

Soil Sampling
Home Gardner Workshop
Sam Custer, Extension Educator
April 13, 2015



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Why worry about soil and nutrient management?

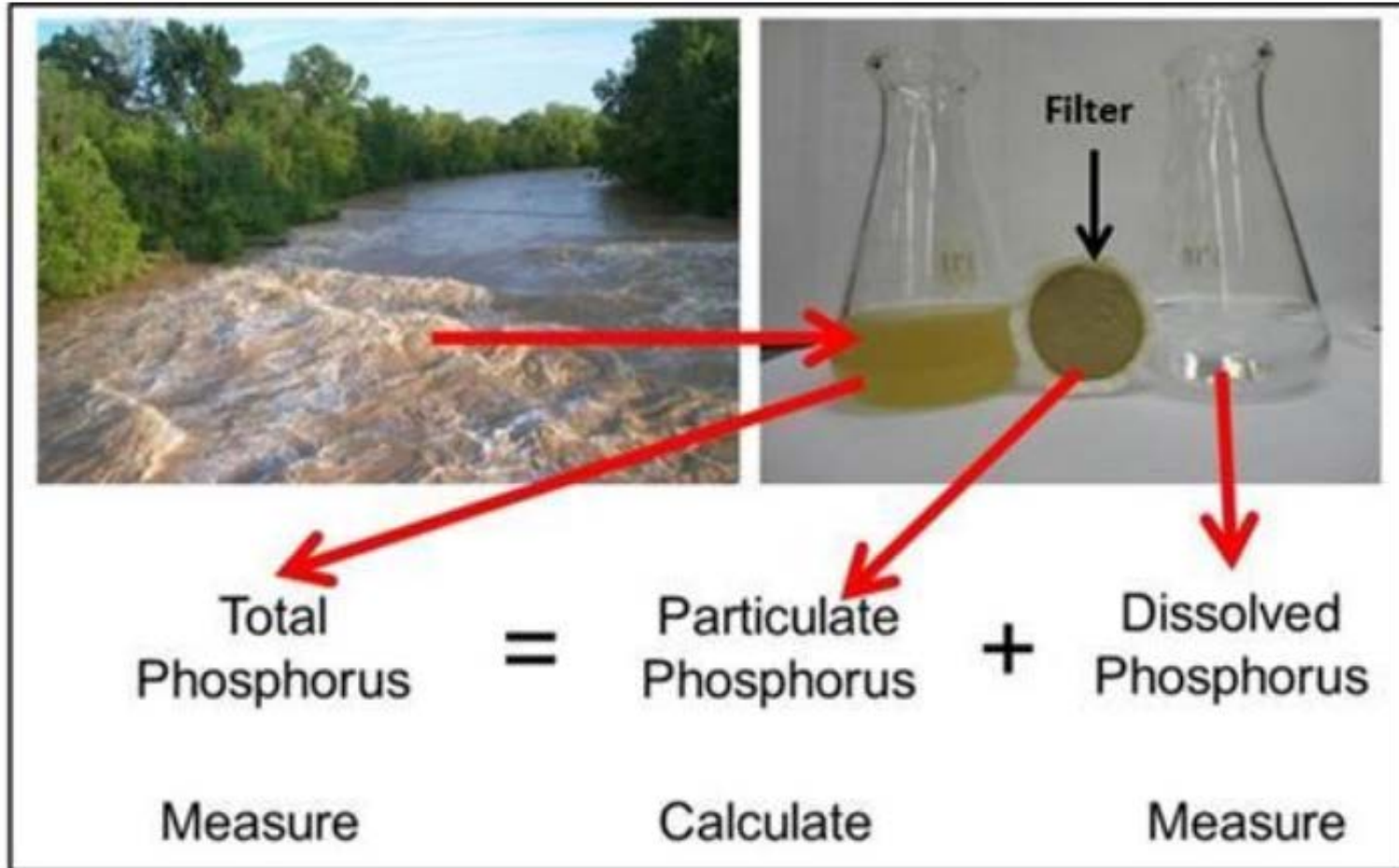
- Grand Lake St Marys



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Water Quality and Nutrients

