



EXPLORE AI
ACADEMY



MAKING SENSE OF THE DALRRD COMMODITY PRICES



CONTENT TODAY

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- DEMONSTRATIONS
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MEET THE TEAM



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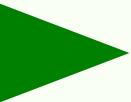


INTRODUCTION



“ ”

*No race can prosper until it learns
there is as much dignity in tilling a
field as in writing a poem*



96M

Of the country's agricultural land. Represents almost 80 percent of the total land area



\$7B

Value added by agriculture to the GDP



2.4%

Contributed by agriculture to the countries total revenue in 2021

South Africa has the largest agricultural land on the African continent

There is a lack of a centralized and easily accessible source of daily commodity prices for horticulture, grain, and livestock in South Africa.

Overview

- DALRRD aims to ensure equitable access to land, sustainable agriculture, and food security for all.
- Our project aims to automate the scraping and transformation of this data into a single dashboard
- This data is essential for buyers and sellers to set and negotiate prices effectively.

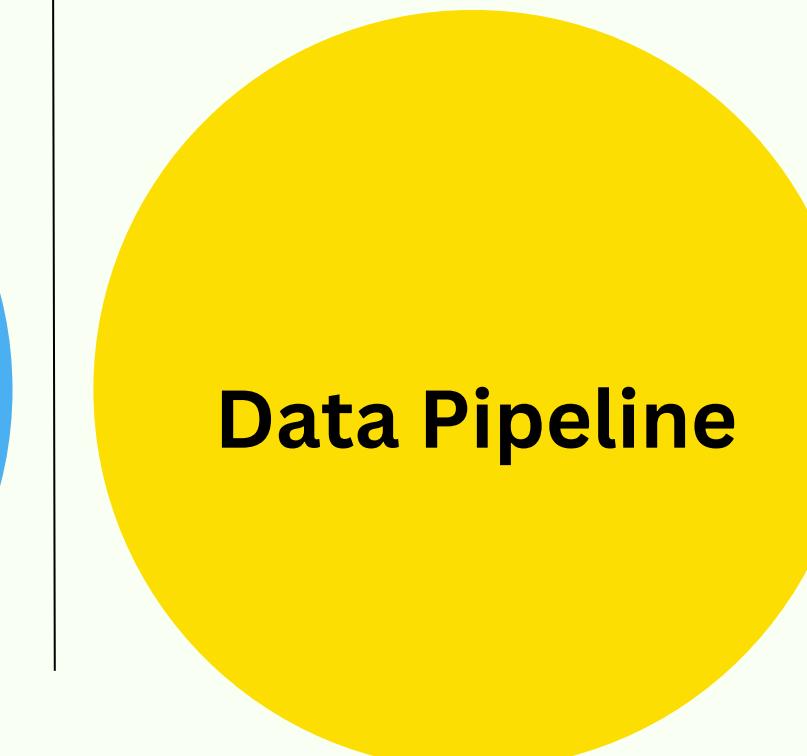
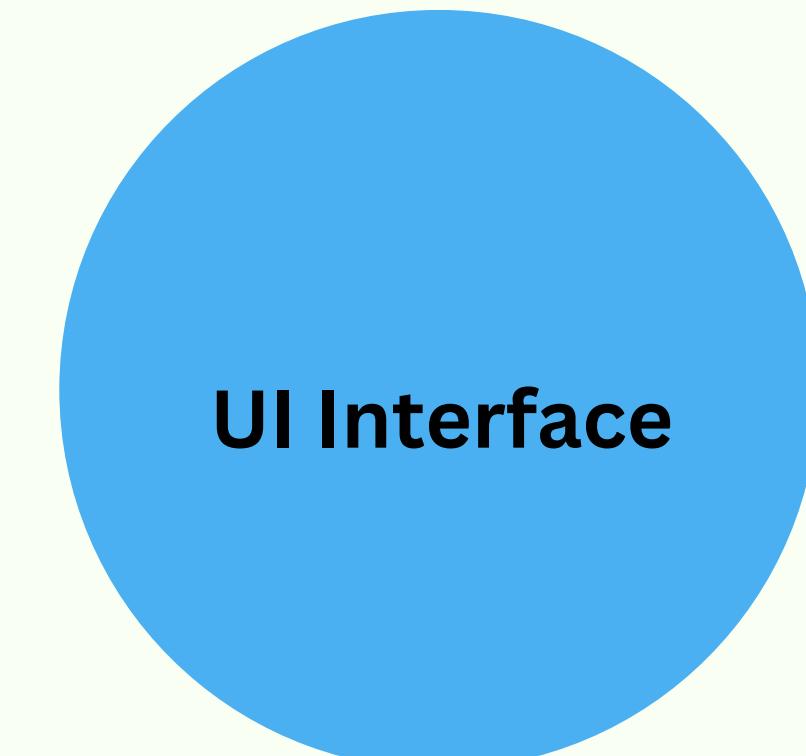
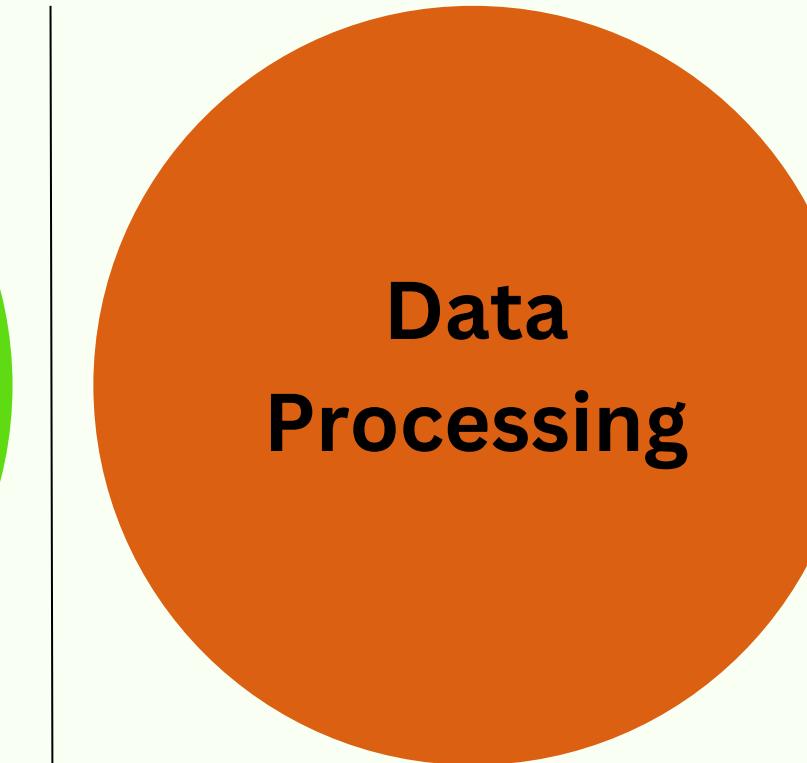


