Predictive

Solution Report

Sampled: 06/19/2013 Received: 06/21/2013 Completed: 06/21/2013

Client: Larry Martin
4143 Red Tail Run
Efland, NC 27243

County: Orange

Farm:

Advisor: ,

Links to Helpful Information

Sample Information

Sample ID: 1

Solution Code: FP

Description:

Nutrient Measurements

N (ppm)	
Inorganic N	0.77
NH_4-N	0.67
NO_3-N	0.10
Organic N	
Urea	0.01

P (ppm)	K (ppm)	Ca (ppm)	Mg (ppm)	S (ppm)	Fe (ppm)	Mn (ppm)	Zn (ppm)	Cu (ppm)	B (ppm)
0.02	0	6.43	1.76	0.21	1.96	0.06	0	0	0

Other Results

Na (ppm)	Cl (ppm)
3.29	3.50

Other Results *(continued)*

SS (10^{-5} S/cm)	EC (mS/cm)	pH	CO_3 (meq/L)	HCO_3 (meq/L)	Total Alkalinity (ppm $CaCO_3$)	Acid Requirement (oz/100 gal)	Hardness (ppm $CaCO_3$)	SAR
6	0.06	5.04	0	0.50	25.0		23.0	0.30

Comments:

SPRING

Other Results *(continued)*

Cd (ppm)	Pb (ppm)	Ni (ppm)	As (ppm)	Cr (ppm)	Se (ppm)	Al (ppm)	Li (ppm)

Agronomist's Comments:

The general recommended ranges for fish pond water are as follows: pH 6.5-9.0; alkalinity 25-400 ppm; hardness 10-400 ppm; Ca 40-160 ppm; Cu 0.006 ppm (in soft water), Fe 0-0.15 or 0.5 ppm (warm water); Mn 0-0.01 ppm; NO3 <3.0 ppm; P 0.01-3.0 ppm; and Zn 0.03-0.05 ppm. Note where these parameters vary from the recommended ranges. Water pH is below the desired range for fish production. Liming will improve this. I recommend that you collect a soil sample from the bottom of the pond to determine the appropriate lime rate. Once the soil has been collected, let it dry out, then submit that sample with the Soil Sample Information form (available at www.ncagr.gov/agronomi/ pdffiles/issoil.pdf) to the NCDA&CS Soil testing section for analysis. Please use crop code 069 on the soil sample information form. Contact the fish specialist through your county extension office if you would like further information . (revised solution code per Carl Matyac, brc 7/9/2013) Water quality is good. Mineral concentrations are generally low. The solution analysis services of the NCDA& CS Agronomic Division are appropriate to diagnose the chemical parameters of water used in agriculture. If this well is used for drinking water, please note that the Agronomic Division does not analyze water samples for any disease-causing organisms that may be present nor for all of the mineral parameters that may be important for good quality drinking water. Further our methods of analysis may not be appropriate to detect concerns with human drinking water. Please contact me or your county extension office if you would like information regarding the suitability of this water for your specific purpose. Aaron Pettit 6/25/2013 1:06 PM

North Carolina Tobacco Trust Fund Commission

Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
- Steve Troxler, Commissioner of

Sample Information

Sample ID: 2

Solution Code: QS

Description:

Nutrient Measurements

N (ppm)	
Inorganic N	0.94
NH_4-N	0.81
NO_3-N	0.13
Organic N	
Urea	0.41

P (ppm)	*K (ppm)*	*Ca (ppm)*	*Mg (ppm)*	*S (ppm)*	*Fe (ppm)*	*Mn (ppm)*	*Zn (ppm)*	*Cu (ppm)*	*B (ppm)*
0.03	0	1.82	1.13	0.37	0.53	0.01	0	0	0

Other Results

Na (ppm)	*Cl (ppm)*
2.77	2.79

Other Results *(continued)*

SS (10^{-5} S/cm)	*EC (mS/cm)*	*pH*	*CO_3 (meq/L)*	*HCO_3 (meq/L)*	*Total Alkalinity (ppm $CaCO_3$)*	*Acid Requirement (oz/100 gal)*	*Hardness (ppm $CaCO_3$)*	SAR
5	0.05	5.20	0	0.50	25.0		9.00	0.40

Comments:

POND

Other Results *(continued)*

Cd (ppm)	*Pb (ppm)*	*Ni (ppm)*	*As (ppm)*	*Cr (ppm)*	*Se (ppm)*	*Al (ppm)*	*Li (ppm)*

Understanding the Solution Report * - *additional information:* www.ncagr.gov/agronomi/pdffiles/usoln.pdf

This report provides data on chemical properties relevant to use of water or nutrient solutions for a specific agricultural purpose such as crop, livestock & poultry production, aquaculture or pond management and indicates whether they pose a concern for that use. If you need to identify microorganisms, pesticides or organic chemical contaminants, contact a commercial laboratory or the county health department.

SS (soluble salts) & **EC** (electrical conductivity) are both measures of salinity, or total dissolved salts (ions) in solution, expressed in different units; **pH** is a measure of basicity/acidity; **Total Alkalinity** is measure of carbonates & bicarbonates; **Acid Requirement** is the amount of battery acid (35% sulfuric acid) needed to neutralize alkalinity by 80%; **Hardness** is calculated from Ca & Mg levels and indicates tendency to form scale or salt deposits; **SAR** (sodium adsorption ratio; no units) indicates relative balance among Ca, Mg & Na ions, which can predict tendency for Na to accumulate in substrates or on surfaces. The designations **VL, L, M, H** & **VH** indicate Very Low, Low, Medium, High & Very High, respectively.

*** ppm** = parts per million; **S** = siemens; **mS** = millisiemens; **CaCO3** = calcium carbonate; **meq/L** = milliequivalent per liter