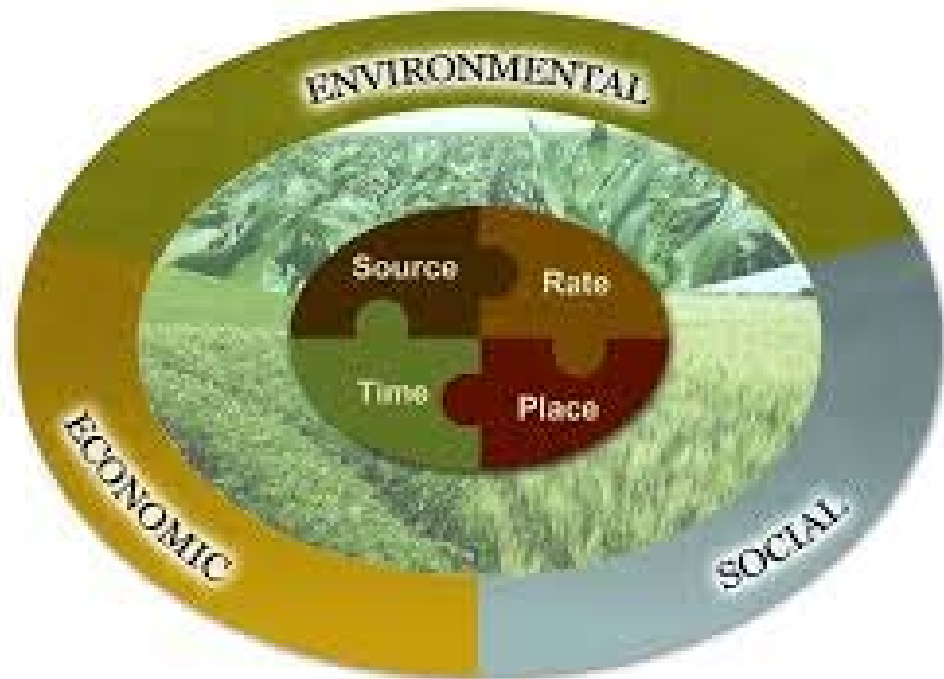


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So what should I do?

- 4 R's
 - Right Source
 - Right Rate
 - Right Time
 - Right Place

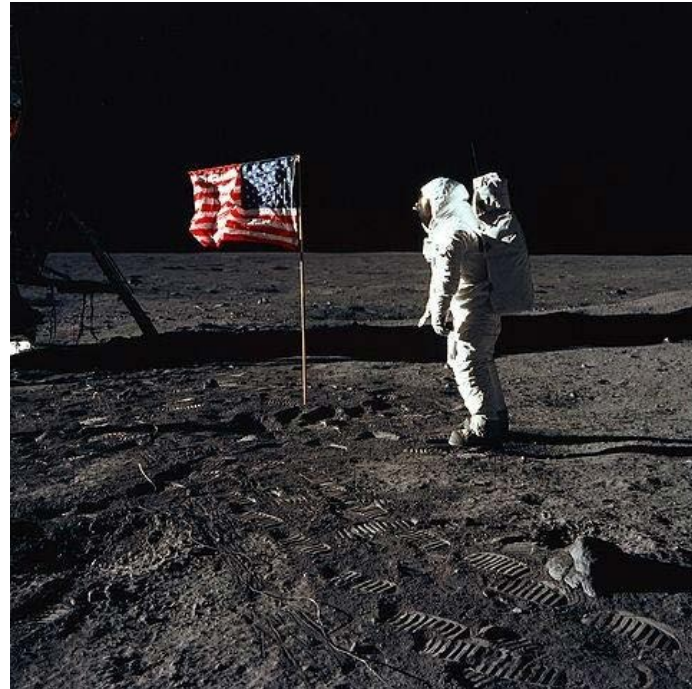


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Soil Sampling

- Call NASA?