Process

Python Script that can successfully scrape the datasets.

- Livestock
- Horticulture
- Grain

- User Interface that grants users access to the DB information
- Dashboard that displays relevant insights and trends. Including forecasts and regional differences.

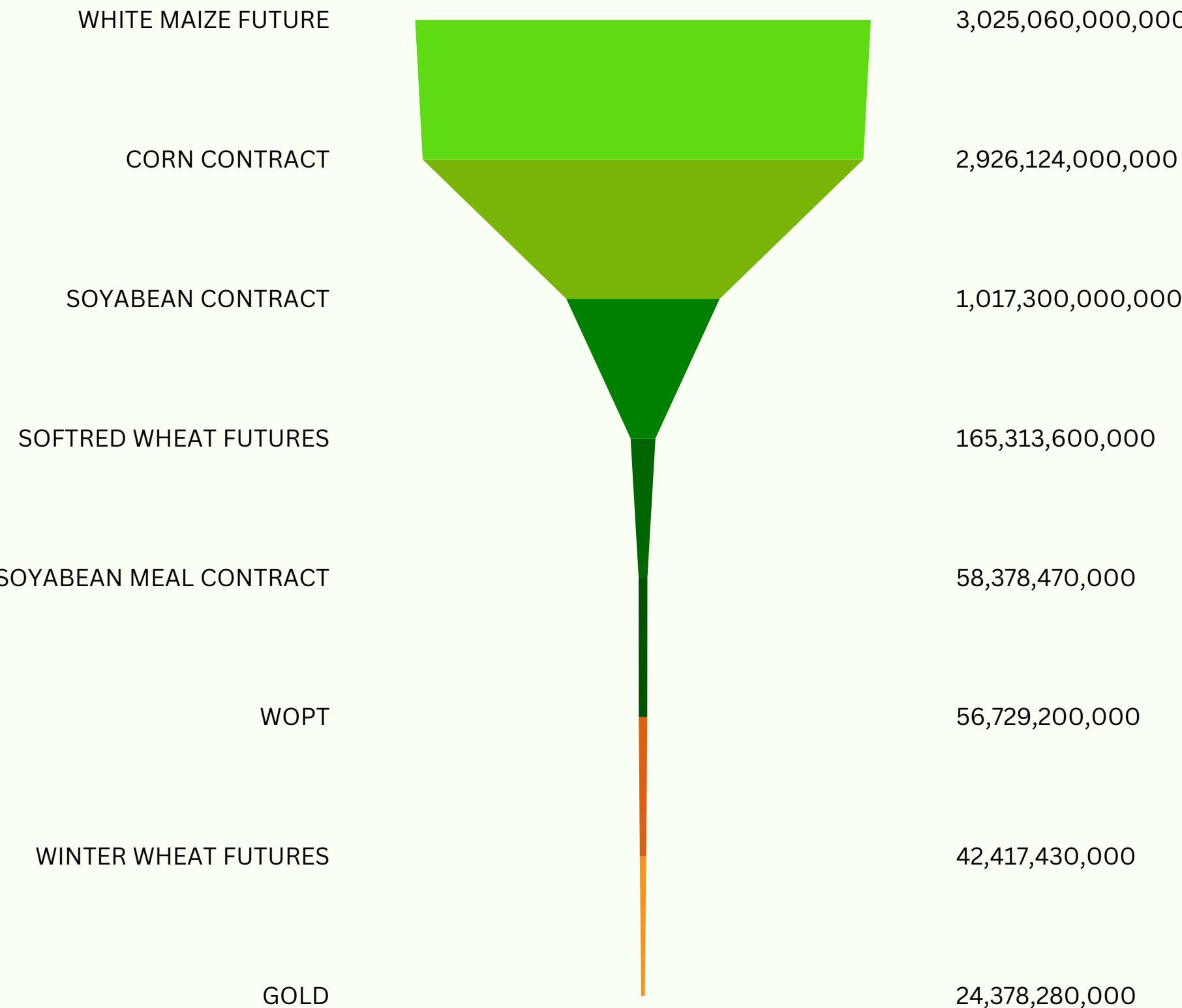


- Pull from the Downloaded Datasets
- Process the data (EDA, clean, quality checks, restructure dataset for the DB)
- An EC2 Instance will host a bash script which will run the webscraper.py
- A processing.py (responsible for cleaning, processing and data transfer).

