

**Regression Analysis: DOC versus Soil pH; C-Org Acids; N-Mineral; PO4; K-Exch; Cu; SWC; GWL**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 8 15321,5 1915,19 4,63 0,117

Soil pH 1 55,5 55,48 0,13 0,738

C-Org Acids 1 641,5 641,53 1,55 0,301

N-Mineral 1 105,3 105,33 0,25 0,648

PO4 1 69,2 69,18 0,17 0,710

K-Exch 1 168,7 168,71 0,41 0,568

Cu 1 216,5 216,55 0,52 0,522

SWC 1 949,7 949,72 2,30 0,227

GWL 1 644,6 644,63 1,56 0,300

Error 3 1240,4 413,47

Total 11 16561,9

Model Summary

S R-sq R-sq(adj) R-sq(pred)

20,3339 92,51% 72,54% 0,00%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant 169 432 0,39 0,721

Soil pH 34,4 94,0 0,37 0,738 10,13

C-Org Acids -39,6 31,8 -1,25 0,301 9,40

N-Mineral -0,059 0,117 -0,50 0,648 7,52

PO4 -0,193 0,473 -0,41 0,710 3,84

K-Exch -0,184 0,288 -0,64 0,568 18,21

Cu 232 321 0,72 0,522 35,32

SWC -0,510 0,337 -1,52 0,227 4,38

GWL -0,739 0,592 -1,25 0,300 1,56

Regression Equation

DOC = 169 + 34.4 Soil pH - 39.6 C-Org Acids - 0.059 N-Mineral - 0.193 PO4 - 0.184 K-Exch + 232 Cu - 0.510 SWC - 0.739 GWL

**Regression Analysis: DOC versus Soil pH; C-Org Acids; N-Mineral; PO4; K-Exch; SWC; GWL**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 7 15104,9 2157,85 5,92 0,052

Soil pH 1 3590,2 3590,23 9,86 0,035

C-Org Acids 1 759,9 759,90 2,09 0,222

N-Mineral 1 4,5 4,47 0,01 0,917

PO4 1 5,1 5,10 0,01 0,912

K-Exch 1 8,2 8,18 0,02 0,888

SWC 1 735,4 735,40 2,02 0,228

GWL 1 700,8 700,85 1,92 0,238

Error 4 1456,9 364,24

Total 11 16561,9

Model Summary

S R-sq R-sq(adj) R-sq(pred)

19,0850 91,20% 75,81% 0,00%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant -116 163 -0,71 0,516

Soil pH 98,1 31,2 3,14 0,035 1,27

C-Org Acids -18,9 13,1 -1,44 0,222 1,81

N-Mineral 0,0075 0,0677 0,11 0,917 2,87

PO4 0,039 0,326 0,12 0,912 2,07

K-Exch 0,0131 0,0877 0,15 0,888 1,92

SWC -0,405 0,285 -1,42 0,228 3,56

GWL -0,769 0,554 -1,39 0,238 1,55

Regression Equation

DOC = -116 + 98.1 Soil pH - 18.9 C-Org Acids + 0.0075 N-Mineral + 0.039 PO4 + 0.0131 K-Exch - 0.405 SWC - 0.769 GWL

**Correlation: DOC; Soil pH; C-Org Acids; N-Mineral; PO4; K-Exch; Cu; SWC; GWL**

DOC Soil pH C-Org Acids N-Mineral PO4 K-Exch

Soil pH 0,598

0,040

C-Org Acids -0,616 -0,215

0,033 0,502

N-Mineral 0,635 0,175 -0,507

0,026 0,587 0,093

PO4 0,616 0,279 -0,244 0,446

0,033 0,380 0,444 0,147

K-Exch 0,477 0,231 -0,449 0,296 0,405

0,117 0,471 0,143 0,350 0,191

Cu 0,632 0,675 -0,142 0,410 0,599 0,713

0,028 0,016 0,659 0,186 0,039 0,009

SWC -0,660 -0,045 0,319 -0,720 -0,612 -0,465

0,020 0,890 0,311 0,008 0,034 0,128

GWL -0,431 0,099 0,208 -0,246 -0,414 0,028

0,162 0,761 0,517 0,441 0,181 0,932

Cu SWC

SWC -0,441

0,151

GWL 0,026 0,378

0,936 0,226

Cell Contents: Pearson correlation

P-Value

**Regression Analysis: DOC versus Soil pH**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 1 5927 5927 5,57 0,040

Soil pH 1 5927 5927 5,57 0,040

Error 10 10635 1064

Total 11 16562

Model Summary

S R-sq R-sq(adj) R-sq(pred)

