## Develop a fertilizer program for your vineyard

### Need to know & understand your soil

## Begin before planting

- Optimize the soil pH for grapes (5.5 to 6.5 or 7.0)
- Amend to optimize the level of major nutrients (P,K)
- Understand your soil's internal drainage characteristic

### After planting – adjust the program based on:

- Soil's fertility level (Organic Matter content)
- Vineyard needs (petiole analysis)
- Cultivar characteristics (vigor, cold hardiness)
- Cropping potential.

No two sites are alike.

## Nutrition

## Is Fertilizer needed?

- Visual observation

  - of problems usually too late
- Soil sampling every 3-5 years
- Petiole sampling every year

## Midwest Grape Production Guide Bulletin 919-05, Ohio State University

Nutrient Desirable Ranges - from soil tests for grapes

pH ~ 5.5 to 6.5

Organic Matter ~ 2 to 3%

Phosphorus ~ 40 to 50

Potassium ~ 250 to 300

Magnesium ~ 200 to 250

Boron ~ 1.5 to 2.0

Zinc ~ 8 to 10

## 2009↓ 2013→



## Soil Test Rep

Grower: Jo Ann Kuhlmann

Date Received: 4/02/2009

Date Reported: 4/03/2009

**30il Test Results** 

	County: Lyon	
100		

METHODS USED:				Mod. W.B.	Cd Reduction		Colormetric Mehlich3	Ammonium A		
Lab Number	Sample ID	Soll pH	Buffer pH	Organic Matter %	Nitrate I pp Surface		Phosphorus ppm P	Potassium ppm K	Calcium ppm Ca	
13,558	Vidal	7.2		1.7	2		7	254		
13,559	Chambourcin	7.6		2.1	1		13	213		
13,560	Traminette	6.8		1.8	-1		4	218	. Prompt	
13,561	Norton	6.8		2.1	3		17	248		

#### ertilizer Recommendations

#### Pounds Actual Nutrient Per Acre

Sample ID	Previous Crop	Intended Crop	Yield Goal	Lime, ECC lbs/acre	Nitrogen N	Phosphorus P <sub>2</sub> O <sub>6</sub>	Potassium K <sub>2</sub> O	Zinc Zn	Sulfur S
		1							
			4						
	+						<b></b>		



Date Re

#### Soil Test Results

METHODS USED:		1:1 Soil:Water	SMP	Mod. W.B.		Od uctior
Lab Number	Sample ID	Soil pH	Buffer pH	Organic Matter %		Nitrogen pm Prof
3,642	Chambourci	6.8		2.0	3	
3,643	Ch-Control	6.4	6.9	1.8	4	
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Date Re

#### Soil Test Results

METHO	DS USED:	1:1 Soil:Water	SMP	Mod. W.B.		d uction
Lab Number	Sample ID	Soil pH	Buffer pH	Organic Matter %		Nitrogen pm Profil
3,638	Vidal	6.8		2.1	2	
3,639	VidalControl	5.5	6.5	1.8	4	
3,640	Traminette	6.1	6.8	2.4	27	
3,641	T-Control	6.3	6.9	2.0	23	

#### Fertilizer Recommendations

#### Pound

Sample ID	Previous Crop	Intended Crop	Yield Goal	Lime, ECC lbs/acre	Nitroge N
		Contract Con	-		

## **Nutrition**

## Fertilizer application

- Methods
  - -Broadcast, band, foliar
- Timing
  - -Nitrogen
    - » One week before bloom
    - »Split: bloom and after fruit set
    - » Fall applications ?
  - -Potassium
    - » Post harvest

## Spray program

▶ Rotate chemicals – avoid resistance ◀

Fungicides -	Planned spray program
Herbicides -	Planned program - 3X per year
Insecticides -	Integrated Pest Management (IPM)
Miticides -	Integrated Pest Management (IPM)

# Sample Spray Program →

from Midwest Grower Supply - 2011

#### Other Resources:

- Midwest Small Fruit and Grape Spray Guide, published annually
- Iowa State (Mike White) sample spray program

#### **Cautions:**

- Re-entry intervals (REI)
- Pre-harvest interval (PHI)

#### **GRAPE PROGRAM 2011**

TIMING	PRODUCT	PER ACRE
DORMANT	SULORIX	1 GAL
BUD SWELL (Optional)	SEVIN XLR	1 QT
EARLY SPRAYS	MANZATE DF	3 LB
(1" shoot growth to bloom)	PLUS - RALLY 40W	3 OZ
	SEVIN XLR	1 QT
BLOOM	MANZATE DF	3 LB
	PLUS - RALLY 40W	3 OZ
(Optional)	ASSAIL 30SG	2.5 OZ
COVER SPRAYS	CAPTAN 80WDG	2 LB
(90% bloom to harvest)	PLUS - TEBUZOL 45DF	4 OZ
	SEVIN XLR	1 QT
	** ABOUND	11 OZ
POST HARVEST	MANZATE DF	3 LB
	PLUS - RALLY 40W	3 OZ

- 1. Spray on 7 to 14 day interval or as needed
- 2. Add Tebuzol with Captan when Powdery Mildew is conducive can use Topsin
- 3. Rotate \*\*Abound as needed (Limited to 2 to 3 sprays)
- 4. Use higher rates when pressures are high and shorten spray interval
- 5. Apply two applications of Assail starting at bloom and repeat in 7 days
- 6. Post Harvest sprays remember that disease continue after harvest

WATCH HARVEST RESTRICTIONS AND FOLLOW LABEL INSTRUCTIONS