



**Agricultural and Environmental
Services Laboratories (AESL)**

Fee Schedule

2016



Athens, GA 30602-9105

Phone: 706-542-5350; Fax: 706-369-5734

<http://aesl.ces.uga.edu>

January 2016

Part I

FEE Schedule

I. Soil Analyses

| A. Routine, Specials, and Greenhouse Mixes | | | | | |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|----------|-----|
| Test No. | Description | | | Fee (\$) | Lab |
| S1 | Routine Test | | | 6.00 | SPW |
| | pH | Calcium (Ca) | | | |
| | Lime requirement | Magnesium (Mg) | | | |
| | Phosphorus (P) | Zinc (Zn) | | | |
| | Potassium (K) | Manganese (Mn) | | | |
| S1A | pH only | | | 5.00 | SPW |
| S1C | Cast (Calcium Soil Test - Peanut Pegging Zone) Mehlich method (Ca, K) | | | 5.00 | SPW |
| S2 | S1 + Na, Fe, Cu, Cr, Mo, Ni, Cd, Pb + CEC (Cation Exchange Capacity) by Mehlich I sum, Percent Base Saturation | | | 12.00 | SPW |
| S2A | S2 by Ammonium Acetate Extraction | | | 15.00 | SPW |
| S3 | Boron (Hot water extractable) | | | 12.00 | SPW |
| S4 | Soluble Salts (electrical conductivity - EC) | | | 12.00 | SPW |
| S5 | Texture by Hydrometer (% sand, silt, clay) | | | 18.00 | SPW |
| S6 | Organic Matter (loss on ignition, LOI) | | | 10.00 | SPW |
| S7 | Nitrate-Nitrogen (KCl extractable NO3-N) | | | 15.00 | SPW |
| S8 | Ammonium-Nitrogen (KCl extractable NH4-N) | | | 15.00 | SPW |
| S9 | Nitrite-Nitrogen (KCl extractable NO2-N) | | | 15.00 | SPW |
| S10 | Exchangeable Aluminum (KCl extraction) | | | 15.00 | SPW |
| S11 | Potting Mix/Greenhouse/Nursery Media Test (saturated extract) | | | 40.00 | SPW |
| | pH | Calcium (Ca) | Ammonium (NH4-N) | | |
| | Phosphorus (P) | Magnesium (Mg) | Soluble Salts (SS) | | |
| | Potassium (K) | Nitrate (NO3-N) | | | |
| S12 | pH only (for S11 only) | | | 10.00 | SPW |

| Test No. | Description | Fee (\$) | Lab |
|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| S13 | Total Elemental Analysis (acid digestion) Screening - Non trace levels Phosphorus (P) Manganese (Mn) Sodium (Na) Cadmium (Cd) Potassium (K) Molybdenum (Mo) Sulfur (S) Chromium (Cr) Calcium (Ca) Boron (B) Zinc (Zn) Lead (Pb) Iron (Fe) Copper (Cu) Aluminum (Al) Magnesium (Mg) Nickel (Ni) Arsenic (As) | 30.00 | SPW |
| S14 | Total organic carbon (TOC) | 15.00 | SPW |
| S15 | Olsen (NaHCO₃) extractable P | 12.00 | SPW |
| S16 | Phosphorus Adsorption Isotherm | 50.00 | SPW |
| S17 | Mercury (Hg) - acid digestion | 50.00 | SPW |
| S18 | Gypsum Subsoil Test for Alfalfa | 20.00 | SPW |
| S20 | Total Carbon (C) OR Total Nitrogen (N) | 10.00 | SPW |
| S21 | Total Carbon (C) AND Total Nitrogen (N) | 18.00 | SPW |
| S22 | Extractable Chloride [Ca(NO ₃) ₂ extraction] | 12.00 | SPW |
| S23 | Water-Extractable Anions Chloride (Cl) Phosphate (PO ₄) Fluoride (F) Sulfate (SO ₄) Nitrate (NO ₃ -N) | 40.00 | SPW |
| S24 | Any one anion in S23 | 12.00 | SPW |
| Saturated Paste Extract (SPE) Tests SPE Preparation: \$20 Note: Minimum sample volume required = 250 g | | | |
| S26 | Saturated Paste Extract Sodium Adsorption Ratio (SAR), Ca, Mg, K, Na | 40.00 | SPW |
| S27 | Saturated Paste Extract Soluble Salts/Electrical Conductivity | 30.00 | SPW |
| S28 | Saturated Paste Extract Anions (Cl, PO ₄ , F, SO ₄ , NO ₃ -N) | 50.00 | SPW |
| S29 | Saturated Paste Extract pH | 25.00 | SPW |
| S30 | Saturated Paste Extract SAR, Ca, Mg, K, Na, EC, Cl, PO ₄ , F, SO ₄ , NO ₃ -N, pH | 80.00 | SPW |
| S31 | Saturated Paste Extract % Moisture Content | 25.00 | SPW |

| Test No. | Description | Fee (\$) | Lab |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| S32 | Bulk density (pre-cored, soil volume pre-determined or provided by client) | 15.00 | SPW |
| S34 | Sr(NO ₃) ₂ -extractable Ca, Mg, K, Na | 15.00 | SPW |
| S35 | Ca(NO ₃) ₂ -extractable Fe, Al | 20.00 | SPW |
| S36 | Basic Soil Salinity Test (1:2 soil to water ratio) Calcium (Ca ²⁺) Sodium (Na ⁺) Total Soluble Salts (TSS) Magnesium (Mg ²⁺) pH Sodium Adsorption Ratio (SAR) Potassium (K ⁺) Electrical Conductivity (EC) | 35.00 | SPW |
| S37 | Comprehensive Soil Salinity Test <i>(Saturated Paste Extract; NH₄OAC Extraction for ESP)</i> (Includes: S2A, S26, S27, S28, S29) (Minimum sample quantity to send: 250 g) Calcium (Ca ²⁺) Sulfate (SO ₄ ²⁻) Electrical Conductivity (EC) Magnesium (Mg ²⁺) Chloride (Cl ⁻) Total Soluble Salts (TSS) Potassium (K ⁺) Nitrate-nitrogen (NO ₃ -N) Exchangeable Sodium Percentage (ESP) Sodium (Na ⁺) pH Sodium Adsorption Ratio (SAR) | 95.00 | SPW |

B. Microbiological Test

| Test No. | Description | Fee (\$) | Lab |
|----------|-------------------------------|----------|-----|
| S38 | Fecal Coliform in Soil | 46.00 | FEW |

C. Trace Level Analysis

| Test No. | Description | Fee (\$) | Lab |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----|
| S41 | Priority Pollutants By ICP-AVOES Antimony (Sb) Cadmium (Cd) Lead (Pb) Silver (Ag) Arsenic (As) Chromium (Cr) Nickel (Ni) Thallium (Tl) Beryllium (Be) Copper (Cu) Selenium (Se) Zinc (Zn) | 150.00 (+ \$10 any additional element in S42) | SPW |

| Test No. | Description | Fee (\$) | Lab |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----|
| S42 | Any one of Available Metals and/or Non-Metals by ICP-AVOES Aluminum (Al) Chromium (Cr) Nickel (Ni) Sulfur (S) Antimony (Sb) Cobalt (Co) Palladium* (Pd) Thallium (Tl) Arsenic (As) Copper (Cu) Phosphorus (P) Tin (Sn) Barium (Ba) Gold (Au) Potassium (K) Titanium (Ti) Beryllium (Be) Iron (Fe) Selenium (Se) Vanadium (V) Bismuth (Bi) Lead (Pb) Silicon (Si) Zinc (Zn) Boron (B) Magnesium (Mg) Silver (Ag) Cadmium (Cd) Manganese (Mn) Sodium (Na) Calcium (Ca) Molybdenum (Mo) Strontium (Sr) | 50.00 (+ \$10 any additional element) | SPW |
| * Analyte not listed in EPA 6010b | | | |

D. Pesticide and Organic Analysis

| Test No. | Description | Fee (\$) | Lab |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| S44 | Chlorinated Hydrocarbon & Organic Phosphate Insecticide (Screen) Aldrin Dieldrin Lindane PCB 1242 Chlordane Endrin Malathion PCB 1254 Chlorpyrifos Endrin Aldehyde Methoxychlor PCB 1260 DDD Ethion Methyl Parathion Toxaphene DDE Heptachlor Mirex DDT Heptachlor Epoxide Parathion | 100.00 | CEQ |
| S45 | Herbicide Analysis (Screen) Alachlor EPTC Oxadiazon Propachlor Atrazine Hexazinone Oxyfluorfen Propazine Benfluralin Isopropalin Pebulate Simazine Bromacil Metolachlor Pendimethalin Terbacil Butylate Metribuzin Prodiamine Trifluralin Cycloate Molinate Profluralin Vernolate | 100.00 | CEQ |
| S46 | Phenoxy Acid Herbicide Analysis 2-4-D 2,4,5-T Dicamba Triclopyr 2,4-DB 2,4,5-TP Picloram MCPP * * Special request (by HPLC Method) | 100.00 | CEQ |
| S47 | Termiticide Analysis Chlorpyrifos Cypermethrin Pydrin Chlordane Bifenthrin Permethrin | 100.00 | CEQ |

| Test No. | Description | | | Fee (\$) | Lab |
|--------------------------|--------------------------------------------------------------------------|------------------------|---------------------------------------|----------|-----|
| S48 | Volatile Organic Analysis | | | 125.00 | CEQ |
| | Acetone | | 1,1-Dichloropropene | | |
| | Acrolein | | cis-1,3-Dichloropropene | | |
| | Acrylonitrile | | trans-1,3-Dichloropropene | | |
| | Benzene | | Diethyl Ether (Ethyl Ether) | | |
| | Bromobenzene | | 3,3-Dimethyl-1-butanol | | |
| | Bromochloromethane | | Ethylbenzene | | |
| | Bromodichloromethane | | Ethyl methacrylate | | |
| | Bromoform | | 2-Hexanone | | |
| | Bromomethane (Methyl Bromide) | | Hexachlorobutadiene | | |
| | 2-Butanone (MEK) | | Isopropylbenzene | | |
| | n-Butylbenzene | | 4-Isopropyltoluene (p-Cymene) | | |
| | sec-Butylbenzene | | Methyl acetate | | |
| | tert-Butylbenzene | | Methyl tert-butyl ether (MTBE) | | |
| | Carbon disulfide | | 4-Methyl-2-pentanone (MIBK) | | |
| | Carbon tetrachloride | | Methylene Chloride | | |
| | Chlorobenzene | | Methylcyclohexane | | |
| | Chloroethane | | Naphthalene | | |
| | Chloroform | | n-Propylbenzene | | |
| | Chloromethane (Methyl Chloride) | | Styrene | | |
| | 2-Chloroethyl vinyl ether | | 1,1,2,2-Tetrachloroethane | | |
| | 2-Chlorotoluene | | Tetrachloroethylene | | |
| | 4-Chlorotoluene | | Tetrahydrofuran | | |
| | Cyclohexane | | Toluene | | |
| | Dibromochloromethane | | 1,2,3-Trichlorobenzene | | |
| | Dibromomethane | | 1,2,4-Trichlorobenzene | | |
| | 1,2-Dibromo-3-Chloropropane (DBCP) | | 1,1,1-Trichloroethane | | |
| | 1,2-Dibromoethane (EDB) | | 1,1,2-Trichloroethane | | |
| | 1,2-Dichlorobenzene | | 1,1,1,2-Tetrachloroethane | | |
| | 1,3-Dichlorobenzene | | Trichloroethylene | | |
| | 1,4-Dichlorobenzene | | Trichlorofluoromethane | | |
| | Dichlorodifluoromethane | | 1,1,2-Trichloro-1,2,2-Trifluoroethane | | |
| | 1,1-Dichloroethane | | 1,2,3-Trichloropropane | | |
| | 1,2-Dichloroethane | | 1,2,4-Trimethylbenzene | | |
| 1,1-Dichloroethene | | 1,3,5-Trimethylbenzene | | | |
| cis-1,2-Dichloroethene | | Vinyl acetate | | | |
| trans-1,2-Dichloroethene | | Vinyl chloride | | | |
| 1,2-Dichloropropane | | o-Xylene | | | |
| 1,3-Dichloropropane | | Total Xylenes | | | |
| 2,2-Dichloropropane | | m,p-Xylenes | | | |
| S49 | BTEX (only) | | | 100.00 | CEQ |
| | Benzene | Ethyl Benzene | MTBE | | |
| | Toluene | m,p-Xylene | O-Xylene | | |
| S50 | GRO-TPH (C6-C10) (Total Petroleum Hydrocarbons; Gasoline Range Organics) | | | 75.00 | CEQ |
| S51 | TPH; DRO (Total Petroleum Hydrocarbons; Diesel Range Organics) | | | 75.00 | CEQ |

II. Plant Tissue Analyses

| A. Plant Tissue Analysis | | | | | | | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-------------|-------------|----------|-----|
| Test No. | Description | | | | | Fee (\$) | Lab |
| P1 | Basic Plant Test | | | | | 25.00 | SPW |
| | Total Nitrogen (N) | Potassium (K) | Iron (Fe) | Boron (B) | Nickel (Ni) | | |
| | Sulfur (S) | Calcium (Ca) | Manganese (Mn) | Copper (Cu) | | | |
| | Phosphorus (P) | Magnesium (Mg) | Aluminum (Al) | Zinc (Zn) | | | |
| P2 | ICP Minerals Only (P1 without Total N) | | | | | 20.00 | SPW |
| P4 | Total Carbon (C) OR Total Nitrogen (N) | | | | | 10.00 | SPW |
| P5 | Total Carbon (C) AND Total Nitrogen (N) | | | | | 18.00 | SPW |
| P9 | Mercury - acid digestion | | | | | 50.00 | SPW |
| P13 | Cotton Petiole: Single sample Single Petiole for Nitrate-N, Phosphorus, and Potassium | | | | | 25.00 | SPW |
| P15 | Cotton Petiole: Test Option # 1 (3 samples in total) | | | | | 55.00 | SPW |
| | Three samples submitted for analysis: a. leaf sample at first square b. petiole sample at first bloom c. petiole sample at first bloom + two weeks | | | | | | |
| P16 | Cotton Petiole: Test Option # 2 (4 samples in total) | | | | | 70.00 | SPW |
| | Four samples submitted for analysis: a. leaf sample at first square b. petiole sample at first bloom c. petiole sample at first bloom + two weeks d. final petiole sample at first bloom + four weeks | | | | | | |

B. Trace Level Analysis

| Test No. | Description | Fee (\$) | Lab |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----|
| P41 | Priority Pollutants by ICP-AVOES Antimony (Sb) Cadmium (Cd) Lead (Pb) Silver (Ag) Arsenic (As) Chromium (Cr) Nickel (Ni) Thallium (Tl) Beryllium (Be) Copper (Cu) Selenium (Se) Zinc (Zn) | 150.00 (+ \$10 any additional element in P42) | SPW |
| P42 | Any one of Available Metals and/or Non-Metals by ICP-AVOES Aluminum (Al) Chromium (Cr) Nickel (Ni) Sulfur (S) Antimony (Sb) Cobalt (Co) Palladium* (Pd) Thallium (Tl) Arsenic (As) Copper (Cu) Phosphorus (P) Tin (Sn) Barium (Ba) Gold (Au) Potassium (K) Titanium (Ti) Beryllium (Be) Iron (Fe) Selenium (Se) Uranium (U) Bismuth (Bi) Lead (Pb) Silicon (Si) Vanadium (V) Boron (B) Magnesium (Mg) Silver (Ag) Zinc (Zn) Cadmium (Cd) Manganese (Mn) Sodium (Na) Calcium (Ca) Molybdenum (Mo) Strontium (Sr) | 50.00 (+ \$10 any additional element) | SPW |

* Analyte not listed in EPA 6010b

C. Pesticide and Organic Analysis

| Test No. | Description | Fee (\$) | Lab |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| P44 | Chlorinated Hydrocarbon & Organic Phosphate Insecticide (Screen) Aldrin Dieldrin Lindane PCB 1242 Chlordane Endrin Malathion PCB 1254 Chlorpyrifos Endrin Aldehyde Methoxychlor PCB 1260 DDD Ethion Methyl Parathion Toxaphene DDE Heptachlor Mirex DDT Heptachlor Epoxide Parathion | 100.00 | CEQ |
| P45 | Herbicide Analysis (Screen) Alachlor EPTC Oxadiazon Propachlor Atrazine Hexazinone Oxyfluorfen Propazine Benfluralin Isopropalin Pebulate Simazine Bromacil Metolachlor Pendimethalin Terbacil Butylate Metribuzin Prodiamine Trifluralin Cycloate Molinate Profluralin Vernolate | 100.00 | CEQ |
| P46 | Phenoxy Acid Herbicide Analysis 2-4-D 2,4,5-T Dicamba Triclopyr 2,4-DB 2,4,5-TP Picloram MCPP * * Special request (by HPLC Method) | 100.00 | CEQ |

| Test No. | Description | Fee (\$) | Lab |
|----------|------------------------------------------------------------------------------------------------------------------------|----------|-----|
| P47 | Termiticide Analysis Chlorpyrifos Cypermethrin Pydrin Chlordane Bifenthrin Permethrin | 100.00 | CEQ |

III. Water Analyses

A. Basic, GA Expanded, and Other Analysis

| Test No. | Description | Fee (\$) | Lab |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| W1 | Basic Water Test (Minimum Sample Amt.: 125mL) pH and Hardness Aluminum (Al) Iron (Fe) Nickel (Ni) Phosphorus (P) Boron (B) Magnesium (Mg) Silica (SiO ₂) Potassium (K) Chromium (Cr) Manganese (Mn) Sodium (Na) Calcium (Ca) Copper (Cu) Molybdenum (Mo) Zinc (Zn) | 20.00 | SPW |
| W2 | GA. Expanded Water Test <i>(required for water treatment design)</i> (W1-Basic, W3-Anions, W11-Soluble Salts, & W18-Alkalinity) Need 16 oz. (500 mL) | 60.00 | SPW |
| For a W1 and W2 , a first draw water sample will be collected. To do this, take the sample between a 6 - 12 hour period during which time there was no water usage. The GA-EPD recommends that either early morning or evenings upon returning home are the best sampling times to ensure that the necessary stagnant water conditions exist. A kitchen or bathroom cold-water faucet is to be used for sampling. If the primary concern is the well pump, draw the water from as near the well head as possible. Place a quart container below the faucet and gently open the cold water tap. Completely fill. Transfer a portion to a 4 oz. (125 mL) sample bottle for W1 and a 16 oz. (500 mL) for W2, tightly cap and place in the mail. | | | |
| W3 | Anions (Ion chromatography) (Minimum Sample Amt.: 125mL) Chloride (Cl) Nitrate-Nitrogen (NO ₃ -N) Sulfate (SO ₄) Fluoride (F) Phosphate (PO ₄) | 40.00 | SPW |
| W4 | Any single Anion (in W3) (Minimum Sample Amt.: 125mL) | 12.00 | SPW |
| W5 | Any two Anions (in W3) (Minimum Sample Amt.: 125mL) | 22.00 | SPW |
| W6 | Nitrate-N (NO₃-N) (Cd reduction colorimetric) (Minimum Sample Amt.: 125mL) | 12.00 | SPW |
| W6A | Nitrate-N (NO₃-N) (Conductimetric) (Minimum Sample Amt.: 25mL) | 12.00 | FEW |
| W7 | Nitrite-N (NO₂-N) (Colorimetric) (Minimum Sample Amt.: 125mL) | 12.00 | SPW |
| W8 | Ammonium-Nitrogen (NH₄-N) (Minimum Sample Amt.: 125mL) | 12.00 | SPW |
| W8A | Ammonium-Nitrogen (NH₄-N) (Conductimetric) (Minimum Sample Amt.: 25mL) | 12.00 | FEW |
| W10 | pH only (Minimum Sample Amt.: 125mL) | 4.00 | SPW |

| Test No. | Description | Fee (\$) | Lab |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| W11 | Soluble Salts (Electrical Conductivity/Specific Conductance) (Minimum Sample Amt.: 125mL, Holding Time: 28 days) | 13.00 | FEW |
| W12 | Total Residual Chlorine (Minimum Sample Amt.: 500 mL, Analyze Immediately) | 8.00 | FEW |
| W13 | Chlorophyll-A (Chla) (Minimum Sample Amt.: 500 mL, Filter Immediately Through 0.45 µm Filter, Keep the Filter Paper Refrigerated, Analyze Within 3 ½ Weeks) | 40.00 | FEW |
| W14 | Mercury (Hg) (Minimum Sample Amt.: 125mL) | 50.00 | SPW |
| W15 | Total Anionic Surfactants (Minimum Sample Amt.: 500 mL, No Known Holding Time, Analyze ASAP) | 25.00 | FEW |
| W16 | Total organic carbon (TOC) (Minimum Sample Amt.: 125 mL, Holding Time: 28 days) | 20.00 | FEW |
| W16A | Total inorganic carbon (TIC) (Minimum Sample Amt.: 125 mL, Holding Time: 28 days) | 20.00 | FEW |
| W16B | Dissolved organic carbon (DOC) (Minimum Sample Amt.: 125 mL, Holding Time: 28 days) | 25.00 | FEW |
| W17 | Kjeldahl Nitrogen (Minimum Sample Amt.: 500 mL, Holding Time: 28 days) | 30.00 | FEW |
| W18 | Alkalinity (bicarbonate), pH , and CO₂ (250 mL required) (Minimum Sample Amt.: 250 mL, Holding Time: 14 days) | 16.00 | FEW |
| W19 | Acidity (Minimum Sample Amt.: 250 mL, Holding Time: 14 days) | 23.00 | FEW |
| W20 | Total Dissolved Solids (TDS) (Minimum Sample Amt.: 250 mL, Holding Time: 7 days) | 20.00 | FEW |
| W21 | Total Suspended Solids (TSS) (Minimum Sample Amt.: 1 Liter, Holding Time: 7 days) | 20.00 | FEW |
| W22 | Total Solids (TS) (Minimum Sample Amt.: 125 mL, Holding Time: 7 days) | 16.00 | FEW |
| W23 | Total Volatile Solids (TVS) and Total Solids (TS) (Minimum Sample Amt.: 125 mL, Holding Time: 7 days) | 22.00 | FEW |
| W24 | Biochemical Oxygen Demand (BOD) CALL FOR SCHEDULING Wednesday & Thursday 8:00 AM - 5:00 PM Friday 8:00 AM - 12:00 PM (Minimum Sample Amt.: 1000mL, Holding Time: 48 hours) Note: If you have more than one BOD sample and we are not aware of them, please bring them on Wednesday or Thursday. Additional tests are required. | 40.00 | FEW |

