



Predictive

Solution Report

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

Advisor:

Sampled County : Orange

Sampled: 07/10/2015 Received: 07/17/2015 Completed: 07/21/2015 Farm: ELG Pond

[Links to Helpful Information](#)

Sample Information		Nutrient Measurements										Other Results			
		<i>N (ppm)</i>	<i>P (ppm)</i>	<i>K (ppm)</i>	<i>Ca (ppm)</i>	<i>Mg (ppm)</i>	<i>S (ppm)</i>	<i>Fe (ppm)</i>	<i>Mn (ppm)</i>	<i>Zn (ppm)</i>	<i>Cu (ppm)</i>	<i>B (ppm)</i>	<i>Na (ppm)</i>	<i>Cl (ppm)</i>	
Sample ID: 1			0.02	0.82	6.65	3.12	0.24	0.03	0	0	0	0.01	2.94	5.50	
Solution Code: AP		<i>Inorganic N</i>	0.61												
		<i>NH4-N</i>	0.32												
Description:		<i>NO3-N</i>	0.28												
Pond Water		<i>Organic N</i>		<i>SS</i>	<i>EC</i>	<i>pH</i>	<i>CO3</i>	<i>HCO3</i>	<i>Total Alkalinity</i>	<i>Acid Requirement</i>		<i>Hardness</i>		<i>SAR</i>	
				(10 ⁻⁵ S/cm)	(mS/cm)		(meq/L)	(meq/L)	(ppm CaCO3)	(oz/100 gal)		(ppm CaCO3)			
		<i>Urea</i>	0.36	9	0.09	6.19	0	0.70	35.0			29.0		0.24	

Agronomist's Comments:

The general desired ranges for aquaculture/fish pond water are as follows (in parenthesis is acceptable ranges): pH 6.5-9.0 (5.5-10.0); alkalinity 50-150 ppm CaCO₃ (>20 and <400); hardness 50-150 ppm CaCO₃ (>20); EC 6-100 10-5 S/cm (3-500); Ca > 20 ppm (>5); Fe 0-0.1 ppm (fry) or 1.0 ppm (general fish); Mn 0-0.01 ppm (<1); Cl < 100 ppm for catfish; NO₃ <90 ppm; P 0.01-3.0 ppm. Note where the results vary from these desired ranges or the recommended ranges for your application. The Agronomic Division does not analyze water samples for parameters (such as dissolved oxygen or carbon dioxide concentrations) that may be important for good quality fish pond / aquaculture water. Please contact the aquaculture specialist through your county extension office if you would like additional information. Please call me if you have any questions. Kristin A. Hicks 7/21/2015 3:58 PM

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



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 Agriculture.