WEB SERVICES at soils.rs.uky.edu

Training for County Extension Offices on UK Soil Laboratory Services

Division of Regulatory Services

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Contents:

UK Soil Testing

Mission

Help citizens in Kentucky maintain productive and economical plant growth operations by offering tests on soils, water, greenhouse media, animal waste, and mine spoils; with subsequent fertilizer and lime recommendations.

Introduction

Chemical tests are offered on media utilized for plant growth operations such as soils, water for tobacco float-beds, greenhouse media, and animal waste. Chemical analyses and recommendations from the University of Kentucky (UK) Agricultural Testing Labs are specifically made for Kentucky conditions. Nutrient needs and fertilizer responses are determined by research conducted through the UK College of Agriculture on crops and soils in Kentucky.

Locations

The University of Kentucky operates agricultural testing labs at Lexington and Princeton. The Lexington lab performs the routine soil test (pH, buffer pH, P, K, Ca, Mg, Zn) and non-routine tests which include boron, organic matter, and triazine residue in soil, pH and nutrients in greenhouse media used for various horticultural crops, pH and nutrients in water used for irrigation and nutrient solution purposes, nutrients in animal waste used for land application, and potential acidity in mine spoil. The Princeton lab performs the routine soil test.

Contact Information: Frank Sikora (Soil Test Coordinator), phone: 859-257-2785, email: fsikora@uky.edu. Author of ASP & javascript applications (fertilizer calculator, database applications): Zhiqiang Yu, zyu0@uky.edu.

UK Soil Testing

Login

User name: [ ] **CountyCode**

Password: [ ] **ZipCode**

Enter Reset

Session Cookies must be enabled

This is the gateway to data specific to each county extension office. Log in to the county data using the county User Name and Password. If you do not know your User Name and Password, email Zhiqiang Yu (zyu0@uky.edu) and he will email you this information.

At this site you will find:

- **Your county office contact information on file with the Soils Lab. Please update this information on the web when it changes.**
- **An order form for ordering soil test supplies and a record of past orders submitted.**
- **A record of samples received and tested in both Lexington and Princeton Labs.**

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WELCOME, FAYETTE

LOGOUT

Lexington Soil Data Information

Princeton Soil Data Information

Order Soil Supplies from Lexington

Order Soil Supplies from Princeton

View Past Soil Supply Orders

Update Address Information

ORDER FORM FOR SUPPLIES

Update Address | View Submitted Orders

Ship To:	FAYETTE	Street Address:	1140 RED MILE PLACE
City:	LEXINGTON	State:	KY
Zip:	40504	County Code:	67

Quantity	Item	Order in Multiples of
	Soil Sample BOXES, 1 pint (From Princeton only)	25
	Soil Sample BAGS, 1 pint (From Lexington only)	25
	Mailing Cartons, 6 samples per carton	25
	Mailing Cartons, 18 samples per carton	10
	Greenhouse & Container Nursery Info. Sheet	1
	Surface Mining or Mined Area Info. Sheets (brown)	10
	Animal Waste Sample Bottle (for liquids only) (use plastic bag for solids)	1
	Water Source & Nutri. Solution Sample Bottle (smaller than bottle for animal waste)	1
	Agricultural Soil Sample Info. Sheets (Print from web)	
	Home Garden, Lawn & Special Turf Info. Sheets (Print from web)	
	Commercial Horticulture Info. Sheet (Print from web)	
	Research Soil Sample Info. Sheet (Print from web)	
	Animal Waste Sample Info. Sheet (Print from web)	
	Water Source & Nutrient Solution Sample Info. Sheet (Print from web),	

We have run out of some sample information forms. You can print these forms from the web by clicking on (Print from web) above or Go to All Forms

Back to Welcome Page

Reset Submit Order

Update Address Information

Order Form For Supplies

Office Name: FAYETTE

Agent Contact: CANDACE HARKER

Clerical Contact: Suzann R. Smith

Street(Shipping Supplies): 1140 RED MILE PLACE

P.O.Box:

City: LEXINGTON

State: KY

Zip: 40504

Phone: 859-257-5582

Email for Reports: srsmith@uky.edu

Email for Billing: srsmith@uky.edu

Back to Welcome Page

Update Changes

UK Soil Testing

Sample SoilData

^^ Forms ^^

Sample Information Forms

Agricultural Soil Sample (A form)

Home, Lawn and Garden Soil Sample (H form)

Commercial Horticultural Soil Sample (C form)

Mine Spoil Soil Sample (M form)

Greenhouse and Container Nursery Media Soil Sample (G form)

Water and Nutrient Solution (W form)

Animal Waste Sample (AW form)

Research Form (R form)

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UK Soil Testing

Programs
Training
Memos

<<< SoilData

Programs SoilData and miscellaneous utility programs to be used with SoilData can be downloaded here.

Training Material prepared for the training sessions on the SoilData program and the UK Soil Testing web site held from July 2001 through January 2002.

Memos Memos regarding the use of the SoilData program.

Back Home Next

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UK Soil Testing

One Fert
Mult Fert
Econ Lime
Econ LimeII
AGR1 Calc
Manure

How to work offline | Saving all calculators | Copyright Protection

<<< Calculators

One Fert This calculator determines the application rate of one fertilizer given a set of soil test recommendations for nitrogen, phosphate, and potash. The nutrient from which calculations are made is selected and the deficit or surplus of the other nutrients are calculated.

Mult Fert This calculator determines the application rate of up to three fertilizers given a set of soil test recommendations for nitrogen, phosphate, and potash. The calculator will determine the best rates for the fertilizers selected to match the recommendations entered. Deficits or surpluses from the recommendation rates are reported.

Econ Lime This is an economic lime calculator that will calculate corrected lime application rates based on lime RNV. Economic factors are also calculated to determine the actual value of the lime.

Econ LimeII This is a more complex economic lime calculator that allows you to enter hauling, purchase and spreading cost of lime and you can compare up to three lime sources.

AGR1 Calc The AGR1 Calculator is based on University of Kentucky fertilizer and lime recommendations published in the UK AGR1 publication entitled "2002-2003 Lime and Nutrient Recommendations". Laboratory data and crop information are entered and recommendations are calculated for the entered data.

Manure This calculator is an EXCEL file that should be downloaded before operating. The calculator will determine manure application rates to meet nutrient demands of the crop.

Data Input (One Fert)

	N	P_2O_5	K_2O	Rec. Unit
Recommendation Rate:	0	0	0	lbs/acre
Fertilizer:				App. Unit:
Grade:	34	0	0	lbs/acre
Match:	◉	○	○	

Calculate

Note:

1. Grade can be modified for Manure or Other only.
2. Click right mouse button in the output frame to print the results.

Mult Fert >

Data Input (Mult Fert)

	Rec. Unit	N	P_2O_5	K_2O
Recommendation Unit & Rate	lbs/acre	0	0	0
Fertilizer	App. Unit			
	lbs/acre	0	0	0
	lbs/acre	0	0	0
	lbs/acre	0	0	0

Calculate

Note:

1. Grade can be modified for Manure or Other only.
2. Click right mouse button in the output frame to print the results.

One Fert >

Economic Lime Calculator

..... Intro ..... Help

INPUT > ..... OUTPUT >

Lime RNV:		*%*	Adjusted rate:		*tons/acre*
UK recommended rate:		*tons/acre*	Cost of effective lime:		*$/ton of effective lime*
Cost:		*$/ton*	Lime cost per acre:		*$/acre*
Field size:		*acres*	Lime cost for whole field:		*$*
	Calc reset		Total lime for whole field:		*tons*

Spring 2003 Table of Lime RNVs

Archived Tables of Lime RNVs

AGR-106: Determining the Quality of Aglime: Relative Neutralizing Value (RNV)

Economic Lime Calculator

Intro | Help

		SOURCE1	SOURCE2	SOURCE3
INPUT >	Lime RNV:	%	%	%
Lime Costs:	Purchase:	$/ton	$/ton	$/ton
	Hauling:	$/ton	$/ton	$/ton
	Spreading:	$/ton	$/ton	$/ton
	UK recommended rate:	tons/acre		
	Field size:	acres		

reset | Calc1 | Calc2 | Calc3

OUTPUT >	Adjusted rate:	tons/acre	tons/acre	tons/acre
	Cost of effective lime:	$/ton of effective lime	$/ton of effective lime	$/ton of effective lime
	Lime cost per acre:	$/acre	$/acre	$/acre
	Lime cost for whole field:	$	$	$
	Total lime for whole field:	tons	tons	tons