| Test No. | Description | Fee (\$) | Lab |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|
| W24A | Carbonaceous Biochemical Oxygen Demand (CBOD) See above note in W24 for information | 30.00 | FEW |
| W25 | Chemical Oxygen Demand (COD) Minimum Sample Amt.: 125 mL, Holding Time: 28 days | 23.00 | FEW |
| W26 | Oil & Grease non-petroleum (Submit a 1- Liter sample in a dedicated glass container. Holding time: 28d if acidified to pH<2 and refrigerated. <i>If the sample cannot be preserved as stated, it should be delivered to the laboratory as soon as possible keeping chilled with ice shield in a cooler.</i>) | 40.00 | FEW |
| W27 Phosphorus (P) | | | |
| W27A | Total Phosphorus (Persulfate Digestion) Minimum Sample Amt.: 125mL, Holding Time: 28 days | 28.00 | FEW |
| W27B | Dissolved Reactive Phosphorus (filtered, undigested) Minimum Sample Amt.: 125mL, Holding Time: 48 hours | 20.00 | FEW |
| W27C | Total Reactive Phosphorus (unfiltered, undigested) Minimum Sample Amt.: 125mL, Holding Time: 48 hours | 18.00 | FEW |
| W28 | Phenol 1- Liter sample in a glass container | 40.00 | CEQ |
| W29 | Cyanide Please call CEQ lab prior to submission (706-542-9023) | 50.00 | CEQ |
| W30 | Color - 48-h holding time, ship overnight or drop off (Minimum Sample Amt.: 125 mL) | 19.00 | FEW |
| W31 | Turbidity - 48-h holding time, ship overnight or drop off (Minimum Sample Amt.: 125 mL) | 17.00 | FEW |
| W32 | Total Nitrate (NO₃) + Nitrite (NO₂) as N | 12.00 | SPW |
| W33 | GA -Certification for Drinking Water Providers (Small Distribution Systems) (W1, W3, W7, W11, W18, W20, W30, W31, W32) 1 Liter (quart) in plastic container for shipping overnight, or drop off within 24 hours. (Samples accepted Monday-Thursday 8:00am - 4:00pm) (Note: consider W35 test) | 130.00 | SPW/ FEW |
| W33A | Irrigation Water Chemistry W1 (with calculated sodium adsorption ratio (SAR) and adjusted SAR), W18 (Alkalinity with bicarbonate concentration), W11 (EC), Total Dissolved Solids (W20), Chloride, Fluoride, and Nitrate (Note: If you are under GAP audit, consider W35 test using irrigation water form) | 70.00 | SPW/ FEW |

| Test No. | Description | Fee (\$) | Lab |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------|
| W33B | Home Loan Closing W42 (Pb)+W6 (Nitrate)+W7 (Nitrite)+W35 (Total Coliform/ <i>E. coli</i>) These four tests are commonly required for home closings. Ask your lending agency for specific details. Normal turnaround time is 5-10 business days; contact the AESL laboratory to inquire about expedited analysis (706-542-5350). | 85.00 (+ \$55 rush fee, + \$10 overnight shipping label when applicable) | SPW/ FEW |
| W33C | Dept. of Public Health: Private Well Chemical Test W2, W32, W42 (Lead and Arsenic) | 122.00 | SPW/ FEW |
| W34C | Fish pond general water quality (W1 + W18) 125 mL, plastic/glass container | 35.00 | SPW |
| W34D | Pond Water Quality (W1 + W18) and Algae Testing Kit Each kit contains 3 plastic bottles with one bottle containing a Lugol solution. | 110.00 | SPW |
| W44 | Radon By liquid scintillation * Must contact county agent for sampling instruction. | 30.00 (+ \$10 overnight shipping label when applicable) | FEW |

B. Microbiological Analysis

| Test No. | Description | Fee (\$) | Lab |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----|
| W35 | Total Coliform / <i>E. coli</i> (Colilert®) (Requires sample in a special bottle . Drinking Water, Irrigation Water, GAP Program - Please download appropriate forms at: http://aesl.ces.uga.edu/forms under Microbiological Forms. For EPD Compliance / Regulatory samples, contact the lab for the appropriate submission form.) (Samples accepted Monday-Thursday 8:00am - 4:00pm) | 36.00 (+ \$10 overnight shipping label when applicable) | FEW |
| W37 | Fecal Coliform (multiple tube fermentation / A1 Media) (Requires sample in a special bottle. Samples accepted Monday-Thursday 8:00am - 1:00pm; Please download the chain-of-custody form for sample submission at: http://aesl.ces.uga.edu/forms/COCWater.pdf) | 36.00 | FEW |
| W38 | Heterotrophic Plate Count (Idexx SimPlate®) (Requires sample in a special bottle. Samples accepted Monday-Wednesday 8:00am - 2:00pm; Please download the chain-of-custody form for sample submission at: http://aesl.ces.uga.edu/forms/COCWater.pdf) | 36.00 | FEW |
| W39 | <i>E. coli</i> only (recreational; swimming) (Requires sample in a special bottle. Samples accepted Monday-Thursday 8:00am - 4:00pm; Please download appropriate forms at: http://aesl.ces.uga.edu/forms) | 36.00 | FEW |

| Test No. | Description | Fee (\$) | Lab |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| W40 | Enterococcus / Fecal Streptococcus (Requires sample in a special bottle. Please contact the lab two weeks before sample submission. This advance notice will allow the lab to order and prepare the microbiological media. Please download the chain-of-custody form for sample submission at: http://aesl.ces.uga.edu/forms/COCWater.pdf) | 36.00 | FEW |

C. Trace Level Analysis

| Test No. | Description | Fee (\$) | Lab |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----|
| <p>For Lead (Pb) and copper (Cu), a first draw water sample will be collected after a minimum of 6 hours, but not more than 12 hours, period during which time there was no water usage prior to the sampling. The GA-EPD recommends that either early morning or evenings upon returning home are the best sampling times to ensure that the necessary stagnant water conditions exist.</p> <p>A kitchen or bathroom cold-water faucet is to be used for sampling. If the primary concern is the well pump, draw the water from as near the well head as possible. Place a quart container below the faucet and gently open the cold water tap. Completely fill. Transfer a portion to a 4 oz. (125 mL) sample bottle, tightly cap and place in the mail.</p> | | | |
| W41 | Priority Pollutants By ICP-AVOES Antimony (Sb) Cadmium (Cd) Lead (Pb) Silver (Ag) Arsenic (As) Chromium (Cr) Nickel (Ni) Thallium (Tl) Beryllium (Be) Copper (Cu) Selenium (Se) Zinc (Zn) | 150.00 (+ \$10 any additional element in W42) | SPW |
| W42 | Any one of Available Metals and/or Non-Metals By ICP-AVOES Aluminum (Al) Cadmium (Cd) Lead (Pb) Potassium (K) Thallium (Tl) Antimony (Sb) Calcium (Ca) Magnesium (Mg) Selenium (Se) Tin (Sn) Arsenic (As) Chromium (Cr) Manganese (Mn) Silicon (Si) Titanium (Ti) Barium (Ba) Cobalt (Co) Molybdenum (Mo) Silver (Ag) Uranium (U) Beryllium (Be) Copper (Cu) Nickel (Ni) Sodium (Na) Vanadium (V) Bismuth (Bi) Gold (Au) Palladium* (Pd) Strontium (Sr) Zinc (Zn) Boron (B) Iron (Fe) Phosphorus (P) Sulfur (S) | 40.00 (+ \$10 any additional element) OR \$10 per element when combined with W43 | SPW |
| * Analyte not listed in EPA 200.7 or 200.5 | | | |
| W43 | Arsenic , low level | 60.00 | SPW |

D. Pesticide and Organic Analysis

| Test No. | Description | Fee (\$) | Lab |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| W45 | Chlorinated Hydrocarbon & Organic Phosphate Insecticide (Screen) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">Aldrin</div> <div style="width: 50%;">Dieldrin</div> <div style="width: 50%;">Lindane</div> <div style="width: 50%;">PCB 1242</div> <div style="width: 50%;">Chlordane</div> <div style="width: 50%;">Endrin</div> <div style="width: 50%;">Malathion</div> <div style="width: 50%;">PCB 1254</div> <div style="width: 50%;">Chlorpyrifos</div> <div style="width: 50%;">Endrin Aldehyde</div> <div style="width: 50%;">Methoxychlor</div> <div style="width: 50%;">PCB 1260</div> <div style="width: 50%;">DDD</div> <div style="width: 50%;">Ethion</div> <div style="width: 50%;">Methyl Parathion</div> <div style="width: 50%;">Toxaphene</div> <div style="width: 50%;">DDE</div> <div style="width: 50%;">Heptachlor</div> <div style="width: 50%;">Mirex</div> <div style="width: 50%;"></div> <div style="width: 50%;">DDT</div> <div style="width: 50%;">Heptachlor Epoxide</div> <div style="width: 50%;">Parathion</div> <div style="width: 50%;"></div> </div> | 100.00 | CEQ |
| W46 | Herbicide Analysis (Screen) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">Alachlor</div> <div style="width: 50%;">EPTC</div> <div style="width: 50%;">Oxadiazon</div> <div style="width: 50%;">Propachlor</div> <div style="width: 50%;">Atrazine</div> <div style="width: 50%;">Hexazinone</div> <div style="width: 50%;">Oxyfluorfen</div> <div style="width: 50%;">Propazine</div> <div style="width: 50%;">Benfluralin</div> <div style="width: 50%;">Isopropalin</div> <div style="width: 50%;">Pebulate</div> <div style="width: 50%;">Simazine</div> <div style="width: 50%;">Bromacil</div> <div style="width: 50%;">Metolachlor</div> <div style="width: 50%;">Pendimethalin</div> <div style="width: 50%;">Terbacil</div> <div style="width: 50%;">Butylate</div> <div style="width: 50%;">Metribuzin</div> <div style="width: 50%;">Prodiamine</div> <div style="width: 50%;">Trifluralin</div> <div style="width: 50%;">Cycloate</div> <div style="width: 50%;">Molinate</div> <div style="width: 50%;">Profluralin</div> <div style="width: 50%;">Vernolate</div> </div> | 100.00 | CEQ |
| W47 | Phenoxy Acid Herbicide Analysis <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">2-4-D</div> <div style="width: 50%;">2,4,5-T</div> <div style="width: 50%;">Dicamba</div> <div style="width: 50%;">Triclopyr</div> <div style="width: 50%;">2,4-DB</div> <div style="width: 50%;">2,4,5-TP</div> <div style="width: 50%;">Picloram</div> <div style="width: 50%;">MCP * </div> </div> <p>* Special request (by HPLC Method)</p> | 100.00 | CEQ |
| W48 | Termiticide Analysis <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">Chlorpyrifos</div> <div style="width: 50%;">Cypermethrin</div> <div style="width: 50%;">Pydrin</div> <div style="width: 50%;"></div> <div style="width: 50%;">Chlordane</div> <div style="width: 50%;">Bifenthrin</div> <div style="width: 50%;">Permethrin</div> <div style="width: 50%;"></div> </div> | 100.00 | CEQ |
| W49 | Volatile Organic Analysis <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;">Acetone</div> <div style="width: 33%;">1,4-Dichlorobenzene</div> <div style="width: 33%;">Naphthalene</div> <div style="width: 33%;">Benzene</div> <div style="width: 33%;">Dichlorodifluoromethane</div> <div style="width: 33%;">n-Propylbenzene</div> <div style="width: 33%;">Bromobenzene</div> <div style="width: 33%;">1,1-Dichloroethane</div> <div style="width: 33%;">Styrene</div> <div style="width: 33%;">Bromochloromethane</div> <div style="width: 33%;">1,2-Dichloroethane</div> <div style="width: 33%;">1,1,2,2-Tetrachloroethane</div> <div style="width: 33%;">Bromodichloromethane</div> <div style="width: 33%;">1,1-Dichloroethene</div> <div style="width: 33%;">Tetrachloroethylene</div> <div style="width: 33%;">Bromoform</div> <div style="width: 33%;">cis-1,2-Dichloroethene</div> <div style="width: 33%;">Toluene</div> <div style="width: 33%;">Bromomethane (Methyl Bromide)</div> <div style="width: 33%;">trans-1,2-Dichloroethene</div> <div style="width: 33%;">1,2,3-Trichlorobenzene</div> <div style="width: 33%;">2-Butanone (MEK)</div> <div style="width: 33%;">1,2-Dichloropropane</div> <div style="width: 33%;">1,2,4-Trichlorobenzene</div> <div style="width: 33%;">n-Butylbenzene</div> <div style="width: 33%;">1,3-Dichloropropane</div> <div style="width: 33%;">1,1,1-Trichloroethane</div> <div style="width: 33%;">sec-Butylbenzene</div> <div style="width: 33%;">2,2-Dichloropropane</div> <div style="width: 33%;">1,1,2-Trichloroethane</div> <div style="width: 33%;">tert-Butylbenzene</div> <div style="width: 33%;">1,1-Dichloropropene</div> <div style="width: 33%;">Trichloroethylene</div> <div style="width: 33%;">Carbon tetrachloride</div> <div style="width: 33%;">cis-1,3-Dichloropropene</div> <div style="width: 33%;">Trichlorofluoromethane</div> <div style="width: 33%;">Chlorobenzene</div> <div style="width: 33%;">trans-1,3-Dichloropropene</div> <div style="width: 33%;">1,2,3-Trichloropropane</div> <div style="width: 33%;">Chloroethane</div> <div style="width: 33%;">Ethanol</div> <div style="width: 33%;">1,2,4-Trimethylbenzene</div> <div style="width: 33%;">Chloroform</div> <div style="width: 33%;">Ethylbenzene</div> <div style="width: 33%;">1,3,5-Trimethylbenzene</div> <div style="width: 33%;">Chloromethane (Methyl Chloride)</div> <div style="width: 33%;">2-Hexanone</div> <div style="width: 33%;">Vinyl acetate</div> <div style="width: 33%;">2-Chlorotoluene</div> <div style="width: 33%;">Isopropyl Ether</div> <div style="width: 33%;">Vinyl chloride</div> <div style="width: 33%;">4-Chlorotoluene</div> <div style="width: 33%;">Isopropylbenzene</div> <div style="width: 33%;">o-Xylene</div> <div style="width: 33%;">Dibromochloromethane</div> <div style="width: 33%;">4-Isopropyltoluene (p-Cymene)</div> <div style="width: 33%;">Total Xylenes</div> <div style="width: 33%;">1,2-Dibromoethane (EDB)</div> <div style="width: 33%;">Methyl tert-butyl ether (MTBE)</div> <div style="width: 33%;">m,p-Xylenes</div> <div style="width: 33%;">1,2-Dichlorobenzene</div> <div style="width: 33%;">4-Methyl-2-pentanone (MIBK)</div> <div style="width: 33%;"></div> <div style="width: 33%;">1,3-Dichlorobenzene</div> <div style="width: 33%;">Methylene Chloride</div> <div style="width: 33%;"></div> </div> | 125.00 | CEQ |

| Test No. | Description | Fee (\$) | Lab |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| W50 | BTEX (only) <div> <div>Benzene</div> <div>Toluene</div> </div> <div> <div>Ethyl Benzene</div> <div>m,p-Xylene</div> </div> <div> <div>MTBE</div> <div>O-Xylene</div> </div> | 100.00 | CEQ |
| W51 | GRO-TPH (C6-C10) (Total Petroleum Hydrocarbons; Gasoline Range Organics) | 75.00 | CEQ |
| W52 | TPH; DRO (Total Petroleum Hydrocarbons; Diesel Range Organics) | 75.00 | CEQ |

IV. Feed and Forage Analyses

| A. Feed and Forage Analysis | | | |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| Test No. | Description | Fee (\$) | Lab |
| F1 | Hays and Silage (NIR + nitrate + minerals) Moisture Neutral Detergent Fiber (NDF) Acid Detergent Fiber (ADF) Crude Fiber (estimated) Non-fibrous Carbohydrates (NFC) Crude Protein Lignin Nitrate (NO3) Total Digestible Nutrients (TDN) Relative Forage Quality (RFQ) 10 Minerals (see F26) | 40.00 | FEW |
| F2 | Hays and Silage (NIR + nitrate, exluding minerals) Moisture Neutral Detergent Fiber (NDF) Acid Detergent Fiber (ADF) Crude Fiber (estimated) Non-fibrous Carbohydrates (NFC) Crude Protein Lignin Nitrate (NO3) Total Digestible Nutrients (TDN) Relative Forage Quality (RFQ) | 20.00 | FEW |
| F3 | Hays and Silage (NIR only) Moisture Neutral Detergent Fiber (NDF) Acid Detergent Fiber (ADF) Crude Fiber (estimated) Non-fibrous Carbohydrates (NFC) Crude Protein Lignin Total Digestible Nutrients (TDN) Relative Forage Quality (RFQ) | 15.00 | FEW |
| F3A | Expanded NIR Package for Silage Crops : both green chop and ensiled Corn and Small Grains (<i>dried and ground to 1mm</i>): Moisture, Dry Matter Crude Protein, Soluble Protein UIP (Undigestable Insoluble Protein) ADF, ADFCP NDF, NDFCP Fat, Lignin Ash Ca, P, K, Mg, Na, S, Zn, Cu, Fe, Mn, Cl NFC, Soluble carbohydrates, Starch ESC (Simple Sugars) IVTDMD24, IVTDMD30, IVTDMD48 dNDF24, dNDF30 dNDF48, NDFD24 NDFD30, NDFD48 RFQ Ammonia-CPE Acetic-acid, Lactic-acid Energy Tables | 20.00 | FEW |
| F3B | Expanded NIR Package for Green Chop, Hays, Haylage/Baleage of Grasses, Legumes, and Grass+ Legume Mixed (<i>dried and ground to 1mm</i>): Moisture, Dry Matter Crude Protein, Soluble Protein UIP (Undigestable Insoluble Protein) ADF, ADFCP NDF, NDFCP Fat, Lignin Ash Ca, P, K, Mg, Na, S, Zn, Cu, Fe, Mn, Cl NFC, Soluble Carbohydrates, Starch ESC (Simple Sugars) IVTDMD24, IVTDMD30, IVTDMD48 dNDF24, dNDF30 dNDF48, NDFD24 NDFD30, NDFD48 RFQ Ammonia-CPE Acetic-acid, Lactic-acid Energy Tables | 20.00 | FEW |

| Test No. | Description | Fee (\$) | Lab |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| F3C | Expanded NIR Package for Total Mixed Rations (any type) and High Moisture Corn (dried and ground to 1mm): Moisture, Dry Matter CP, Soluble-protein UIP (Undigestible Insoluble Protein) CF, ADF, ADFCP, NDF, NDFCP Fat, Lignin Ash Ca, P, K, Mg, Na S, Zn, Cu, Fe, Mn, Cl NFC Soluble Carbohydrates, Starch ESC (Simple Sugars) IVTDM30, dNDF30, NDFD30 Energy Tables | 20.00 | FEW |
| F3D | NIR for Whole Soybean seed: Moisture Crude Fiber, NDF CP, Oil, Ash Fatty Acid Profiles: Palmitic, Stearic, Oleic, Linoleic, and Linolenic Sugar Profiles: Glucose, Fructose, Sucrose, Raffinose, Stachyose | 20.00 | FEW |
| F3E | NIR for Ground/Meal Soybean: Moisture Crude Fiber, NDF CP, Oil, Ash Fatty-Acid Profiles: Palmitic, Stearic, Oleic, Linoleic, and Linolenic Sugar Profiles: Glucose, Fructose, Sucrose, Raffinose, Stachyose Amino acid profiles: Arginine, Cysteine, Isoleucine, Leucine, Lysine, Methionine, Threonine, Tryptophan, and Valine | 20.00 | FEW |
| F3F | NIR for Amino Acid Profile for Other Feed Ingredients: Wheat Midds, Corn, Distiller's dried grains with solubles (DDGS) and Wheat (<i>dried and ground to 1mm</i>): Arginine, Cysteine, Isoleucine, Leucine, Lysine, Methionine, Threonine, Tryptophan, and Valine | 15.00 | FEW |
| F4 | Hays and Silages (Wet Chemistry) includes nitrate and minerals Moisture Neutral Detergent Fiber (NDF) Crude Fiber (estimated) Crude Protein Nitrate (NO ₃) Total Digestible Nutrients (TDN) 10 Minerals (see F26) | 60.00 | FEW |
| F5 | Hays & Silages (Wet Chemistry) includes nitrate but excludes minerals Moisture Neutral Detergent Fiber (NDF) Crude Fiber (estimated) Crude Protein Nitrate (NO ₃) Total Digestible Nutrients (TDN) | 40.00 | FEW |
| F6 | Hays & Silages (Wet Chemistry) excludes both nitrate and minerals Moisture Neutral Detergent Fiber (NDF) Crude Fiber (estimated) Crude Protein Total Digestible Nutrients (TDN) | 35.00 | FEW |

