KARAMOJA 2017 CROP SEASON ANALYSIS

GROUP III

25/08/2025

SUMMARY

- _Context_: Several NGOs in Karamoja region lack information for **effective targeted intervention** to reduce food security risks in the region.

- _Goal_: **Creating interactive visualizations of the 2017 crop season results**, which will serve as a first mockup of the Food Security Monitoring Tool to guide future NGO activities.

OUTLINE

- Business Objectives

- Data and Methods

- Results

- Conclusions and Recommendations

BUSINESS OBJECTIVES

- Highlight areas where **food availability is critically low**.

- **Visualize crop yields and production** for sorghum and maize

- Identify priority areas for **NGO intervention**.

- Enable **interactive exploration** through interactive visualizations.

DATA

- The data used in this analysis consists of **two datasets** which provide information concerning **yield and production of staple crops** (maize and sorghum) for **districts** and **sub-counties** in Karamoja region including the farming area and population of districts and sub-counties.

METHODS

- The project uses descriptive analysis including **comparisons of total yield, farming area and production of maize and sorghum** in the Districts and Sub-Counties in Karamoja region.

RESULTS

The disparity in production volumes points to **differences in land area, soil suitability, or farmer preference** for crop type across districts.

Crop Contribution at District and Sub-county level
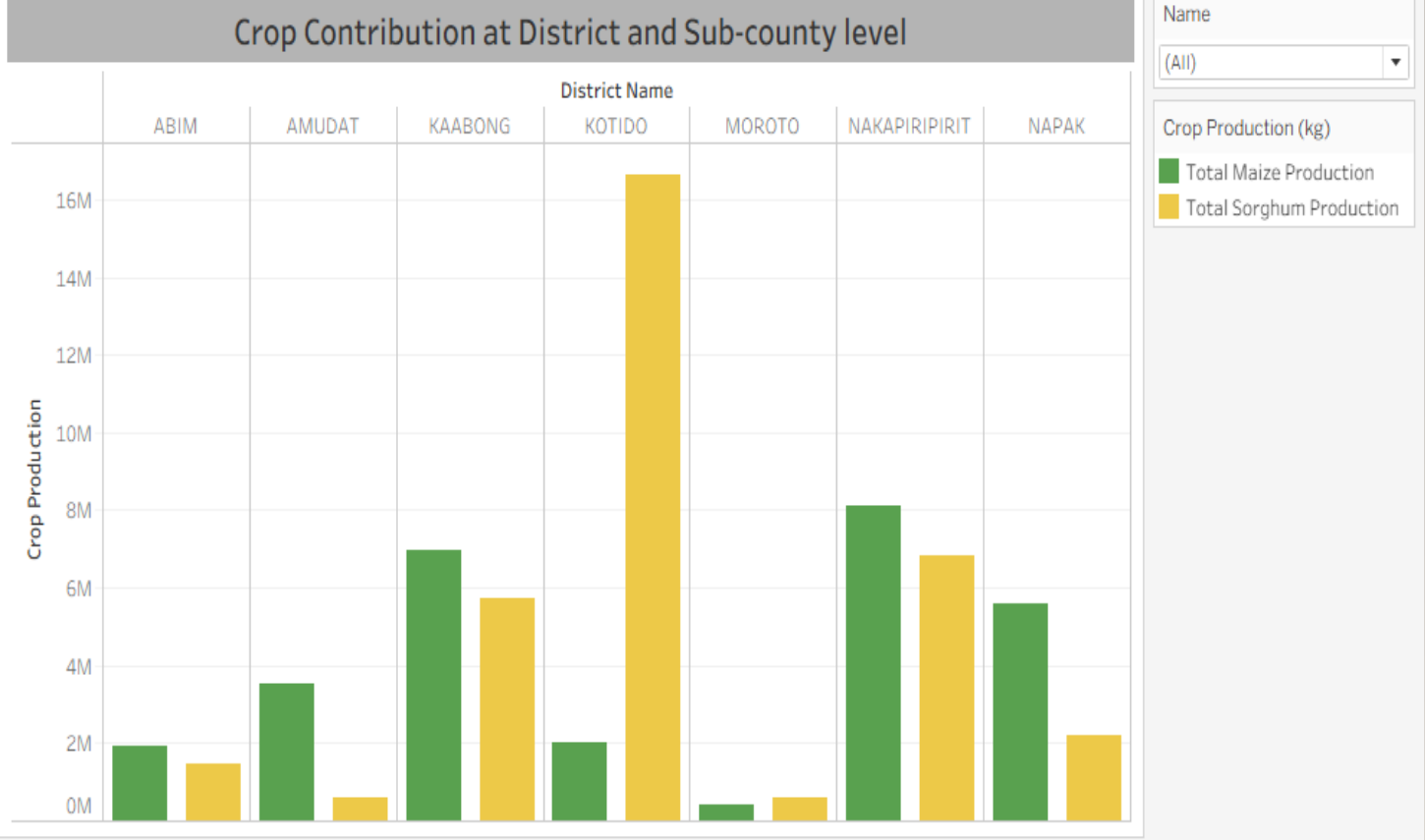
Kotido's yield is lower than Kaabong's and Nakapiripirit's which suggests that Kotido **has a large area of cultivation but lower efficiency** while Kaabong **achieves better productivity per unit area**.

