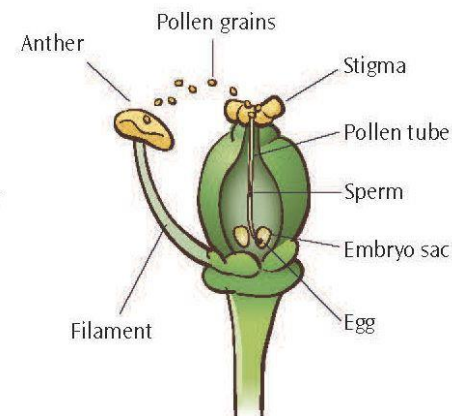
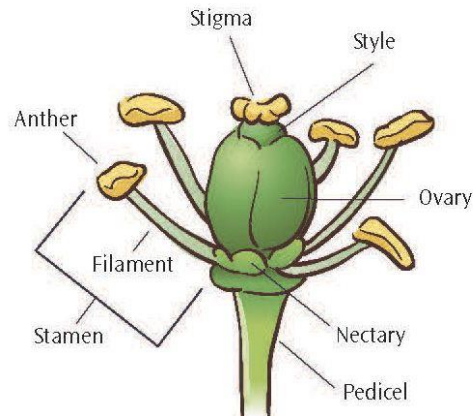
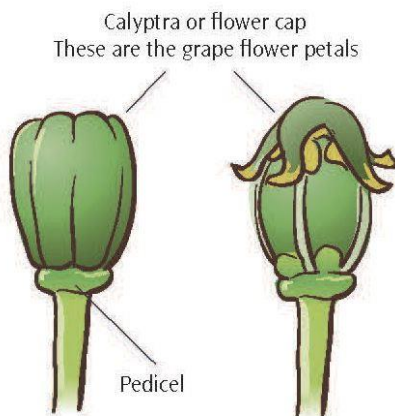
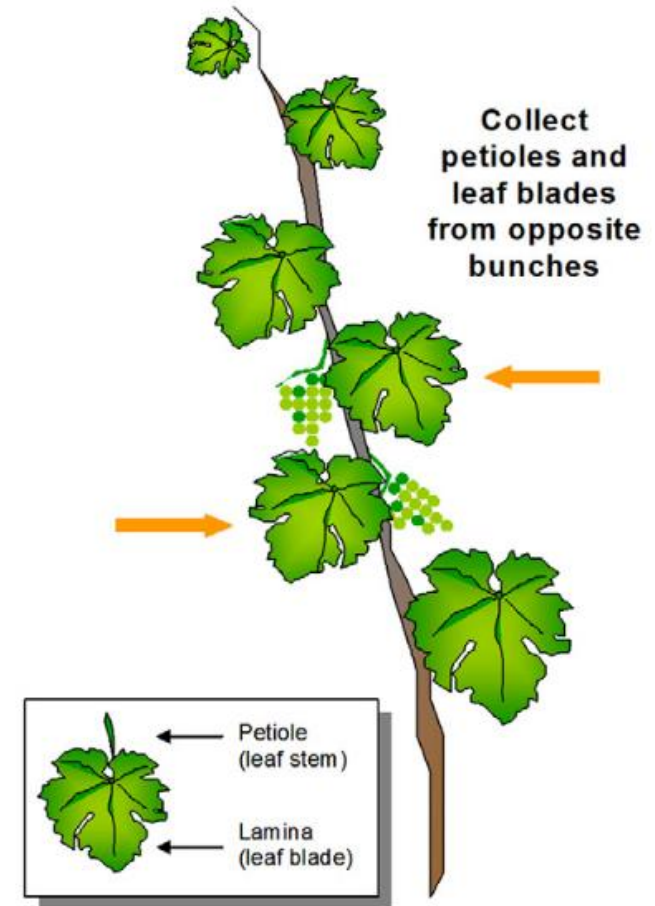


Early bloom fertility recommendations Temecula CA



Petiole sampling

1. Avoid edge rows and the end two panels of a row
2. Take samples from across the selected area in an X or W pattern to obtain a representative
3. Sample at flowering when 50– 80% of the flower caps have fallen off
4. Preferably sample before 10am before any moisture stress and nutrient translocation may occur
5. Use gloves Pick the whole leaf opposite a basal bunch, as per the diagram (right)
6. Break off the leaf blade and discard it. Place the remaining petiole in a paper bag
7. Collect at least 50 - 100 petioles (depending on size) from across the selected area



Petiole samples

Tissue: Grape - DIV I Leaves Opposite Flowers at Blooming

Grower Name **Wilson Creek**

Test Date **4/26/2016**

Field Name **Muscat Block 10**

Field Rep **David Drucker**

Crop **Grape**

Sample ID **DG02333**

Sample Date **4/25/2016**

Subfield



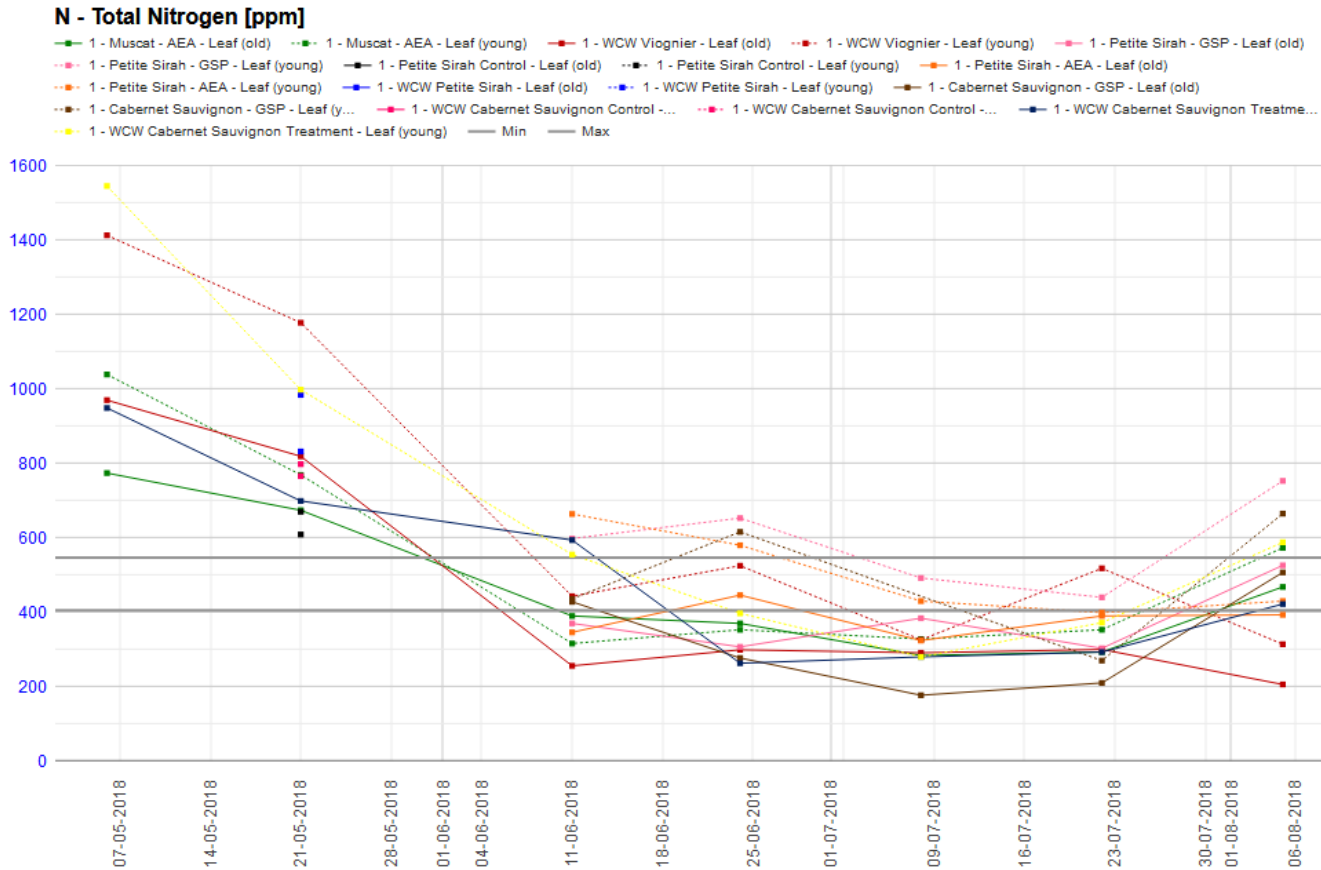
		Very Low	Low	Optimum	High	Excessive	
Total N	1.40						Maximum NPact
Total P	0.41						Optimum
Total K	2.75						High
Macronutrients		Very Low	Low	Optimum	High	Excessive	
Ca	1.39						Optimum
Mg	0.63						High
Na	0.02						OUT OF RANGE
S	0.19						OUT OF RANGE
Micronutrients		Very Low	Low	Optimum	High	Excessive	
Zn-ppm	75.00						High
Mn-ppm	57.00						Optimum
Fe-ppm	124.00						OUT OF RANGE
Cu-ppm	4.00						Contact your CPS CCA
B-ppm	36.00						Optimum
Petioles		Very Low	Low	Optimum	High	Excessive	