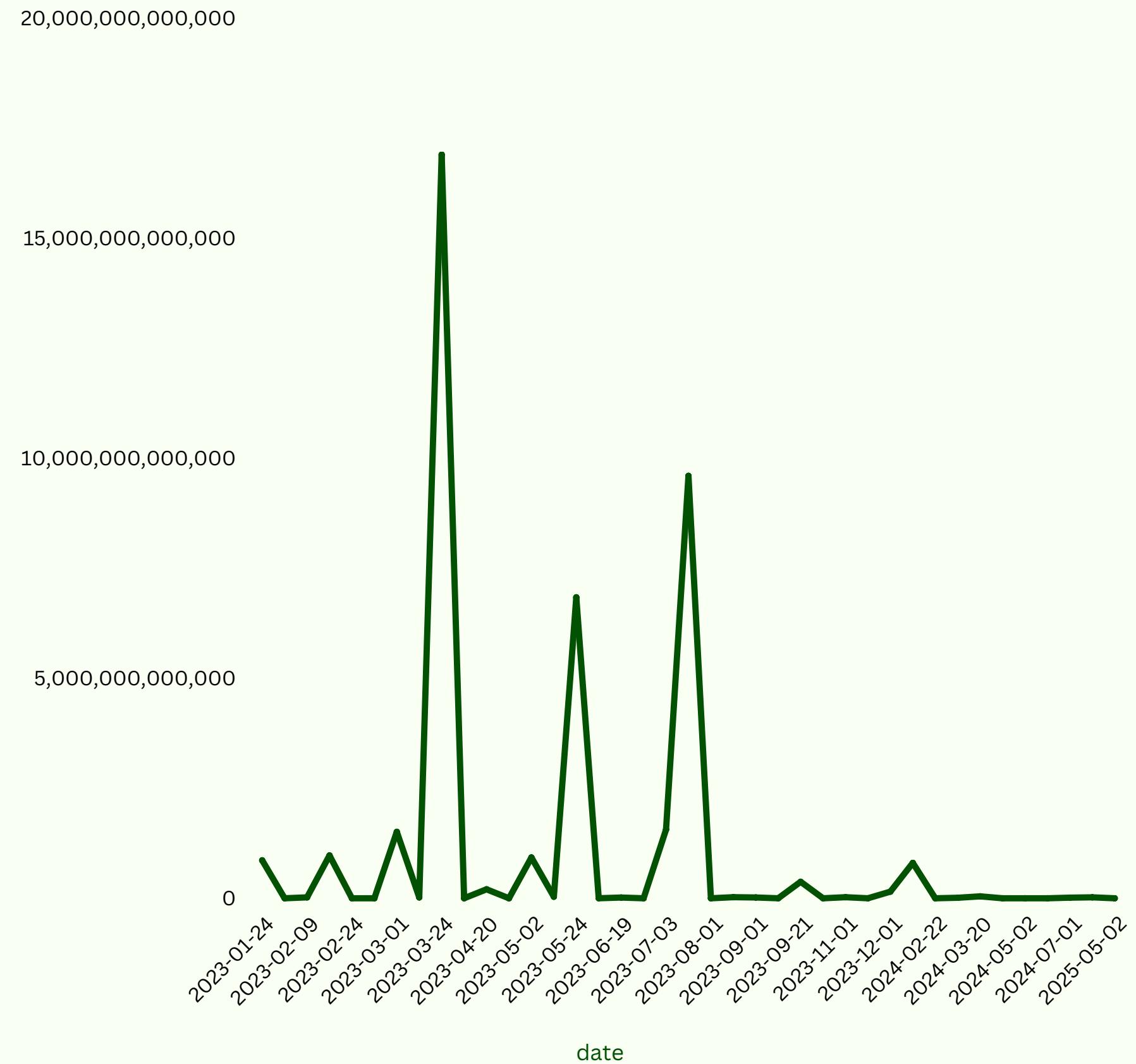


ANALYTICAL INSIGHTS

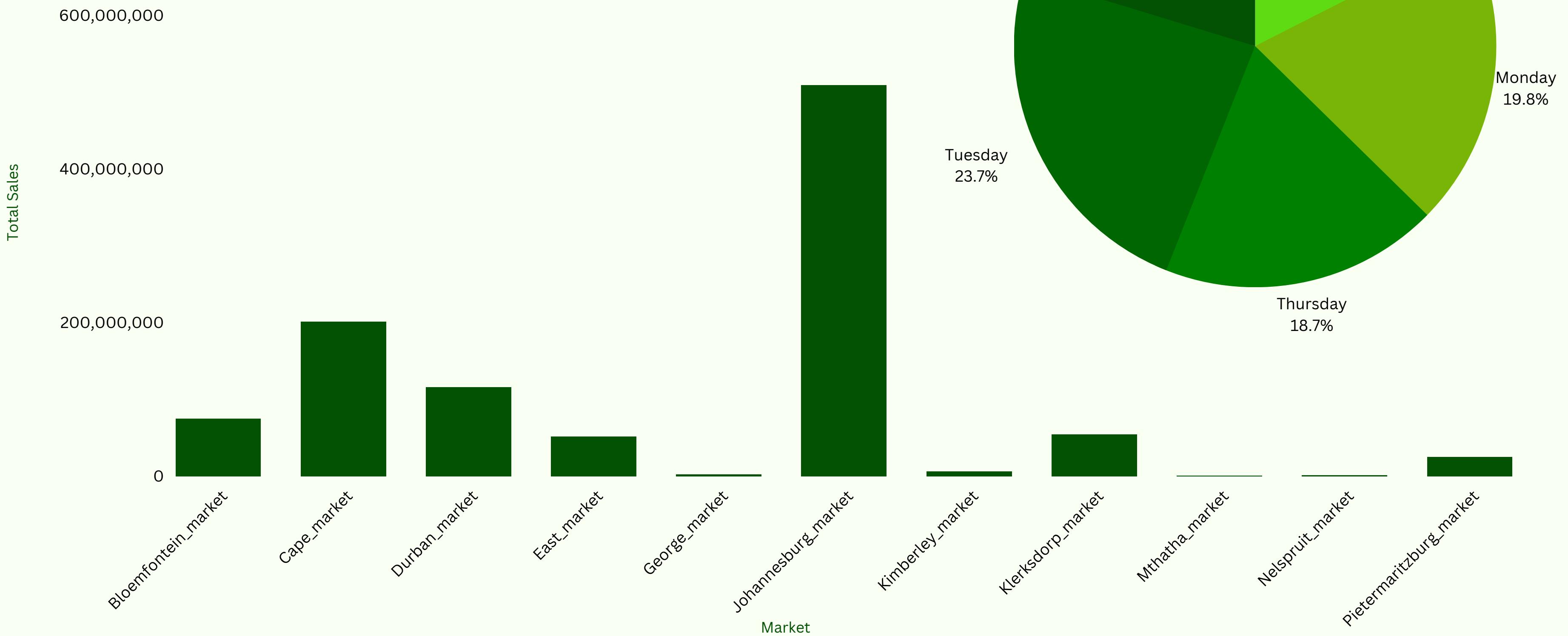
Grain types with the most offer

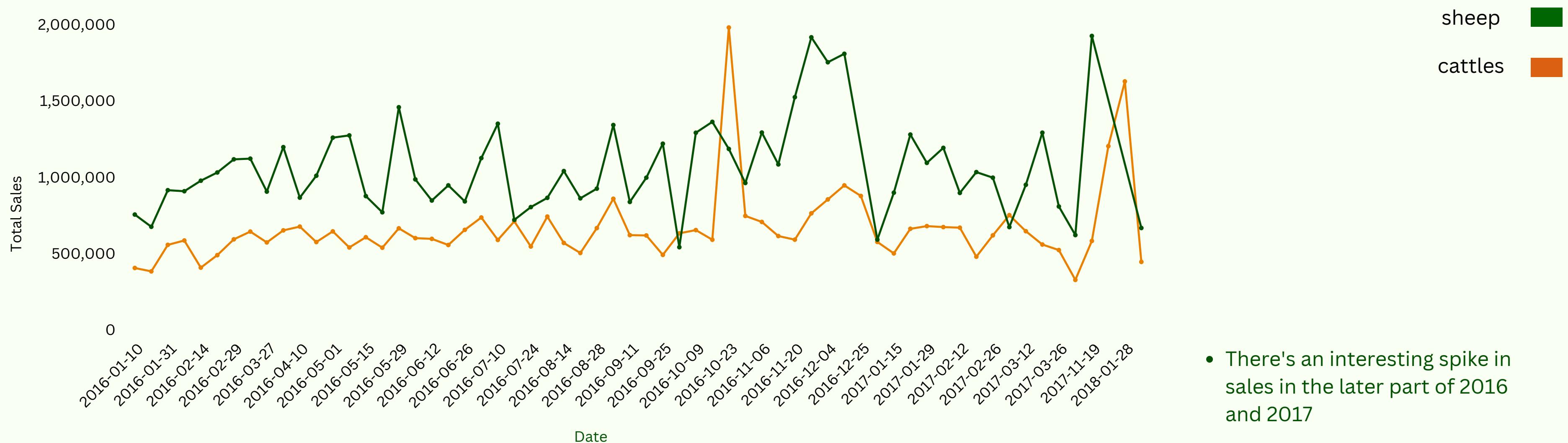


