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# DETERMINING THE HIGH SUGAR BEAN LINES IN LESOTHO

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## Background & Context

- Common bean (*Phaseolus vulgaris L.*) is an important grain legume in attaining food security and income.
- Important component of the cropping systems
  - Major source of protein, iron, and zinc
  - For the poor in sub-Saharan Africa.
- A queen of legumes in Lesotho,
- Intercropped with non-legumes (maize), •planted solo
- consumed as dry beans and green beans.



### Continuation

- It has huge manifold merits in nutritional value and soil fertility improvement and other health benefits
- Several assessment studies showed that common beans are a cash crop and the most preferred in Lesotho are the sugar beans varieties



## Motivation

- In Lesotho, common bean is mostly intercropped Currently, there is an ongoing study in Lesotho which seeks to screen 30 genotypes for find the high nitrogen fixing common bean.
- Therefore, it is very crucial that this screening to be done should include the component of adaptation of the high nitrogen fixing common bean genotypes



## Objectives

• The study aimed at determining the yield of common bean genotype





# Methodology

- The study design is randomized complete block design, with three replicates and 30 common bean genotypes were our treatments
- The seeds were inoculated before planting then fertilizer application (super phosphate and potassium chloride) was done concurrently with seeding. The LAN was applied 14 days after seeding
- Yield data was collected on the following parameters, plant stand count and the weight of total seeds



# Methodology

	Agro-ecological zone	Sites	Soils	Treatments	Replicates	Basal Fertilizer + Inoculation
2	Northern Lowlands	1	Alfisols	Genotypes	3	
		2				
)	Southern Lowlands	1				
		2				





### Results





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#### Continuation..





## Results & Discussions

- The results showed that the following genotypes performed best;
  - MWCTZ20A-SUG-16-ALS-1,
  - MWCTZ20A-SUG-16DRGHT-FeZn-1,
  - SUG131,
  - MWCTZ20A-SUG-16DRGHT-1,
  - MWCTZ20A-SUG-15DRGHT-LSF-8
  - MWCTZ20A-SUG-15DRGHT-LSF-9





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# Conclusions & Recommendations

• Further studies are needed to investigate their adaptability across multiple locations.