Very Low or Problem	Comments:
Low	
Optimum	
High	
Very High	

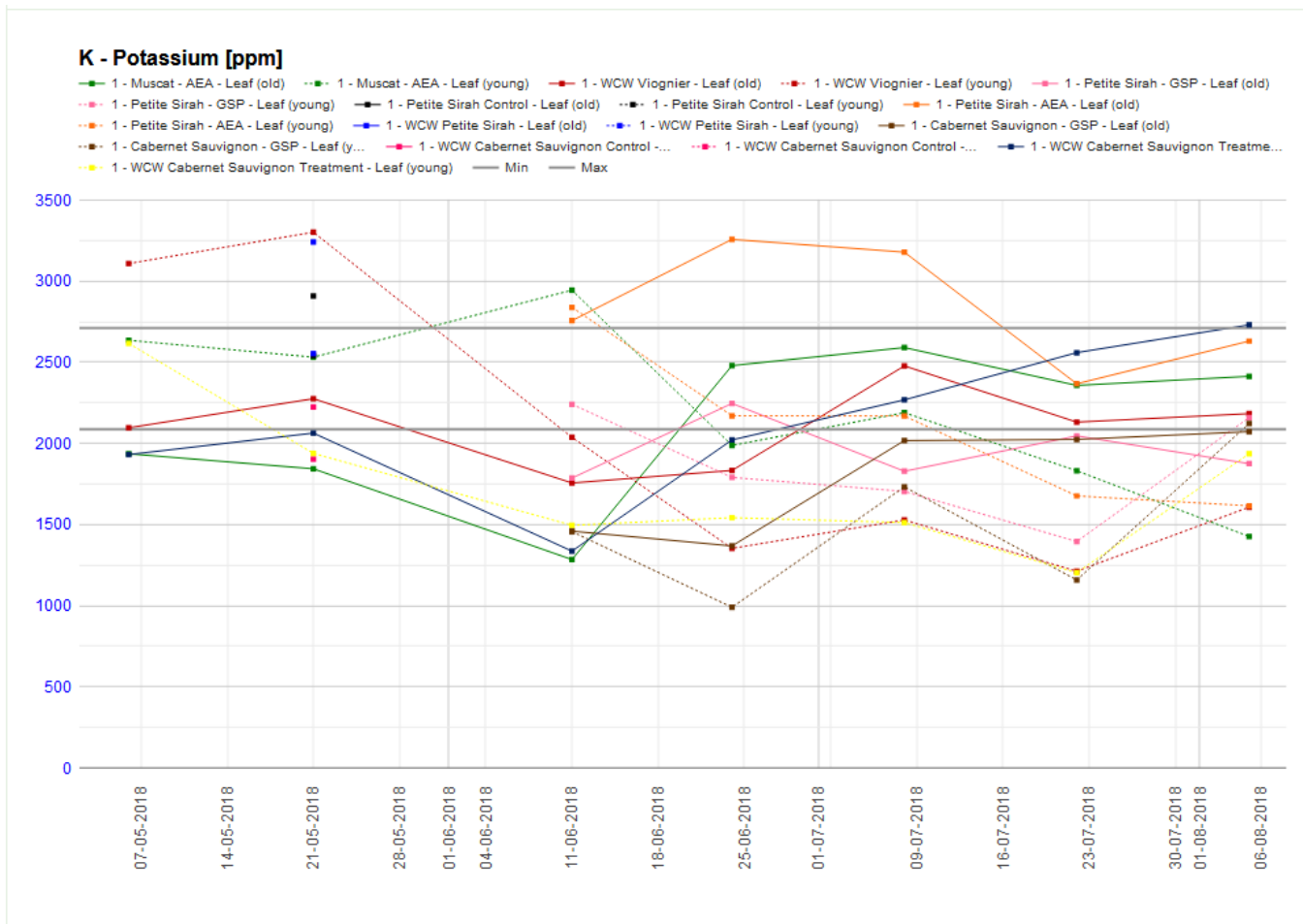
Analytical data provided by Waypoint Analytical Tennessee. Recommendations provided in this report are proprietary in nature whereby nutrient thresholds used as a reference may or may not match Waypoint Analytical Tennessee ranges for this particular crop and growth stage.

The information contained herein is provided "as is" without warranty of any kind. We hereby disclaim all warranties with regard to the information, including all implied warranties of merchantability or fitness for a particular purpose. In no event shall we be liable for any special, indirect or consequential damages or any damages whether in an action of contract, negligence or other tortious action, arising out of or in connection with the use or performance of information contained herein. Your exclusive remedy, and our total liability to you, shall be for damages not exceeding the price you have paid for the information contained herein.

Total N WCW young & old 2018



K WCW young & old 2018



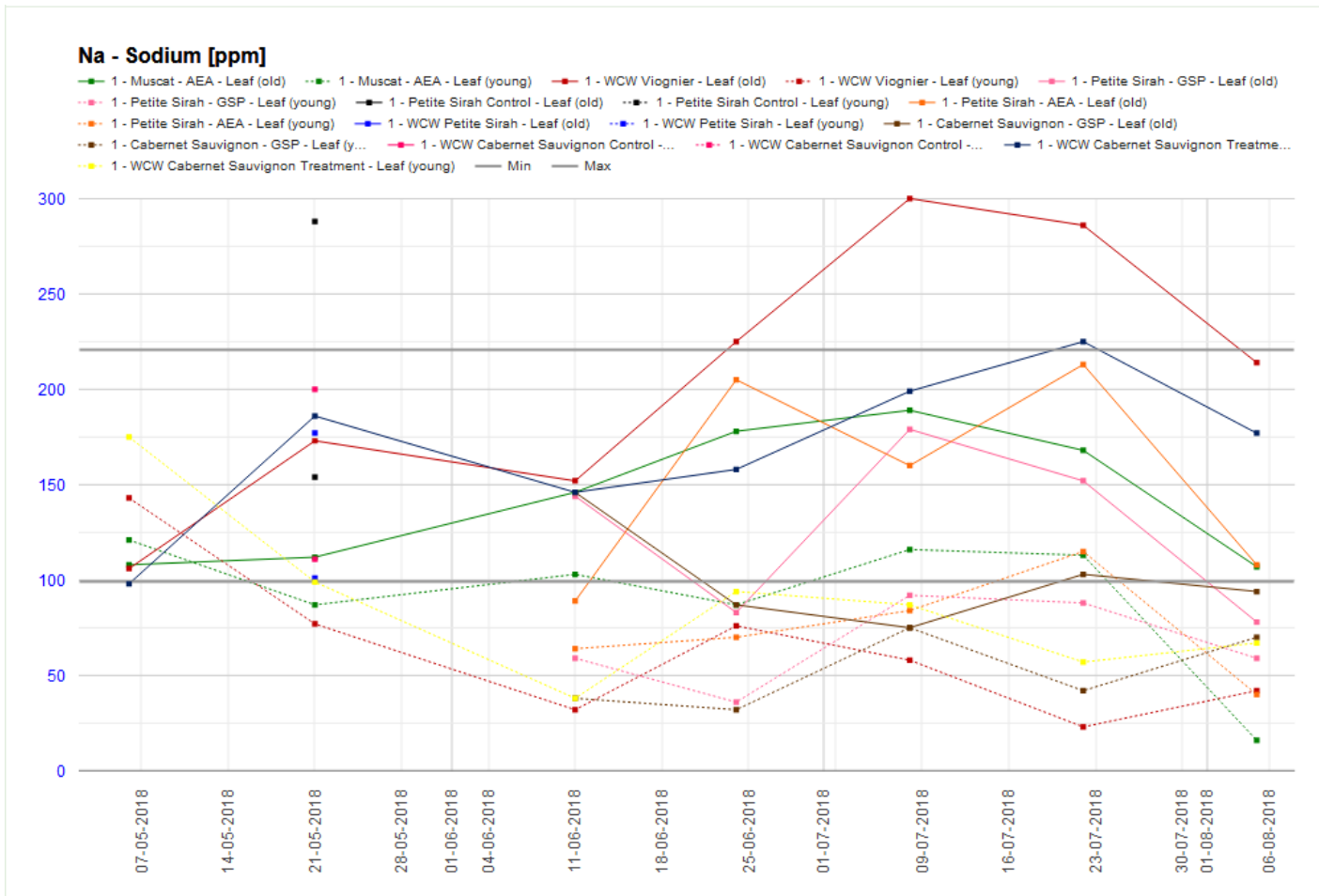
Ca - Calcium [ppm]