Price trends of Grains over time

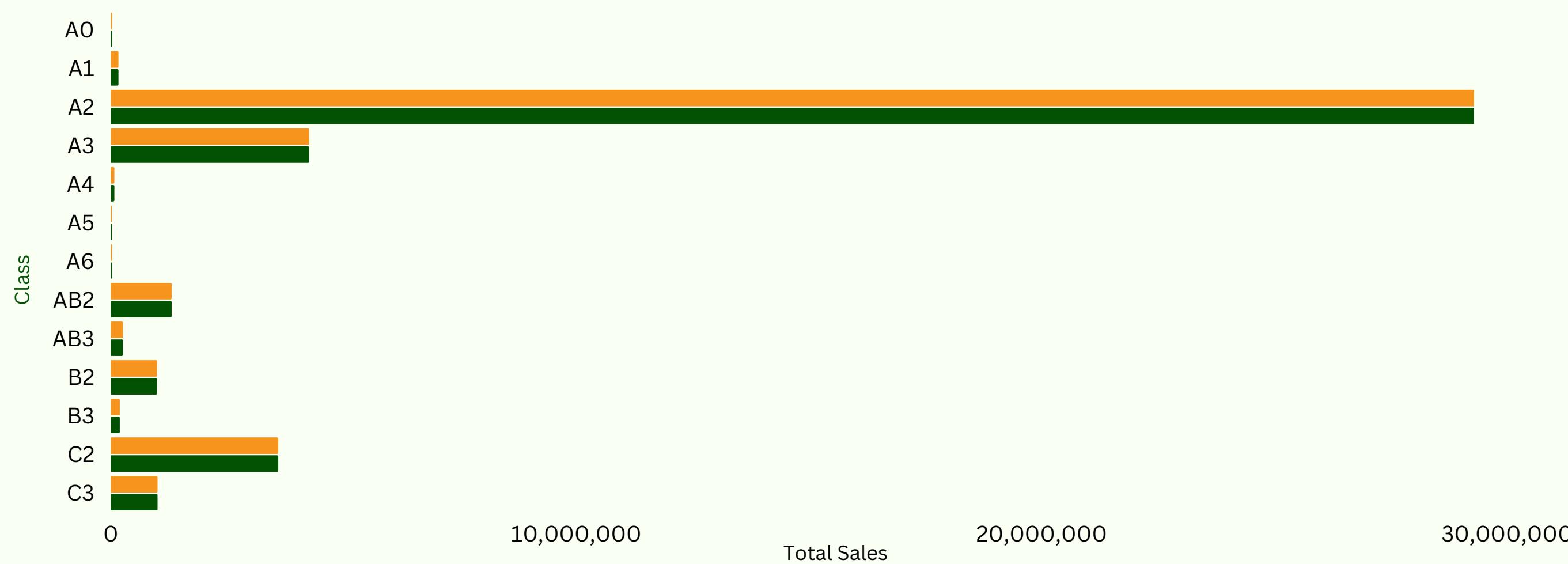


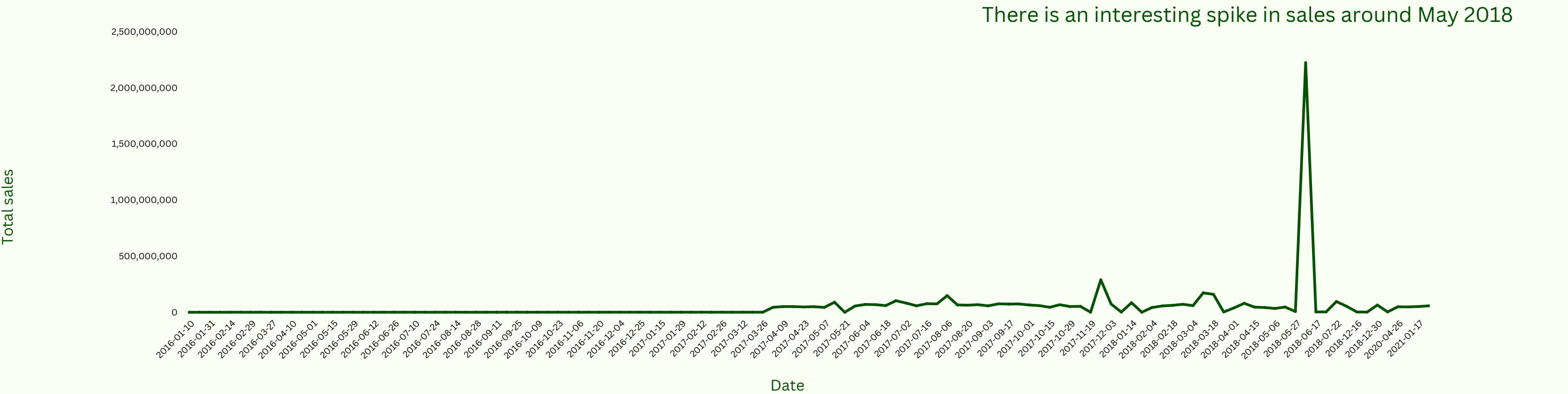
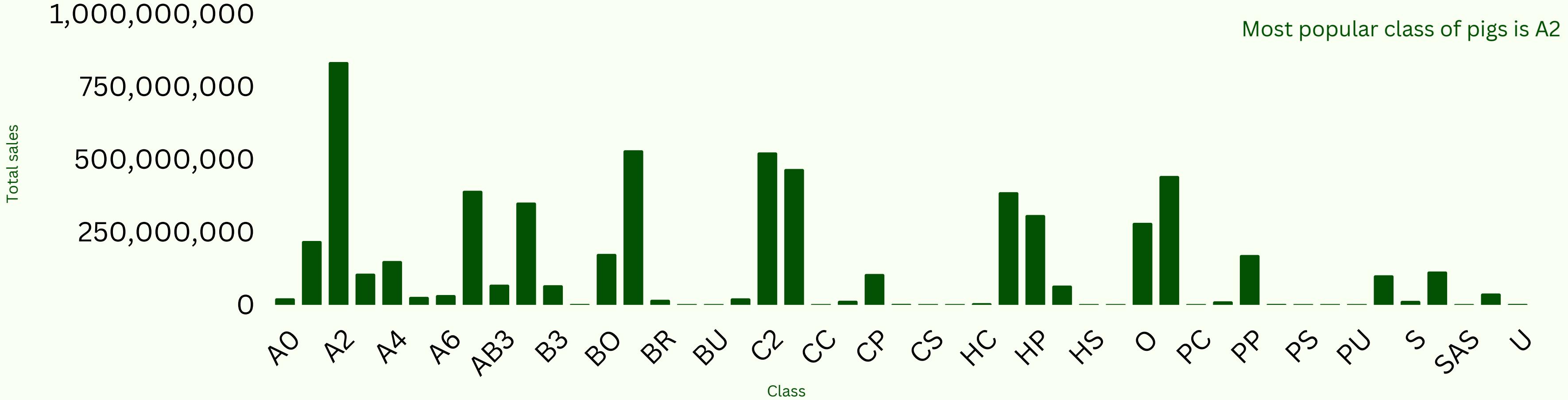
The most popular market horticulture produce is
Johannesburg Market





- There's an interesting spike in sales in the later part of 2016 and 2017
- Class A2 is the most popular class for sheep and cattles.