Sorghum appears less productive than maize overall, possibly due to **lower inputs, poor agronomic practices, or environmental limitations**
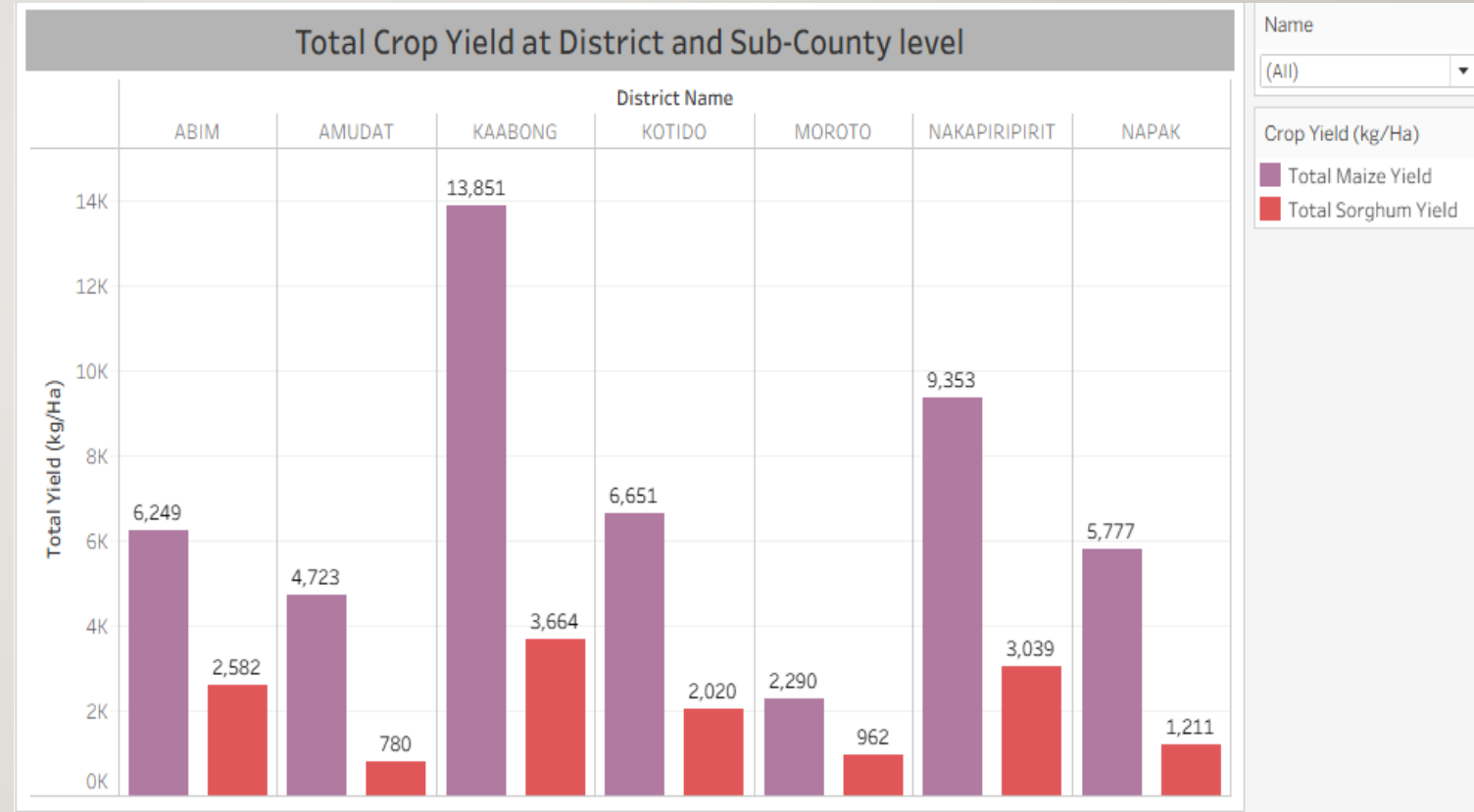
The analysis reveals a clear **dominance of sorghum cultivation** over maize across all surveyed. Abim, Amudat and Moroto have limited cultivated land, suggesting either **land constraints, lower agricultural