The graph displays Calcium concentration [ppm] on the Y-axis (0 to 2500) against dates from May 7 to August 6, 2018, on the X-axis. The legend identifies the following series:

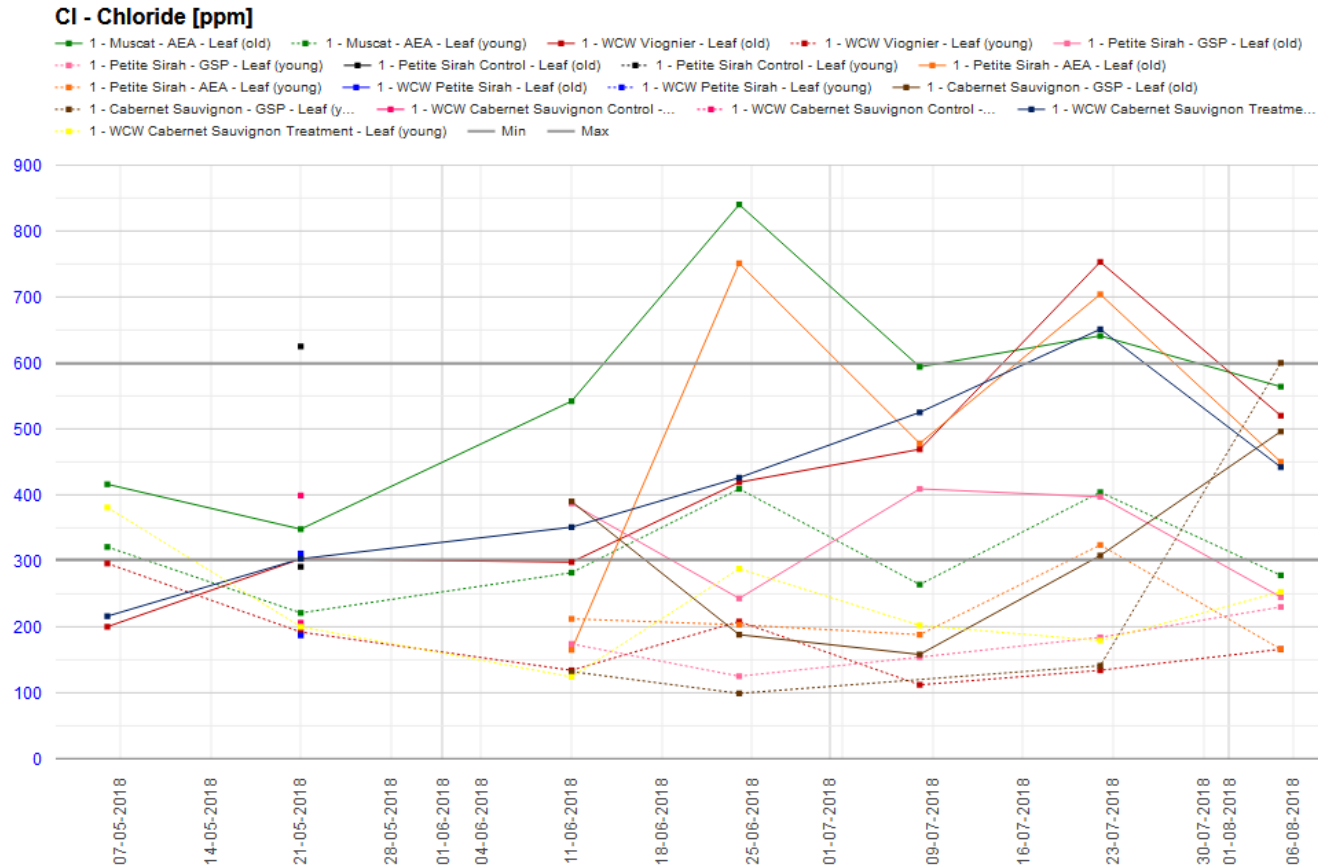
- 1 - Muscat - AEA - Leaf (old)
- 1 - Muscat - AEA - Leaf (young)
- 1 - WCW Viognier - Leaf (old)
- 1 - WCW Viognier - Leaf (young)
- 1 - Petite Sirah - GSP - Leaf (old)
- 1 - Petite Sirah - GSP - Leaf (young)
- 1 - Petite Sirah - AEA - Leaf (old)
- 1 - Petite Sirah - AEA - Leaf (young)
- 1 - WCW Petite Sirah - Leaf (old)
- 1 - WCW Petite Sirah - Leaf (young)
- 1 - Cabernet Sauvignon - GSP - Leaf (old)
- 1 - Cabernet Sauvignon - GSP - Leaf (young)
- 1 - Cabernet Sauvignon Control - Leaf (old)
- 1 - Cabernet Sauvignon Control - Leaf (young)
- 1 - WCW Cabernet Sauvignon Treatment - Leaf (old)
- 1 - WCW Cabernet Sauvignon Treatment - Leaf (young)

Key observations include a significant peak in 1 - WCW Viognier - Leaf (old) around May 21st (~2250 ppm), a peak in 1 - Petite Sirah - AEA - Leaf (old) around June 25th (~2100 ppm), and a peak in 1 - Cabernet Sauvignon Control - Leaf (old) around July 9th (~2150 ppm). Most other series remain below 1500 ppm throughout the period.

