KARAMOJA DISTRICT CROP YIELD INSIGHTS

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PROBLEM STATEMENT

In the Karamoja region, NGOs face challenges in assessing agricultural productivity due to limited visibility into crop yields across various districts and sub-counties. Despite providing technical support and farm inputs to farmers, there is a significant gap in understanding the spatial distribution and variation of crop yields, particularly for sorghum and maize. This lack of comprehensive data impedes the effective prioritization of interventions and resource allocation. To address this issue, the goal of this project is to develop an interactive visualization tool that leverages data from the 2017 crop season to offer clear insights into crop yield patterns. This tool will help NGOs make informed decisions, optimize their support strategies, and ultimately improve food security in the region

OBJECTIVES

The goal of this analysis is to develop an interactive visualization tool that provides insights into crop yields across different districts and sub-counties in Karamoja for the 2017 crop season. By analyzing and visualizing the data, we aim to:

1. **Identify Patterns:** Understand the distribution of crop yields across various regions.
2. **Highlight Trends:** Detect any significant trends or anomalies in crop yields.
3. **Support Decision-Making:** Provide actionable insights that can help NGOs prioritize their activities and allocate resources more effectively.

RESEARCH QUESTIONS

1. What are the spatial patterns of population across different districts and in Karamoja during the 2017 crop season?
2. Which districts in Karamoja are experiencing the lowest crop yields, and how do these areas compare with regions of higher productivity?
3. How does the population size of a district or sub-county correlate with the crop yield in Karamoja?
4. What is the proportion of land dedicated to Sorghum and Maize in different districts?
5. What trends can be observed in crop production relative to changes in crop area over the specified period?

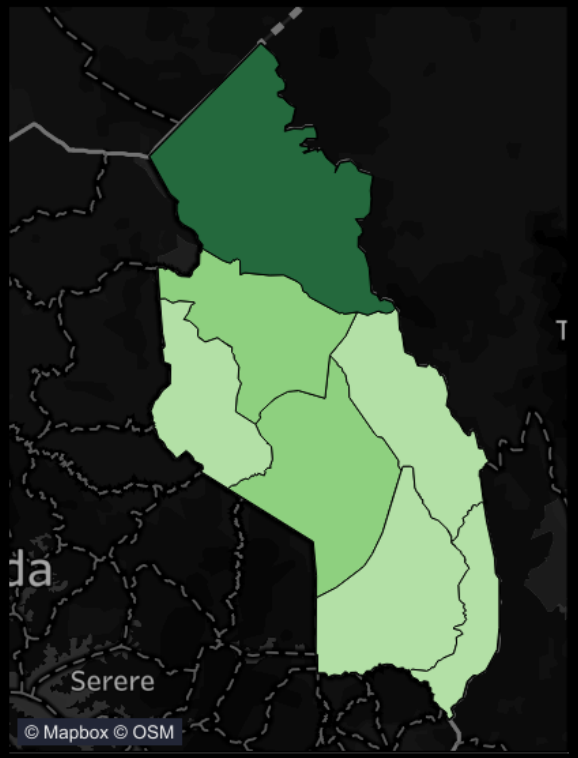
KARAMOJA CROP ANALYSIS DASHBOARD

KARAMOJA DISTRICT CROP YIELD INSIGHTS

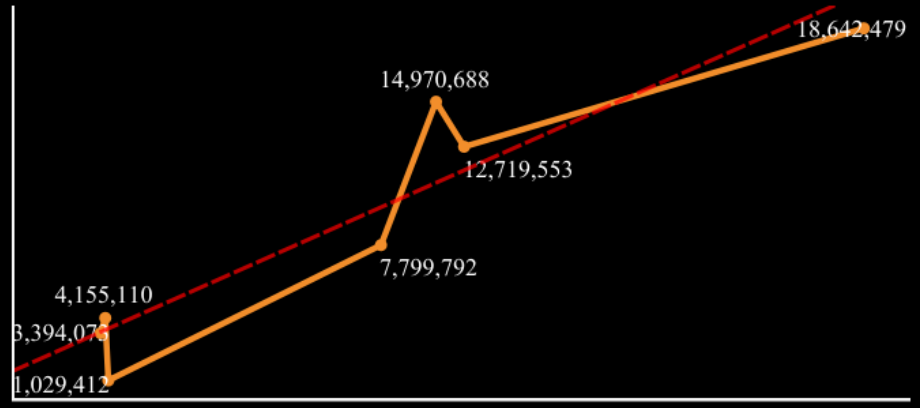
District: All

District Population	Avg Maize Yield	Avg Sorghum Yield	Total Crop Area	Avg Maize Yield /Area	Avg Sorghum Yield / Area	Total Maize Production	Total Sorghum Production
1,504,605	986	269	147,662	2	0	28,599,424	34,111,683