| Test No. | Description | Fee (\$) | Lab |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| F7 | All Other Feeds (Wet Chemistry) Moisture Total Digestible Nutrients (TDN) Crude Fiber 10 Minerals (see F26) Crude Protein | 45.00 | FEW |
| F8 | Moisture, Crude Fiber, Crude Protein, Crude Fat, Ash, and Total Digestible Nutrients (TDN) | 50.00 | FEW |
| F8A | Moisture, Neutral Detergent Fiber, Crude Protein, Crude Fat, Ash, and Metabolizable Energy (POULTRY FEED ONLY) | 50.00 | FEW |
| F8B | Moisture, Crude Protein, Crude Fat, and Ash in Meat | 30.00 | FEW |
| F9 | Moisture, Crude Fiber, Crude Protein, Total Digestible Nutrients (TDN) | 36.00 | FEW |
| F10 | Crude Protein (Combustion Technique) | 15.00 | FEW |
| F10A | Crude Protein (by Kjeldahl Digestion): Samples with high moisture (e.g., Meats) | 30.00 | FEW |
| F11 | Crude Fiber | 20.00 | FEW |
| F12 | NDF (Neutral Detergent Fiber) | 17.00 | FEW |
| F13 | ADF (Acid Detergent Fiber) | 17.00 | FEW |
| F14 | Nitrate (NO₃) | 13.00 | FEW |
| F15 | Crude Fat | 20.00 | FEW |
| F15A | F7 (all other feeds) + F15 (crude fat) | 60.00 | FEW |
| F16 | Bound Protein | 30.00 | FEW |
| F17 | Ash | 13.00 | FEW |
| F18 | Moisture | 12.00 | FEW |
| F19 | Mineral pre-Mixes for the <i>parameters listed in SC1</i> | 36.00 | FEW |
| F20 | pH | 5.00 | FEW |
| F21 | Chromic Oxide | 25.00 | FEW |
| F21A | Titanium Oxide | 25.00 | FEW |
| F22 | Calorimetry/Gross Energy (BTU) | 32.00 | FEW |
| F23 | Total Aflatoxin | 42.00 | FEW |
| F24 | Protein Solubility (soybean meal) | 35.00 | FEW |

| Test No. | Description | Fee (\$) | Lab |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| F24A | Protein Dispersibility Index (PDI) | 45.00 | FEW |
| F25 | Cyanide (Prussic Acid) Please call CEQ Lab prior to submission (706-542-9023) | 50.00 | CEQ |
| F26 | Minerals only <div> <div>Phosphorus (P)</div> <div>Potassium (K)</div> <div>Calcium (Ca)</div> </div> <div> <div>Magnesium (Mg)</div> <div>Manganese (Mn)</div> <div>Iron (Fe)</div> </div> <div> <div>Aluminum (Al)</div> <div>Copper (Cu)</div> <div>Zinc (Zn)</div> </div> <div>Sodium (Na)</div> | 25.00 | FEW |
| F27 | Salt/Chloride by Quantab. | 20.00 | SPW |
| F28 | Carbohydrate Package Starch Ethanol Soluble Carbohydrates (ESC) Water Soluble Carbohydrates (WSC) Fructans Non-Structural Carbohydrates (NSC) | 60.00 | FEW |
| F29 | F1+F28 Starch NIR Nitrates Minerals Starch, ESC, WSC, Fructans, NSC | 95.00 | FEW |
| F30 | F2+F28 NIR Nitrates Starch, ESC, WSC, Fructans, NSC | 75.00 | FEW |
| F31 | Lignin | 25.00 | FEW |
| F33 | F3+F28 NIR Starch, ESC, WSC, Fructans, NSC | 70.00 | FEW |
| F34 | F4+F28 <div> <div>Moisture</div> <div>NDF</div> <div>Crude Protein</div> <div>Crude Fiber (estimated)</div> <div>Total Digestible Nutrients (TDN)</div> </div> <div> <div>Digestible Energy</div> <div>Nitrates (NO₃)</div> <div>Minerals</div> <div>Starch, ESC, WSC, Fructans, NSC</div> </div> | 110.00 | FEW |
| F35 | F5+F28 <div> <div>Moisture</div> <div>NDF</div> <div>Crude Protein</div> <div>Crude Fiber (estimated)</div> </div> <div> <div>Total Digestible Nutrients (TDN)</div> <div>Digestible Energy</div> <div>Nitrates (NO₃)</div> <div>Starch, ESC, WSC, Fructans, NSC</div> </div> | 95.00 | FEW |

| Test No. | Description | | | Fee (\$) | Lab |
|------------|----------------------------------|-------------------------------------------------|--|----------|-----|
| F36 | F6+F28 | | | 90.00 | FEW |
| | Moisture | Total Digestible Nutrients (TDN) | | | |
| | NDF | Digestible Energy | | | |
| | Crude Protein | Nitrates (NO ₃) | | | |
| | Crude Fiber (estimated) | Starch, ESC, WSC, Fructans, NSC | | | |
| F37 | F7+F28 | | | 100.00 | FEW |
| | Moisture | Total Digestible Nutrients (TDN) | | | |
| | Crude Protein | Digestible Energy | | | |
| | Crude Fiber (estimated) | Starch, ESC, WSC, Fructans, NSC | | | |
| F38 | F8+F28 | | | 105.00 | FEW |
| | Moisture | Ash | | | |
| | Crude Protein | Total Digestible Nutrients (TDN) | | | |
| | Crude Fiber | Digestible Energy | | | |
| | Crude Fat | Starch, ESC, WSC, Fructans, NSC | | | |
| F39 | F9+F28 | | | 90.00 | FEW |
| | Moisture | Total Digestible Nutrients (TDN) | | | |
| | Crude Protein | Digestible Energy | | | |
| | Crude Fiber | Starch, ESC, WSC, Fructans, NSC | | | |
| F40 | F15A+F28 | | | 90.00 | FEW |
| | Moisture | Minerals (P, K, Ca, Mg, Mn, Fe, Al, Cu, Zn, Na) | | | |
| | Crude Protein | Starch | | | |
| | Crude Fiber | Ethanol Soluble Carbohydrates (ESC) | | | |
| | Crude Fat | Water Soluble Carbohydrates (WSC) | | | |
| | Total Digestible Nutrients (TDN) | Fructans | | | |
| | Digestible Energy | Non-Structural Carbohydrates (NSC) | | | |

B.Trace Level Analysis

| Test No. | Description | | | | Fee (\$) | Lab |
|------------|----------------------------|---------------|---------------|---------------|----------------------------------------------------|-----|
| F41 | Priority Pollutants | | | | 150.00 | SPW |
| | By ICP-AVOES | | | | (+ \$10 any additional element in F42) | |
| | Antimony (Sb) | Cadmium (Cd) | Lead (Pb) | Silver (Ag) | | |
| | Arsenic (As) | Chromium (Cr) | Nickel (Ni) | Thallium (Tl) | | |
| | Beryllium (Be) | Copper (Cu) | Selenium (Se) | Zinc (Zn) | | |

| Test No. | Description | Fee (\$) | Lab |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----|
| F42 | Any one of Available Metals and/or Non-Metals by ICP-AVOES Antimony (Sb) Cadmium (Cd) Nickel (Ni) Tin (Sn) Arsenic (As) Chromium (Cr) Palladium (Pd) Titanium (Ti) Barium (Ba) Cobalt (Co) Silicon (Si) Uranium (U) Beryllium (Be) Gold (Au) Silver (Ag) Vanadium (V) Bismuth (Bi) Lead (Pb) Strontium (Sr) Boron (B) Molybdenum (Mo) Thallium (Tl) | 50.00 (+ \$10 any additional element) | SPW |
| F43 | Selenium (Se) in Feed or Forage for Animal Nutrition (by Hydride Generation-ICP-AVOES) | 60.00 | SPW |
| F44 | Starch | 30.00 | FEW |
| F45 | Ethanol Soluble Carbohydrates (ESC): Simple Sugars | 23.00 | FEW |
| F46 | Water Soluble Carbohydrates (WSC): Sum of Simple Sugars+Fructans | 20.00 | FEW |
| F47 | Phytate | 40.00 | FEW |

C. Pesticide and Organic Analysis

| Test No. | Description | Fee (\$) | Lab |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| F32 | Chlorinated Hydrocarbon & Organophosphate Insecticide (Screen) Aldrin DDT Fonofos Methyl Parathion BHC Diazinon Heptachlor Mirex Carbophenothion Dieldrin Heptachlor Epoxide Parathion Chlordane Endrin Lindane Total PCB DDD Endrin Aldehyde Malathion Toxaphene DDE Ethion Methoxychlor | 100.00 | CEQ |

V. Animal Wastes Analyses

| A. Animal Waste Analysis | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|
| Test No. | Description | Fee (\$) | Lab |
| A1 | Poultry Litter: Total Minerals + Total Nitrogen (NIR technology) Phosphorus (P) Iron (Fe) Copper (Cu) Potassium (K) Aluminum (Al) Zinc (Zn) Calcium (Ca) Sulfur (S) Sodium (Na) Magnesium (Mg) Manganese (Mn) Boron (B) | 52.00 | SPW |
| A2 | Total Kjeldahl Nitrogen | 30.00 | SPW |
| A3 | Nitrate-Nitrogen (NO ₃ -N) | 15.00 | SPW |
| A4 | Ammonium-Nitrogen (NH ₄ -N) | 15.00 | SPW |
| A5 | Moisture | 10.00 | SPW |
| A6 | Manure: Total minerals, Total Kjeldahl Nitrogen, Nitrate-Nitrogen (Total Minerals + A2 + A3) | 75.00 | SPW |
| A7 | Lagoon: Total minerals, Total Kjeldahl Nitrogen, Nitrate-Nitrogen, Ammonium-Nitrogen (Total Minerals + A2 + A3 + A4) | 80.00 | SPW |
| Recommended Tests <ul style="list-style-type: none"> • Poultry Litter = A1 (1 pint re-sealable plastic bag) • Manure = A6 (1 pint sample) • Lagoon = A7 (1 pint sample) | | | |

VI. Biosolids, Sludge, and Non-Animal Wastes Analyses

| A. Biosolids, Sludge, and Non-Animal Wastes Analysis | | | | | | |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|-----------------|----------|-----|
| Test No. | Description | | | | Fee (\$) | Lab |
| SC1 | Total Minerals | | | | 36.00 | SPW |
| | Phosphorus (P) | Aluminum (Al) | Zinc (Zn) | Nickel (Ni) | | |
| | Potassium (K) | Sulfur (S) | Sodium (Na) | Lead (Pb) | | |
| | Calcium (Ca) | Manganese (Mn) | Silicon (Si) | Molybdenum (Mo) | | |
| | Magnesium (Mg) | Boron (B) | Cadmium (Cd) | | | |
| | Iron (Fe) | Copper (Cu) | Chromium (Cr) | | | |
| SC2 | Total Kjeldahl Nitrogen | | | | 30.00 | FEW |
| SC3 | Nitrate-Nitrogen (NO3-N) | | | | 15.00 | SPW |
| SC4 | Ammonium-Nitrogen (NH4-N) | | | | 15.00 | FEW |
| SC5 | Moisture | | | | 10.00 | SPW |
| SC9 | Mercury | | | | 50.00 | SPW |
| SC10 | Total Solids | | | | 16.00 | FEW |
| SC11 | Total Solids + Total Volatile Solids | | | | 22.00 | FEW |
| SC12 | pH | | | | 5.00 | FEW |
| SC13: (SC1, SC2, SC3, SC4, SC42 (As, Se), SC9, SC11, SC12) EPA 503 Compliance of Bio-Solids for Land Application | | | | | | |
| SC13A | “Chain of Custody” Document Required: http://aesl.ces.uga.edu/forms/ChainOfCustody.pdf | | | | 225.00 | SPW |
| SC13B | Compliance not required | | | | 200.00 | SPW |
| SC14: Fecal coliform EPA 503 Compliance of Bio-Solids for Land Application | | | | | | |
| SC14A | “Chain of Custody” Document Required: http://aesl.ces.uga.edu/forms/ChainOfCustody.pdf | | | | 60.00 | FEW |
| SC14B | Compliance not required | | | | 45.00 | FEW |
| SC16 | Total Carbon (C) OR Total Nitrogen (N) | | | | 10.00 | SPW |

| Test No. | Description | Fee (\$) | Lab |
|----------|-----------------------------------------|----------|-----|
| SC17 | Total Carbon (C) AND Total Nitrogen (N) | 18.00 | SPW |

B. Trace Level Analysis

| Test No. | Description | Fee (\$) | Lab |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----|
| SC41 | Priority Pollutants By ICP-AVOES <div> Antimony (Sb) Cadmium (Cd) Lead (Pb) Silver (Ag) Arsenic (As) Chromium (Cr) Nickel (Ni) Thallium (Tl) Beryllium (Be) Copper (Cu) Selenium (Se) Zinc (Zn) </div> | 150.00 (+ \$10 any additional element in SC42) | SPW |
| SC42 | Any one of Available Metals and/or Non-Metals by ICP-AVOES <div> Aluminum (Al) Chromium (Cr) Nickel (Ni) Sulfur (S) Antimony (Sb) Cobalt (Co) Palladium (Pd) Thallium (Tl) Arsenic (As) Copper (Cu) Phosphorus (P) Tin (Sn) Barium (Ba) Gold (Au) Potassium (K) Titanium (Ti) Beryllium (Be) Iron (Fe) Selenium (Se) Uranium (U) Bismuth (Bi) Lead (Pb) Silicon (Si) Vanadium (V) Boron (B) Magnesium (Mg) Silver (Ag) Zinc (Zn) Cadmium (Cd) Manganese (Mn) Sodium (Na) Calcium (Ca) Molybdenum (Mo) Strontium (Sr) </div> | 50.00 (+ \$10 any additional element) | SPW |

VII. Miscellaneous Analyses

| Miscellaneous Analysis | | | |
|------------------------|------------------------------------------------------------------|----------|-----|
| Test No. | Description | Fee (\$) | Lab |
| M1 | Calcium Carbonate Equivalent (CCE) | 20.00 | SPW |
| M2 | Calcium + Magnesium (test for dolomitic limestone) | 25.00 | SPW |
| M3 | Lead (Pb) in paint chips (>5000 ppm indicates Pb-based paint) | 36.00 | SPW |
| M4 | Gypsum Quality Test | 30.00 | SPW |

VIII. Crop Quality Analyses

| Crop Quality Analysis | | | |
|-----------------------|-------------------------------------------------------------------------------------|----------|-----|
| Test No. | Description | Fee (\$) | Lab |
| C1 | pH | 8.00 | CEQ |
| C2 | Brix | 10.00 | CEQ |
| C3 | Titrateable Acidity | 15.00 | CEQ |
| C4 | Pyruvic Acid | 40.00 | CEQ |
| C5 | Sugar Profile (sucrose, glucose, and fructose) | 40.00 | CEQ |
| C6 | Fruit Quality Package: pH, Brix, and Titrateable acidity | 30.00 | CEQ |
| C7 | Onion Quality Package: Pyruvic acid, Lachrymatory factor, and Methyl Thiosulfinates | 80.00 | CEQ |
| C8 | Olive - Percent Moisture & Oil (NIR) | 20.00 | CEQ |
| C9 | Peroxide Value (PV) | 30.00 | CEQ |
| C10 | Free Fatty Acid Content (FFA) | 30.00 | CEQ |
| C11 | Specific Extinction, Ultraviolet Absorption (UV) | 45.00 | CEQ |
| C12 | Fatty Acid Profile (FAP) | 60.00 | CEQ |
| C13 | Oil Quality (PV, FFA, UV) | 90.00 | CEQ |
| C14A | Anthocyanin characterization (including raw grape processing) | 80.00 | CEQ |
| C14B | Anthocyanin characterization (pre-processed sample) | 65.00 | CEQ |

Part II

General Information

I. Introduction

This Fee Schedule Handbook is provided for use by County Extension Agents and County Extension Secretaries who are the principal source of samples submitted for analytical services offered by the Agricultural and Environmental Services Laboratories (AESL). Copies will be made available to Extension Specialists and others as requested on a limited basis.

The purpose of this Handbook is to give a schedule of fees for all analytical services normally available from the respective units along with pertinent sampling and submission instructions.

Two copies of this Handbook are provided to each County Extension Office for their exclusive use. Revision will be made periodically, and it is the responsibility of each holder of the Handbook to add the revised or new information and to delete outdated material in a timely manner.

Please keep this reference in a central location within the office and follow the fee schedule and submission instructions closely in order to provide your clients with timely and accurate information.

How To Use This Handbook

Sections are provided for each major kind of samples we receive, i.e., soil, plant, feed, water, waste, crop quality, etc. Once you have determined the kind of sample, go to that section to find a listing of the tests normally conducted. You will also find the fee, special sampling instructions and the laboratory unit responsible for the test. Addresses for each laboratory are given in the section labeled "General Information." There are also examples of all current submission forms that should be on hand in your office files and /or available on the AESL Web site:

<http://aesl.ces.uga.edu> .

By following the guidelines given in this Handbook, the task of handling samples of all types should be easier for you, and the results will be expedited for your county constituents.

If you have questions or comments, please contact Dr. Leticia Sonon or any of the appropriate personnel listed in the Lab Information Section.

Dr. Leticia Sonon, Director
Agricultural and Environmental Services Laboratories
Ph: 706-542-5350
e-mail: isonon@uga.edu

II. General Laboratory Information

A. Mailing Addresses

| Abbreviations | Laboratory Name and Address |
|----------------------|------------------------------------------------------|
| AESL | Agricultural and Environmental Services Laboratories |
| | 2300-2400 College Station Road |
| | Athens, Georgia 30602-9105 |
| | Phone: (706) 542-5350 |
| | Fax: (706) 369-5734 |
| SPW | Soil, Plant, and Water Laboratory |
| | 2400 College Station Road |
| | Athens, Georgia 30602-9105 |
| | Phone: (706) 542-5350 |
| | Fax: (706) 369-5734 |
| FEW | Feed and Environmental Water Laboratory |
| | 2300 College Station Road |
| | Athens, Georgia 30602-4356 |
| | Phone: (706) 542-7690 |
| | Fax: (706) 542-1474 |
| CEQ | Crop and Environmental Quality Laboratory |
| | 2300 College Station Road |
| | Athens, Georgia 30602-4356 |
| | Phone: (706) 542-9023 |
| | Fax: (706) 542-1474 |

B. Laboratory Services and Personnel

1. Soil, Plant and Water Laboratory (SPW)

2400 College Station Road
Athens, Georgia 30602-9105
Phone: (706) 542-5350
Fax: (706) 369-5734

This laboratory provides numerous analyses for soil, plants, water, animal waste, sludge and cotton petioles. Submission forms (see submission form section) are provided for the various types of samples analyzed. Inquiries may be made to the following:

Dr. Leticia Sonon – Director e-mail: isonon@uga.edu

Responsible for administration, policy and budgets of all units of the Agricultural and Environmental Services Laboratories.

Dr. Jason Thomas Lessl – Program Coordinator e-mail: jlessl@uga.edu

Responsible for overall routine operation of the lab. Develops and maintains required methodologies. Coordinates special requests and projects.

Gary Williams – Laboratory Manager e-mail: garyw@uga.edu

Manages day-to-day operations of the laboratory.

Alice Moreland – Administrative Specialist e-mail: alicem@uga.edu

Receives and directs incoming calls. Handles purchase orders and personnel records. All secretarial duties for the Director, Agricultural & Environmental Services Laboratories.

Michelle Doster – Senior Accountant e-mail: dmd7096@uga.edu

Responsible for keeping the accounting books for AESL, processing invoices & maintaining accounts payable.

Rosalina Mirandilla– Accounting Assistant e-mail: rdmirand@uga.edu

Prepares and mails invoices, and maintains accounts receivable. Back-up for incoming calls.

2. Feed & Environmental Water Laboratory (FEW)

2300 College Station Road
Athens, Georgia 30602-4356
Phone: (706) 542-7690
Fax: (706) 542-1474

This unit performs analyses on and interpretive information about feeds, forages, foods, feed ingredients, natural waters and industrial wastewater. Inquiries regarding analyses and the laboratory in general should be directed to:

Dr. Leticia Sonon – Director

e-mail: lsonon@uga.edu

Responsible for administration, policy and budgets of all units of the Agricultural and Environmental Services Laboratories.

Dr. Uttam Saha – Program Coordinator

e-mail: sahau@uga.edu

Responsible for overall routine operation of the lab. Develops and maintains required methodologies. Coordinates special requests and projects.

David Parks – Laboratory Supervisor

e-mail: pix@uga.edu

Manages day-to-day operations of the laboratory.

Deborah Ann Suits – Accounting Assistant

e-mail: dsuits@uga.edu

Responsible for processing invoices & maintaining accounts payable.

3. Crop and Environmental Quality Laboratory (CEQ)

2300 College Station Road
Athens, Georgia 30602-4356
Phone: (706)542-9023
Fax: (706)542-1474

This laboratory unit analyzes for the presence of certain insecticides and herbicides in soil, plant, fish and water samples. It also provides tests for hazardous materials in municipal and industrial sludges, petroleum and organic solvents in soil and water, and drinking water standards for municipal water systems and bottled water manufacturers. Numerous analyses of trace elements for soil, plants, water, animal waste, sludge and cotton petioles, as well as flavor quality compounds in onions, olive/seed oil, grape/wine, fruit and vegetables are also provided.

Inquiries regarding non-routine analyses, interpretation of results and the laboratory in general may be directed to:

Dr. Leticia Sonon – Director

e-mail: isonon@uga.edu

Responsible for administration, policy and budgets of all units of the Agricultural and Environmental Services Laboratories.

Daniel Jackson – Research Professional

e-mail: djackso@uga.edu

Responsible for overall routine operation of the crop quality section of the CEQ Laboratory. Develops and maintains required methodologies. Coordinates special requests and projects.

Natalie Bond – Laboratory Supervisor

e-mail: nbond@uga.edu

Manages day-to-day operations of the laboratory.

Sonya Davis – Administrative Associate

e-mail: sfdavis@uga.edu

Receives and directs incoming calls. Handles purchase orders and personnel records. Perform secretarial duties for the program coordinator of CEQ.

III. Testing Fees and Billing

A. Fee Policies

1. Scheduled Services

The funds to operate the AESL are generated from state and federal appropriations, fees and contracts. The fee schedule is the basis for all routine and special analytical services. Deviations from the schedule or special rates may be considered for large quantities, special handling and contractual agreements.

2. Extension Specialists

With proper submission forms (<http://aesl.ces.uga.edu/forms/index.html>), troubleshooting samples will be tested at no cost in limited quantities. Large-scale surveys or research projects will be charged the scheduled fee per sample, the same as researchers.

3. Research Samples

College of Agricultural and Environmental Sciences researchers, in-state USDA and other closely allied UGA units will be charged the scheduled fees and must use a Research Sample Submission Form (<http://aesl.ces.uga.edu/forms/Research.pdf?2>). Research samples should be submitted directly to the appropriate laboratory, not through the county Extension office.

4. County Program Support

County extension agents often need laboratory analysis to support educational programs in their county that address issues specific to their clients' needs. These analyses are referred to as "County Program Samples. AESL supports Extension programs by providing an amount of credit to each county every year to be used for free analysis for their county programs.