Spring 2003 Table of Lime RNVs

Archived Tables of Lime RNVs

AGR-106: Determining the Quality of Aglime: Relative Neutralizing Value (RNV)

AGR1 CALCULATOR Intro Help

INPUT >

Soil pH:
SMP Buffer pH:
Mehlich 3 P: lbs/acre
Mehlich 3 K: lbs/acre
Mehlich 3 Ca: lbs/acre
Mehlich 3 Mg: lbs/acre
Mehlich 3 Zn: lbs/acre

Primary crop: corn
Previous crop: Select One
Primary management: Select One
Primary use: Select One
Drainage: Select One

Solve Report
Reset Labinfo Reset All

OUTPUT >

N rate: lbs/acre
P2O5 rate: lbs/acre
K2O rate: lbs/acre
Lime rate: tons/acre
Mg rate: lbs/acre
Zn rate: lbs/acre

WORKSHEET FOR MANURE APPLICATION RATE 1/21/2004

1. Background Information

a. Field ID	Enter >	
b. Field acres	Enter >	
c. Crop to be grown	Enter >	
d. Manure type (Table 1)	Enter >	
e. ...management (Table 2)	Enter >	
f. …history (Table 3)	Enter >	
g. …units (Table 5)	Enter >	
h. Basis for calculations	Enter >	
i. Yield unit		
j. Estimated yield per acre		

2. Fertilizer Recom. or Crop Removal

		Fertilizer Recom.
a. Nitrogen	Enter >	lbs/A
b. Phosphorus (P_2O_5)	Enter >	lbs/A
c. Potassium (K_2O)	Enter >	lbs/A

3. Fertilizer Already Applied

a. N	Enter >	lbs/A
b. P_2O_5	Enter >	lbs/A
c. K_2O	Enter >	lbs/A

4. Residual N from Manure

a. Amount applied/acre last year	Enter >	
b. lbs N/unit	Enter >	
c. availability coefficient (Table 3)	Enter >	
d. Available N(lbs/unit)		**0.0**

5. Net Nutrient Needs

a. N (2a - 3a - 4d)	**0**	**lbs/A**
b. P_2O_5 (2b - 3b)	**0**	**lbs/A**
c. K_2O (2c - 3c)	**0**	**lbs/A**

6. Available Nutrients in Manure

(from Table 1 or test results)

a. N (lbs N/unit)	Enter >	
avail. coefficient (Table2)	Enter >	
Available N		**0.0**
b. P_2O_5 (lbs P_2O_5/unit)	Enter >	
Available P_2O_5		**0.0**
c. K_2O (lbs K_2O/unit)	Enter >	
Available K_2O		**0.0**

7. Application Rate to Supply Priority Nutrient

a. Priority Nutrient	N	
b. Priority Nutrient Needed	**0.0**	**lbs/A**
.....Available in Manure	**0.0**	
c. Manure Application Rate (units/A)	**0.0**	
d. Total Manure Applied (units)		

8. Nutrients Supplied by Manure

a. N (7c x 6a)	**0**	**lbs/A**
b. P_2O_5 (7c x 6b)	**0**	**lbs/A**
c. K_2O (7c x 6c)	**0**	**lbs/A**

9. Nutrient Balance

(-) indicates need; (+) indicates excess

a. N (8a - 5a)	**0**	**lbs/A**
b. P_2O_5 (8b - 5b)	**0**	**lbs/A**
c. K_2O (8c - 5c)	**0**	**lbs/A**

WORKSHEET FOR MANURE APPLICATION RATE 1/21/2004

UK Soil Testing

99-01 Soil Test Summaries

- Agriculture (A)
- Home Lawn and Garden (H)
- Commercial Horticulture (C)

96-98 Soil Test Summaries

- Agriculture (A)