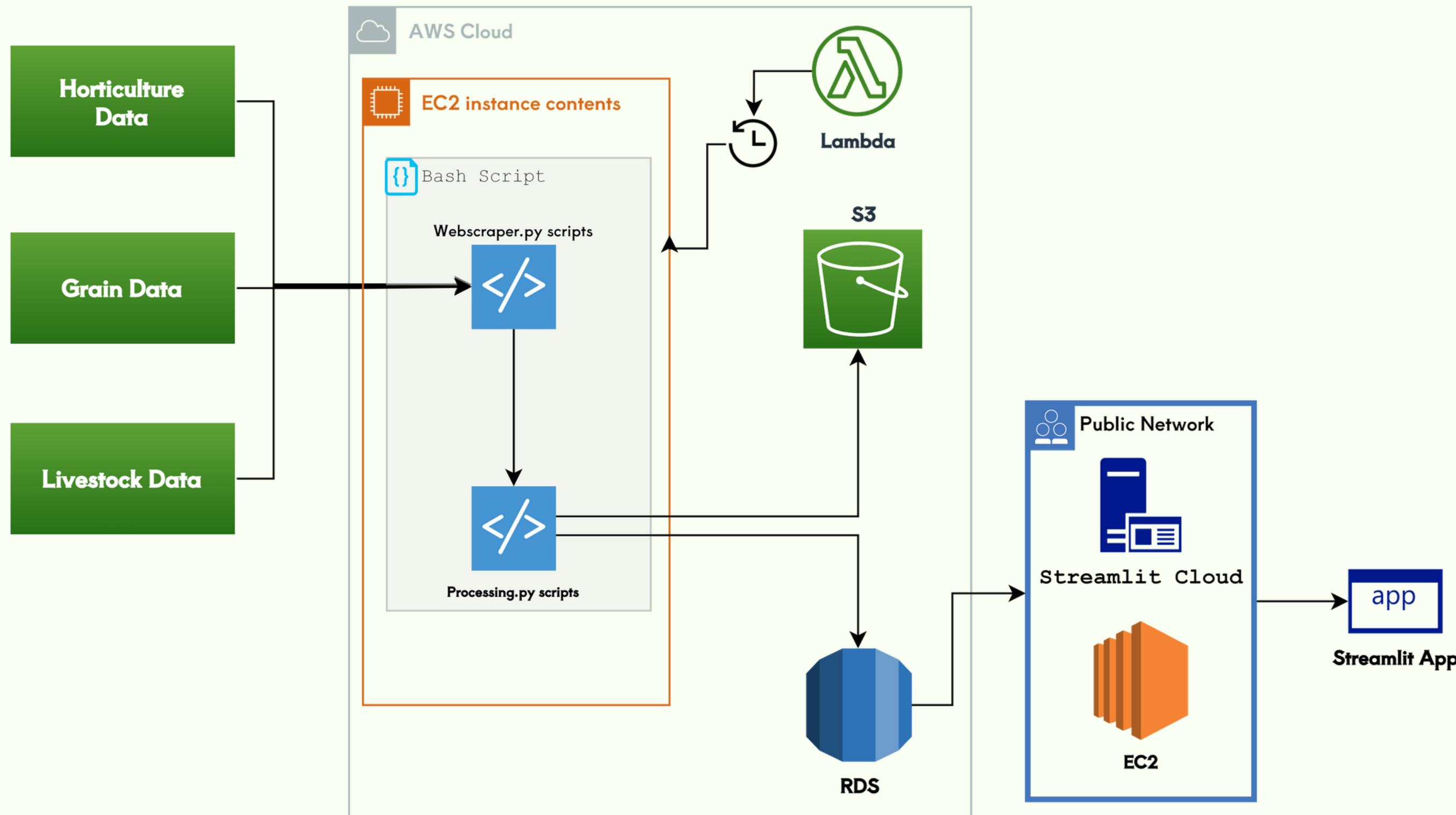




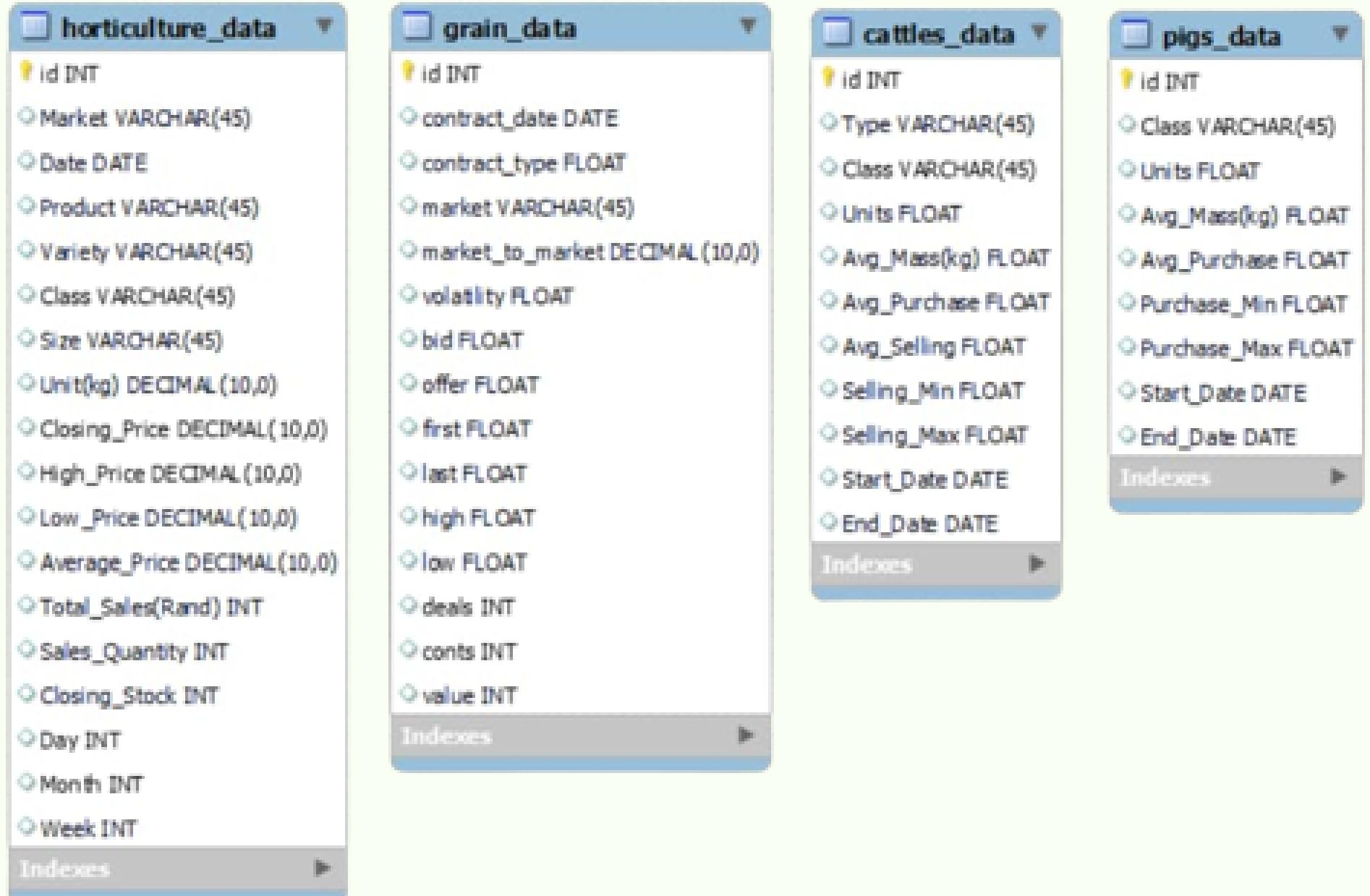


PIPELINE ARCHITECTURE SOLUTION

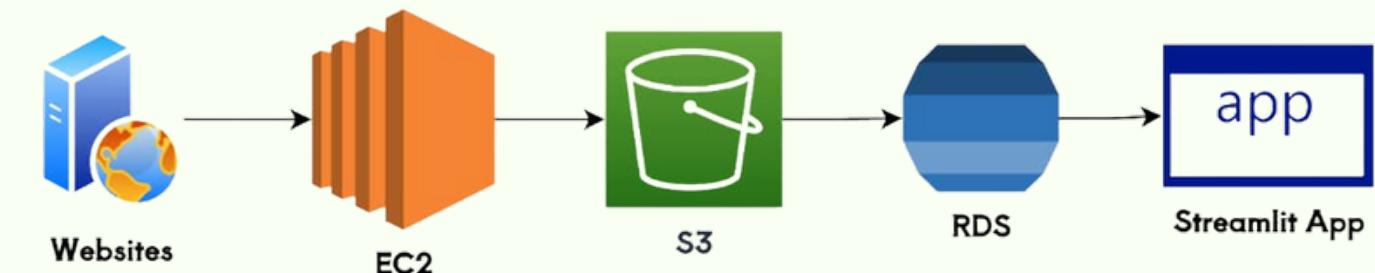
PIPELINE ARCHITECTURE DIAGRAM



• Final RDS MySQL Database EER Diagram



• Pipeline Data Flow



• Pipeline Drawbacks

- **Website Element Structure:** causes scraper scripts to break.
- **Still Pending:** Handling possible Bugs, Pipeline Automation.