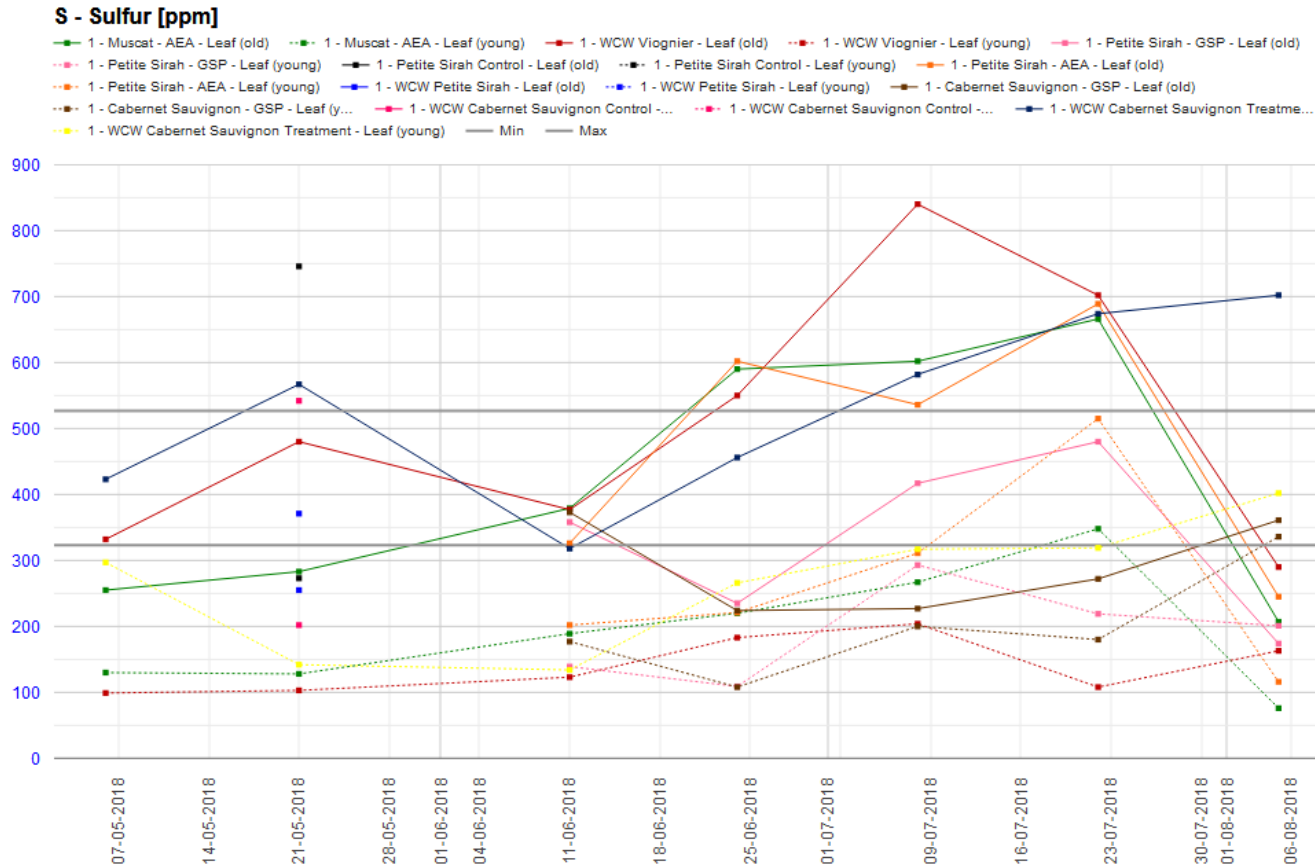
Na WCW young & old 2018



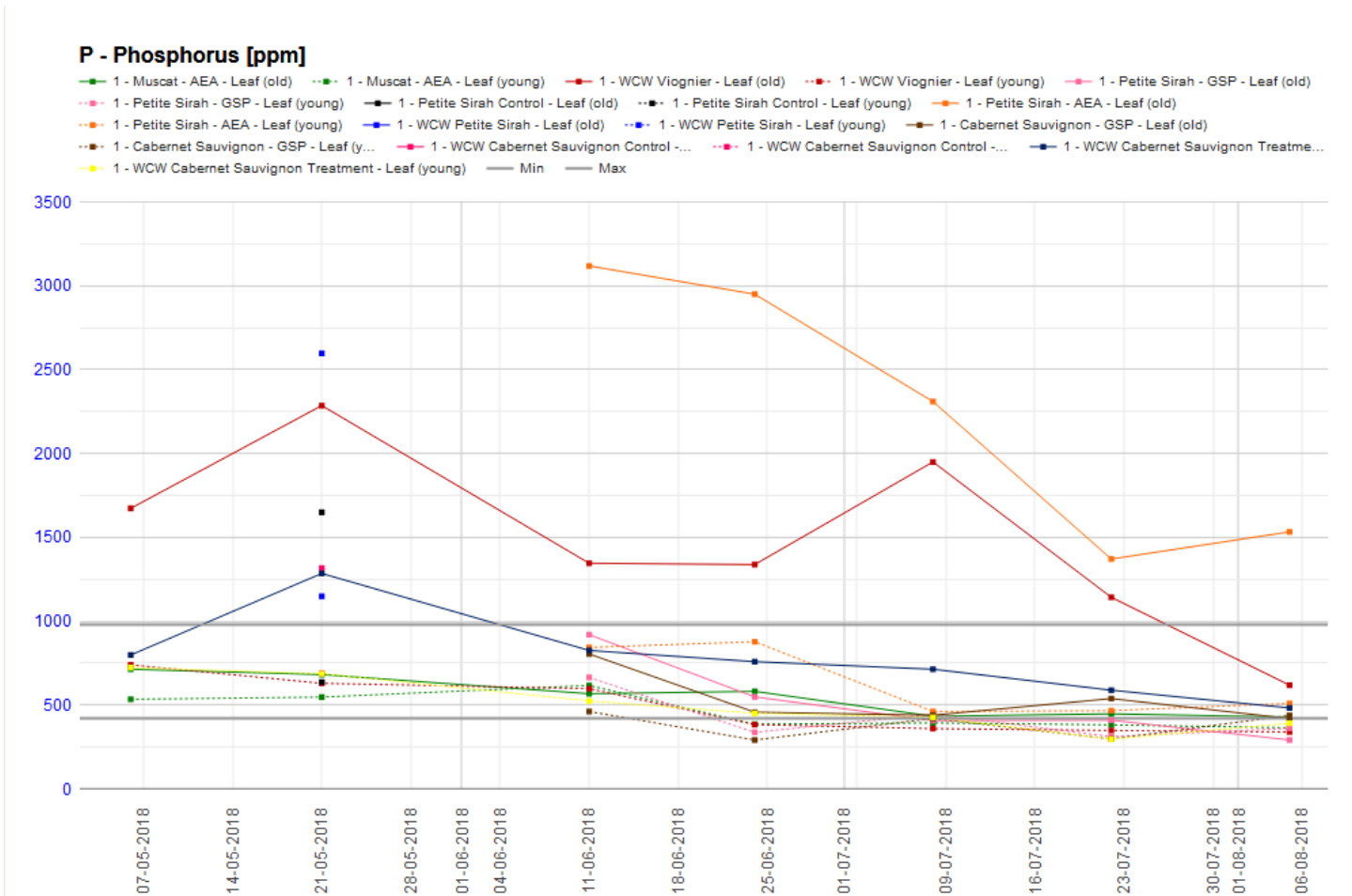
Cl WCW young & old 2018



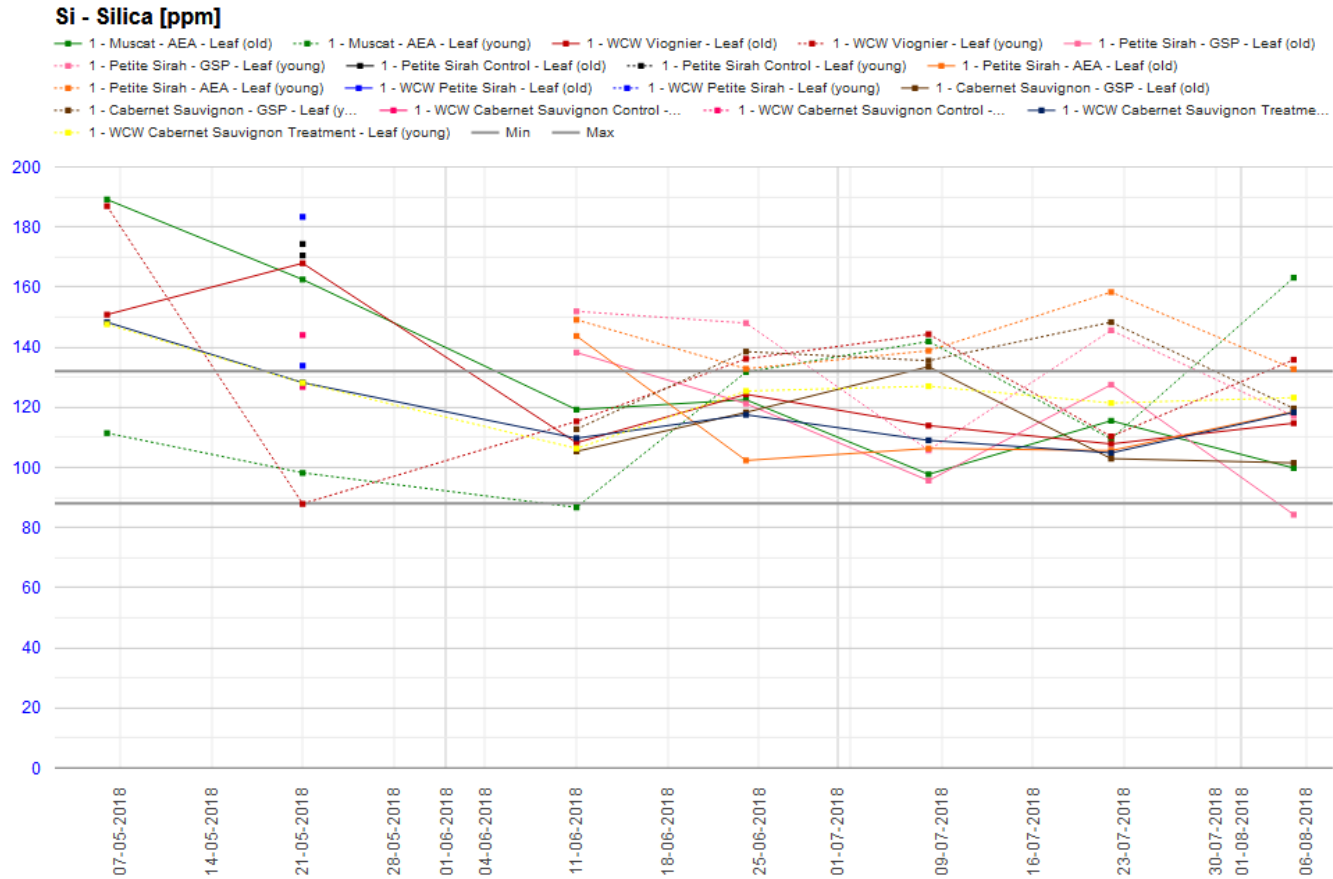
S WCW young & old 2018



