVAS	MSN-L (3rd pair of leaves back from fruiting terminals, Jul-Aug)
FILBERTS /HAZELNUTS	MSN-L (MRM midshoot leaves from current season's growth, Jul)
FLOWERS	No code, but generally select MRM leaves.
GARLIC / CHIVES	ESN-L (before bulbing) BUL-L (bulbing) LSN-L (post-bulbing) Discard lower white section of MRM leaves.
GINSENG	No code, but select MRM leaves.
GRAPES	PBL-P or PBL-B or PBL-L Usually before May. Select petioles P, only from unshaded leaves. BLM-P or BLM-B or BLM-L Select from opposite the basal cluster on new shoots. MSN-P or MSN-B or MSN-L Berry filling. Select 2nd leaf away from last cluster.

VER-P or VER-B or VER-L Veraison (berry softening). Select 6th to 7th leaf from growing tip.

HAR-P or HAR-B or HAR-L Select MRM leaf, usually 6th to 7th leaf from growing tip.

Petioles are better for determining sodium and chloride toxicities.

Blades are better for determining boron toxicities.

**GRASS / PASTURE /
TIMOTHY /
ORCHARD GRASS**

HOPS

JUN-P

JUL-P

AUG-P

Select petioles from MRM leaves on main vine, 5 to 6 ft from ground.

Sap will stain!

KIWIFRUIT

MAY-P or MAY-L

MSN-P or MSN-L

NOV-P or NOV-L

Select 1st to 3rd leaf beyond fruit, or mid-cane leaves on non-bearing vines.

LETTUCE / ENDIVE ESN-L or ESN-M (4th to 6th leaf stage)

HEA-L or HEA-M

HAR-L or HAR-M

FES-M

FHE-M

FHA-M

Select MRM leaves L, or midribs M.

F = Fall planting

LITCHI

No code, but select MRM leaves.

MACADAMIAS

No code, but select leaves from 2nd whorl below bud before new flush.

MELONS /

VEG-P/L

CANTALOUPE /

EFL-P/L

SQUASH /

BUL-P/L

PUMPKINS /

HAR-P/L

CUCUMBERS /

Select MRM leaves, 5th to 6th from growing tip.

CUCURBITS /

WATERMELONS

**[GH CUCUMBER /
GH LETTUCE]**

[MRM-L]

[GH = GREENHOUSE PRODUCTION]

MINT

EBL-L Select leaves from top 6" of first unbranched stem. Test for total levels.

ESN-S Test for nitrate nitrogen only. Select top 6" of first unbranched stem, stripped of leaves.

MAY-S

JUN-S

	JUL-S AUG-S
NECTARINES / OLIVES / PEACHES / FREEST PEACHES / CLING PEACHES / PECANS / FIGS	MAR-L APR-L MAY-L MSN-L (June-July) LSN (Aug-Sep) Select basal to midshoot leaves/leaflets from current season's shoots.
ONIONS	ESN-P or ESN-L (tallest leaf before bulb enlargement) MSN-P or MSN-L LSN-P or LSN-L ESN-R (washed roots before bulb enlargement) More reliable for NO ₃ -N readings.
ORNAMENTALS	No code, but select MRM leaves for general guidelines.
PALMS	No code, but select middle leaflets from MRM leaves, discarding the petiole/midrib.
PAPAYAS	PBL-P (when flower buds are just visible in the axil)
PARSLEY	No code
PEAS	EBL-L Select MRM leaves, usually 3rd to 5th from growing tips.
PECANS	MSN-L (paired midshoot leaflets from non-fruiting shoots in July)
PEPPERS / GH PEPPERS	VEG-P or VEG-L EFL-P or EFL-L EGF-P or EGF-L PRE-P or PRE-L MRM leaves [GH PEPPERS = MRM-L]
PERSIMMONS	LSN-L (MRM leaves from non-fruiting shoots, Sep-Oct)
PINEAPPLES	EFL-L (leaf at early inflorescence, discarding white base)
PISTACHIOS	MAR-L APR-L MAY-L MSN-L (Jun-Jul) LSN-L (Aug-Sep) Select terminal leaflets
POTATOES	ESN-P or ESN-L prebloom-50 days MSN-P or MSN-L fullbloom-70 days LSN-P or LSN-L 90 days Select MRM leaves, usually 4th to 5th from growing tip.
RICE/ WILD RICE	MIT-L (35-55 days) May-June, After 5th leaf stage MAT-L (55-65 days) June-July Select MRM "Y" leaf. PAI-L (60-80 days) panicle initiation BOO-F (flag) Boot/heading Leaf below ear

ROSEMARY	No code, but select 2" to 3" terminal cuttings in summer.
SAFFLOWER	L (midstem leaves) To determine total levels of nutrients. ESN-S (8"-12" bolted) PBL-S EBL-S Select stem half way down, discarding leaves.
SORGHUM	ESN-W (12" tall) MSN-L (37-65 days) HEA-L (2nd to 3rd leaf below head)
SPINACH	ESN-L (30-50 days) PRE-L
STRAWBERRIES	MSN-P or MSN-L (early fruiting stage) MSN-B for SO ₄ -S
SUDAN GRASS	No code, but select whole tops, 5 weeks between clippings.
SUGARBEET	ESN-P 6" to 8" growth MSN-P or MSN-B PRE-P 5 to 6 weeks prior to harvest
SUGARCANE	MSN-L (4th to 6th leaf from top) MSN-N (discard midrib for nitrogen, N)
SUNFLOWERS	PBL-L (3rd to 4th leaf below flower bed)
SWEET POTATOES	MSN-P or MSN-L (MRM leaves during first half of growing season) Also VEG-P (vining) and BUL-P (root bulking) but for NO ₃ -N only
SWEET CORN	TAS-L (6th leaf from base) SIL-L (leaf opposite 1st ear) For total levels. ESN-M (6" to 12" tall) MSN-M (3 to 6ft tall) TAS-M (tasseling-silking) Select basal 4" to 5" of midrib for NO ₃ -N, PO ₄ -P, and K.
TOMATOES / CANNG / PR / CH / FM / GR / TRELLIS	VEG-P or VEG-L EFL-P or EFL-L EGF-P or EGF-L (1" diam) ERF-P or ERF-L (10-20% red)
ALSO EGGPLANTS*	Also FRF-P (full ripe, for fresh market tomatoes - FM TOMATOES) GH TOMATOES = MRM-L [GH = GREENHOUSE PRODUCTION] * But only MRM-B at 1st small fruit. Select MRM leaves, usually 4th to 5th from top, or opposite top cluster.
TURF	No code, but specify variety for accurate ratings.
WALNUTS	MAR-L APR-L MAY-L MSN-L (June-July)

LSN-L (Aug-Sept)

Select terminal leaflets from non-fruiting fully expanded spur leaves.

WHEAT / BARLEY /	ESN-W or ESN-U (3rd to 4th leaf stage)
OATS	TIL-S
GRAIN/MIXED	JNT-T or JNT-S
GRAIN	BOO-T or BOO-S
	HEA-T
	W = whole tops U = 2"stem underground S = 2" stem aboveground T= top 4 leaves

CAUTION! Official ratings for elements other than NO₃-N, PO₄-P, and soluble K on petioles or midribs may not exist. Therefore, interpret with caution when requesting the PT2 or PT5A package.