32,6119 35,78% 29,36% 3,26%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant -263 152 -1,73 0,114

Soil pH 111,9 47,4 2,36 0,040 1,00

Regression Equation

DOC = -263 + 111.9 Soil pH

Fits and Diagnostics for Unusual Observations

Obs DOC Fit Resid Std Resid

12 45,5 120,8 -75,3 -2,58 R

R Large residual

**Regression Analysis: DOC versus C-Org Acids**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 1 6276 6276 6,10 0,033

C-Org Acids 1 6276 6276 6,10 0,033

Error 10 10286 1029

Total 11 16562

Model Summary

S R-sq R-sq(adj) R-sq(pred)

32,0716 37,89% 31,68% 12,21%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant 143,6 21,9 6,55 0,000

C-Org Acids -40,4 16,4 -2,47 0,033 1,00

Regression Equation

DOC = 143.6 - 40.4 C-Org Acids

Fits and Diagnostics for Unusual Observations

Std

Obs DOC Fit Resid Resid

1 126,3 65,8 60,5 2,13 R

R Large residual

**Regression Analysis: DOC versus N-Mineral**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 1 6685 6684,9 6,77 0,026

N-Mineral 1 6685 6684,9 6,77 0,026

Error 10 9877 987,7

Total 11 16562

Model Summary

S R-sq R-sq(adj) R-sq(pred)

31,4277 40,36% 34,40% 22,18%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant 38,9 23,2 1,68 0,124

N-Mineral 0,1710 0,0657 2,60 0,026 1,00

Regression Equation

DOC = 38.9 + 0.1710 N-Mineral

Fits and Diagnostics for Unusual Observations

Obs DOC Fit Resid Std Resid

3 139,9 148,4 -8,5 -0,39 X

X Unusual X

**Regression Analysis: DOC versus PO4**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 1 6294 6294,1 6,13 0,033

PO4 1 6294 6294,1 6,13 0,033

Error 10 10268 1026,8

Lack-of-Fit 9 6678 742,0 0,21 0,945

Pure Error 1 3590 3590,2

Total 11 16562

Model Summary

S R-sq R-sq(adj) R-sq(pred)

32,0434 38,00% 31,80% 19,83%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant 63,3 15,6 4,05 0,002

PO4 0,941 0,380 2,48 0,033 1,00

Regression Equation

DOC = 63.3 + 0.941 PO4

Fits and Diagnostics for Unusual Observations

Obs DOC Fit Resid Std Resid

2 154,0 155,2 -1,2 -0,07 X

X Unusual X

**Regression Analysis: DOC versus Cu**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 1 6607 6606,7 6,64 0,028

Cu 1 6607 6606,7 6,64 0,028

Error 10 9955 995,5

Total 11 16562

Model Summary

S R-sq R-sq(adj) R-sq(pred)

31,5519 39,89% 33,88% 24,25%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant 56,9 17,2 3,31 0,008

Cu 216,0 83,8 2,58 0,028 1,00

Regression Equation

DOC = 56.9 + 216.0 Cu

Fits and Diagnostics for Unusual Observations

Obs DOC Fit Resid Std Resid

2 154,0 148,4 5,6 0,26 X

6 41,6 105,5 -63,9 -2,14 R

R Large residual

X Unusual X

**Regression Analysis: DOC versus SWC**

Analysis of Variance

Source DF Adj SS Adj MS F-Value P-Value

Regression 1 7211 7210,8 7,71 0,020

SWC 1 7211 7210,8 7,71 0,020

Error 10 9351 935,1

Total 11 16562

Model Summary

S R-sq R-sq(adj) R-sq(pred)

30,5795 43,54% 37,89% 24,61%

Coefficients

Term Coef SE Coef T-Value P-Value VIF

Constant 327,8 84,5 3,88 0,003

SWC -0,672 0,242 -2,78 0,020 1,00

Regression Equation

DOC = 327.8 - 0.672 SWC