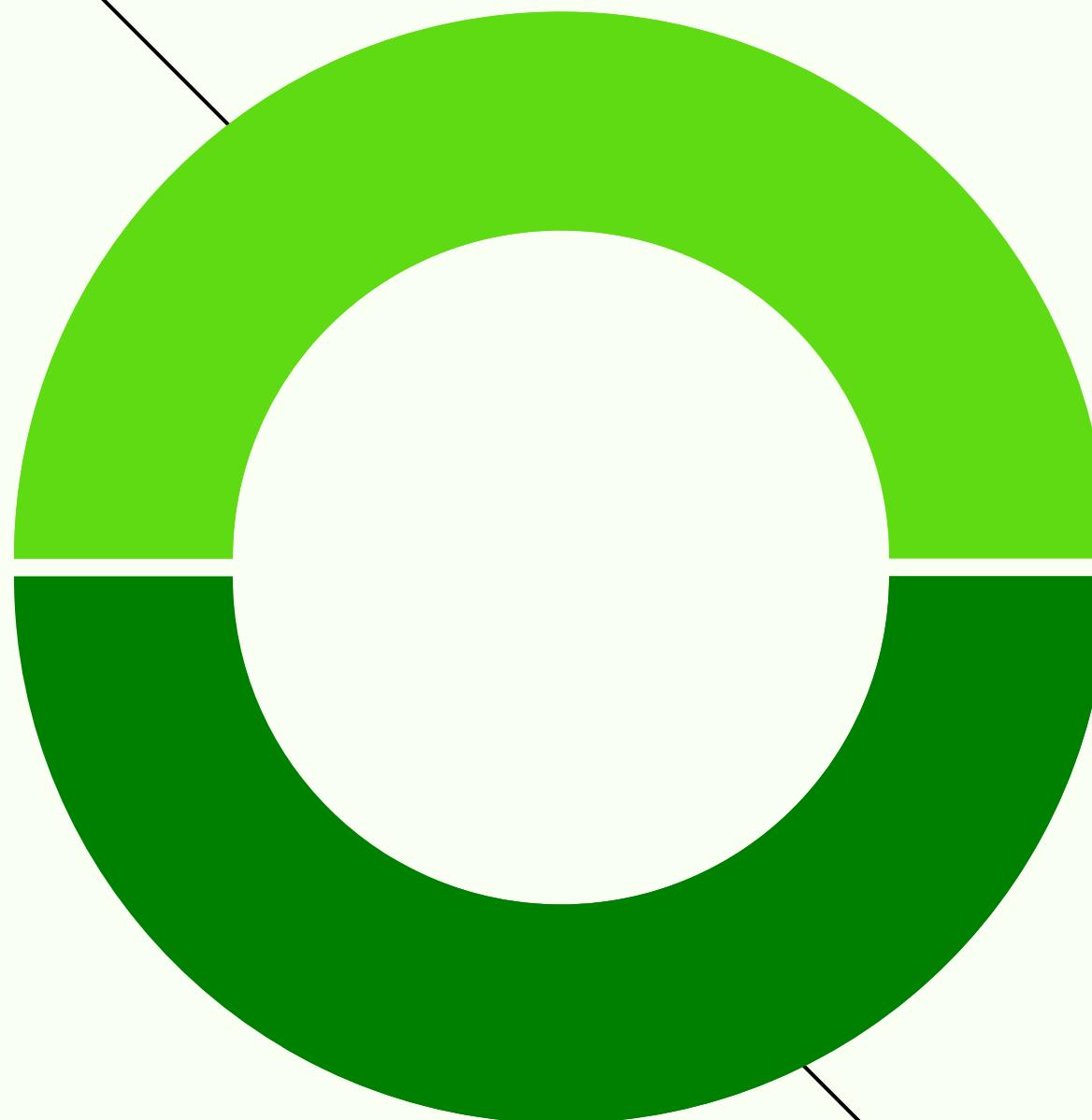
DEMONSTRATIONS



RECOMMENDATIONS

Recommendation

- Improve the dashboard with more insights and visuals
- Introduce machine learning algorithm component



Biggest Accomplishment:

- Creation of a Web Application that display relevant insights and trends

Challenge:

- Team Sync
- Delays in getting some tasks done.

Scope Change:

- None

Progress:

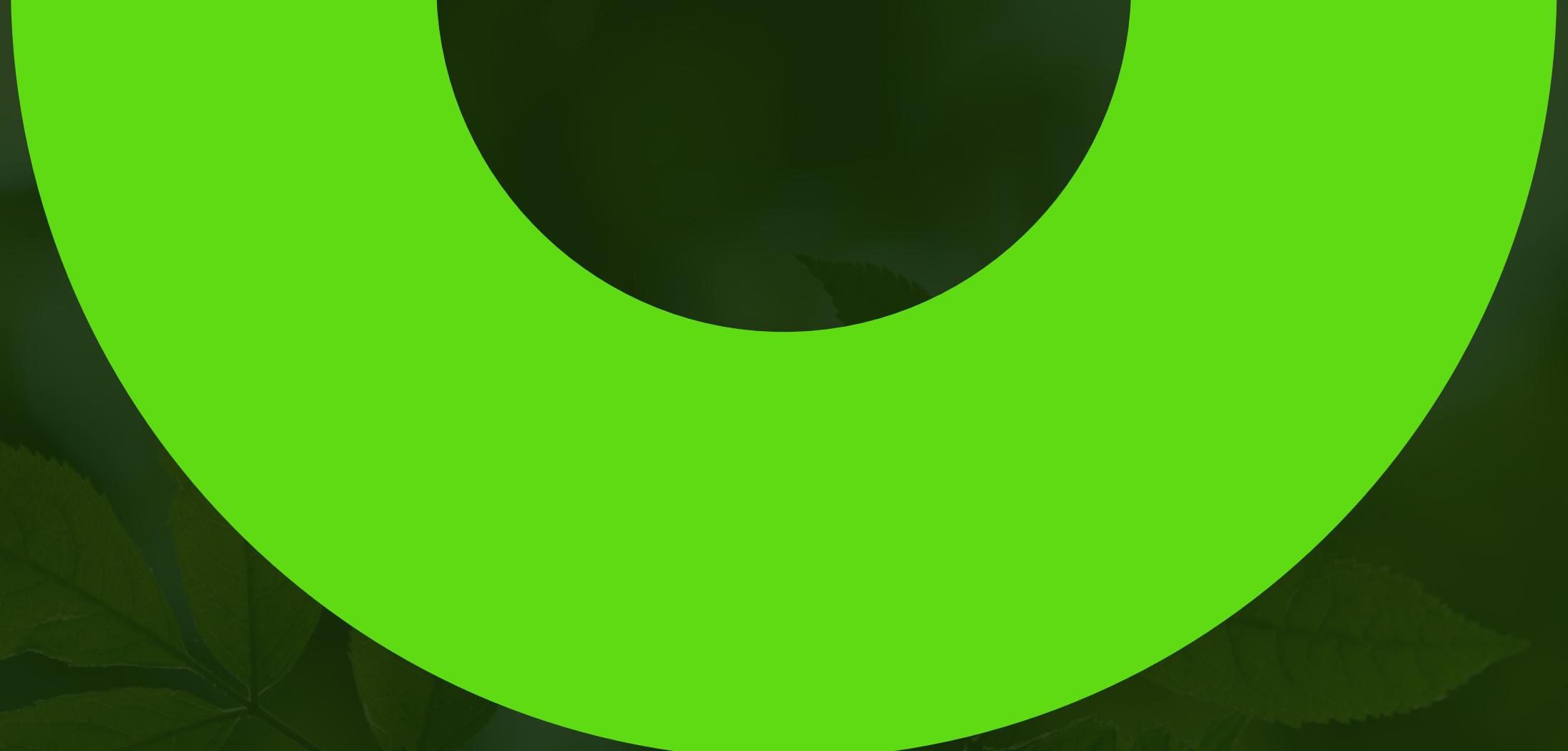
- 97% Complete

Retrospective



QUESTIONS

ALL TECH INC.



THANK YOU