The amount of county program funds is now calculated as \$100 + 1% of the amount of income generated by your online submission samples for the previous fiscal year. For example, if you used Online Submission last year to submit \$5,000 worth of samples, your county program total this fiscal year would be \$100 + \$50 = \$150. This amount will be used towards analysis of samples and bookkeeping of available credit for each county provided by the laboratory. The amount of credit available for free county program samples will be updated in Data Transfer once we've processed the samples. Any unused credit provided by the laboratories would not carry over to future fiscal years.

When submitting County Program samples, write "County Program" next to the samples on the submission forms. You may use the Online Submission forms if these are soil or water samples.

We do not offer reduced fees for school projects. You may use county program funds for this purpose at your discretion.

B. Payment of Fees

1. Information Regarding Payment of Fees

- a. Our most recent price list is in this Handbook. Do not refer to prices listed in the codebook, on sampling kits or on other printed material. If you have old materials in your office, it would be a good idea to tell your clients that prices listed in them may not be current.

- b. Always insert any notification you receive regarding changes in fees in your Fee Schedule Handbook for future reference.
- c. Collect fees from clients before submitting them to the lab. If fees are not submitted with the samples, you must instruct us as to what tests you are requesting and include specific instructions regarding the billing.
- d. When payment is sent after samples are submitted but before an invoice is issued, please provide us with as much information as possible so we can match the payment with the samples. (Client's name, date submitted, sample type, etc.)
- e. If you are submitting payment for an invoiced sample along with prepaid samples, always include a copy of the invoice or a note referencing the invoice number, lab number or kit number.
- f. **Do not send cash** with samples or invoices.
- g. When a client requests a special analysis that is not listed on the fee schedule, call the lab to confirm the fee.
- h. Make separate checks for samples sent to different lab units.
- i. If your office or a client receives a bill and you believe the fee has been paid, contact the lab as soon as possible. Unfortunately, checks sometimes get lost or are separated from the samples in the rush of opening, separating and preparing the samples for analysis.
- j. Please inform the appropriate lab of any circumstances regarding problems with payment of an invoice. We will try to reach an agreement suitable to all parties involved.
- k. Make checks payable to individual laboratories as follows:
 - l. UGA - Soil, Plant, & Water Lab
 - m. UGA - Feed & Environmental Water Lab
 - n. UGA - Crop and Environmental Quality Lab

1. Monthly Billing

Monthly Billing is available for online submission of soil and water samples. If you have not enrolled in Monthly Billing, we encourage you to do so. At the time of this writing, 154 counties have enrolled.

a. Advantages of Monthly Billing

1. Samples could be shipped to the laboratory without waiting for the agent's signature

on a check.

2. The monthly invoice contains a list of all samples received from your office, including client names, lab numbers, tests requested, and price per sample. This should help with your bookkeeping, because it provides a detailed record of all tests that we've run for your office.
3. Monthly billing eliminates confusion as to which charges have been paid and which are still outstanding.

Here are the specifics for the Monthly Billing program:

1. Send e-mail to soiltest@uga.edu indicating that you wish to participate. We will bill you for all samples submitted online after you have received confirmation of enrollment.
2. You must use the Online Submission Forms in Data Transfer to participate.
3. We will bill you by the 10th of each month, and payment will be due at the end of the month. This should help ensure that your clients' payments have been deposited to your bank account. The bill will include samples we *completed* during the prior month. The bill will come in the form of an e-mail attachment.

b. Monthly Billing Frequently Asked Questions

1. I need a test that's not available through Online Submission. Will you bill me for this test?

No. You should send payment for any samples that are not submitted online.

A good rule of thumb: If you have to write any special instructions on the forms, don't use Online Submission, and be sure to send payment with the samples.

2. Will payments be due on the 10th of each month, or is that when we will receive the billing statement?

You will receive an invoice on the 10th of each month, which will cover all samples completed for the previous month. This bill will go to your county office e-mail address, and it will be due at the end of the month.

3. Are you requesting that each county submit one check totaling the cost of all soil samples for the month, or can we send the individual checks that we receive from customers requesting the samples?

You should deposit all client checks to your own bank account and pay us with one check.

4. Is the turn-around for soil reports received from the online sample submissions the same?

Turn-around time will be the same. Routine samples are generally available for download the afternoon after we receive them. Any additional time depends on the time it takes the mail to deliver the samples to us.

5. Will we need to submit a printout of the online submission form along with the box of soil samples we mail to the SPW lab?

Yes. Clicking "Print Forms" creates the forms we need. In the printer dialog box, change "Number of copies" to "2" so that you'll have a copy in-house.

6. What if my computer is in the shop, or I can't log on the Internet?

If you cannot run the Online Submission Form program, you must send payment with your samples.

7. Who do I contact if I have questions or problems with the program?

Send an e-mail message to: soiltest@uga.edu
or by phone: 706-542-5350

IV. Soil Analyses

A. General Information

Soil Sample Bags. Soil sample bags are provided to farmers and homeowners free of charge. It is important that clients submit the required amount of sample so that analysis can be done properly. For standard routine analysis, each bag should be filled with soil up to the **fill line**. Additional amount of sample may be required if several tests are requested. For ease in sample handling and to minimize mailing costs, clients are advised to air dry samples at home overnight before submitting their samples to their local extension office.

The county extension office may obtain their sample bags from:

Storekeeper Cooperative Extension
The University of Georgia
Room 103, Hoke Smith Annex
Athens, GA 30602
Phone: 706-542-8844

<http://apps.caes.uga.edu/supplylist/>

Sample Submission. The laboratory supports online submission of samples that allows efficient entry of client information. The program also automatically creates the appropriate submission forms and the corresponding test fees.

Submission Forms. Sample submission forms may be obtained online at:

<http://aesl.ces.uga.edu/forms>



Fill line →

Submission Forms

V. Plant Tissue Analyses

A. General Information

Leaf tissue should be placed in a paper bag. **Do not wrap or enclose leaves in plastic bags. Do not send roots or soil.** Air dry wet plant tissue before shipment.

If sampling instructions are not given for the crop being submitted, sample the most recent mature leaves. A "Plant Submission Form" (see example in Forms Section) should be completed with as much information as possible to ensure appropriate recommendation.

B. Sampling Guide for Plant Nutritional Analysis

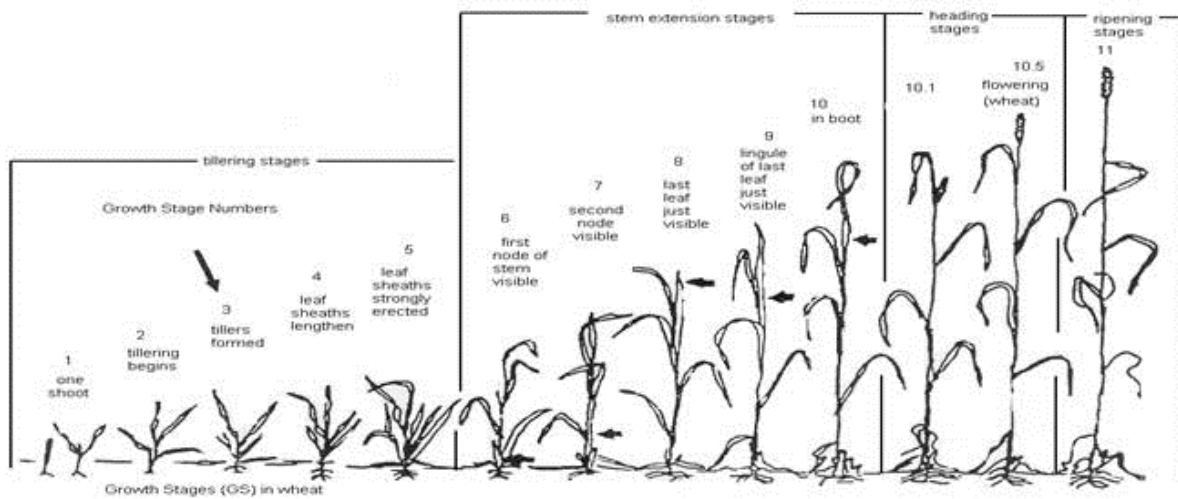
These guidelines give you the necessary information for collecting samples for plant nutritional analysis. Proper sampling for plant analysis is very important and requires that a definite plant part be taken at a specific time during the growing season. Following these guidelines will help ensure that a sufficient quantity of plant tissue is submitted for analysis and that the sample collected is representative of the area under study.

Key Points to Remember

1. DO NOT SAMPLE
 - (a) Diseased, insect or mechanically damaged plants.
 - (b) Stressed plants (i.e., drought or extremes in temperature).
 - (c) Plants in advanced fruiting stages.
 - (d) Tissue that is contaminated with dust or soil. If all the tissue available is dust, wash gently in flowing water. However, do not prolong washing because some nutrient elements like potassium are water soluble.
2. Plant samples should be placed directly into a paper bag of appropriate size. DO NOT WRAP OR ENCLOSE samples in plastic bags or other impermeable containers. Allow succulent or wet tissue samples to air dry at least one day before mailing to the laboratory.
3. When sampling plants with suspected nutrient deficiencies at times other than recommended, take two samples, one from the normal plants and one from the abnormal plants. Place in separate mailing kits and make reference to each on history form.
4. If sampling instructions are not given for the crop you wish analyzed, a good RULE OF THUMB is to sample the most recent mature leaves.
5. Complete the questionnaire as accurately as possible. The more complete the questionnaire is filled out, the better the interpretation and recommendation will be. Place this information (Plant Submission Form) inside the mailing envelope and mail with the samples
6. When possible, collect a soil sample at the same location the plant sample was taken. Send soil sample separately from plant samples but make reference to each other so the interpreters have access to the soil and plant analysis data.

a. Agronomic Crops

| Stage of Growth | Plant Part to Sample | Number of Plants to Sample |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Prior to or at 1/10 bloom stage | Alfalfa Mature leaf blades taken from the top 4 to 6 inches of the plant | 40-50 |
| Prior to bloom | Clover And Other Legumes Mature leaf blades taken about ½ of the way down from the top of the plant | 40-50 |
| 1) Seedling stage (less than 12") or 2) Prior to tasseling or 3) From tasseling to silking <i>Sampling after silking occurs is not recommended.</i> | Corn All the above the ground portion The first fully developed leaf below the whorl The entire leaf at the ear node (or immediately above or below it) | 15-20 15-20 |
| Prior to or at first bloom or when first | Cotton Youngest fully mature leaves on main stem squares appear | 30-40 |
| Prior to seed head emergence or at the optimum stage for best quality forage | Hay, Pasture Or Forage Grasses Top 6 inches of plant | 40-50 |
| Prior to or at bloom stage | Peanuts Mature leaves from both the main stem and either cotyledon lateral branch | 40-50 |
| Prior to or at heading 1) Seeding stage (less than 12") or 3) Prior to or during initial flowering <i>Sampling after pods begin to set not recommended.</i> | Sorghum-Milo Second leaf from top of plant All the above ground portion Two or three fully developed leaves at the top of plant. | 15-25 20-30 |
| Before bloom | Tobacco Uppermost fully developed leaf | 8-12 |
| During normal growing of season; at least two days re-growth | Turf Leaf blades - clip by hand to avoid contamination with soil or other material | ½ pint material |
| 1) Tillering (GS-3) to just prior to heading (GS 10-boot stage) or 2) Just prior to heading (GS 10) <i>Sampling after heading not recommended. See figure below.</i> | Wheat All above ground portion Flag leaf | 30-40 40-50 |



b. Vegetable Crops

| Stage of Growth | Plant Part to Sample | Number of Plants to Sample |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------|
| Asparagus | | |
| Mid growth, 18-36" up | Mature fern from | 10-20 |
| Beans | | |
| 1) Seedling stage (less than 12") | All the above ground portion | 20-30 |
| 2) Prior to or during initial flowering | Two or three fully developed leaves at the top of the plant | |
| Head Crops (Cabbage, etc.) | | |
| 1) Prior to heading | First mature leaves from center of whorl | 10-20 |
| 2) Head ½ grown | Young wrapper leaf; 2 leaves per plant | |
| Leaf Crops (Lettuce, Spinach, Turnip Greens, Collards, etc.) | | |
| Mid growth | Youngest mature leaf | 35-55 |
| Melons (Water, Cucumber, Muskmelon) | | |
| Early stages of growth prior to fruit set | Mature leaves near the growing tip of the plant | 20-30 |
| Peas | | |
| Prior to or during initial flowering | Leaves from the third from the top node down from the plant | 30-60 |
| Peppers | | |
| Prior to or at bloom stage | Most recently mature leaves | 20-30 |
| Potatoes, Irish | | |
| Early flowering to tubers ½ grown | Upper most mature | 20-30 |
| Potatoes, Sweet | | |
| Mid growth | Most recently mature leaves | 20-30 |
| Root Crops (Carrots, Onions, Beets, etc.) | | |
| Prior to root or bulb enlargement | Center mature leaves | 20-30 |
| Sweet Corn | | |
| 1) Prior to tasseling | The entire fully mature leaf below the whorl | 20-30 |
| 2) At tasseling | The entire leaf at the ear node | |
| Tomato (Field) | | |
| Prior to or during early bloom stage | Third or fourth leaf from growing tip | 20-25 |
| Tomato (Greenhouse) | | |
| Prior to or during fruit set | 1) Young plants: leaves adjacent to 2nd and 3rd clusters 2) Older plants: leaves from 4th to 6th clusters | 20-25 |

c. Ornamentals and Flowers

| Stage of Growth | Plant Part to Sample | Number of Plants to Sample |
|--------------------------|-----------------------------------------------------------------------------|----------------------------|
| Carnations | | |
| 1) Unpinched plants | 4 th or 5 th leaf pairs from base of plant | 20-30 |
| 2) Pinched plants | 5 th and 6 th leaf pairs from top of primary laterals | 20-30 |
| Chrysanthemums | | |
| Prior to or at flowering | Upper leaves on flowering stem | 20-30 |
| Ornamental Trees | | |
| Current year's growth | Fully developed leaves | 30-100 |
| Ornamental Shrubs | | |
| Current year's growth | Fully developed leaves | 30-100 |
| Poinsettias | | |
| Prior to or at flowering | Most recently mature fully expanded leaves | 15-20 |
| Rose | | |
| During flower production | Upper leaves on the flowering stem | 20-30 |

d. Fruits and Nuts

| Stage of Growth | Plant Part to Sample | Number of Plants to Sample |
|---------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------|
| 8-10 weeks after full bloom | Apple | 50-100 |
| | Healthy mid-terminal leaves of current season's growth, taking 4 to 8 leaves per tree | |
| Mid season | Apricot, Almond, Cherry, Pear, Prune | 50-100 |
| | Healthy mid-terminal leaves of current year's growth or from spurs | |
| First two weeks after harvest | Blueberry, Rabbiteye | 25-40 |
| | Mature leaves from mid-portion of current season's growth | |
| End of bloom period | Grapes | 60-100 |
| | Petioles from leaves adjacent to fruit clusters | |
| Mid to late summer but prior to final swelling of fruit | Grape, Muscadine | 25-30 |
| | Most recent mature leaves adjacent to fruit clusters | |

| | | |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------|
| 12 to 14 weeks after bloom | Peach Mature leaves from mid-portion or near base of current season's terminal growth, taking 4 to 8 leaves per tree | 50-100 |
| 56 to 84 days after catkin fall; July 7 to August 7 | Pecan Middle pair of leaflets from mid-portion of terminal growth | 100 |
| Mid Season | Raspberry Youngest mature leaves on laterals or "primo" canes | 20-40 |
| 4 to 5 weeks after peak bloom | Strawberry Youngest fully expanded mature leaves | 50-75 |
| 6 to 8 weeks after bloom | Walnut Middle pairs of leaflets from mature shoots | 30-35 |

e. Sampling Instructions for Pecans

Results of a leaf analysis can be no better than the sampling procedures used. To help ensure obtaining reliable analytical results and fertilizer recommendations follow these sampling instructions.

1. Sample trees between July 7th and August 7th. Sampling can be extended into mid-August without significantly affecting the results.
2. Take one sample every 10 to 15 acres. If more than one soil type is present in the sampling area and if growth and production varies appreciably in these areas, take one sample from each soil type. Take samples at random using a zig-zag sampling pattern across the grove.
When samples are taken annually, the pattern of sampling should be the same; better yet, samples should be taken from the same marked trees or rows.
3. Collect 100 middle pair of leaflets from the middle leaf of this year's growth. (See sketch on following page.) Use terminal shoots exposed to the sun. Avoid twigs from the interior of the tree. Collect leaflets from all sides of the tree. Avoid leaflets damaged by insects and diseases.
4. Sample trees of different varieties and different ages separately.
5. Abnormal trees or trees not representative of the area should be sampled and sent separately. A complete and accurate description of abnormalities should accompany such samples.
6. Immediately upon collection, wipe leaves (entire surface, both top and bottom) with a damp cellulose sponge or cheesecloth to remove dust and spray residue. Do not allow the leaves to come into contact with rubber or galvanized containers. Partially air dry and place in a large paper bag.
7. Complete the questionnaire provided by the laboratory. Place the completed questionnaire in the smaller envelope together with a check for appropriate fees payable to "UGA Soil, Plant and Water Laboratory."

8. If recent soil test data are not available, collect a soil sample and send it to the Soil, Plant, and Water Laboratory. Soil sample bags are available at your local extension office.

Pecan Leaf



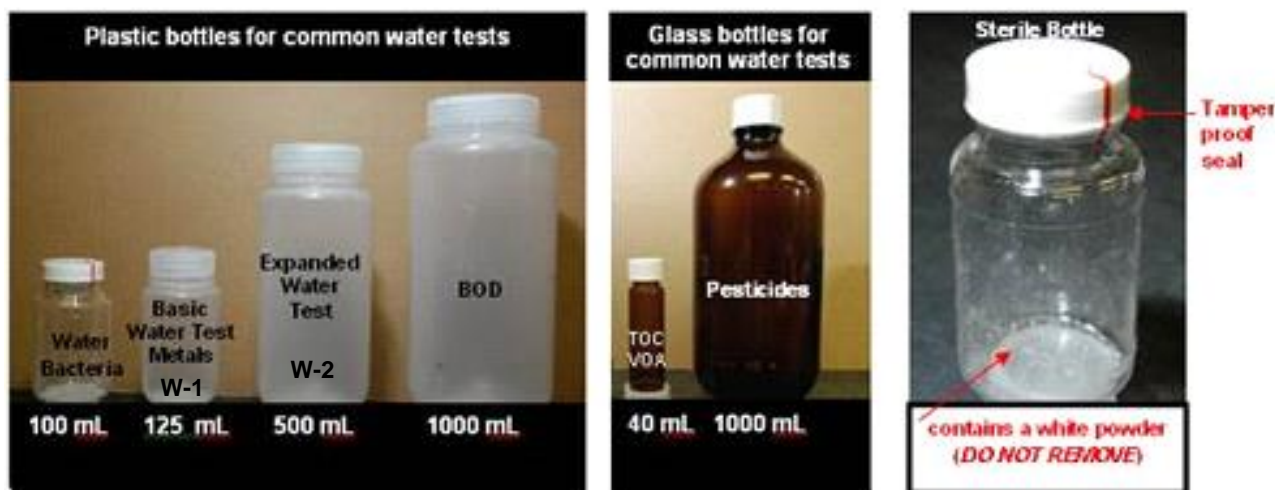
VI. Water Analyses

A. General Information

Water samples for submission to the laboratories vary as to the type of container and volume appropriate for different tests. Much time can be saved if water is initially sampled in the correct container.

a. Sample Containers

Sampling containers for testing well water or ponds are available to Extension Service County Agents from the University of Georgia Extension Storekeeper, Hoke Smith Annex (706/542-8844). Wastewater samples should be submitted in the appropriate container, either plastic or glass depending on the tests needed. Research samples should be submitted in appropriate containers – contact AESL if you need bottles. Visit our website for specific sample container requirements (<http://aesl.ces.uga.edu/samplecontainers>).



Many of the chemical parameters are time sensitive, which means that there is a specified amount of time that the sample can be held before testing procedures must begin. Table 1 contains the minimum sample size, preservatives, and maximum holding times for commonly requested water tests. On time sensitive samples (less than 7 days), the laboratory should be contacted for scheduling.

b. Sample Collection Techniques

In the past, except when testing for lead, the recommended sample collection technique for drinking water from wells was to collect water from the spigot closest to the well head and to let water run for 10-15 minutes before collecting the sample. This procedure was designed to address groundwater quality excluding the effects from the household plumbing, storage tank, well construction, and pump.

Except for microbiology, we now recommend that all drinking water samples be collected from the first draw water out of the kitchen faucet or from the faucet used most often for drinking. Please follow three basic protocols when collecting a drinking water sample:

1. A first draw water sample will be collected (after a minimum of 6 hours, but not more than 12-hour period) during which time there was no water usage prior to the sampling. The GA-EPD recommends that either early morning or evening upon returning home are the best sampling times to ensure that the necessary stagnant water conditions exist.
2. A kitchen or bathroom cold-water faucet is to be used for sampling. If the primary concern is the well pump, draw the water from as near the well head as possible.
3. Place a clean sample container below the faucet and gently open the cold water tap. Completely fill all sample bottles.

For Microbiology testing (i.e. Bacteria), follow 5 basic protocols when collecting a drinking water sample:

1. Select an inside faucet that is clean and not leaking.
2. Remove any faucet attachments such as filters, aerators, screens, splashguards, or water-saver valves.
3. Sanitize the faucet inside and out by dipping the faucet neck into undiluted chlorine bleach (do not use color-safe bleach).
4. Open tap fully and flush the faucet and pipes by running water for 3 minutes. If sampling from a faucet that mixes hot and cold water, run hot water for 3 minutes, then cold water for 3 minutes. Do not turn off the water, but reduce the flow to avoid splashing.
5. Uncap the sample bottle without touching the inside of the cap or bottle, fill the bottle above the 100 mL line, but not completely full and recap. Please note that the white substance in the bottle is a dechlorinating agent, which is essential. Fill the bottle only once; do not rinse.

Ponds and streams should be sub-sampled at various depths and positions across the body of water. Sub-samples should then be combined to create one sample. Wastewater samples should be collected per the requirements of the permit.