Soil Sample Procedures

- When should I sample?
- What tools do I need?
- How do I take a soil sample?
- How do I process the sample for submission?
- What tests are available?
- How long does it take to get the results?



Soil Sampling Schedule

- Every two or three years
- Fall or spring
 - Fall to beat the rush in the spring and to adjust soil pH



What tools do I need?



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Taking the Sample

- Sample when the garden is suitable for tillage
- Remove the top debris, residue or sod from the soil surface before taking the sample
- Sampling depths
 - 6-8 inches for conventional tillage
- Take representative samples
- Take at least 15 cores per area in a zig zag pattern





Processing the sample

- Contact a soil testing lab for instructions, soil test kits and appropriate forms
- Break up cores and air dry the sample at room temperature



Results

- Typically results are mailed within two weeks
- Some come with recommendations and others do not

 University Extension <small>UNIVERSITY OF MISSOURI COLUMBIA</small>		Soil Test Report		Soil Testing Laboratory 23 Mansford Hall, MU Columbia, MO 65211 Phone: (872) 882-0623	or Soil Testing Laboratory P.O. Box 190 Portageville, MO 63873 Phone: (872) 879-5431					
FIELD INFORMATION				Serial no. M9999 Lab no. 9969999						
Field ID	Hill top field	Sample no.	1	Area	015	County	010 Region 3			
Rowe No	40	Last lined	Not known	Submitted	06/10/96		Processed	06/12/96		
Last crop	019 Cool-Season Grass Pasture		Soil sample submitted by:							
This report is for: Example Report University of Missouri Columbia, MO 65211										
B SOIL TEST INFORMATION				G RATING						
				Very low	Low	Medium	High	Very High	Excess	
pH _s	(salt pH)	4.9		*****						
Phosphorus	(P)	22 lbs/acre		*****						
Potassium	(K)	303 lbs/acre		*****						
Calcium	(Ca)	2091 lbs/acre		*****						
Magnesium	(Mg)	278 lbs/acre		*****						
Sulfur	(S)	ppm								
Zinc	(Zn)	ppm								
Manganese	(Mn)	ppm								
Iron	(Fe)	ppm								
Copper	(Cu)	ppm								
Ogentic matter	2.2 %	Neutralizable acidity	6.0 meq/100g	Cation Exch. Capacity	12.8	meq/100g				
pH in water		Electrical Conductivity	mmhos/cm	Sodium (Na)		lbs				
Nitrate (NO ₃ -N)	Topsoil	ppm	Subsoil	ppm	Sampling Depth	Top	Inches	Subsoil	Inches	
E CROPPING OPTIONS				D NUTRIENT REQUIREMENTS				G LIMESTONE SUGGESTIONS		
		F Yield goal	N	P ₂ O ₅	K ₂ O	Zn	S	Effective neutralizing material (ENM)		
Alfalfa/Grass Establishment		0	20	55	0			1,395		
Clover/Grass Establishment		0	20	45	0			Effective magnesium (EMg)		
Alfalfa/Grass Hay		6	0	80	235					
Cool-Season Grass Pasture		150 CD/A	90	30	20					
I To determine limestone needs in tons/acre, divide ENM requirements by the guarantee of your limestone dealer. When N requirement for cool-season grass exceeds 90 lbs/acre, apply 2/3 of it during the eriod from December through February, and the remainder in August. Do not use nitrogen on spring seedlings of legumes after May 1st because of potential weed competition.										
Area Agronomy Specialist Agronomy Specialist Phone (573) 882-1000 White-Farmer, York-ASCS, Blue-Firm, Pink-Extension MP 189 Revised 194 Signature University of Missouri, Lincoln University, U.S. Department of Agriculture & Local University Extension Councils Cooperating <small>equal opportunity institutions</small>										

Questions ?

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