P WCW young & old 2018

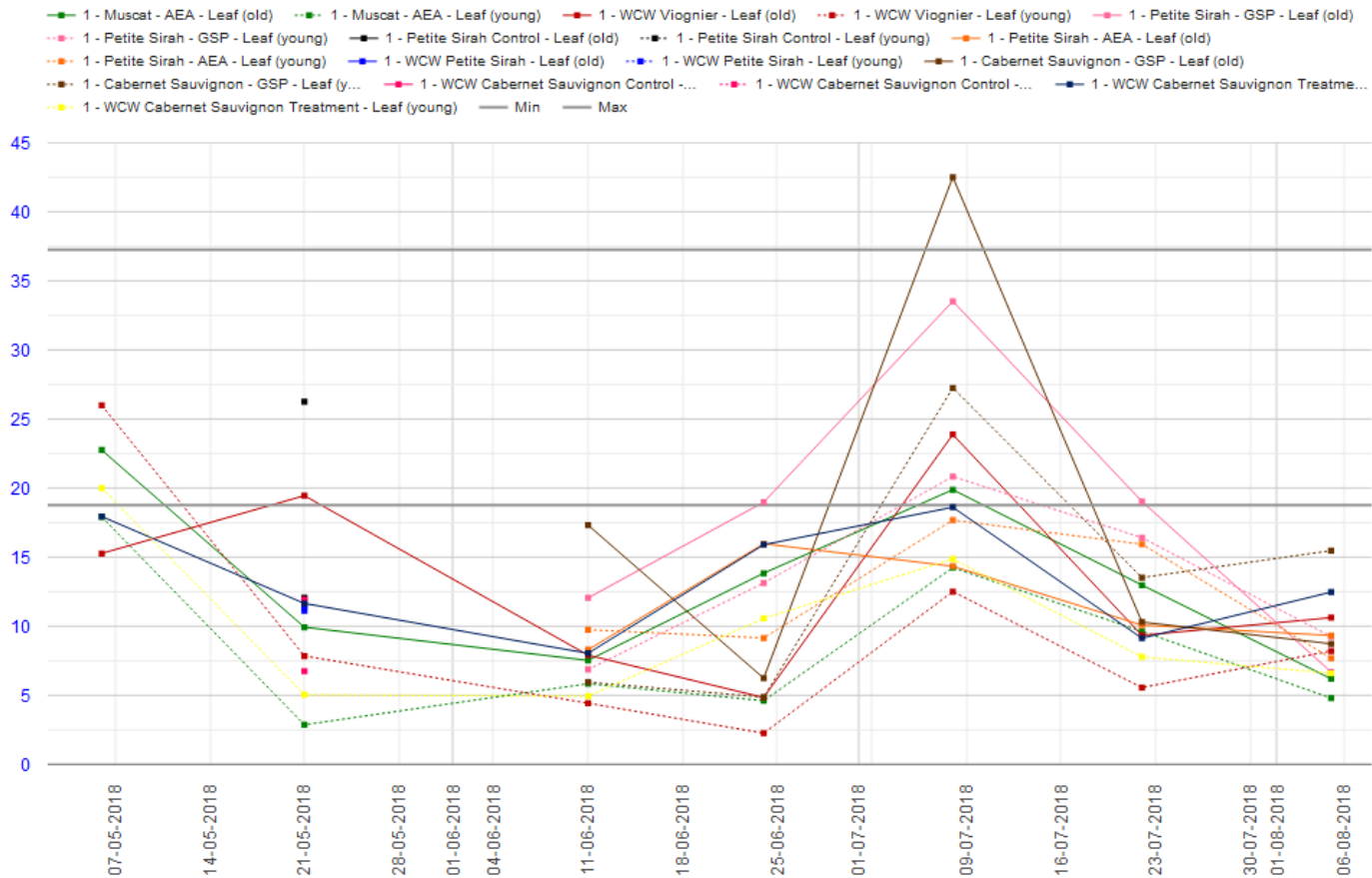


Si WCW young & old 2018

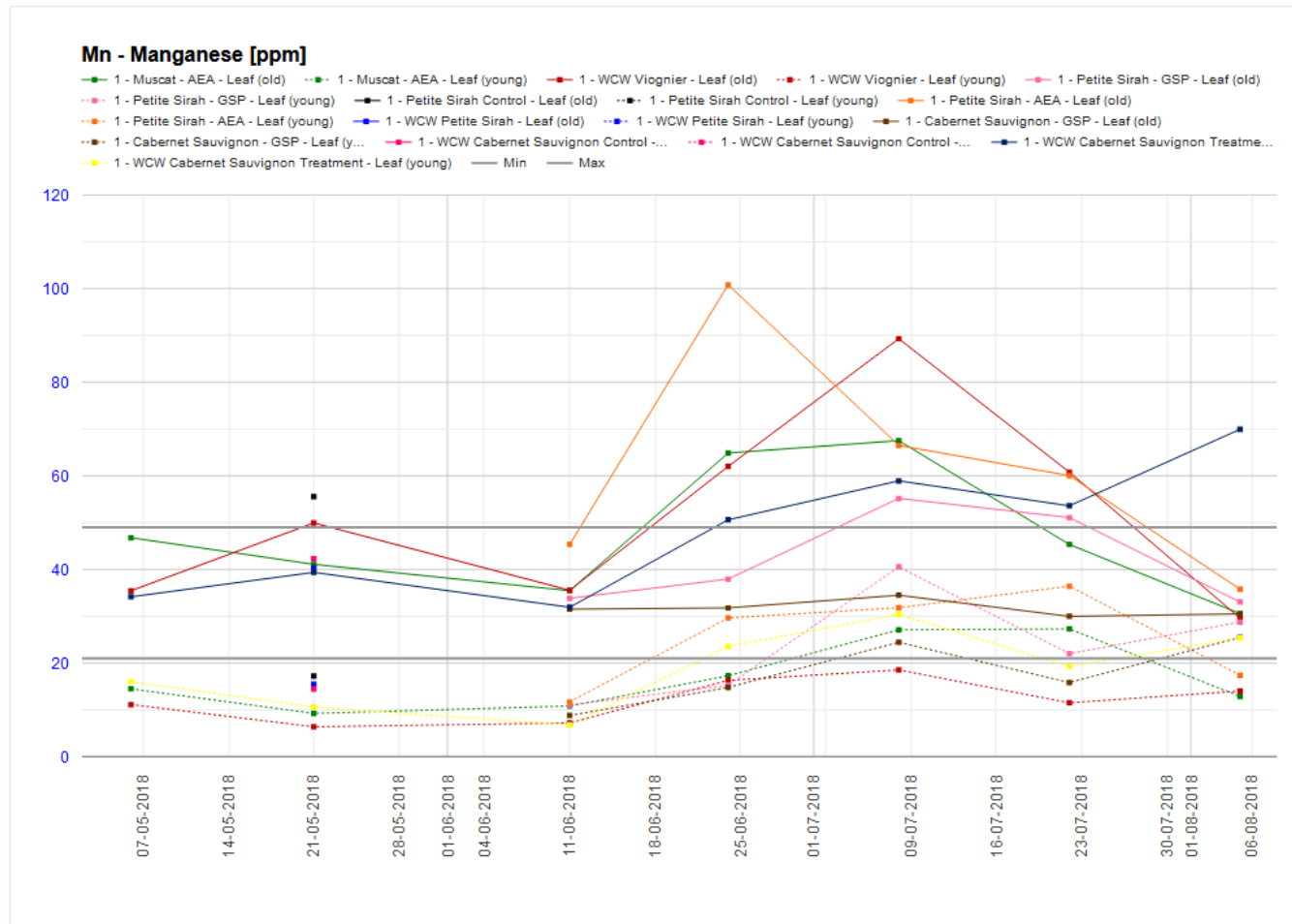


Fe WCW young & old 2018

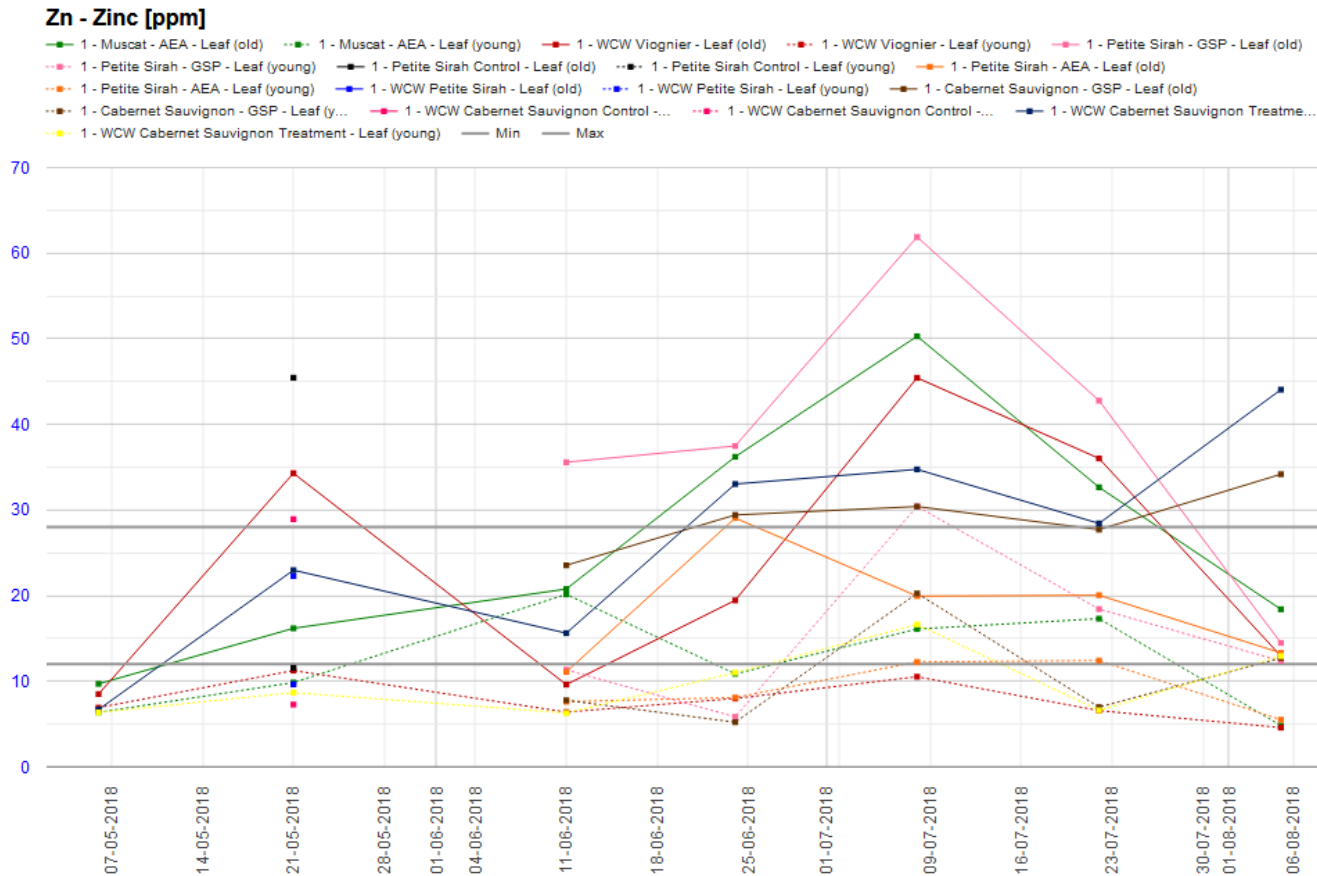
Fe - Iron [ppm]