Back | Home | Up | Next

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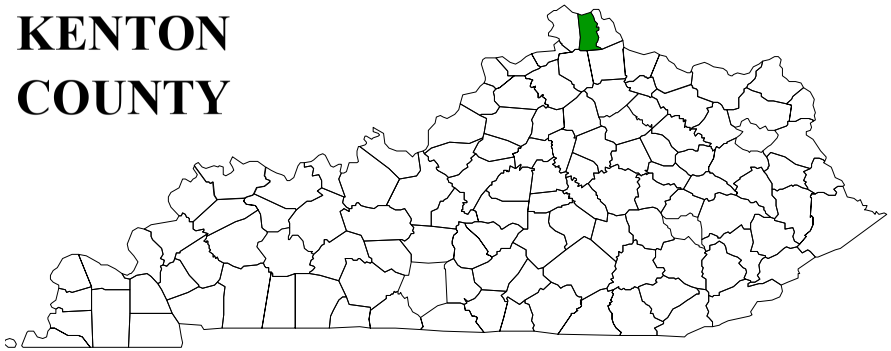
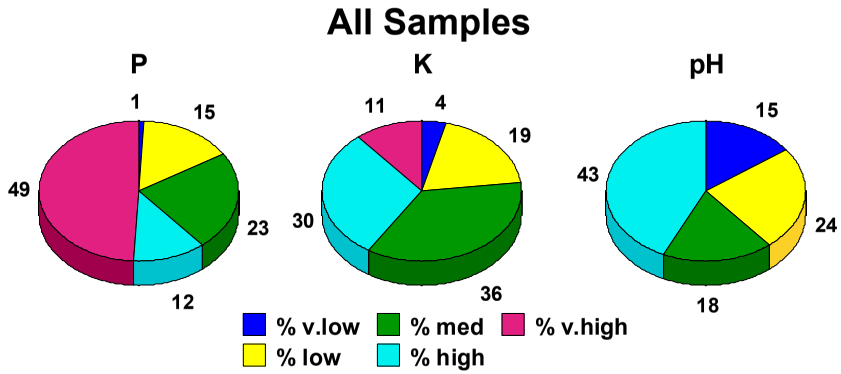
KENTON COUNTY





Soil test results (99-01) for Agricultural soil samples collected in Kenton Co(104,409 land acres).

		Sorted by Crop					Sorted by Soil Management		
	All	Corn	Soybean	Forage	Tobacco	Wheat	Till	Notill	Past./Hay
No. samples (99-01)	253	16	1	95	112	4	33	1	99
acres	11,625	600	0	10,600	425	0			
Soil P * median	**78**	**151**	**179**	**63**	**93**	**89**	**134**	**173**	**63**
% v.low (<10)	1	0	0	3	0	0	0	0	2
% low (10-30)	15	6	0	18	12	25	21	0	19
% med (30-60)	23	6	0	28	23	0	9	0	28
% high (60-80, >60)	12	88	100	51	11	75	70	100	51
% v.high (>80)	49				54				
% >200	9	19	0	6	9	0	21	0	6
Soil K* median	**274**	**257**	**640**	**251**	**295**	**322**	**280**	**254**	**242**
% v.low (<100)	4	6	0	2	4	0	3	0	5
% low (100-200)	19	6	0	26	17	0	18	0	25
% med (200-300)	36	69	0	38	32	50	33	100	36
% high (300-450,>300)	30	19	100	34	39	50	45	0	33
% v.high (>450)	11				8				
Soil pH median	**6.3**	**6.9**	**6.2**	**6.1**	**6.4**	**6.1**	**6.0**	**6.9**	**6.1**
% v.low (<5.4)	15	19	0	17	15	0	27	0	17
% low (5.4-6.0)	24	13	0	26	21	50	27	0	28
% med (6.0-6.4)	18	6	100	22	15	25	6	0	22
% high (>6.4)	43	63	0	35	49	25	39	100	32

* Units for Soil P and Soil K are lbs/acre P and lbs/acre K, respectively. For All and Tobacco, % high for Soil P and Soil K are 60-80 and 300-450, respectively. For all other categories, % high for Soil P and Soil K are >60 and >300, respectively.