investment, or greater reliance on external food supplies.**
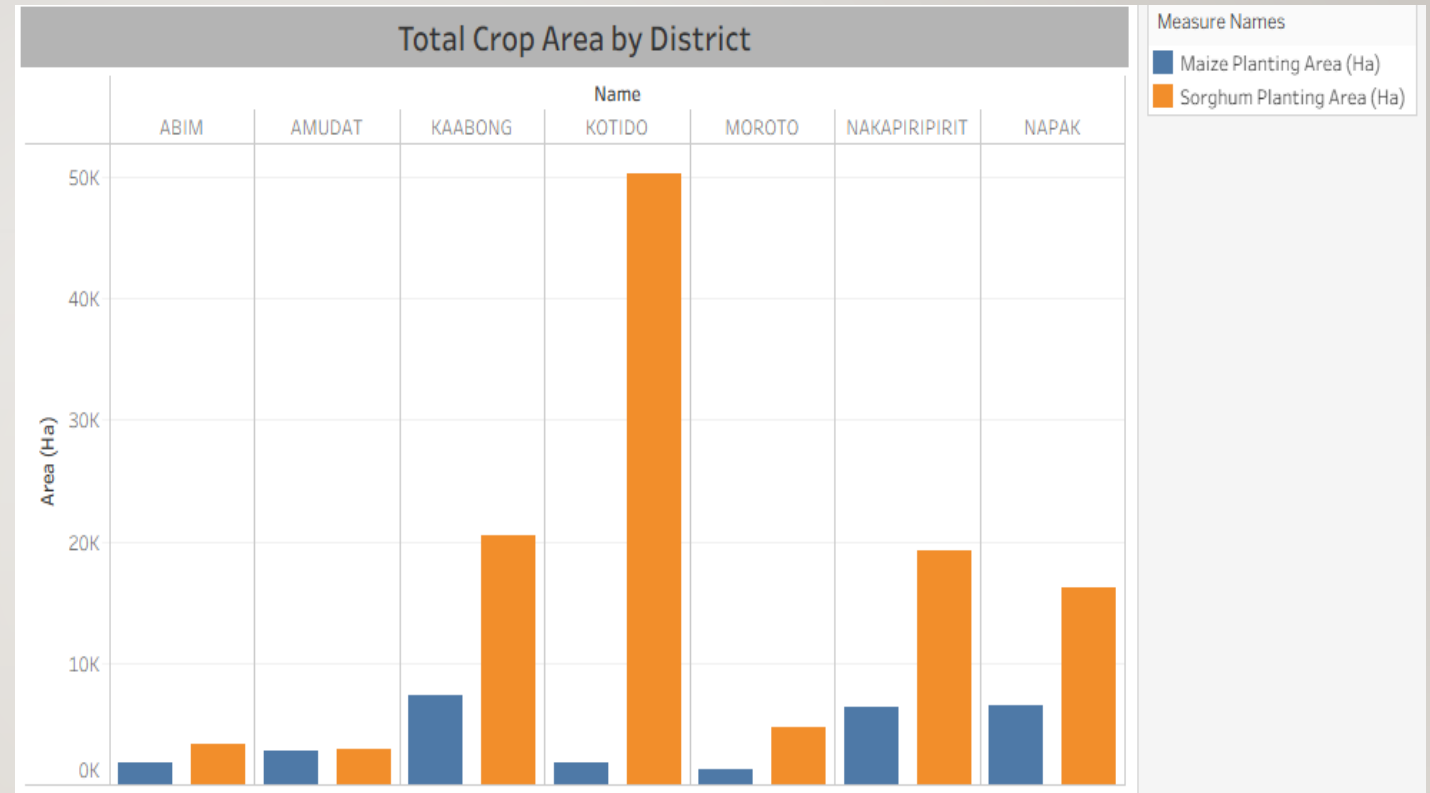
Nakupiripirit and Kotido are **better positioned to meet household food needs** and may even have surpluses. Moroto shows **critical underproduction**, raising concerns about food shortages. Kaabong's low per capita value, despite high yields, suggests **population pressure.**