TABLE 1

Sampling & Handling Requirements for Commonly Requested Water Tests

| Test | Container | Sample Volume (ml) | Preservative | Maximum Regulatory Holding Time * |
|-------------------------------|--------------------------|--------------------|----------------------------------------------------------------------------------------------|-------------------------------------|
| Ammonia-Nitrogen | P,G | 500 | Analyze as soon as possible or add H ₂ SO ₄ to pH <2 then refrigerate | 28 d |
| Acidity | P, G(B) | 250 | Refrigerate | 14 d |
| Alkalinity | P, G | 250 | Refrigerate | 14 d |
| BOD | P,G | 1000 (1 Liter) | Refrigerate | 48 h |
| COD | P,G | 125 | Analyze as soon as possible, or add H ₂ SO ₄ to pH <2 then refrigerate | 28 d |
| Color | P,G | 125 | Refrigerate | 48 h |
| Chlorine, residual | P,G | 500 | Analyze immediately | Immediately |
| Chloride | P | 125 | Refrigerate | 28 d |
| Conductivity | P,G | 500 | Refrigerate | 28 d |
| Hardness | P, G | 125 | H ₂ SO ₄ to pH<2 then refrigerate | 7 d |
| Herbicides | G(A) | 1000 (1 Liter) | Refrigerate | 7 d |
| Mercury | P, G | 125 | Refrigerate; HNO ₃ to pH<2 | 28 d |
| Metals (Trace) except Mercury | P | 125 | HNO ₃ to pH<2 | 6 mo |
| Nitrate+Nitrite-Nitrogen | P,G | 125 | Analyze as soon as possible or refrigerate | 48 h (28 d for chlorinated samples) |
| Organic, Kjeldahl Nitrogen | P,G | 500 | H ₂ SO ₄ to pH<2 then refrigerate | 28 d |
| Oil and Grease | G, wide-mouth calibrated | 1000 (1 Liter) | Add H ₂ SO ₄ to pH<2 then refrigerate | 28 d |
| pH | P,G | 125 | Analyze immediately | Immediately |
| Pesticides | G(A) | 1000 (1 Liter) | Refrigerate | 7days |
| Phosphate-Ortho | P, G(A) | 125 | For dissolved phosphate filter immediately; refrigerate | 48 h |
| Phosphorus, Total | P,G | 125 | H ₂ SO ₄ to pH<2 then refrigerate | 28 d |
| Solids | P,G | 1000 | Refrigerate | 7 d |
| Total Organic Carbon | G | 125 | HCl to pH<2 then refrigerate | 28 d |
| Turbidity | P,G | 125 | Refrigerate | 48 h |

P = plastic (polyethylene or equivalent); G = glass; G(A) = glass, amber; G(B) = glass, borosilicate

B. Recommended Water Tests

a. Ambient Surface Water Monitoring

Custom chemical analysis packages based on specific monitoring needs. Typical requests include: alkalinity, ammonia-N, bacteria, BOD, conductivity, organic Kjeldahl Nitrogen, nitrite+nitrate-N, phosphorus, pH, total suspended solids.

b. Environmental Research/ Investigation

Helping to quantify today's environmental toxins by specialized equipment:

- Trace metals
- Pesticides

c. Drinking Water Providers

Small Distribution Systems (Cities, Restaurants, Mobile Home Parks, etc)

W33 and W35 Required.

(Some providers do their own W33 testing)

d. Recreational Water

Test Required: W39 *E. coli* or W37 Fecal Coliform. For regulatory purpose, collected 4 consecutive weeks immediately prior to season.

e. Household Well Water/ Drinking Water

Expanded Water Test (W2):

Designed to address common well water problems in Georgia such as corrosion, high levels of iron and manganese, saltwater intrusion, and nitrate from various sources. This test package should be done at least once before using a less inclusive test package such as W1.

Basic Water Test (W1):

Only after a W-2 has been conducted annually.

Total Coliform/*E. Coli* (W35)

Annually

Hydrogen Sulfide (Refundable Deposit)

If your water smells like rotten eggs, then you should test for hydrogen sulfide. Call the FEW lab to borrow a hydrogen sulfide test kit.

f. Waste Water-Permitted /Research

Per permit requirements or per parameter of interest.

g. Fish Ponds

W1 and W18 recommended.

Occasionally, if water quality is a concern, biological oxygen demand (W24), nitrate-N (W6), total phosphorus (W27), and ammonium-nitrogen (W8) may be necessary.

h. Georgia Expanded Water Test Package

In a review and summary of the AESL water testing results from 1992 through 2015, the most common recurring domestic water quality problem was low pH and high iron levels. Approximately 30% of the wells tested had pH values below the recommended level of 6.5 and 17% with iron above 0.3 ppm. In conjunction with low pH, 494 samples had copper levels above 1.0 ppm and these elevated levels result from corrosion caused by these acid waters. To accurately predict the corrosion caused by water, more testing information is needed than is contained in the W1 test package. The corrosive ability of water is a function of pH, alkalinity, specific conductance (estimated dissolved solids), and calcium. A Saturation Index can be calculated using these parameters and used to predict corrosion and scaling (Table 2). Therefore, we are offering an expanded water test package that contains all the tests needed to predict corrosion. Other tests are included that provide information needed to design an appropriate water treatment system.

TABLE 2. Saturation Index Values and Recommended Treatment

| Saturation Index | Description | General Recommendations |
|------------------|------------------------|--------------------------------|
| - 5.00 | Severe Corrosion | Treatment Recommended |
| - 4.00 | Moderate Corrosion | Treatment Recommended |
| - 3.00 | Moderate Corrosion | Treatment Recommended |
| - 2.00 | Moderate Corrosion | Treatment Should be Considered |
| - 1.00 | Mild Corrosion | Treatment Should be Considered |
| - 0.50 | Mild Corrosion | Treatment Probably Not Needed |
| 0.00 | Balanced | Treatment Typically Not Needed |
| 0.50 | Some Faint Coating | Treatment Typically Not Needed |
| 1.00 | Mild Scale Forming | Some Aesthetic Problems |
| 2.00 | Mild Scale Forming | Some Aesthetic - Consider |
| 3.00 | Moderate Scale Forming | Treatment Should be Considered |
| 4.00 | Severe Scale Forming | Treatment Probably Required |
| 5.00 | Severe Scale Forming | Treatment Required |

C. Microbiology of Water Samples

- The lab **must receive** these samples **within 24 hours** following sample collection. Sterile sample containers must be obtained from the Feed & Environmental Water Lab and water must be collected directly into these containers, other containers will not be accepted for testing.
- Submission forms and instructions for collecting drinking, recreational, or irrigation water samples are provided at AESL's website (<http://aesl.ces.uga.edu/forms>).
- See sampling instructions on the following page.

NOTE: Sample acceptance times are listed for each test below:

a. Sampling Instructions: Escherichia coli (E. coli) in Drinking Water

1. **Samples are accepted for analysis on Monday through Thursday from 8:00 a.m. to 4:00 p.m.** and the fee for analysis is \$46.00, including a next-day shipping label. If shipping is not needed, the fee is \$36.00 for the laboratory test. Please make checks out to UGA - FEW Lab.
2. Samples must be accepted for analysis **within 24 hours of the collection time**. Therefore, plan ahead by pre-selecting a day and time to collect your sample that will allow for shipping or travel time.
3. If you have shock chlorinated your well, you must wait until the chlorine has dissipated before collecting sample.
4. Choose an inside faucet that is clean and not leaking.
5. Remove any faucet attachments such as filters, aerators, screens, splashguards or water-saver valves.
6. Sanitize the faucet inside and out by dipping the faucet neck into undiluted chlorine bleach (do not use color-safe bleach).
7. Open tap fully and flush the faucet and pipes by running water for 3 minutes. If sampling from a faucet that mixes hot and cold water, run hot water for 3 minutes, then cold water for 3 minutes.
8. At the end of step #7, reduce the flow to avoid splashing, uncap the sample bottle without touching the inside of the cap or bottle, fill the bottle above the 100-ml line but not completely full (Fill the bottle only once, do not rinse), and recap tightly.
9. Place sample in the sample box, seal sample box, affix UPS shipping label and call UPS at 800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages. Or hand deliver to the Ag. Services Laboratory, 2300 College Station Road, Athens.

b. Sampling Instructions: Escherichia coli (E. coli) in Recreational Water

1. **Samples are accepted for analysis on Monday through Thursday from 8:00 a.m. to 4:00 p.m.** and the fee for analysis is \$46.00, including a next-day shipping label. If shipping is not needed, the fee is \$36.00 for the laboratory test. Please make checks out to UGA - FEW Lab.
2. Samples **must be accepted for analysis within 24 hours of the collection time**. Therefore, plan ahead by pre-selecting a day and time to collect your sample that will allow for shipping or travel time.
3. Completely fill out the information requested on the opposite side of the form. Essential info. must be completed for sample to be accepted.
4. Select the appropriate sampling area needed to obtain a representative sample for the recreational use of the water. If help is needed making this choice, please contact Dr. Uttam Saha at 706-542-7690.
5. Uncap the sample bottle without touching the inside of the cap or bottle, collect the water sample by holding the bottle near its base in the hand and plunging it, neck downward, below the surface. Turn bottle until neck points slightly upward and mouth is directed toward the current. If there is no current, create a current artificially by pushing bottle forward less horizontally in a direction away from the hand. Collect the sample approximately 1ft below the water surface.
6. The white substance in the bottle is a dechlorinating agent. Please do not rinse the bottle out.
7. It is best to take samples during a range of environmental and climatic conditions, especially during times when maximal pollution occurs.
8. Place sample in the sample box, seal sample box, affix UPS shipping label and call UPS at 800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages. Or hand deliver to the FEW Laboratory, 2300 College Station Road, Athens, GA 30602.

VII. Feed and Forage Analyses

A. General Information

- Taking a representative sample is the most important step in assuring quality analyses. Please follow sampling procedures as described later in this section.
- Supply complete information on the sample submission form to ensure maximum usefulness to the client. The **animal** and **feed type** must be given if you want calculations for total digestible nutrients (TDN) or net energies.
- For total mixed rations, concentrates, vitamin/mineral blends, grains and by-products, collect multiple core samples or grab samples. Composite the cores or grab samples, mix thoroughly, and sub-sample into **quart** Ziploc bag.
- Submit hays and silages in a **gallon** Ziploc bag.

B. Taking a Good Forage Sample

Adapted from a procedure published by the National Forage Testing Association
http://www.foragetesting.org/lab_procedure/appendix/appendixE.htm

a. Introduction

Sampling is a major factor affecting the accuracy of forage quality analyses. Chemical analysis is valid only to the extent that the sample analyzed represents the lot of hay or haylage to be fed.

Forage Lots

Take samples by "lots" of hay or silage. A "lot" is defined as hay or silage, which has been made from the same cutting, field, and stage of maturity. A sample should not represent more than 200 tons dry matter. For lots larger than 200 tons, two or more samples should be taken and the average of the results used to represent the lot.

Sampling Equipment

The most commonly used sampling method for baled or stacked hay employs a hollow tube (probe) to extract core samples from the hay. Use a probe that travels at least 12 to 18 inches into the hay package for most hay packages. The internal diameter of the probe should be at least 3/8 of an inch. Probes with sharpened tips must be kept sharp to cut through hay. A dull tip may reduce the amount of stem material in the sample due to the tip sliding past rather than cutting through the stems.

b. Sampling Hay and Haylage

Baled Hay

Baled hay packages are not uniform products because the initial windrows were not uniform and the baling process affects the distribution of leaves and stems (bale structure) within the bale. Based on the structure of the hay package to be sampled, the hay should be probed in such a way as to adequately sample the various concentrations of stems and

leaves. At least 20 cores (one core per bale) should be taken, combined, and mixed well to develop one sample per lot. Bales within a lot of hay should be sampled at random. Random means that there should be no pre-chosen reason for selecting a specific bale to sample (i.e., location, color, leafiness, etc.). Techniques to guard against non-random sampling are to sample every fourth or fifth bale going around the stack, truck, or down the row in the field or take at least five random samples from each of the four sides of a stack. Sample rectangular bales, regardless of size, using a probe centered in the end of a bale and drill horizontally into the bale.

Sample round bales by drilling horizontally into the curved side of the bale. Deteriorated hay from the exterior of the bale should not be sampled if it will not be fed to animals or they can be selective in their feeding. However, if hay to be sold includes the deteriorated exterior, it should be included in the sampling. Bales stored outside should be sampled within 2 to 4 weeks of feeding so that continued deterioration does not significantly lower bale quality from the sample taken for analysis.

Stacked Hay

For loose hay use a probe at least 30 inches long with 3/4 inch or larger internal diameter and drill at an angle from the side of the stack to the probe's full depth in 20 random locations throughout the stack. In a mow, hold the probe vertically and drill at the spot where the hay is compressed by the weight of the operator. Discard any weather damaged surface layer that would not be included in the part being fed or sold. Hay stored outside should be sampled within 2 to 4 weeks of feeding so that continued deterioration does not significantly lower bale quality from the sample taken for analysis.

Cubes and Pellets

Hay cubes or pellets should be sampled by collecting several hay cubes or handfuls of pellets from 15 to 20 locations in each "lot" so that a minimum of 40 cubes or 2 lb of pellets are selected. Each lot should be limited to 200 tons or less.

Silage

Silage. Collect a 1- to 2-lb sample from the silo unloader while it is operating or a comparable amount from several sites in a bunker or silo tube. Do not collect a silage sample until at least two weeks after ensiling. Do not collect a silage sample from the top 2 to 3 feet in a top-loading upright silo. Avoid sampling from moldy or spoiled areas in silo, bunker or tube. Also, avoid sampling silage that has been exposed to the air for several hr. Sample bunker silos by sampling 12 to 15 sites from the face of the silage in the silo.

Sampling chopped forage as it is being put into the silo will give an indication of forage quality but will not account for changes occurring during the ensiling process. Fiber changes are usually less than 1 unit and occur primarily because digestible material is lost through respiration or juices leaching out. Protein content and solubility can change significantly during the ensiling process depending on the fermentation process.

Mixed Rations

Total Mixed Rations (TMR). Total mixed rations are difficult to sample because they are seldom homogeneous or well mixed. When it is unlikely that a sampling method can produce a representative sample, it is recommended that the components of total mixed rations be sampled and analyzed individually. When confident that a representative sample can be obtained, a TMR sample may be analyzed by wet chemistry. NIR calibration on TMR samples has not been successful.

Special Sample Handling

Sampling silages, haylages and total mixed rations may produce a large amount of sample. The sample should not be divided because stems and leaves will separate and settle in the sample. The sample should be taken early in the week, placed in a polyethylene, airtight (e.g. freezer) bag, sealed tightly and immediately mailed or delivered to the laboratory. Perishable samples should be mailed immediately after collection and should be mailed early in the week so they arrive at the laboratory without spending the weekend in shipment. Samples except for those intended for prussic acid testing can be frozen before shipment.

Record Keeping

It is recommended to keep records of information about each lot of forage that is sampled and analyzed. These records should contain information about the source (area where grown), forage type (species), cutting number, stage of maturity, and special conditions (frost, drought, etc.). Further information such as cutting date and interval between cuttings may also helpful when managing your forage quality.

VIII. Animal Waste Analyses

A. General Information

Sample Submission

- A representative sample of the material should be submitted as close as possible to the time of application.
- Samples should be placed in pint size re-sealable plastic bags (solid sample) or plastic bottles (liquid sample).
- Glass containers are not acceptable because they may break in shipment.
- Properly seal lid using tape to avoid sample leakage during transit. Use adequate packing.
- Enclose Animal Waste Submission Form (see submission form section). Do not staple forms to re-sealable plastic bag.
- Bottles are available upon request from Extension Storekeeper:

Storekeeper Cooperative Extension
The University of Georgia
Room 103, Hoke Smith Annex
Athens, GA 30602



Poultry Litter Analysis

Since April 2000, the Total Minerals Test (A1) has been provided free of charge to Georgia Poultry Producers who submit poultry litter through their county extension program. Litter testing is an integral part of the Georgia Poultry industry program of voluntary comprehensive nutrient management plans (CNMPs) that call for both soil and litter/manure testing. Funds have been appropriated by the Georgia General Assembly to support the free litter- testing program. Only the A1 test is free; charges still apply for other tests on poultry litter.

To qualify for the free test, samples need to be submitted through Data Transfer's Online Submission procedure. In order to use the online submission successfully, all fields in the submission form will need to be filled out. This will require that the grower provides the information requested. To facilitate submission, the programmed on-line submission form has drop-down boxes that will make filling out the form much easier. The information on the form will serve as a valuable contribution to our ongoing database for long term nutrient management planning.

B. Manure Sampling and Testing

Manures can be quite variable in nutrient content. This variability may be due to different animal species, feed composition, bedding material, storage and handling as well as other factors. Testing at or near the time of application tells you the fertilizer value to make decisions about rates to apply. Some livestock producers are faced with nutrient

management regulations that require manure testing. Also, if buying or selling litter/manure for fertilizer use, testing will help both buyer and seller establish the fertilizer value.

Manure Sample Collection

According to the Georgia Environmental Protection Division (EPD) “Swine Feeding Operation Permit Requirements,” lagoon effluent is to be sampled semiannually. Preferably, the sample should be taken as near the application time as possible prior to the manure application. However, if it is urgent to pump down a full lagoon or storage pond, you should not wait until you can sample and obtain the results. You should sample the day of irrigation. The results can later be used to determine the nutrients applied to the fields and identify the need for additional nutrients to complete crop production.

Manures should be sampled and tested near the time of application because the nutrient content can change considerably over time, particularly if stockpiled and unprotected from the weather. Nitrogen (N) is the nutrient that is the most likely to be affected. The frequency for testing your manure will depend upon several factors, but, as noted above, lagoon effluent needs to be tested at least semiannually. The type of manure and overall management system will also be factors. Animal producers using lagoon manure storage systems should sample every time that the liquid or slurry will be pumped and applied to the land. Proper sampling is the key to reliable manure analysis. Although laboratory procedures are accurate, they have little value if the sample fails to represent the manure product. Manure samples submitted to a laboratory should represent the average composition of the material that will be applied to the field. Reliable samples typically consist of material collected from a number of locations. Precise sampling methods vary according to the type of manure. The laboratory, County Extension Agent, or crop consultant should have specific instructions on sampling.

Liquid Manure

Liquid manure samples submitted for analysis should meet the following requirements:

- Place sample in a sealed, clean plastic container with about a 1-pint volume. Glass is not suitable because it is breakable and may contain contaminants.
- Leave at least 1 inch of air space in the plastic container to allow for expansion caused by the release of gas from the manure material.
- Refrigerate or freeze samples that cannot be shipped on the day they are collected. This will minimize chemical reactions and pressure buildup from gases.

Ideally, liquid manure should be sampled after it is thoroughly mixed. Because this is sometimes impractical, samples can also be taken in accordance with the suggestions that follow.

Lagoon effluent: Premixing the surface liquid in the lagoon is not needed, provided it is the only component that is being pumped. Growers with multistage systems should draw samples from the lagoon they intend to pump for crop irrigation.

Samples should be collected using a clean, plastic container similar to the one shown in Figure 1. One pint of material should be taken from at least eight sites around the lagoon and then mixed in the larger clean, plastic container. Effluent should be collected at least 6 feet from the edge of the lagoon at a depth of about a foot. Shallower samples from anaerobic lagoons may be less representative than deep samples because oxygen transfer near the surface sometimes alters the chemistry of the solution. Floating debris and scum

should be avoided. One pint of the mixed material should be sent to the laboratory. Galvanized containers should never be used for collection, mixing, or storage due to the risk of contamination from metals like zinc in the container.

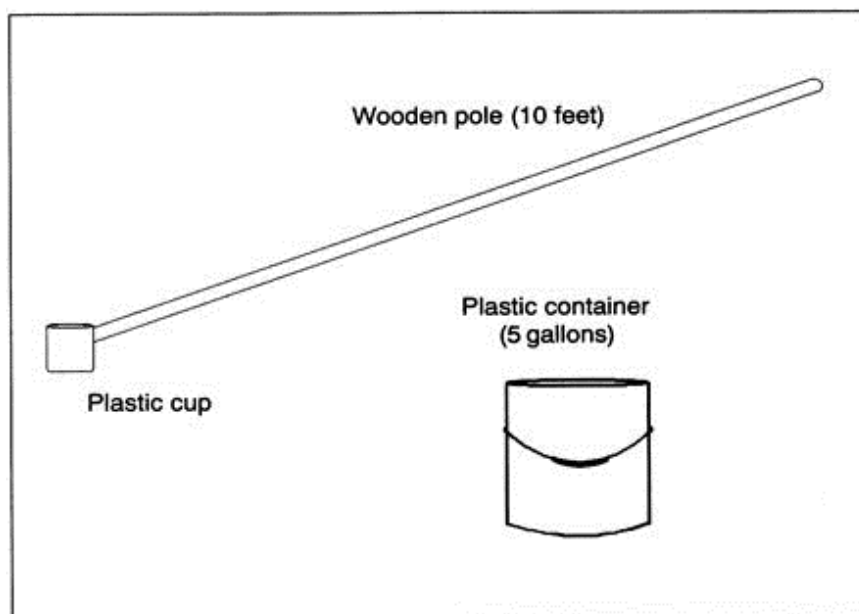


Figure 1. Liquid manure sampling device

Liquid slurry: Manure slurries that are applied from a pit or storage pond should be mixed prior to sampling. If you agitate your pit or basin prior to sampling, a sampling device pictured in Figure 1 can be used. If you wish to sample a storage structure without agitation, you must use a composite sampling device as shown in Figure 2. Manure should be collected from approximately eight areas around the pit or pond and mixed thoroughly in a clean, plastic container. An 8- to 10-foot section of 0.5- to 0.75-inch plastic pipe can also be used: extend the pipe into the pit with ball plug open, pull up the ball plug (or press your thumb over the end to form an air lock), and remove the pipe from the manure, releasing the air lock to deposit the manure into the plastic container.