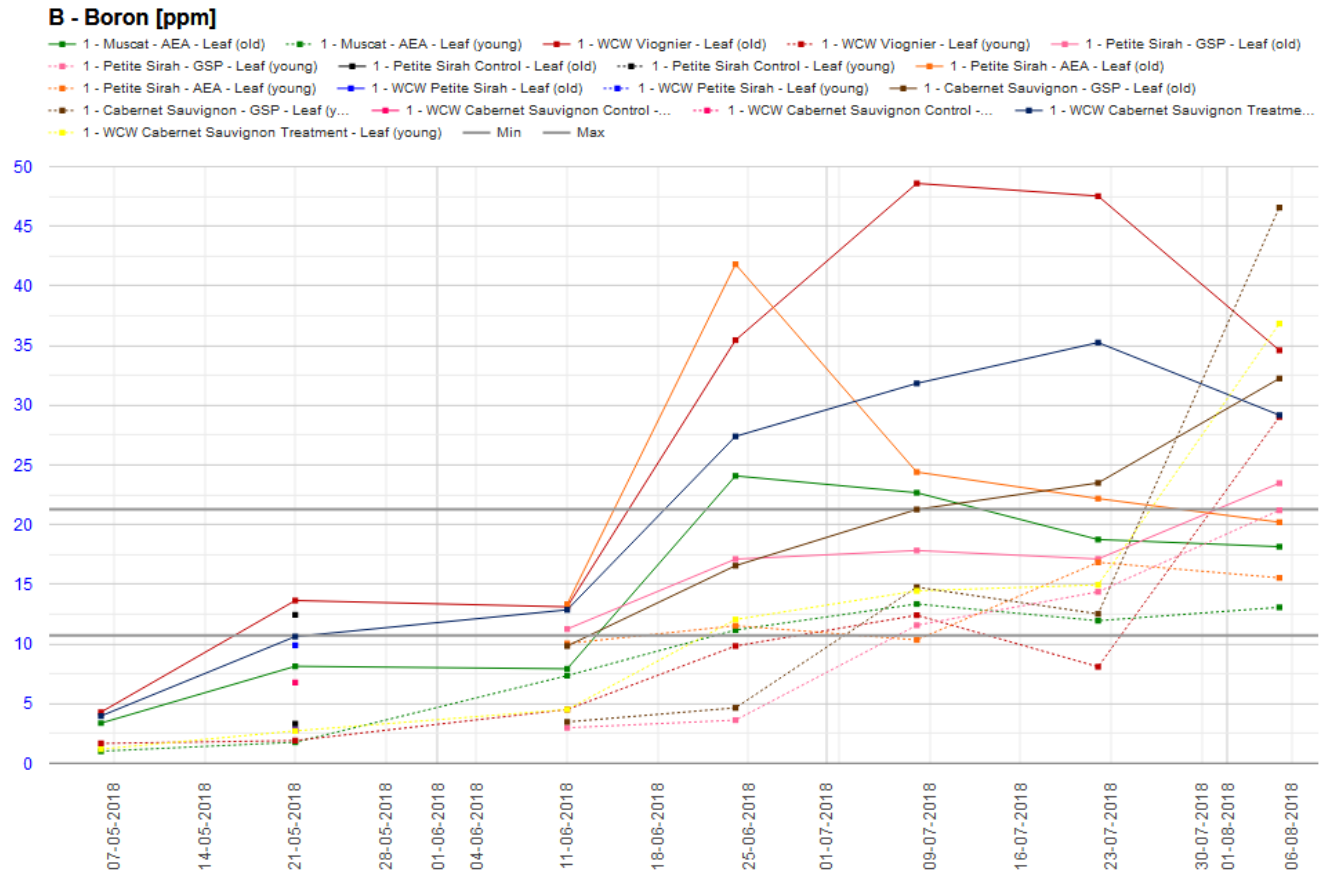
Mn WCW young & old 2018



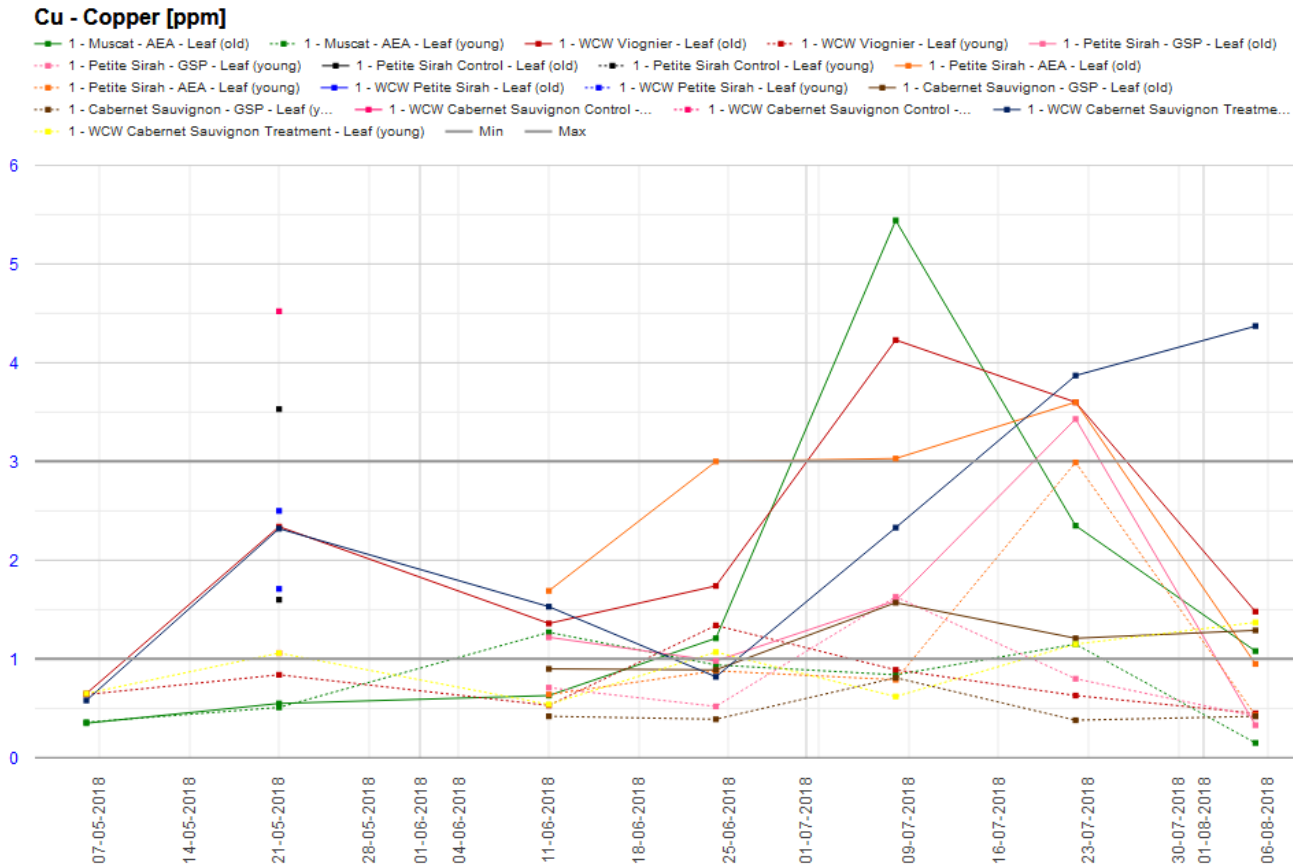
Zn WCW young & old 2018



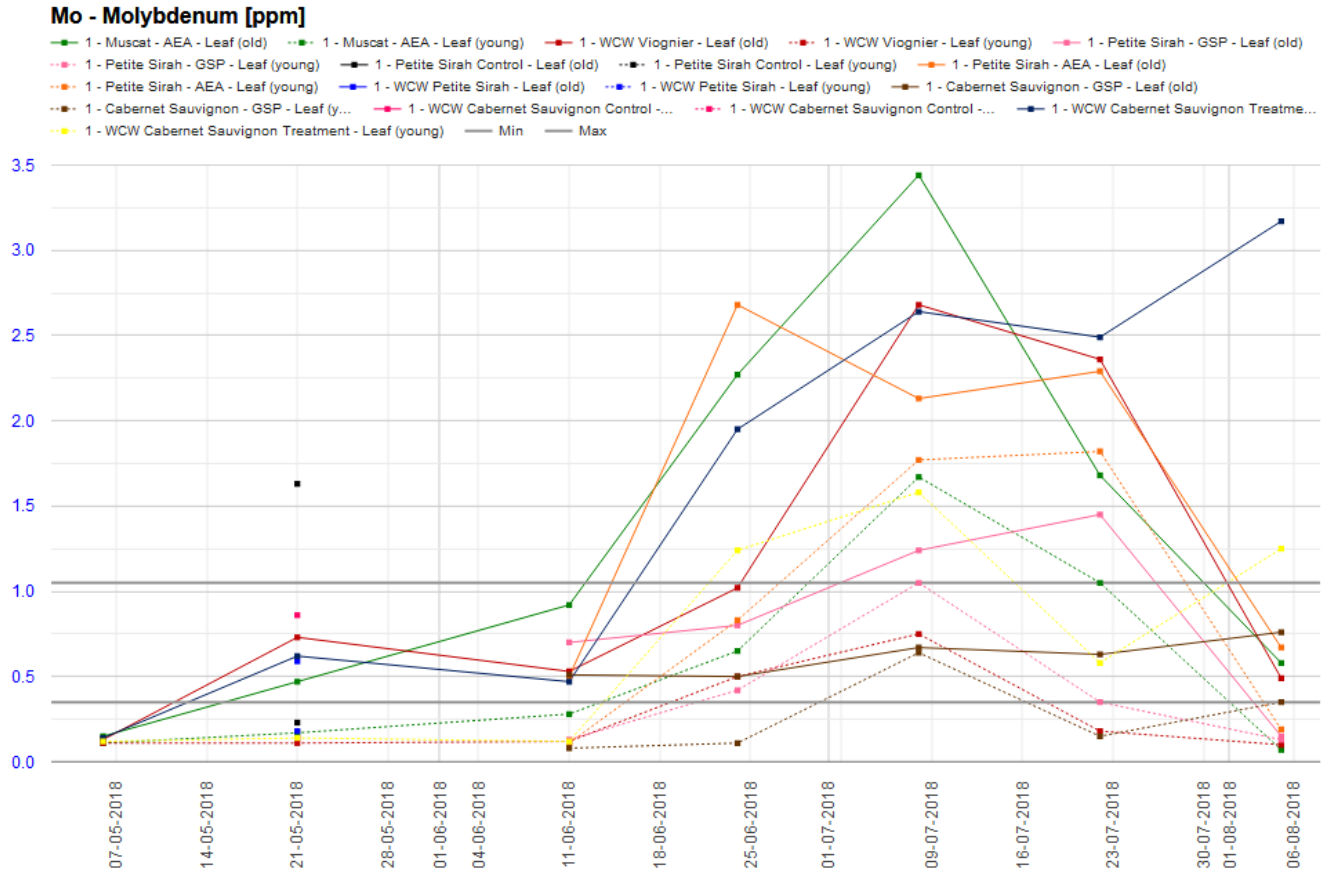
B WCW young & old 2018



Cu WCW young & old 2018

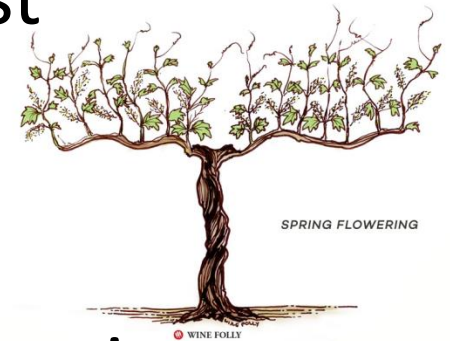


Mo WCW young & old 2018

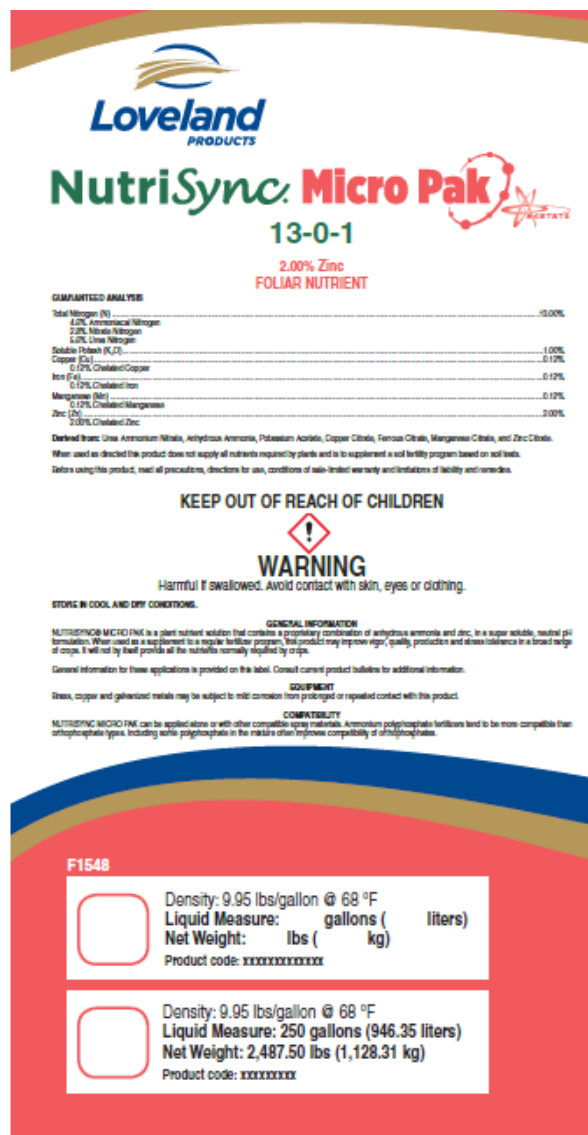


Conclusions for early bloom nutrients in Temecula CA

- Little Nitrogen at bloom – fall is best
- Potassium pre-veraison
- Calcium all season
- Sodium and Chloride build with irrigation
 - Humic acid & Compost
- **Iron, Boron, Zinc, Boron, Copper and Molybdenum all at bloom**
- Sulfur, Silicone and Phosphorus generally OK



Micro Pak



(13) Berry and Small Fruit including Blackberry, Blueberry, Caneberry, Kiwi, Raspberry and Grape (except Strawberry)	2.0 to 6.0 pts	concentration of NUTRISYNC MICRO PAK in the final solution. 1st: After transplant recovery. 2nd: 10 to 14 days later before bloom. Can repeat as needed every 14 to 21 until harvest. Co-factors in NUTRISYNC MICRO PAK will perform best with minimum 1% concentration of NUTRISYNC MICRO PAK in the final solution.
(14) Strawberry	2.0 to 4.0 pts	Remain at full leaf emergence. Avoid applications while

Boron



NutriSync™ Boron

5.00% BORON, 0-0-0
FOLIAR NUTRIENT

FOR THE PREVENTION AND CORRECTION OF BORON DEFICIENCIES IN CROPS

Guaranteed Analysis
Boron (B) 5.00%

Derived from: Boric Acid

WARNING: This product contains Boron; application to any crops other than those recommended may result in serious injury.

