

**Data Dictionary for:** Limestone rate influence common bean in south-central Uganda

**Available at:** <https://datashare.iastate.edu>

**File names:**

Limestone\_rates\_common\_bean\_Uganda\_crop\_data.csv

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## REFERENCES

These data support the published dissertation:

Bulyaba, Rosemary, "Limestone application on a Ferralsol soil and genotype by environment effects on yield and grain nutrient composition in common bean" (2019). *Graduate Theses and Dissertations*. 17651. <https://lib.dr.iastate.edu/etd/17651>

And a publication in revision for *African Journal of Agricultural Research*.

## DESCRIPTION

Limestone rate influencing common bean in Uganda was compiled to test whether limestone can increase yield and nutritional content of common bean on red soil in Uganda. Using the databases, we report how limestone and NP fertilizers affected common bean stand density, pod density, seed number per pod, individual seed weight, grain yield, bean biomass yield, bean height, pod harvest index, and grain Fe and Zn concentrations in two growing seasons.

Usage of this dataset has no copyright or propriety restrictions other than citation of the appropriate manuscript.

## FUNDING

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## TIMELINE

Creation/Collection – November 2017

Last Update – 11 Dec 2019

Temporal Start – 1 November 2017

Temporal End – 1 September 2018

Embargo Request – six months

## KEYWORDS

Common bean; Phaseolus vulgaris; Ferralsol; bean growth, development, and yield; bean varieties; limestone; bean management systems; soil fertility; nutrient availability;

### Limestone\_rates\_common\_bean \_Uganda\_crop\_data.csv

The data table contains 14 columns and 127 rows of information.

Name	Label	Type
b01	Planting date	Discrete
b02	Harvest date	Discrete
b03	Plot number	Discrete
b04	Limestone rate (kg/ac)	Discrete
b05	Bean variety	Discrete
b06	Grain (kg/ha)	Continuous
b07	Seed number (m^2)	Continuous
b08	Grain Fe (iron, mg/kg)	Continuous
b09	Grain Zn (zinc, mg/kg)	Continuous
b10	V4 stand (m^2)	Continuous
b11	R8 stand (m^2)	Continuous
b12	Crop biomass (kg/ha)	Continuous
b13	Pods (m^2)	Continuous
b14	Seeds per pod	Continuous
b15	Individual seed weight (g/seed)	Continuous

The data included in columns were used in one journal publication

Example	Source Type	Description
Bulyaba 2019	A published dissertation	<a href="https://lib.dr.iastate.edu/etd/17651/">https://lib.dr.iastate.edu/etd/17651/</a>

### Limestone\_rates\_common\_bean\_Uganda\_soil\_data.csv

The data table contains 23 columns and 127 rows of information.

Name	Label	Type
a01	Plot	Continuous
a02	Block number	Discrete
a03	Limestone rate (kg/ac)	Discrete
a04	NPK rate (nitrogen, phosphorus, potassium kg/ac)	Discrete
a05	Sampling depth (cm)	Discrete
a06	pH (pretreatment November 2017)	Continuous
a07	pH (preplant March 2018)	Continuous
a08	EC (exchange capacity, uS/cm, pretreatment November 2018)	Continuous
a09	EC (exchange capacity, uS/cm, preplant March 2018)	Continuous
a10	CEC (cation exchange capacity, meq/100g, pretreatment November 2017)	Continuous
a11	CEC (cation exchange capacity, meq/100g, preplant March 2018)	Continuous
a12	Organic C (carbon, %, pretreatment November 2017)	Continuous
a13	Organic C (carbon, %, preplant March 2018)	Continuous
a14	P (phosphorus, Mehlich-3 extraction, ppm, pretreatment November 2017)	Continuous
a15	P (phosphorus, Mehlich-3 extraction, ppm, preplant March 2018)	Continuous
a16	K (potassium, Mehlich-3 extraction, ppm, pretreatment November 2017)	Continuous
a17	K (potassium, Mehlich-3 extraction, ppm, preplant March 2018)	Continuous
a18	Ca (calcium, Mehlich-3 extraction, ppm, pretreatment November 2017)	Continuous
a19	Ca (calcium, Mehlich-3 extraction, ppm, preplant March 2018)	Continuous
a20	Mg (magnesium, Mehlich-3 extraction, ppm, pretreatment November 2017)	Continuous
a21	Mg (magnesium, Mehlich-3 extraction, ppm, preplant March 2018)	Continuous
a22	Na (sodium, Mehlich-3 extraction, ppm, pretreatment November 2017)	Continuous
a23	Na (sodium, Mehlich-3 extraction, ppm, preplant March 2018)	Continuous

The data included in columns were used in one journal publication

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