Lagoon sludge: Representative samples of lagoon sludge are more difficult to obtain than samples with lower solid contents. Two common methods are used. One method requires lagoon pump-down to the sludge layers. Then, during sludge agitation, a liquid or slurry type of sample described above may be collected. The other method requires insertion of a probe into the lagoon to the bottom to obtain a column of material. A "sludge-judge" is a device commonly used for this type of sampling. The sludge component of this column is then released into a clean plastic bucket, and several (12-20) other sampling points around the lagoon are likewise collected to obtain a composite, representative sample. This procedure must be performed with a boat or mobile floating dock.

For analysis, most laboratories require at least 1 pint of material in a plastic container. The sample should not be rinsed into the container because doing so dilutes the mixture and distorts nutrient evaluations. However, if water is typically added to the manure prior to land application, a proportionate quantity of water should be added to the sample.

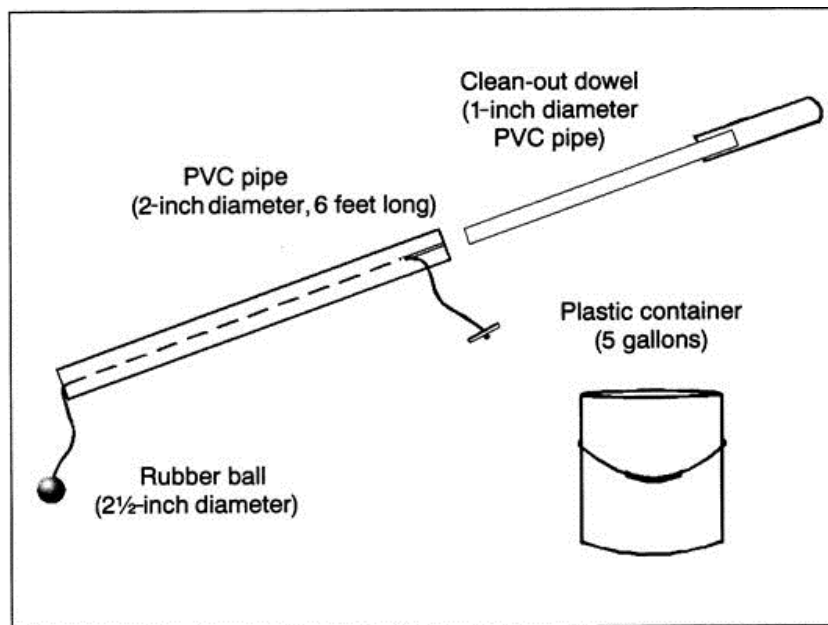


Figure 2. Composite sampling device

Solid Manure

Solid manure samples should represent the average moisture content of the manure. A one-quart sample is adequate for analysis. Samples should be taken from approximately eight different areas in the manure pile, placed in a clean, plastic container, and thoroughly mixed. Approximately one quart of the mixed sample should be placed in a plastic bag, sealed, and shipped directly to the laboratory. Samples stored for more than two days should be refrigerated. Figure 3 shows a device for sampling solid manure.

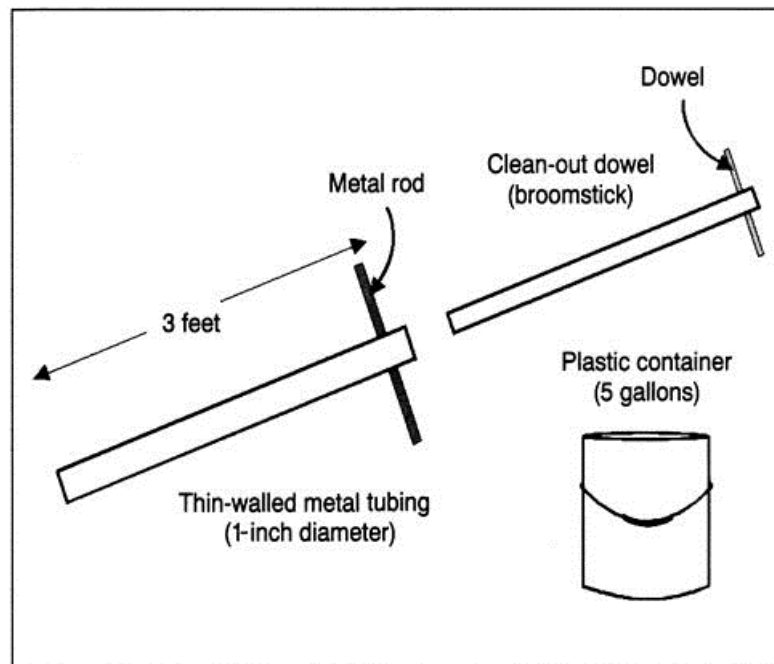


Figure 3. Solid manure sampling device

Stockpiled manure or litter: Ideally, stockpiled manure and litter should be stored under cover on an impervious surface. The weathered exterior of uncovered waste may not accurately represent the majority of the material. Rainfall generally moves water-soluble nutrients down into the pile. If an unprotected stockpile is used over an extended period, it should be sampled before each application.

Stockpiled manure should be sampled at a depth of at least 18 inches at six or more locations. The collected material should be combined in a plastic container and mixed thoroughly. The one-quart laboratory sample should be taken from this mixture, placed in a plastic bag, sealed, and shipped to the laboratory for analysis. If the sample cannot be shipped within one day of sampling, it should be refrigerated.

Surface-scraped manure: Surface-scraped and piled materials should be treated like stockpiled manure. Follow the same procedures for taking samples. Ideally, surface-scraped materials should be protected from the weather unless they are used immediately.

Composted manure: Ideally, composted manure should be stored under cover on an impervious surface. Although nutrients are somewhat stabilized in these materials, some nutrients can leach out during rains. When compost is left unprotected, samples should be submitted to the laboratory each time the material is applied. Sampling procedures are the same as those described for stockpiled waste.

In-house Litter: Litter in the poultry house can vary considerably depending on location within the house. Litter around watering systems, feeders, and brooders should be sampled proportionate to the entire house floor. Special attention should be given to sampling in-house litter by making every effort to representatively sample the entire volume of litter that will be cleaned out and land applied. Collect at least 10 to 12 one-pint samples throughout the house and combine these samples into a plastic bucket. Take care to sample the entire depth of litter without including soil from the house floor. After thoroughly mixing the individual samples in the bucket, place approximately one quart of this mixture into a plastic bag or plastic wide-mouth jar.

Manure Tests to Request

The County Extension Office has sample submission forms and information on tests that are most often needed and can assist with shipping samples to the University of Georgia (UGA) Ag and Environmental Services Laboratories. The UGA manure sample submission forms are in the “Form Examples” section of this schedule. Poultry producers should use the

Poultry Litter/Manure Submission Form for Nutrient Management Plans. All others should use Animal Waste Submission Form for Land Application.

Basic UGA manure test package: Your individual permits will dictate the frequency and kinds of testing. The basic manure test package at the UGA Ag and Environmental Services Laboratories includes: (all are as total elemental nutrient)

- Nitrogen (N)
- Phosphorus (P)
- Potassium (K)
- Calcium (Ca)
- Magnesium (Mg)
- Sodium (Na)
- Sulfur (S)
- Aluminum (Al)
- Iron (Fe)

- Boron (B)
- Copper (Cu)
- Manganese (Mn)
- Zinc (Zn).

Additional test on liquid manure for CNMP: Lagoon effluent samples submitted for basic manure testing at the UGA Ag Services Labs will have additional analyses that include:

- Total Kjeldahl nitrogen (TKN)
- Ammonium nitrogen
- Nitrate nitrogen.

Manure Report

The UGA Ag and Environmental Services Laboratories reports results for solid manures in both percentages and pounds of nutrients per ton on an “as received” basis since this is how you will be applying the material. Liquid sample results are reported as parts per million (ppm) and converted into both pounds per 1,000 gallons and pounds per acre inch of application for your convenience in determining rates. The phosphorus and potassium are reported in the fertilizer basis as P_2O_5 and K_2O respectively. Other laboratories may report their results differently. If a lab reports phosphorus and potassium as elemental P or K, you must convert them into the fertilizer basis of P_2O_5 or K_2O . This can be done with the following conversions:

P multiplied by 2.29 = P_2O_5

K multiplied by 1.20 = K_2O

The amount of the total nutrients in manure that will be available to plants varies depending on the type of manure and whether it will be applied to the surface of the soil, incorporated or injected. County Extension Agents and other qualified professionals can assist with the calculation of manure nutrient availability based on when and how you will make application. This information, combined with the soil test report and other information, is necessary to develop a CNMP.

IX. Biosolids, Sludge, and Non-Animal Wastes Analyses

Biosolids refer to the nutrient-rich organic materials produced by wastewater-treatment plants. In the past, the majority of this raw sewage was disposed of by dumping directly into our nation's rivers, lakes, and bays. However, upon treatment and processing, this sewage sludge, called Biosolids, can be safely recycled and applied as fertilizer.

Biosolids were used by American farmers since the 1920s who believed the material worked better than traditional fertilizers due to their rich nutrients and organic matter that reduced soil erosion. In southeastern Georgia, some farmers are using the biosolids under the regulation of the Georgia Department of Natural Resources.

In AESL, we offer a variety of tests for Biosolids, sludge, and non-animal wastes, including minerals, nutrients (especially different forms of N), total carbon, total (volatile) solids, and environmental concerns (such as pollutants Hg and As, and fecal coliforms). Please refer to the full list of tests offered in AESL.

X. Miscellaneous Analyses

Application of chemical fertilizers can contribute to soil acidification which is harmful for plant production, liming is a common practice to improve the pH of acidic soils. But how much to apply liming materials in a soil is varying. Soil Calcium Carbonate Equivalent (CCE) or content of Calcium plus Magnesium (for dolomitic limestone) offers a numeric value to the effectiveness of different liming materials. Both tests are offered in the AESL laboratories.

XI. Trace Level Analyses

Trace level metals exist extensively in soil, water, plant, chemical fertilizer, manures, animal waste, non-animal waste, and biosolids, and might be beneficial or highly toxic to plants, animals, and human beings depending on the metal types and their concentrations. Accurately quantifying their concentrations is not only important to agricultural production, but vital to human health. Relevant Information about trace metals in environmental media can be found in the UGA extension websites:

<http://aesl.ces.uga.edu/publications/watercirc/LeadCopper.pdf>

<http://aesl.ces.uga.edu/publications/watercirc/Arsenic.pdf>

<http://aesl.ces.uga.edu/publications/watercirc/Mercury.pdf>

<http://aesl.ces.uga.edu/publications/watercirc/Uranium.pdf>

<http://extension.uga.edu/publications/detail.cfm?number=B1353>

<http://extension.uga.edu/publications/detail.cfm?number=B1390#3>

XII. Pesticide, Herbicide, and Organic Compounds Analyses

The Pesticide & Hazardous Waste Lab analyzes for the presence of certain insecticides and herbicides in soil, plant, fish and water samples. It also provides tests for hazardous materials in municipal and industrial sludges; petroleum and organic solvents in soil and water; and drinking water standards for homeowner systems.

Please do **not send pesticide samples in plastic bottles**. Below is a list of approved sample containers:



Water - GLASS ONLY !

1 liter Bottle **or** Quart Mason Jar (cover top w/ foil)



Soil - Sediment

Use glass for wet soil or sediment



Herbicide on Foliage: Fill a Quart Size Bag
Wrap the sample in foil or paper towel.



Need two 40 mL
glass vials to fill
to the top.
No air bubbles!
VOA
BTEX
GRO

1 liter glass Bottle
or Quart Mason
Jar (cover top w/
foil)

TPH DRO



TPH DRO / GRO combo



**Soil - Petroleum
BTEX, VOA, and TPH**

Frequently Asked Question:

Q: The test checks for 6 parameters but I want only 1 parameter, can I get the test done at a cheaper cost?

A. No, because the cost of the standard and sample prep or extraction requires the same amount of work to test for 1 as it does to test for 6 parameters.

Q: Do you test fuel (gasoline, diesel oil, or kerosene)?

A. No, contact the Georgia Fuel Lab at: 404-363-7597.

Q: Do you test for asbestos?

A. No, contact Clayton Group Services at 770-499-7500.

Q: What submission form do we send?

A. Use the standard water or soil form and write in the special analysis you are requesting.

Q: What is the standard turn-around time?

A. Two weeks, but sometimes may be done faster upon request.

XIII. Crop Quality Analyses

The Agricultural and Environmental Services Laboratories (AESL) offers tests for the analysis of flavor compounds in onions and other crops. The list of tests being offered and sample report form is shown at <http://aesl.ces.uga.edu/Onion/Example.pdf>. The sample submission form can be found at <http://aesl.ces.uga.edu/Onion/Submission.pdf>. The fee for these analyses is \$80 per sample; however, if samples are submitted in groups of 10 samples or more at a time, then the cost per sample is \$70. Samples can be submitted through county extension offices, in which case the cost of shipping is included in the samples cost, or samples can be mailed directly, in which case the growers are responsible for covering the cost of shipping. Each composite sample from the grower should consist of ten onions (see sampling protocol below). It is important to place the composite sample in a paper or mesh bag only. Plastic bags should NOT be used. The bagged sample/s should be shipped by UPS in a cardboard shipping box. Shipping boxes (12x10x6" for one composite sample of 10 onions or 12x10x12" for 2 composite samples) are available from the Extension mail room at the Hoke Smith Annex (Phone: 706-542-8844) and prepaid UPS shipping labels are available at the AESL (Phone: 706-542-7690, e-mail: FEWLab@uga.edu). All samples should be clearly labeled and submitted along with a completed sample submission form. Mail the boxed samples to AESL at the address provided above.

Field Sampling Protocol

To best represent a field, collect onion samples randomly around the area. If the sample is to represent a 5-10 acre field, divide the area into four quadrants, collect two (2) mature onions from each quadrant, and 2 onions from the center of the field. It is ideal to collect onions of the same size and maturity. If the sample is from the packing house, make sure that the onion lot is well represented by collecting ten onions from various sections of the lot. Again, it is best to collect onions of the same grade, size and maturity.

For inquiry, call: 706-542-9023 and ask for information.

Prepaid UPS shipping labels are available from 706-542-7690.

Part III

Submission and Order Forms

Date Mailed: _____

CHECK SUBMISSION FORM

LAB USE ONLY

Date: _____

Set I.D.: _____

Page #: _____

REFER TO CURRENT PRICE LIST FOR CORRECT CHARGES

BE SURE TO NOTE NUMBER OF TESTS UNDER CORRECT HEADING

County Code: _____

Check covers analysis for the following samples. Indicate number of tests requested (use number, **NOT CHECK MARK**)

| | Client Name | #Routine | #Boron | #Soluble Salts | #O.M. | #Nitrate | #Green- house | #Other | Amt. Due (\$) |
|----|-------------|----------|--------|-------------------|-------|----------|------------------|--------|------------------|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |

Total Amount Due (\$) _____

Order Form for Soil, Plant & Water Analysis Supplies

| | | |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| From: | To: Soil, Plant & Water Laboratory 2400 College Station Road Athens, Georgia 30602-9105 OR E-mail: soiltest@uga.edu | County: <hr/> Date: |
| Quantity | Description of Item | |
| | Soil Test Probes (<i>Check made out to Georgia 4-H Foundation</i>) | |
| | | |
| Download all other forms from http://aesl.ces.uga.edu | | |
| *****Submit orders for Water Bottles, Boxes and Soil bags to the following address: ***** | | |
| Storekeeper Cooperative Ext. Service The University of Georgia Room 103, Hoke Smith Annex Athens, Georgia 30602 | | |
| Mailing Labels – (<i>Order from your District Director</i>) | | |
| | | |

Retain a copy for your records.

Submit other forms to Soil, Plant & Water Laboratory, 2400 College Station Rd, Athens, GA 30602-9105

SOIL SUBMISSION FORM

DATE MAILED: _____ COUNTY CODE: _____ ROUTINE or SPECIAL (list tests): _____

PHONE: _____

EMAIL: _____ (for returning soil report)

LAB USE ONLY

SET ID: _____

Login Date: _____

| NAME | | ADDRESS (required) | Sample ID | Crop Codes (up to 5) | Lab Number |
|------|-------|------------------------|-----------|----------------------|------------|
| Last | First | Street, City, Zip Code | | | |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |

INSTRUCTIONS:

If samples are not paid for through an Extension office, **payment must be included.**

Include only 12 samples per form, 1 sample per line. Info on sample bag should match info on form.

Crop and **County** codes must be used.

Samples for **Special** analyses must be listed on a separate form.

All samples listed on sheet should be enclosed in same box.

Enclose forms **inside** envelope and place **inside** box.

LAB USE ONLY

CASH

CREDIT

CHECK #

RECEIPT # _____

TECHNICIAN _____

| <u>Name</u> | <u>Address</u> | <u>Sample ID</u> | <u>Crop Code</u> |
|---------------|------------------------------|------------------|--------------------|
| 1. Doe, John | 3657 Rocky Rd. Atlanta 30303 | Lawn | CLM, 087, 086 |
| 2. Smith, Mae | 1254 Peach Dr. Atlanta 30078 | 1 | 112, 098, 105, 101 |



The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension

SOIL, PLANT, AND WATER LABORATORY
2400 College Station Road

Lab Use Only

LAB #:

Received by:

Date Received:

Date Returned:

Fee Received:

PLANT SUBMISSION FORM

Please Note – Retain a copy of this form for your files. Submit one copy per sample.

| Grower | | Appearance of Plant | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|-------------|-----------------------------------|--------------------------------|-------------------------------------------|---------------------------------|--|--------------------------------|
| <p>Name (Print) _____</p> <p>Address: _____</p> <p>_____</p> <p>City: _____</p> <p>State: _____ Zip Code: _____</p> <p>County Agent: _____</p> <p>County: _____</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px; text-align: center;">IMPORTANT <i>Samples should be placed in a 10"x13" paper envelope or a PAPER BAG, which is labeled with your name, address, the crop, and sample description.</i></div> | | <p><input type="checkbox"/> Normal <input type="checkbox"/> Abnormal (describe)</p> <p>_____</p> <p>_____</p> <p>Plant Diseases? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Insect Problem? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Was a soil sample taken from this same area for:</p> <p>1. Soil Test <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Nematode Assay <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>List any foliar fertilizers or fungicides sprayed on this crop: _____</p> <p>Additional comments about samples: _____</p> | | | | | | | | | |
| TYPE OF SAMPLE | | IRRIGATION | | | | | | | | | |
| <p>Crop: _____ Code: _____ Variety or Hybrid: _____</p> <p>Sample No. _____ of _____ Date Planted: _____ Date Sampled: _____</p> <p>Stage of Growth: <input type="checkbox"/> Seedling <input type="checkbox"/> Early Growth <input type="checkbox"/> Bloom <input type="checkbox"/> Fruiting <input type="checkbox"/> Mature</p> <p>Wheat: (Enter Growth Stage No.) _____ Plant Height: _____ Inches</p> | | <p>YES <input type="checkbox"/></p> <p>NO <input type="checkbox"/></p> | | | | | | | | | |
| (Notice: Do not send root portion. Leaves covered with dust or recently sprayed should be rinsed and air-dried before mailing.) | | | | | | | | | | | |
| PLANT PART SAMPLED: (Check One) | | Position of Plant Leaf (Check One) | | | | | | | | | |
| <p>Whole Plant <input type="checkbox"/> Leaves <input type="checkbox"/></p> <p>Stems <input type="checkbox"/> Top 6" <input type="checkbox"/></p> <p>Petioles <input type="checkbox"/> Other: _____</p> <p>* Check here if requesting single Petiole Analysis (Nitrate, Phosphorus, Potassium). P13 <input type="checkbox"/></p> | | <table style="width: 100%; border-collapse: collapse;"><thead><tr><th style="text-align: center; border-bottom: 1px solid black; width: 50%;">Corn</th><th style="text-align: center; border-bottom: 1px solid black; width: 50%;">Other Crops</th></tr></thead><tbody><tr><td>Ear Leaf <input type="checkbox"/></td><td>Upper <input type="checkbox"/></td></tr><tr><td>Leaf Below Whorl <input type="checkbox"/></td><td>Middle <input type="checkbox"/></td></tr><tr><td></td><td>Lower <input type="checkbox"/></td></tr></tbody></table> | | Corn | Other Crops | Ear Leaf <input type="checkbox"/> | Upper <input type="checkbox"/> | Leaf Below Whorl <input type="checkbox"/> | Middle <input type="checkbox"/> | | Lower <input type="checkbox"/> |
| Corn | Other Crops | | | | | | | | | | |
| Ear Leaf <input type="checkbox"/> | Upper <input type="checkbox"/> | | | | | | | | | | |
| Leaf Below Whorl <input type="checkbox"/> | Middle <input type="checkbox"/> | | | | | | | | | | |
| | Lower <input type="checkbox"/> | | | | | | | | | | |



The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension Service
SOIL, PLANT, AND WATER LABORATORY
2400 College Station Rd. Athens GA 30602

Lab Use Only

LAB# _____

Received by: _____

Date and Time: _____

WATER SUBMISSION FORM

Please Note – Retain a copy of this form for your files. Submit one copy per sample.

| SUBMITTING COUNTY* | Sample location (If different from client's address) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| COUNTY: _____ | County: _____ |
| Client Name: _____ | Name: _____ |
| Client Address: _____ | Sample Address: _____ |
| City, State, Zip: _____ | City, State, Zip: _____ |
| Phone #: _____ | Other Information |
| E-mail: _____ | Date Received: _____ |
| * Note: Test results are sent to submitting county office. | Sample name: _____ |
| TYPE OF SAMPLE (Check One): | |
| <input type="checkbox"/> Household Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Irrigation Pond <input type="checkbox"/> Municipal Water <input type="checkbox"/> Fish Pond <input type="checkbox"/> Other: _____ | |
| IF THE WATER SOURCE IS A WELL (if known): | |
| Well Depth: _____ ft. Well Casing Diameter: _____ in. | |
| What is the end use of the water: _____ | |
| Briefly describe any problems and/or reasons for testing water (optional): _____ | |
| TEST REQUESTED (Circle all that apply): | |
| W1 – BASIC TEST (Includes: pH, P, K, Ca, Mg, Mn, Fe, Al, B, Cu, Cr, Mo, Ni, Si, Na, Zn, Calculated Hardness) | |
| W2 – GA Expanded Water Test W6 – Nitrate (NO₃-N) W7 – Nitrite (NO₂-N) | |
| W42 – check all that apply, <input type="checkbox"/> Arsenic (As) <input type="checkbox"/> Lead (Pb) <input type="checkbox"/> Uranium (U) <input type="checkbox"/> Other _____ | |
| W33 – GA EPD Public Water Systems Review & Permitting Process Other Tests: _____ | |
| FOR LAB USE ONLY | |
| Payment Received: _____ Date Returned: _____ | |
| pH _____ NO ₂ -N _____ NH ₄ -N _____ Pb _____ E.C. _____ | |
| F _____ Cl _____ NO ₃ -N _____ PO ₄ _____ SO ₄ _____ | |
| Special Notes: _____ | |

Please note that test results may be available to other parties through the Georgia Open Records Act.