When used as directed this product does not supply all nutrients required by plants and is to supplement a soil fertility program based on soil tests.

Information regarding the contents and levels of metals in this product is available on the internet at <http://www.regulatory-info-lpi.com/>

Before using this product, read all precautions, directions for use, conditions of sale-limited warranty and limitations of liability and remedies.

F1548

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Density: 9.68 lbs/Gallon @ 68° F
Liquid Measure: 2.5 Gallons (9.46 liters)
Net Weight: 24.2 lbs. (10.16 kg)

GUARANTEED BY:
LOVELAND PRODUCTS, INC.® P.O. BOX 1286 GREELEY, CO 80632-1286

NS_Boron_B2513R

TREE, VINE AND FRUIT CROPS

Apples, Apricots, Avocados, Olives, Pistachios, Strawberries, Blueberries, Cranberries:

Filberts, Almonds:

Caneberries, Grapes, Melons, Walnuts:

Pears, Citrus Fruits, Cherries, Peaches, Plums, Prunes:

1 to 2 quarts/acre

1 to 2 quarts/acre

1 to 2 quarts/acre

1 to 2 quarts/acre

Zinc



NutriSync Zinc

0-0-0 6% Zn

FOLIAR NUTRIENT

GUARANTEED ANALYSIS
Zinc (Zn) 6.00%
6.00% Water Soluble Zinc

Derived from: Zinc sulfate

When used as directed this product does not supply all nutrients required by plants and is to supplement a soil fertility program based on soil tests.
Before using this product, read all precautions, directions for use, conditions of sale, limited warranty and limitations of liability and remedies.

KEEP OUT OF REACH OF CHILDREN



WARNING
Harmful if swallowed. Avoid contact with skin, eyes or clothing.

STORE IN COOL AND DRY CONDITIONS.

GENERAL INFORMATION
NUTRISYN[®] ZINC is generally compatible with most pesticides and fertilizer solutions. Add to water before adding pesticides. Test for compatibility by means of a jar test prior to large scale tank mixing. NUTRISYN[®] ZINC is intended for use as a plant nutrient supplement for the correction of zinc deficiencies. NUTRISYN[®] ZINC is intended for use on all agricultural, horticultural and ornamental crops that require and respond to zinc nutritional supplements. NUTRISYN[®] ZINC is to be applied as a foliar application through conventional, low-volume, or aerial sprayers. NUTRISYN[®] ZINC is compatible with a wide range of fertilizer materials, pesticides, herbicides and fungicides. NUTRISYN[®] ZINC may be formulated into NPK fertilizers as a source of zinc. This product should be stored in a cool, dry area out of direct sunlight.



		Repeat applications at 14- to 21-day interval as needed.
(13) Berry and Small Fruit including Blackberry, Blueberry, Caneberry, Grape, Kiwi, and Raspberry (except Strawberry)	1.0 to 4.0 qts	Start applications from vegetative to flowering stage. Repeat applications at 14- to 21-day interval as needed.
(14) Tree Nuts including Almonds	1.0 to 4.0 qts	Start applications from vegetative to flowering stage

Seaweed Bio stimulant



acadian

100% LIQUID SEAWEED CONCENTRATE
0.1 | 0.0 | 5.0

GUARANTEED ANALYSIS

Total Nitrogen (N) 0.1%

0.1% Water Soluble Nitrogen

Soluble Potash (K₂O) 5.0%

Derived from *Ascophyllum nodosum*

Manufactured by:

**A Acadian
Seaplants**

PRODUCT OF CANADA

Guaranteed by:

Acadian Seaplants Limited
 30 Brown Avenue
 Dartmouth, Nova Scotia
 Canada, B3B 1X8
 Tel.: +1 902 468 2840
 Fax: +1 902 468 3474
www.acadianseaplants.com

A1211_0116

Grapes
(Wine)

64 TO 128 OUNCES PER ACRE

1st application: 1-4 inch shoot growth (foliar and soil) 2nd application: 10-12 inch shoot growth (foliar and soil) 3rd application: 5 days pre-bloom (foliar)
 Avoid foliar pre-bloom application in varieties that are prone to under shatter. Use high rate in pre-bloom sprays on varieties that tend to over shatter.
 4th application: 'BB' sized berries (2-3 mm) (foliar) 5th application: veraison (foliar and soil) Repeat: every 2-4 weeks during summer months
 Post-harvest application: 2-4 weeks after harvest

Grapes
(Table, Raisin and Juice)

64 TO 128 OUNCES PER ACRE

1st application: 1-4 inch shoot growth (foliar and soil) 2nd application: 10-12 inch

Nitrogen and Potassium

PLANT NUTRITION



Maximum
N-PACT K
12-0-12

MAXIMUM N-PACT K (12-0-12, w/ SRN) is an enhanced slow release nitrogen which provides a stable source of foliar nitrogen with the addition of potassium for increased uptake, translocation and utilization of nitrogen and potassium, with excellent crop safety and increased stress tolerance.

FEATURES:

- Balanced source of foliar nitrogen with the addition of a safe foliar potassium source
- Suitable for most specialty and field crops to enhance growth and quality, correct nitrogen deficiencies, and help plants recover from stressful conditions

RATES:

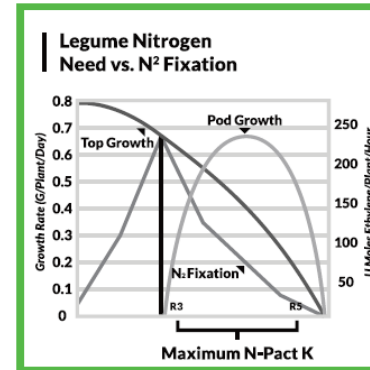
1-2 gals/A for most crops

ANALYSIS:

12-0-12

GROWER BENEFITS:

- Drives key growth processes during times of peak demand
- Increased drought and salinity tolerance
- Supports photosynthesis during critical periods



Potassium and N



Foliar/Soil Applied

Re-Nforce™ K (5-0-20 + 13S) is a unique blend of urea-triazone and potassium thiosulfate. It is a chlorine free, clear solution containing 5% nitrogen (33% of which is slow release nitrogen (SRN) in the patented Triazone compound), 20% potassium and 13% sulfur in the potassium thiosulfate (KTS) form. Re-Nforce K is the clearly superior fertilizer solution.

Re-Nforce K may be applied as a foliar feed and/or injected through the irrigation system. It may also be used in conjunction with other fertilizer solutions in pre-emergent and post-emergent sprays.

PRODUCT FEATURES:

- Triazone nitrogen source
- KTS – Potassium Thiosulfate

PRODUCT BENEFITS:

- Increased Crop Safety
- Increased Nitrogen Absorption
- Increased Translocation
- Increased Nutrient Remobilization
- Chlorine Free
- Comparatively High Analysis
- Superior Source of K and S

APPLICATION INFORMATION:

Re-Nforce K can be used on ALL field and specialty crops to enhance growth and quality, correct nutritional deficiencies, and help plants rebound from stressful conditions. **Re-Nforce K** is the solution to solving nutrient uptake needs during peak demand periods.

The RAWA Program

RAWA



- Great fertilizer technology 7-17-3 Zinc ammonium acetate and micronutrients



- Facilitates nutrients that are tied to soil increasing efficiency and root mass



- Promotes water infiltration, distribution and retention in the soil to help improve and maintain crop productivity



- Stress relief and root development

Benefits of the RAWA Program:

- Bigger root mass
- More plant vigor
- Enhanced fertilizer technology
- Better salt tolerance
- Enhanced water use efficiency

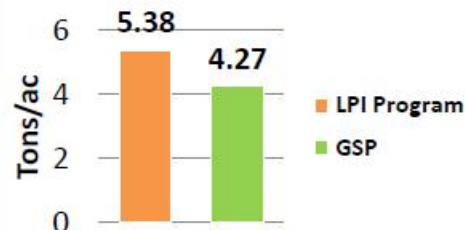
Grower Standard Program

RAWA Program



Wine Grape Production

3 Five vine plots/TRT



Soil Applied Technology!

RAWA: Unique soil applied technology combination specifically designed to enhance plant physiological activities and growth of various crops. Facilitating nutrient uptake, water distribution and stress relief.