Production per Capita by District
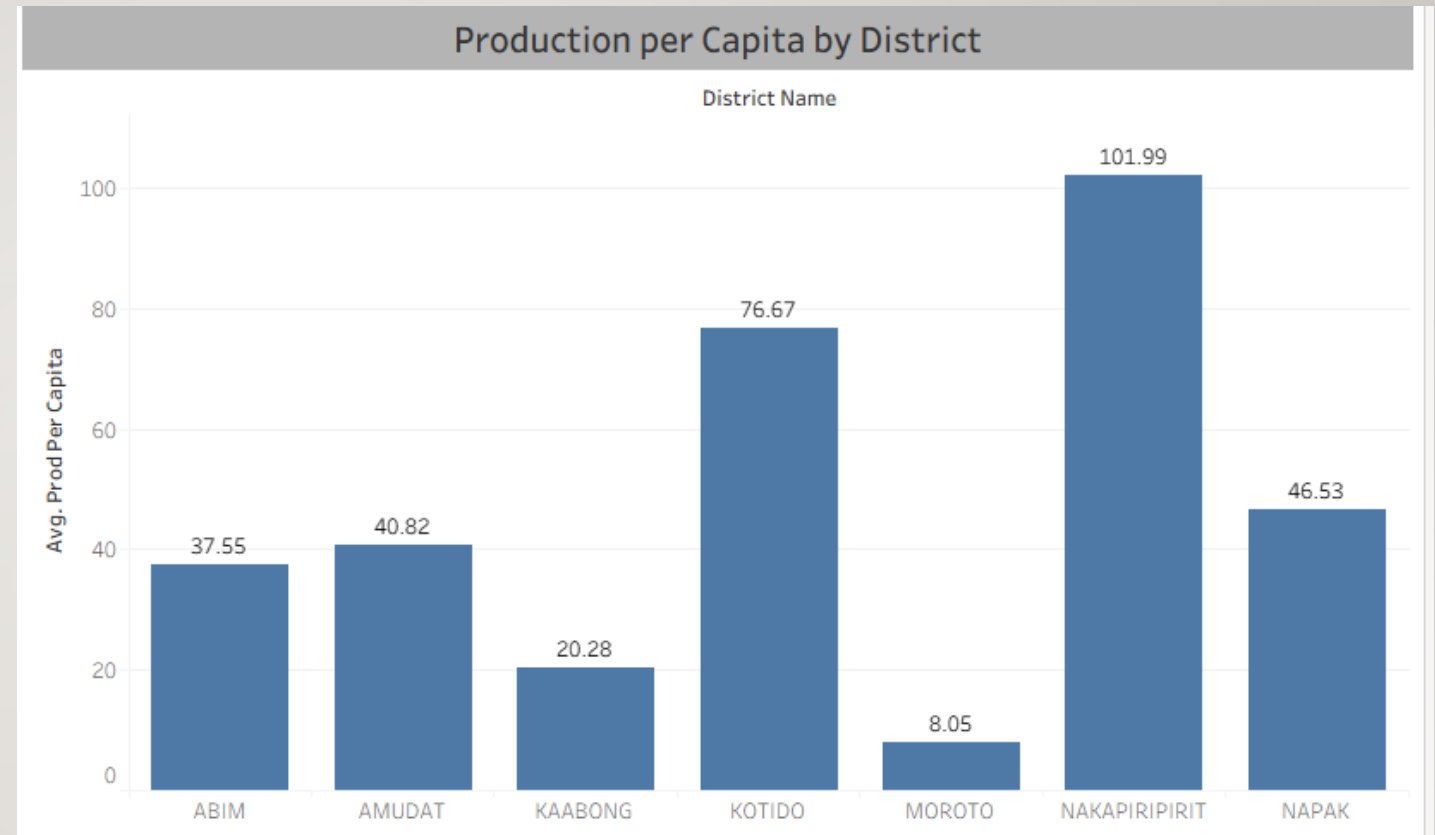
Kotido and Nakupiripirit emerge as **surplus-producing districts**. Napak, Amudat and Kaabong appear self-sufficient, while Moroto and Abim represent low-scale systems with minimal contribution to regional food stocks.
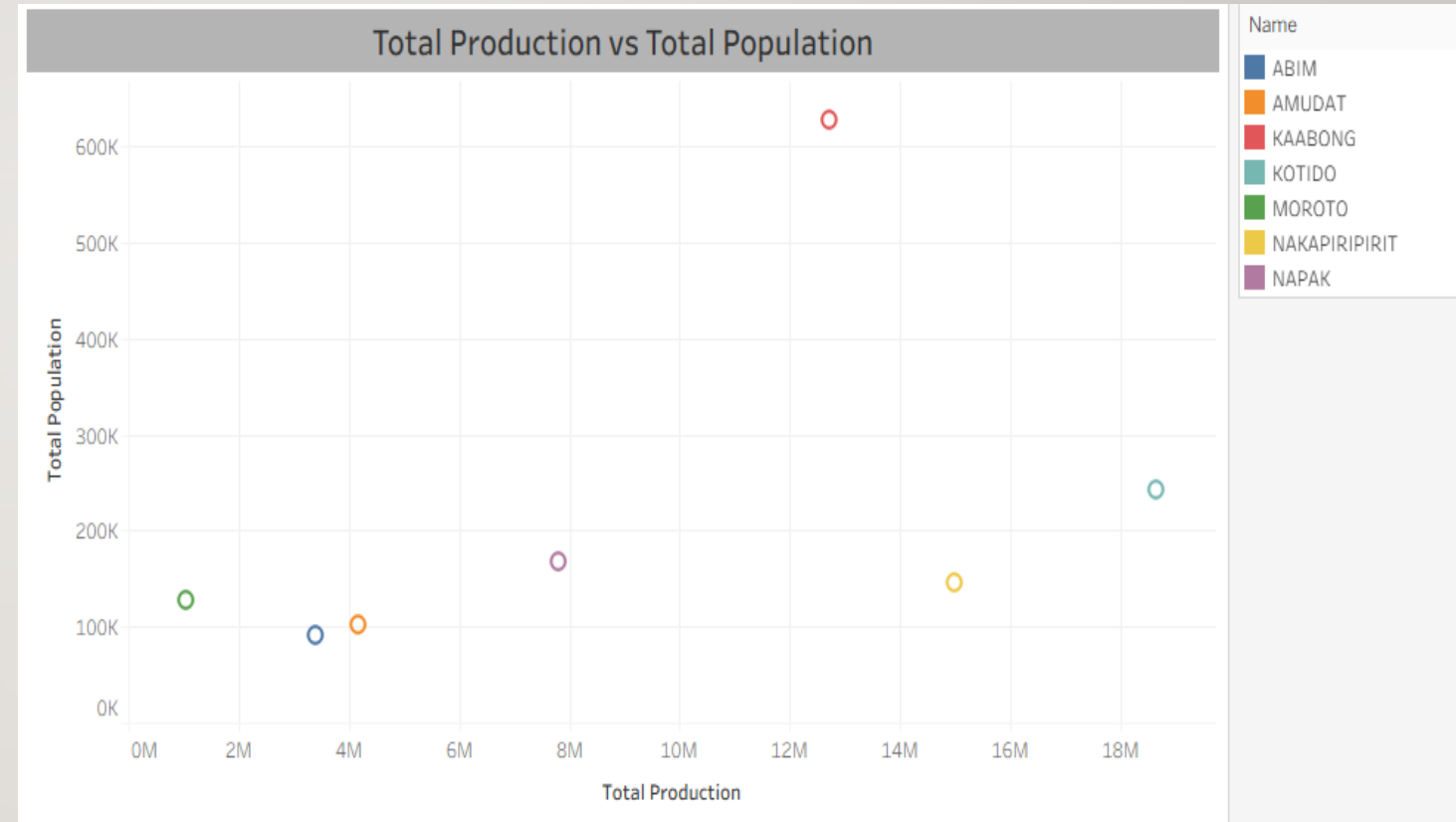
CONCLUSIONS

- Most districts such as **Kotido** heavily rely on sorghum production over maize production.

- Sorghum and maize yields and production **vary significantly** across districts and sub-counties.

- Moroto, Abim and Amudat contribute less to the regional food basket, with both **low crop area and production.**

- Kotido and Nakupiripirit are **regional hubs** as they consistently produce surplus**.**

- Some districts such as Kaabong show **good yields but low production per capita**, stressing the need to integrate demographic trends.

RECOMMENDATIONS

- Direct NGO interventions to districts with the lowest food production per capita such as Kaabong and Moroto.

- Promote **crop diversification** by encourage farmers to balance maize and sorghum cultivation and introduce legumes such as beans and root crops such as cassava.

- Develop a **monitoring framework** that updates yield estimates annually or seasonally to detect emerging food security risks early.

- Promote **soil health programs** such as use of organic manure, and soil conservation practices to improve yields sustainably.

- **Introduce modern farming methods** such as irrigation and use of greenhouses to improve crop yields and help unlock currently unused land in the region.

FUTURE WORK

- Quantify how population density, growth and age structure at district and sub-county level affect per capita production.

- Identify and rank the drivers of low yields in high-area sub-counties including inputs, soils, rainfall variability, pests and diseases, and market access.

THANK YOU!