ANIMAL WASTE SUBMISSION FORM FOR LAND APPLICATION

Lab# _____

Please Note - Retain a copy of this form for your files. Submit one copy per sample.

Name (last, first) _____
 Address _____
 City State Zip _____
 Email _____

Sample ID _____
 County _____
 Date Received _____
 Phone _____

| Choose one Kind and one Condition | | | Choose one Application Method | |
|-----------------------------------|-------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | <u>Kind</u> | <u>Condition</u> | | |
| LITTER | <input type="radio"/> Broiler | <input type="radio"/> Fresh/Stackhouse | <input type="radio"/> Broadcast Surface <input type="radio"/> Broadcast Incorporated <input type="radio"/> Soil Injected <input type="radio"/> Irrigation applied <input type="radio"/> Other | |
| | <input type="radio"/> Layer | <input type="radio"/> Deep Stacked | | |
| | <input type="radio"/> Breeder | <input type="radio"/> Composted | | |
| | <input type="radio"/> Pullet | <input type="radio"/> Other | | |
| MANURE | <input type="radio"/> Dairy | <input type="radio"/> Slurry | | |
| | <input type="radio"/> Swine | <input type="radio"/> Solid | | |
| | <input type="radio"/> Beef | <input type="radio"/> Composted | | |
| | <input type="radio"/> Horse | | | |
| | <input type="radio"/> Other | | | |
| LAGOON | <input type="radio"/> Swine | <input type="radio"/> Layer | | |
| | <input type="radio"/> Dairy | <input type="radio"/> Other | | |

Tests Requested

(Check all that apply and consult Fee Schedule for pricing)

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> A1: Total Minerals + Nitrogen* Recommended for litters. (1 pint Ziploc® bag) Includes phosphorus, potassium, calcium, magnesium, iron, aluminum, sulfur, manganese, boron, copper, zinc, sodium, and nitrogen. | Individual Tests |
| <input type="checkbox"/> A6: Total Minerals + Nitrogen* + Nitrate-Nitrogen Recommended for manures. (1 pint sample) | <input type="checkbox"/> A2: Total Kjeldahl Nitrogen |
| <input type="checkbox"/> A7: Total Minerals + Nitrogen* + Nitrate-Nitrogen + Ammonium-Nitrogen Recommended for lagoons. (1 pint sample) | <input type="checkbox"/> A3: Nitrate-Nitrogen |
| | <input type="checkbox"/> A4: Ammonium-Nitrogen |
| | <input type="checkbox"/> A5: Moisture |
| | Other _____ |

*Nitrogen is total nitrogen for litters or Kjeldahl nitrogen for manures and lagoons.

For Lab Use Only

Date Received: _____

Date Returned: _____

Payment Received: _____

Invoice #: _____

NH₄-N _____

Moisture _____

NO₃-N _____

Total Nitrogen _____ Other _____

For Lab Use Only

Lab # _____

BIOSOLID OR NON-ANIMAL WASTE/COMPOST SUBMISSION FORM

Please Note – Retain a copy of this form for your files. Submit one copy per sample.

Name: _____

Sample #: _____

Mailing address: _____

County: _____

City, State, Zip: _____

Phone #: _____

Date Received: _____

Sample Type:

*Bio-solids – 503 Regulations

☐ Non 503 Regulations

☐ Class A or ☐ Class B

*NOTE:

1. If for land application of biosolids, **chain of custody** and **quality assurance documentation** is required. Contact the **PHW Lab** for these forms and sampling instructions.
2. Test(s) for pathogen reduction (fecal coliform) must be done within 24 hours of collection. Therefore, contact the **FEW Lab** to schedule analyses.

END USE OF MATERIAL _____

TESTS REQUESTED

☐ All for 503 (SC13)

☐ Total Minerals:

| | | | | | |
|----------------|----------------|---------------|-------------|---------------|-----------------|
| Phosphorus (P) | Magnesium (Mg) | Iron (Fe) | Copper (Cu) | Lead (Pb) | Nickel (Ni) |
| Potassium (K) | Sulfur (S) | Aluminum (Al) | Zinc (Zn) | Cadmium (Cd) | Molybdenum (Mo) |
| Calcium (Ca) | Manganese (Mn) | Boron (B) | Sodium (Na) | Chromium (Cr) | |

☐ Total Nitrogen

☐ Fecal Coliform (pathogen reduction)

☐ Arsenic

☐ Selenium

☐ Arsenic + Selenium

☐ Mercury

☐ pH

☐ Total Kjeldahl Nitrogen (excluding nitrate nitrogen)

☐ Nitrate Nitrogen

☐ Ammonium Nitrogen

☐ Total Volatile Solids

☐ Total Solids

☐ Other: _____

FOR LAB USE ONLY

Date Received: _____

Time Received: _____

Date Returned: _____

Payment Received: _____

Invoice #: _____

Received By: _____

NH₄-N _____

Moisture _____

Total Solids _____

NO₃-N _____

Mercury _____

Total N _____

Arsenic _____

Total Volatile Solids _____

Selenium _____

Other _____

Feed and Forage Testing Application Form – Beef Cattle and Dairy Cattle

Client Information

Name: _____ Date: _____

Address: _____ Sample No: _____

City: _____ State: _____ Zip: _____ Phone: _____

Date Received in County Office: _____ County: _____ Agent: _____

Signature of the county employee:

(Needed if submitted through the county extension office)

Animal Classes (Please check only the most important class)

Beef Cattle:

| | | | | | | |
|----------------|----------|----------|---------------------------|--------------------|----------|----------------|
| Dry Cows | hd _____ | wt _____ | Stocker hd (steers) _____ | hd (heifers) _____ | wt _____ | exp. ADG _____ |
| Lactating Cows | hd _____ | wt _____ | Feedlot hd (steers) _____ | hd (heifers) _____ | wt _____ | exp. ADG _____ |
| Heifers | hd _____ | wt _____ | Other _____ | | | |

Dairy Cattle:

Lactating Cows _____ Dry Cows _____ Heifers _____ wt. _____

| Group | Num | Wt. | Milk lb. | Fat% | Days in Milk | |
|-------|-------|-------|----------|-------|--------------|--------------------------|
| 1 | _____ | _____ | _____ | _____ | _____ | |
| 2 | _____ | _____ | _____ | _____ | _____ | Other: _____ |
| 3 | _____ | _____ | _____ | _____ | _____ | Milk price, \$/cwt _____ |

Test(s) Requested (Check all appropriate.)

| | |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <input type="checkbox"/> F1 Hays and Silage (NIR + nitrate + minerals) | <input type="checkbox"/> F7 Routine Feed Analysis (Includes minerals) |
| <input type="checkbox"/> F2 Hays and Silage (NIR + nitrate, excluding minerals) | <input type="checkbox"/> F8 Proximate Analysis (Protein, Fat, Fiber, Moisture & Ash) |
| <input type="checkbox"/> F3 Hays and Silage (NIR only) | <input type="checkbox"/> F10 Crude Protein |
| <input type="checkbox"/> F4 Hays and Silage (Wet Chemistry) includes minerals | <input type="checkbox"/> F14 Nitrates |
| <input type="checkbox"/> F5 Hays and Silages (Wet Chemistry) excludes minerals | Other: _____ |
| <input type="checkbox"/> F6 Hays and Silages (Wet Chemistry) | Other: _____ |

Type of Feed and Forage

Please check the one most appropriate type from the list below.

Silage: _____

☐ Corn
☐ Sorghum (Silage)
☐ Small grain
☐ Wheat
☐ Rye
☐ Barley
☐ Oats
☐ Sorghum (grain)
☐ Alfalfa
☐ Other legume
☐ Grass
☐ Mixed
☐ Other: _____

Green Chop: _____

☐ Corn
☐ Sorghum (silage)
☐ Small grain
☐ Wheat
☐ Rye
☐ Barley
☐ Oats
☐ Alfalfa
☐ Other legume
☐ Grass
☐ Mixed
☐ Grass/Legume Mix
☐ % legume (est.)
☐ Other: _____

Hay: _____ Haylage/baleage: _____

☐ Alfalfa
☐ Annual Ryegrass
☐ Bahia
☐ Bermudagrass
☐ Alicia
☐ Coastal
☐ Coastcross
☐ Common
☐ Tift 44
☐ Tift 78
☐ Tift 85
☐ Mixed
☐ Russell
☐ Other (specify): _____
☐ Fescue/Orchardgrass
☐ Millet
☐ Small Grain
☐ Wheat
☐ Rye
☐ Barley
☐ Oats
☐ Grass/Legume Mix
☐ % legume (est.)
☐ Peanut
☐ Perennial Peanut
☐ Other Legumes
☐ Sorghum hybrids
☐ Other: _____

Grain: _____

☐ Corn
☐ Grain Sorghum
☐ Wheat
☐ Barley
☐ Oats
☐ Triticale
☐ Other: _____

Protein Source: _____

☐ Soybean Meal 48
☐ Soybean Meal 44
☐ Cottonseed Meal
☐ Peanut Meal
☐ Whole Cottonseed
☐ Protein Supplement
 (% Protein _____)

Other not listed: _____

By-products: _____

☐ Soybean hulls
☐ Cottonseed hulls
☐ Peanut hulls
☐ Citrus pulp
☐ Brewers grains, wet
☐ Poultry litter
☐ Wheat midds
☐ Other: _____

Mineral Mixes: _____

☐ Base mix
☐ Premix
☐ Trace-mineral mix
☐ Other: _____

Mixed Feeds: _____

Complete Feed _____
 (list ingredients separately)
 Silage/grain mix _____
 Silage: _____ Grain: _____

Please send all samples and forms to:
 Ag & Environmental Services Laboratories
 Feed & Environmental Water Laboratory
 2300 College Station Rd
 Athens GA 30602-4356

For Lab Use Only

Lab # _____

11/25/2014 Rick Hitchcock

For assistance in formulating a ration, please contact your local Extension office (1-800-ASK-UGA-1).

Feed and Forage Testing Application Form - Swine, Sheep, Goats, and Deer

Client Information

Name: _____ Date: _____

Address: _____ Sample No: _____

City: _____ State: _____ Zip: _____ Phone: _____

Date Received in County Office: _____ County: _____ Agent: _____

Signature of the county employee:

(Needed if submitted through the county extension office)

Animal Classes *(Please check only the most important class)*

Swine: Sows: Gestation _____ Lactation _____ Both _____ Boars: Growing: _____ Mature: _____

Pigs: Less than 15 lb. _____ 15-20 lb. _____ 20-40 lb. _____ 40-110 lb. _____ 110 market _____ 40-market _____ Other _____

Sheep: Dry Ewes: _____ Lactating Ewes: _____ Lambs: _____ Other: _____

Goats: _____ **Deer:** _____ Other: _____

Test(s) Requested *(Check all appropriate.)*

___ F1 Hays and Silage (NIR + nitrate + minerals) ___ F7 Routine Feed Analysis (Includes minerals)

___ F2 Hays and Silage (NIR + nitrate, excluding minerals) ___ F8 Proximate Analysis (Protein, Fat, Fiber, Moisture & Ash)

___ F3 Hays and Silage (NIR only) ___ F10 Crude Protein

___ F4 Hays and Silage (Wet Chemistry) includes minerals ___ F14 Nitrates

___ F5 Hays and Silages (Wet Chemistry) excludes minerals Other: _____

___ F6 Hays and Silages (Wet Chemistry) Other: _____

Type of Feed and Forage

Please check the one most appropriate type from the list below.

Silage: _____

___ Corn
___ Sorghum (Silage)
___ Small grain
___ Wheat
___ Rye
___ Barley
___ Oats
___ Sorghum (grain)
___ Alfalfa
___ Other legume
___ Grass
___ Mixed
___ Other: _____

Hay: _____ Haylage/baleage: _____

___ Alfalfa
___ Annual Ryegrass
___ Bahia
___ Bermudagrass
___ Alicia
___ Coastal
___ Coastcross
___ Common
___ Tift 44
___ Tift 78
___ Tift 85
___ Mixed
___ Russell
Other (specify): _____
___ Fescue/Orchardgrass
___ Millet
___ Small Grain
___ Wheat
___ Rye
___ Barley
___ Oats
___ Grass/Legume Mix
___ % legume (est.)
___ Peanut
___ Perennial Peanut
___ Other Legumes
___ Sorghum hybrids
___ Other: _____

Grain: _____

___ Corn
___ Grain Sorghum
___ Wheat
___ Barley
___ Oats
___ Triticale
___ Other: _____

Protein Source: _____

___ Soybean Meal 48
___ Soybean Meal 44
___ Cottonseed Meal
___ Peanut Meal
___ Whole Cottonseed
___ Protein Supplement
(% Protein _____)

Other not listed: _____

By-products: _____

___ Soybean hulls
___ Cottonseed hulls
___ Peanut hulls
___ Citrus pulp
___ Brewers grains, wet
___ Poultry litter
___ Wheat midds
___ Other: _____

Mineral Mixes: _____

___ Base mix
___ Premix
___ Trace-mineral mix
___ Other: _____

Mixed Feeds: _____

Complete Feed _____
(list ingredients separately)
Silage/grain mix _____
Silage: _____ Grain: _____

Green Chop: _____

___ Corn
___ Sorghum (silage)
___ Small grain
___ Wheat
___ Rye
___ Barley
___ Oats
___ Alfalfa
___ Other legume
___ Grass
___ Mixed
___ Grass/Legume Mix
___ % legume (est.)
___ Other: _____

Please send all samples and forms to:
Ag & Environmental Services Laboratories
Feed & Environmental Water Laboratory
2300 College Station Rd
Athens GA 30602-4356

For Lab Use Only

Lab # _____

11/25/2014 Rick Hitchcock

For assistance in formulating a ration, please contact your local Extension office (1-800-ASK-UGA-1).

Feed and Forage Testing Application Form – Horses

Client Information

Name: _____ Date: _____

Address: _____ Sample No: _____

City: _____ State: _____ Zip: _____ Phone: _____

Date Received in County Office: _____ County: _____ Agent: _____

Signature of the county employee:

(Needed if submitted through the county extension office)

Animal Classes *(Please check only the most important class)*

Horses: Lactating _____ Creep _____ Weanlings _____ Yearlings _____

Light Work _____ Medium Work _____ Other (Maintenance, Pregnant, Intense Work, etc.) _____

Test(s) Requested *(Check all appropriate.)*

| | |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <input type="checkbox"/> F1 Hays and Silage (NIR + nitrate + minerals) | <input type="checkbox"/> F29 (F1+F28) |
| <input type="checkbox"/> F2 Hays and Silage (NIR + nitrate, excluding minerals) | <input type="checkbox"/> F30 (F2+F28) |
| <input type="checkbox"/> F3 Hays and Silage (NIR only) | <input type="checkbox"/> F33 (F3+F28) |
| <input type="checkbox"/> F4 Hays and Silage (Wet Chemistry) includes minerals | <input type="checkbox"/> F34 (F4+F28) |
| <input type="checkbox"/> F5 Hays and Silages (Wet Chemistry) excludes minerals | <input type="checkbox"/> F35 (F5+F28) |
| <input type="checkbox"/> F6 Hays and Silages (Wet Chemistry) | <input type="checkbox"/> F36 (F6+F28) |
| <input type="checkbox"/> F7 Routine Feed Analysis (Includes minerals) | <input type="checkbox"/> F37 (F7+F28) |
| <input type="checkbox"/> F8 Proximate Analysis (Protein, Fat, Fiber, Moisture & Ash) | <input type="checkbox"/> F38 (F8+F28) |
| <input type="checkbox"/> F9 Moisture, Crude Fiber, Protein, TDN | <input type="checkbox"/> F39 (F9+F28) |
| <input type="checkbox"/> F15A F7 + Fat | <input type="checkbox"/> F40 (F15A+F28) |
| <input type="checkbox"/> F10 Crude Protein | <input type="checkbox"/> F44 Starch |
| <input type="checkbox"/> F14 Nitrates | <input type="checkbox"/> F45 Ethanol Soluble Carbohydrates (ESC) |
| <input type="checkbox"/> F28 Carbohydrates Package (Starch, ESC, WSC, Fructans, NSC) | <input type="checkbox"/> F46 Water Soluble Carbohydrates (WSC) |

Other: _____

Type of Feed and Forage

Please check the one most appropriate type from the list below.

Silage: _____

☐ Corn
☐ Sorghum (Silage)
☐ Small grain
☐ Wheat
☐ Rye
☐ Barley
☐ Oats
☐ Sorghum (grain)
☐ Alfalfa
☐ Other legume
☐ Grass
☐ Mixed
☐ Other: _____

Hay: _____ Haylage/baleage: _____

☐ Alfalfa
☐ Annual Ryegrass
☐ Bahia
☐ Bermudagrass
☐ Alicia
☐ Coastal
☐ Coastcross
☐ Common
☐ Tift 44
☐ Tift 78
☐ Tift 85
☐ Mixed
☐ Russell
☐ Other (specify): _____
☐ Fescue/Orchardgrass
☐ Millet
☐ Small Grain
☐ Wheat
☐ Rye
☐ Barley
☐ Oats
☐ Grass/Legume Mix
☐ % legume (est.)
☐ Peanut
☐ Perennial Peanut
☐ Other Legumes
☐ Sorghum hybrids
☐ Other: _____

Grain: _____

☐ Corn
☐ Grain Sorghum
☐ Wheat
☐ Barley
☐ Oats
☐ Triticale
☐ Other: _____

Protein Source: _____

☐ Soybean Meal 48
☐ Soybean Meal 44
☐ Cottonseed Meal
☐ Peanut Meal
☐ Whole Cottonseed
☐ Protein Supplement
 (% Protein _____)

Other not listed: _____

By-products: _____

☐ Soybean hulls
☐ Cottonseed hulls
☐ Peanut hulls
☐ Citrus pulp
☐ Brewers grains, wet
☐ Poultry litter
☐ Wheat midds
☐ Other: _____

Mineral Mixes: _____

☐ Base mix
☐ Premix
☐ Trace-mineral mix
☐ Other: _____

Mixed Feeds: _____

Complete Feed _____
 (list ingredients separately)
 Silage/grain mix _____
 Silage: _____ Grain: _____

Green Chop: _____

☐ Corn
☐ Sorghum (silage)
☐ Small grain
☐ Wheat
☐ Rye
☐ Barley
☐ Oats
☐ Alfalfa
☐ Other legume
☐ Grass
☐ Mixed
☐ Grass/Legume Mix
☐ % legume (est.)
☐ Other: _____

Please send all samples and forms to:
 Ag & Environmental Services Laboratories
 Feed & Environmental Water Laboratory
 2300 College Station Rd
 Athens GA 30602-4356

For Lab Use Only

Lab # _____

11/25/2014 Rick Hitchcock

For assistance in formulating a ration, please contact your local Extension office (1-800-ASK-UGA-1).