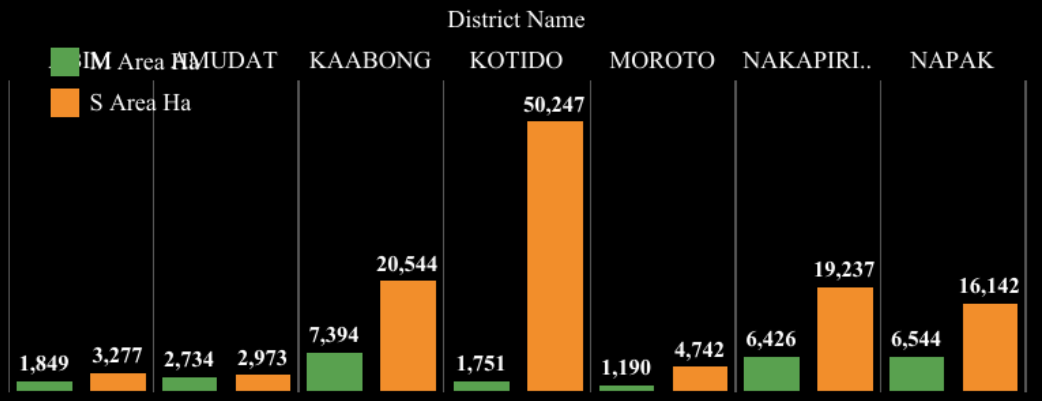
Population Size Across Districts



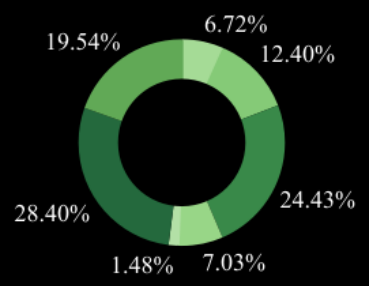
Trend Analysis: Crop Production vs. Crop Area (Ha)



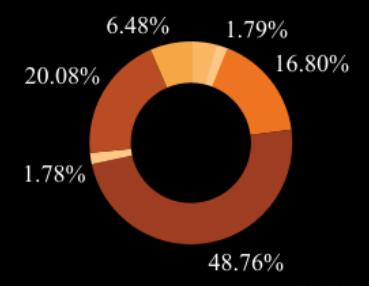
Sorghum & Maize Yields per District



% Land Proportion for Maize



% Land Proportion for Sorghum



FINDINGS

1. ***Kaabong*** is the most populous district, with more than double the population of ***Kotido***. ***Abim*** and ***Amudat*** have notably lower populations, highlighting a significant disparity across the districts.
2. ***Kotido*** stands out as the leading district in maize production, significantly surpassing other districts, while ***Kaabong*** leads in sorghum yields, indicating varying agricultural strengths across the regions.
3. In some districts, the population may rely more on alternative livelihoods (e.g pastoralism, trade, or mining), leading to a weaker connection between population size and agricultural land use.
4. ***Nakapiripirit*** and ***Kaabong*** excel in maize production, while ***Kotido*** is key for sorghum, highlighting distinct agricultural strengths among the districts.
5. The trends, while generally increasing, may indicate periods of lower production despite increased area, highlighting potential inefficiencies or challenges in crop yield.

RECOMENDATIONS

1. Focus resources on Kaabong and Nakapiripirit to boost maize production and on Kotido for sorghum, leveraging their strengths.
2. In districts with weaker agriculture, invest in alternative livelihoods like pastoralism, trade, or mining to balance economic reliance.
3. Examine why some districts with more cultivation area have lower yields and implement strategies to enhance productivity.
4. Factor in population disparities when distributing resources to ensure equitable support for agriculture and livelihoods.

CONCLUSION

Kaabong and ***Nakapiripirit*** should get a boost to improve maize production, and ***Kotido*** needs to focus on enhancing sorghum yields. For areas with weaker agriculture, exploring alternatives like pastoralism or trade could help. It’s also important to address why some districts aren't seeing better yields with more land and keep population differences in mind when planning resource support.