

Integrating farmer perceptions and scientific assessments of soil acidity in the Upper Blue Nile Basin, Ethiopia

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SUPPLEMENTARY MATERIALS

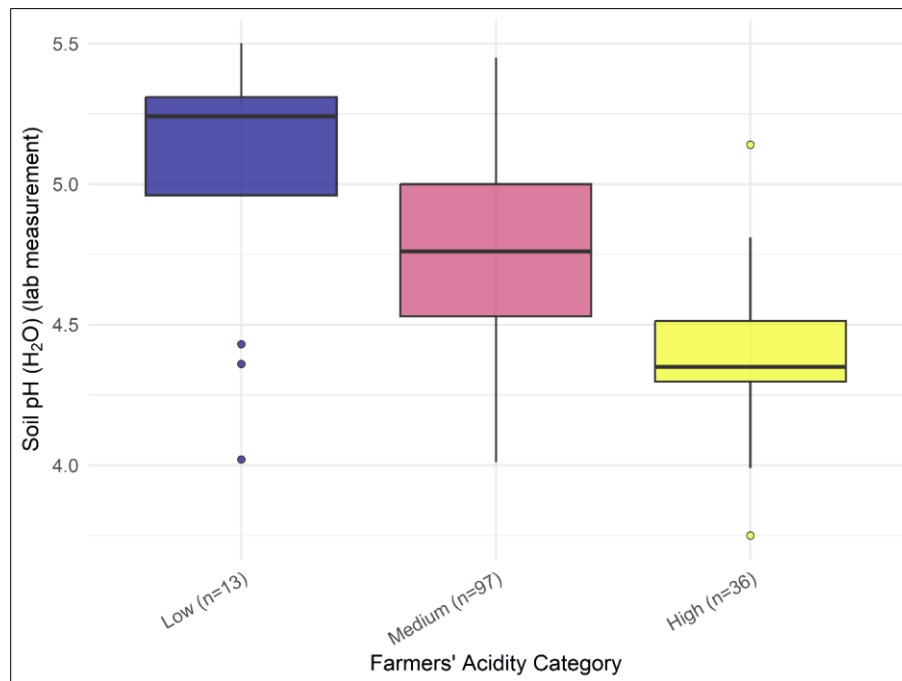


Fig. S1 Relationship between farmers perceived soil acidity categories and laboratory-measured soil pH (H₂O) in the Upper Blue Nile Basin. Boxplots show median and interquartile ranges of soil pH for each farmers' acidity category (Low, Medium, High). Sample sizes are indicated in parentheses.

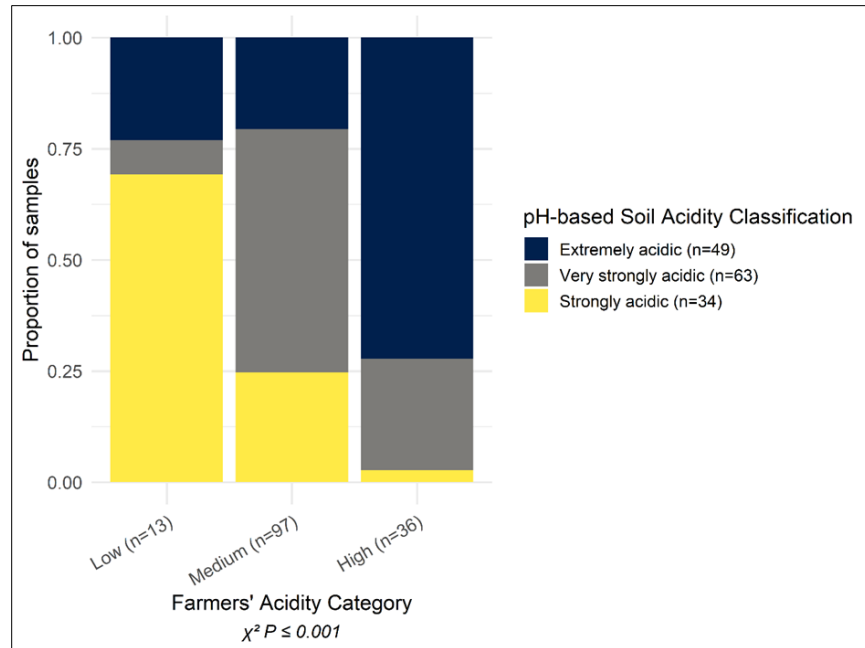


Fig. S2 Comparison of farmers perceived soil acidity categories with laboratory-defined pH-based acidity classes. Bars represent the proportion of samples within each farmers' category (Low, Medium, High), with laboratory classifications stacked. Sample sizes are indicated in parentheses. Chi-square test shows a significant association between farmers' and laboratory pH-based soil acidity classifications ($\chi^2, P \leq 0.001$).

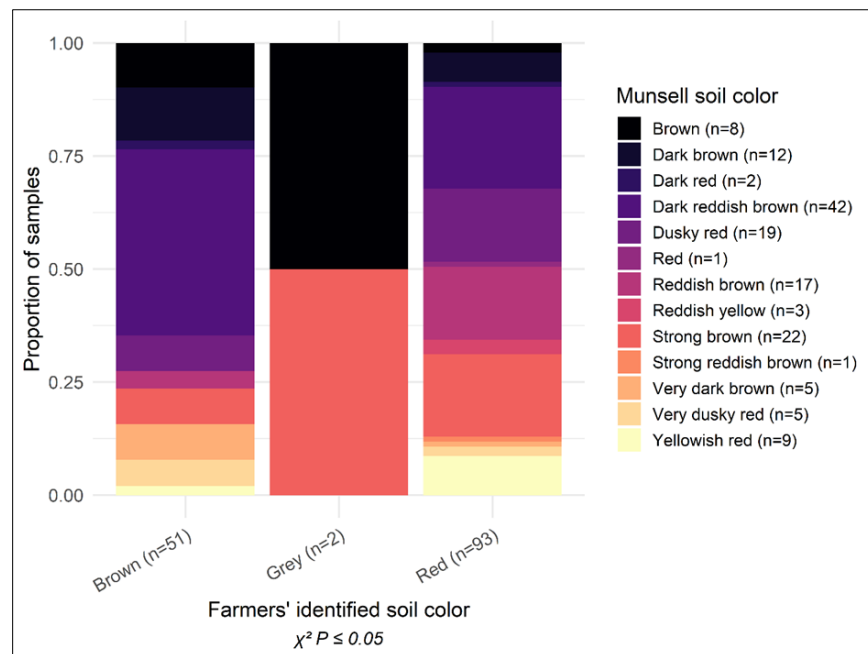


Fig. S3 Comparison of farmers perceived soil color with laboratory-determined Munsell soil color categories. Bars represent the proportion of samples within each farmers' color category (brown, red, grey), with laboratory classifications stacked. Sample sizes are indicated in parentheses. Chi-square test indicates a significant association between farmers' perceptions and laboratory acidity classifications ($\chi^2, P \leq 0.05$).