The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension Service
SOIL, PLANT, AND WATER LABORATORY
2400 College Station Road
Athens, GA 30602

Lab Use Only

LAB # _____

Received by: _____

Date and Time: _____

POND WATER TOXIN ANALYSIS SUBMISSION FORM

Please Note – Retain a copy of this form for your files. Submit one copy per sample.

| SUBMITTING COUNTY* | Sample location (if different from client's address) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COUNTY: _____ Client Name: _____ Client Address: _____ City, State, Zip: _____ Phone/E-mail: _____ *Note: Test results are sent to submitting county office. Please note that test results may be available to other parties through the Georgia Open Records Act. | County: _____ Name: _____ Sample Address: _____ City, State, Zip: _____ Other Information Date Received: _____ Sample #: _____ |
| TEST REQUESTED (Check all that apply): | |
| <p>_____ Test 1. Water Quality and Algal Identification Two 125ml, plastic or Nalgene containers wrapped with aluminum foil</p> <p>_____ Test 2. Toxin Identification and Concentration One 125ml, plastic or Nalgene container wrapped with aluminum foil</p> <p>Other _____</p> <p>*Note: Samples are accepted Monday through Thursday. All samples with payment must be mailed using <u>UPS Overnight</u>. Mail directly to: UGA Soil, Plant and Water Analysis Lab 2400 College Station Rd. Athens, GA 30602</p> | |
| FOR LAB USE ONLY | |
| Payment Received: _____ Date Returned: _____ | |
| pH _____ NO₂-N _____ NH₄-N _____ Alkalinity _____ | |
| E.C. _____ NO₃-N _____ PO₄ _____ | |
| Special Notes: | |



Research Sample Submission Form

Date Submitted: _____ Date Received: _____ Lab Number (s): _____
SOIL LAB USE ONLY

Sample Type: _____ Number of Samples Submitted: _____
(Categories listed below)

Sample I.D. Numbers: _____

Return Results To: (complete mailing address)

Name: _____

Department Name: _____

Building Name: _____ Room # _____

(If off campus) City _____ State _____ Zip _____

Phone: _____ Fax: _____

Email Address: _____

Account Name: _____

Account No. / Purchase Order No: _____

Bill To: (if address different from Return to)

Name: _____

Address: _____

City _____ State _____ Zip _____

Disposition of Sample after Analysis:

☐ Discard ☐ Hold for Pickup ☐ Return
(If samples are returned you might be billed for shipping charges)

Note any Special Instructions: _____

Tests Requested

| Soil | Plant | Water | Biosolids, Sludge, etc. |
|-----------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------|
| <input type="checkbox"/> S1 Routine Test ¹ | <input type="checkbox"/> P1 Basic Plant Test ³ | <input type="checkbox"/> W1 Basic Test (pH + Minerals) ⁴ | <input type="checkbox"/> SC1 Total Minerals ⁵ |
| <input type="checkbox"/> S1A pH only for soil | <input type="checkbox"/> P2 Mineral Analysis (w/o N) | <input type="checkbox"/> W1A Mineral w/acid digestion | <input type="checkbox"/> SC2 Kjeldahl Nitrogen |
| <input type="checkbox"/> S2 Routine + CEC | <input type="checkbox"/> P5 Carbon + Nitrogen | <input type="checkbox"/> W3 Anions (Chloride, Fluoride, Phosphate, Sulfate, Nitrate) | <input type="checkbox"/> SC3 NO ₃ -N |
| <input type="checkbox"/> S3 Boron | <input type="checkbox"/> P4 Any Single Element (in P5) | <input type="checkbox"/> W4 Any Single Anion (in W3) | <input type="checkbox"/> SC4 NH ₄ -N |
| <input type="checkbox"/> S4 Soluble Salts | <input type="checkbox"/> C <input type="checkbox"/> N | <input type="checkbox"/> W5 Any 2 Anions (in W3) | <input type="checkbox"/> SC5 Moisture |
| <input type="checkbox"/> S5 Texture | <input type="checkbox"/> Other: | <input type="checkbox"/> W6 Nitrate (NO ₃ -N) | <input type="checkbox"/> SC9 Mercury (Hg) |
| <input type="checkbox"/> S6 Organic Matter | | <input type="checkbox"/> W7 Nitrite (NO ₂ -N) | <input type="checkbox"/> SC17 Carbon + Nitrogen |
| <input type="checkbox"/> S7 Nitrate (NO ₃ -N) | Animal Waste | <input type="checkbox"/> W8 Ammonium (NH ₄ -N) | <input type="checkbox"/> SC16 Any Single Element (in SC17) |
| <input type="checkbox"/> S8 Ammonium (NH ₄ -N) | <input type="checkbox"/> A1 Total Minerals + Total N | <input type="checkbox"/> W11 EC | <input type="checkbox"/> C <input type="checkbox"/> N |
| <input type="checkbox"/> S11 Routine Potting Mix/Nursery ² | <input type="checkbox"/> A2 Kjeldahl Nitrogen | <input type="checkbox"/> W18 Alkalinity | <input type="checkbox"/> Other: |
| <input type="checkbox"/> S12 pH only for potting mix/nursery | <input type="checkbox"/> A3 Nitrate-Nitrogen (NO ₃ -N) | <input type="checkbox"/> Other: | |
| <input type="checkbox"/> S13 Total Elemental Analysis | <input type="checkbox"/> A4 Ammonium-Nitrogen (NH ₄ -N) | | |
| <input type="checkbox"/> S21 Carbon + Nitrogen | <input type="checkbox"/> A5 Moisture | | |
| <input type="checkbox"/> S20 Any Single Element (in S21) | <input type="checkbox"/> A6 A1 + A3 | | |
| <input type="checkbox"/> C <input type="checkbox"/> N | <input type="checkbox"/> A7 A1 + A3 + A4 | | |
| <input type="checkbox"/> Other: | <input type="checkbox"/> Other: | | |

1. Routine Test: pH, lime buffering capacity, P, K, Ca, Mg, Zn, Mn

2. Potting Mix/Nursery: for mixes which include peat, pine bark, vermiculite, etc., pH, P, K, Ca, Mg, NO₃, NH₄, Soluble Salts (reported in mmhos/cm)
THIS TEST MAY NOT BE APPLICABLE TO A REGULAR SOIL SAMPLE

3. Basic Plant: Total N, S, P, K, Ca, Mg, Mn, Fe, Al, B, Cu, Zn, Na, Pb, Cr, Cd, Ni, Mo

4. Basic Water: pH, P, K, Ca, Mg, Mn, Fe, Al, B, Cu, Zn, Na, Cr, Ni, Mo, Si

5. Total Minerals (Acid Digestion): P, K, Ca, Mg, Mn, Fe, Al, B, S, Cu, Zn, Na, Si, Pb, Cr, Cd, Ni, Mo.



Sampling Instructions: Total Coliform and *Escherichia coli* in Drinking Water

Please remember to provide the information requested on the next page of this form.



If submitting samples for EPD compliance monitoring, do not use this form. Please contact the lab for the appropriate form.

1. Samples are accepted for analysis on Monday through Thursday from 8:00 a.m. to 4:00 p.m. If you need a next day shipping label from us, please add an extra \$10 to the actual fee of \$36 required for the laboratory test. Please make checks out to UGA-FEW Lab. Payment is due upon receipt of sample unless prior arrangements are made.
2. Samples must be accepted for analysis within 24 hours of the collection time. Therefore, collect and ship samples on the same day. If using overnight shipping, please collect and send samples on Monday through Wednesday only.
3. **If you have shock chlorinated your well you must wait until the chlorine has dissipated before collecting sample.**
4. Completely fill out the information requested on the opposite side of the form.
5. Select an inside faucet that is clean not leaking.
6. Remove any faucet attachments such as filters, aerators, screens, splashguards or water-saver valves.
7. Sanitize the faucet inside and out by dipping the faucet neck into undiluted chlorine bleach (do not use color-safe bleach).
8. Open tap fully and flush the faucet and pipes by running water for 3 minutes. If sampling from a faucet that mixes hot and cold water, run hot water for 3 minutes, then cold water for 3 minutes. Do not turn off the water, but reduce the flow to avoid splashing.
9. Uncap the sample bottle without touching the inside of the cap or bottle, fill the bottle above the 100 mL line, but not completely full and recap. Please note that the white substance in the bottle is a dechlorinating agent. Fill the bottle only once; do not rinse.
10. Place sample in the same box, seal sample box, affix UPS shipping label and call UPS at 1-800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages. Or hand deliver to the Ag Services Lab, 2300 College Station Rd, Athens.



University of Georgia
Agricultural and Environmental Services Laboratories
Feed and Environmental Water Laboratory

2300 College Station Road
Athens, GA 30602-4356
Phone: 706-542-7690
Fax: 706-542-1474



If submitting samples for EPD compliance monitoring, do not use this form. Please contact the lab for the appropriate form.

| Submission Form: Total Coliform and <i>Escherichia coli</i> in Drinking Water Instructions for collecting and delivering the sample are on the previous page of this form. | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------|
| Client Information: | | Sample Location (if different from client address): |
| County Extension Office: | | |
| Signature of the county employee: (Needed if submitted through the county extension office) | | |
| Name: | | County: |
| | | Street: |
| Street: | | City, State, Zip: |
| City, State, Zip: | | Lab use only: |
| Phone: | | Lab # FEW____: |
| Fax: | | Date/Time Received: |
| E-mail: | | Carrier: |
| Sample Information: | | Chlorine (Y / N): |
| Date/Time Sampled: | | Accept/Reject (A / R): |
| Sample ID: | | Paid (Y / N): |
| Well Diameter: | Well Depth: | Special Notes: |
| Date of Last Shock Chlorination (if applicable): | | Date/Time Analyzed: |
| Year Drilled: | Pump Age: | Results (MPN/100mL): |
| Comments: | | Total Coliform : _____ <i>Escherichia coli</i> : _____ |



Sampling Instructions: *Escherichia coli* in Recreational Water

Please remember to provide the information requested on the next page of this form.

1. Samples are accepted for analysis on Monday through Thursday from 8:00 a.m. to 4:00 p.m. If you need a next day shipping label from us, please add an extra \$10 to the actual fee of \$36 required for the laboratory test. Please make checks out to UGA-FEW Lab. Payment is due upon receipt of sample unless prior arrangements are made.
2. Samples must be accepted for analysis within 24 hours of the collection time. Therefore, collect and ship samples on the same day. If using overnight shipping, please collect and send samples on Monday through Wednesday only.
3. Provide the information requested on the opposite side of the form.
4. Select the appropriate sampling area needed to obtain a representative sample for the recreational use of the water. If you need help selecting a sampling location, contact your county extension agent or the FEW Laboratory.
5. Uncap the sample bottle without touching the inside of the cap or bottle, collect the water sample by holding the bottle near its base and plunging it, neck downward, below the surface. Turn bottle until neck points slightly upward and mouth is directed toward the current. If there is not current, create a current artificially by pushing the bottle forward horizontally in a direction away from hand. Collect the samples approximately 0.3 m or 1 ft below the water surface.
6. The white substance in the bottle is a dechlorinating agent. Please do not rinse the bottle.
7. It is best to take samples during a range of environmental and climatic conditions, especially during times when maximal pollution occurs.
8. Place sample in the same box, seal sample box, affix UPS shipping label and call UPS at 1-800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages. Or hand deliver to the Ag Services Lab, 2300 College Station Rd, Athens.



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Fax: 706-542-1474

Submission Form: *Escherichia coli* in Recreational Water.

Instructions for collecting and delivering the sample are on the previous page of this form.

| | | |
|-------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------|
| Client Information: | | Sample Location (if different from client address): |
| County Extension Office: | | |
| Signature of the county employee: (Needed if submitted through the county extension office) | | |
| Name: | | County: |
| | | Nearest Street: |
| Street: | | City, State, Zip: |
| City, State, Zip: | | Lab use only: |
| Phone: | | Lab # FEW____: |
| Fax: | | Date/Time Received: |
| E-mail: | | Carrier: |
| Sample Information: | | Accept/Reject (A / R): |
| Date/Time Sampled: | | Paid (Y / N): |
| Sample ID: | | Special Notes: |
| Type of Surface Water (Pond, Stream, etc) : | | |
| Sampler's Name: | | Date/Time Analyzed: |
| Comments: | | Results (MPN/100mL): |
| | | <i>Escherichia coli</i> : _____ |



Sampling Instructions: Total Coliform and *Escherichia coli* in Crop Protection and Irrigation Water

Please remember to provide the information requested on the next page of this form.

1. Samples are accepted for analysis on Monday through Thursday from 8:00 a.m. to 4:00 p.m. If you need a next day shipping label from us, please add an extra \$10 to the actual fee of \$36 required for the laboratory test. Please make checks out to UGA-FEW Lab. Payment is due upon receipt of sample unless prior arrangements are made.
2. Samples must be accepted for analysis within 24 hours of the collection time. Therefore, collect and ship samples on the same day. If using overnight shipping, please collect and send samples on Monday through Wednesday only.
3. Provide the information requested on the opposite side of the form.
4. Select the appropriate sampling area needed to obtain a representative sample of the crop protection or irrigation water. For either irrigation or crop protection water from either a well or surface source, collect the sample at the point of use, just prior to application in the case of irrigation or in the case of crop protection water, just prior to filling the spray tank. If you need help selecting a sampling location, contact your county extension agent or GAP auditor.
5. Fill the bottle completely, leaving only a small air space.
6. The white substance in the bottle is a dechlorinating agent. Please do not rinse the bottle.
7. Place sample in the same box, seal sample box, affix UPS shipping label and call UPS at 1-800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages. Or hand deliver to the Ag Services Lab, 2300 College Station Rd, Athens.



University of Georgia
Agricultural and Environmental Services Laboratories
Feed and Environmental Water Laboratory

2300 College Station Road
Athens, GA 30602-4356
Phone: 706-542-7690
Fax: 706-542-1474

| Submission Form: Total Coliform and <i>Escherichia coli</i> in Crop Protection and Irrigation Water Instructions for collecting and delivering the sample are on the previous page of this form. | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------|
| Client Information: | | |
| County Extension Office: | | |
| Signature of the county employee: (Needed if submitted through the county extension office) | | |
| Name: | | County: |
| | | Nearest Street: |
| Street: | | City, State, Zip: |
| City, State, Zip: | | Lab use only: |
| Phone: | | Lab # FEW____: |
| Fax: | | Date/Time Received: |
| E-mail: | | Carrier: |
| Sample Information: | | Chlorine (Y / N): |
| Date/Time Sampled: | | Accept/Reject (A / R): |
| Sample ID: | | Paid (Y / N): |
| Surface or Well Water: | | Special Notes: |
| Type of Surface Water: | | Date/Time Analyzed: |
| Well Diameter (if applicable): | Well Depth (if applicable): | Results (MPN/100mL): |
| Comments: | | Total Coliform : _____ <i>Escherichia coli</i> : _____ |



Sampling Instructions: Total Coliform and *Escherichia coli* in Water from a Georgia GAP Fruit and Vegetable Facility
Please remember to provide the information requested on the next page of this form.

1. Samples are accepted for analysis on Monday through Thursday from 8:00 a.m. to 4:00 p.m. If you need a next day shipping label from us, please add an extra \$10 to the actual fee of \$36 required for the laboratory test. Please make checks out to UGA-FEW Lab. Payment is due upon receipt of sample unless prior arrangements are made.
2. Samples must be accepted for analysis within 24 hours of the collection time. Therefore, collect and ship samples on the same day. If using overnight shipping, please collect and send samples on Monday through Wednesday only.
3. **If you have shock chlorinated, wait until the chlorine has dissipated before collecting sample.**
4. Completely fill out the information requested on the opposite side of the form.
5. Select an inside faucet that is clean not leaking.
6. Remove any faucet attachments such as filters, aerators, screens, splashguards or water-saver valves.
7. Sanitize the faucet inside and out by dipping the faucet neck into undiluted chlorine bleach (do not use color-safe bleach).
8. Open tap fully and flush the faucet and pipes by running water for 3 minutes. If sampling from a faucet that mixes hot and cold water, run hot water for 3 minutes, then cold water for 3 minutes. Do not turn off the water, but reduce the flow to avoid splashing.
9. Uncap the sample bottle without touching the inside of the cap or bottle, fill the bottle above the 100 mL line, but not completely full and recap. Please note that the white substance in the bottle is a dechlorinating agent. Fill the bottle only once; do not rinse.
10. Place sample in the same box, seal sample box, affix UPS shipping label and call UPS at 1-800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages. Or hand deliver to the Ag Services Lab, 2300 College Station Rd, Athens.



University of Georgia
Agricultural and Environmental Services Laboratories
Feed and Environmental Water Laboratory

2300 College Station Road
Athens, GA 30602-4356
Phone: 706-542-7690
Fax: 706-542-1474

| Submission Form: Total Coliform and <i>Escherichia coli</i> in Water from a Georgia GAP Fruit and Vegetable Packing Facility, Field-Pack Operation, or Worker Hygiene Process (Circle all that Apply) Instructions for collecting and delivering the sample are on the previous page of this form. | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------|--|
| Client Information: | | | |
| County Extension Office: | | | |
| Signature of the county employee: (Needed if submitted through the county extension office) | | | |
| Name: | | Sample Location (if different from client address): | |
| Street: | | County: | |
| City, State, Zip: | | Street: | |
| Phone: | | City, State, Zip: | |
| Fax: | | Lab use only: | |
| E-mail: | | Lab # FEW_____: | |
| Sample Information: | | Date/Time Received: | |
| GCIA or GFVGA rep: | | Carrier: | |
| Date/Time Sampled : | | Chlorine (Y / N): | |
| Sample Identifier (circle sample type at the top of the page): | | Accept/Reject (A / R): | |
| Well Diameter: | | Paid (Y / N): | |
| Well Depth: | | Special Notes: | |
| Depth to Water: | | Date/Time Analyzed: | |
| Screens (Y or N): | | Results (MPN/100mL): | |
| Year Drilled: | | Total Coliform : _____ | |
| Pump Age: | | <i>Escherichia coli</i> : _____ | |



AESL - FEW Sample Submission Form
for: Total Coliform and *Escherichia coli* in
in Drinking Water for Compliance/Regulatory Purposes

Attention : *Instructions for collecting and delivering the sample are on the opposite side of this form.*

Client Name and Mailing Address:

name: _____

street: _____

city, state, zip: _____

daytime phone: () - _____

fax: () - _____

e-mail: @ _____

For Repeat Samples Only:

Previous Positive Log#: _____

Repeat Location Type (check one below)

Same Location as Positive: _____

Upstream (within 5 connections): _____

Downstream (within 5 connections): _____

Fourth Repeat Sample: _____

Lab use only:

Transit Water Temp. (<10°C): _____ °C

Lab # FEW ____: _____

date/time received
and received by: _____

carrier: _____

county contact: _____

chlorine (Y/N): _____

accept/reject (A/R): _____

paid (Y/N): _____

check#/cash: _____

analyzed (date/time): _____

special notes: _____

Sample Information:

county: _____

date / time sampled: _____ / _____

Collected by (Name): _____

System ID Number: _____

Name of System: _____

Sample Type (circle):

1-Routine 2-Repeat 3-Replacement 4-Source Approval
5-Special 6-GWR Source 7-GWR Repeats

Location (circle):

1-Entry Point 2-Tap in Distribution System
3-End Point 4-Source Intake

Sample Location Code (from sample site plan): _____

Chlorine Residual at Tap (Y/N): _____

SIGNATURE of Sender _____ **Date:** _____

Sampling & Shipping Instructions: Total Coliform and *Escherichia coli* in Drinking Water

ATTENTION: Please remember to provide the information requested on the opposite side of this form.

1. Samples are accepted for analysis on **Monday through Thursday** from 8:00 a.m. to 4:00 p.m. If you need a next day shipping label from us, please add an extra \$10 to the actual fee of \$36 required for the laboratory test. Please make checks out to UGA - FEW Lab.
2. Samples must be accepted for analysis within 24 hours of the collection time. Therefore, plan ahead by pre-selecting a day and time to collect your sample that will allow for shipping or travel time.
3. **If you have shock chlorinated your well, you must wait until the chlorine has dissipated before collecting the sample.**
4. Completely fill out the information requested on the opposite side of the form. *Essential information must be completed for the sample to be accepted.
5. Select an inside faucet that is clean and not leaking.
6. Remove any faucet attachments such as filters, aerators, screens, splashguards, or water-saver valves.
7. Sanitize the faucet inside and out by dipping the faucet neck into undiluted chlorine bleach (do not use color-safe bleach).
8. Open tap fully and flush the faucet and pipes by running water for 3 minutes. If sampling from a faucet that mixes hot and cold water, run hot water for 3 minutes, then cold water for 3 minutes. Do not turn off the water, but reduce the flow to avoid splashing.
9. Uncap the sample bottle without touching the inside of the cap or bottle, fill the bottle above the 100 mL line, but not completely full and recap. Please note that the white substance in the bottle is a dechlorinating agent. Fill the bottle only once; do not rinse.
10. **Important: The sample (especially source water) should be immediately placed in a cooler with ice and transported to the laboratory for analysis. Frozen samples will not be accepted. Surface water samples will be flagged if >10 °C unless collection time is less than 2 hours.**
11. Seal the shipping container, affix the UPS shipping label and call UPS at 800-742-5877 to determine your local pick-up/drop off place and time for "Next Day Air" packages OR hand deliver to the Agricultural and Environmental Services Lab, 2300 College Station Road, Athens.



The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension Service

Crop & Environmental Quality Lab
2300 College Station Rd.
Athens, GA 30602
706-542-9023

LAB USE ONLY**LAB #**

Date Received: _____

Received By: _____

Date Reported: _____

Invoice #: _____

Invoice Amount: _____

UGA Lab Onion Flavor Testing Submission Form

Please retain a copy of this form for your files. Submit one copy per sample.

Grower Name: _____ Phone: _____ Cell: _____

Address: _____ Email: _____

Sample ID: _____ County: _____ Submission Date: _____

Additional Information (Optional)**Onion Information**

Onion variety: _____

Date transplanted: _____

Previous crop on collection field: _____

Soil Information

Soil test results prior to planting (if available):

Soil Lab Number: _____

P (lb/A) _____

K (lb/A) _____

Soil type: _____

Were the samples (circle one):fresh pulledfield driedartificially dried**Season-long fertility program:**

N fertilizer applied, lb N per acre: _____

P fertilizer applied, lb P₂O₅ per acre: _____K fertilizer applied, lb K₂O per acre: _____

S fertilizer applied, lb S per acre: _____

Irrigation (approximate inches applied this calendar year): _____

Date of last application of any fertilizer material (nitrogen or otherwise): _____

Any environmental stress (heat, moisture, drought, disease, other): _____

Comments:

RADON IN WATER SAMPLING INSTRUCTIONS AND SUBMISSION FORM

Overnight mailing (preferably using the enclosed UPS label) required

Agricultural and Environmental Services Laboratories (AESL), University of Georgia Cooperative Extension,
2300 College Station Road, Athens GA 30602 (706) 542-7690/9023

If you use our next day shipping label, please add an extra \$10 to the actual fee of \$30 required for the laboratory test. Please make checks out to UGA-AESL. Payment is due upon receipt of sample unless prior arrangements are made.

Supplies Needed:

- 1) Two clear glass 25 mL sample bottles with cap and foil liner, 2) Sealable plastic bag
- 3) Sample Submission Form (**page 2**), and 4) UPS mailing label

Sample Collection Procedure

- 1) Remove aerator (if present) from faucet. Flush the system running cold water for 15 minutes before taking sample. Decrease the flow to moderate (non- turbulent) for the final minute. Collect the water sample following '**submerged bottle method**' as described below:
 - Collect gently flowing water into bowl over one side with minimal disturbance.
 - Submerge the entire sample bottle *and* the lid under water and allow bottle to fill.
 - Cap bottle while still under water and turn it upside down.
 - If air bubbles are present, empty the vial and try again until air bubbles are no longer observed. Repeat with second bottle.
- 2) Place bottles in plastic bag and seal well.
- 3) Complete sample submission form and send to the laboratory by **OVERNIGHT MAIL** for analysis. This may be arranged through the local County Extension Office.





Agricultural and Environmental Services Laboratories (AESL)

2300 College Station Road

Athens, GA 30602-9105

Phone: (706) 542-7690/9023 Fax: (706) 542-1474

SUBMISSION FORM: RADON IN DRINKING WATER ANALYSIS

Please provide all requested information when submitting your water samples

Name: _____

Phone: _____

County Name and Signature of the county Agent/Employee:

(Please e-mail the report to both client and agent)

(Needed if submitted through the county extension office)

Mailing Address:

Email Address: _____

Sample Collection Address (If different from mailing address): Well Depth: _____

County (Where sampled): _____

BOTTLE #1 COLLECTION DATE: _____ TIME: _____ AM/PM (circle)

BOTTLE #2 COLLECTION DATE: _____ TIME: _____ AM/PM (circle)

What is your reason for testing?:

How did you learn of this service?:

The UGA Cooperative Extension offers RADON IN HOME AIR TESTING KITS through the Extension County Offices. If you have not tested your home air for radon, we recommend that you do so.

Comments (if any):