

# Plant Co. Performance Insight 2024

Exploratory Data Analysis (EDA) and Strategic  
Insights

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# Introduction

- Plant Co. specializes in selling indoor, landscape, and outdoor plants.
- This analysis focuses on three key performance metrics:
  - Gross Profit
  - Quantity Sold
  - Sales Revenue.
- The goal is to identify performance trends, problem areas, and recommend strategic improvements.

# Introduction - dataset

- Dataset = Plant\_DTS.xls (<https://github.com/mochen862/power-bi-portfolio-project.git>)
- Key Metrics:
  - Gross Profit (GP): Measures profitability.
  - Quantity Sold: Reflects sales volume.
  - Sales Revenue: Total revenue generated.
- Data Comparison: Year-to-Date (YTD) vs. Previous Year-to-Date (PYTD).

## Gross Profit Performance Overview

- Current YTD Gross Profit: \$1.40M
- Previous YTD Gross Profit: \$1.47M
- YTD vs PYTD Change: -77.62K (-5.3%)
- Gross Profit Margin: 39.15%

YTD

**1.40M**

YTD vs PYTD

**-77.62K**

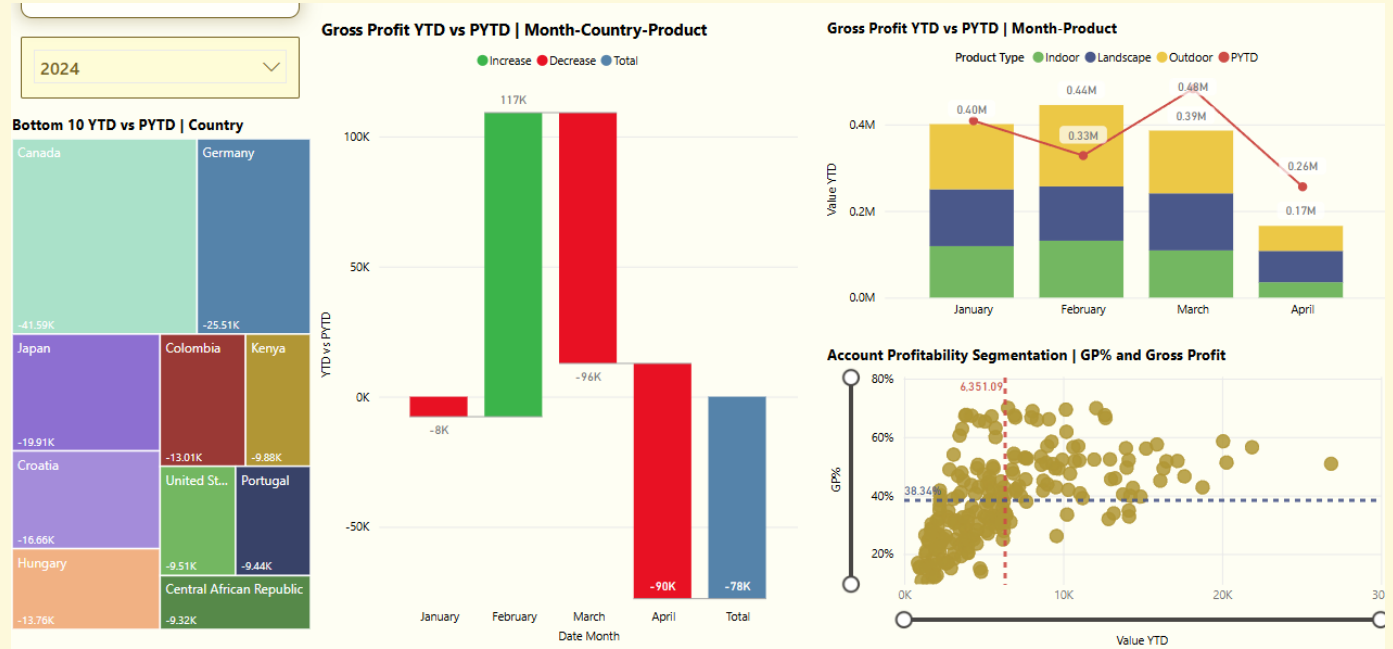
PYTD

**1.47M**

GP%

**39.15%**

# Gross Profit Breakdown



- **The Gross Profit YTD is \$1.40M**, which is \$77.62K lower than PYTD (\$1.47M).
- The biggest negative drop in gross profit occurred in **March (-\$96K)** and **April (-\$90K)**.
- The product category contribution shows that **Indoor, Landscape, and Outdoor products contributed to the total profit**, but their trend fluctuates. March had the highest total gross profit (\$480K), which then significantly dropped in April (\$260K).
- Country-wise losses: The biggest losses in gross profit occurred in **Canada (-\$41.59K)**, **Germany (-\$25.51K)**, and **Japan (-\$19.91K)**. These countries could have faced decreased demand, pricing issues, or economic challenges.

## Quantity Sold Performance

- Current YTD Quantity: 148.47K
- Previous YTD Quantity: 160.84K
- YTD vs PYTD Change: -12.37K (-7.7%)
- Gross Profit Margin (GP%): 39.15%

YTD

**148.47K**

YTD vs PYTD

**-12.37K**

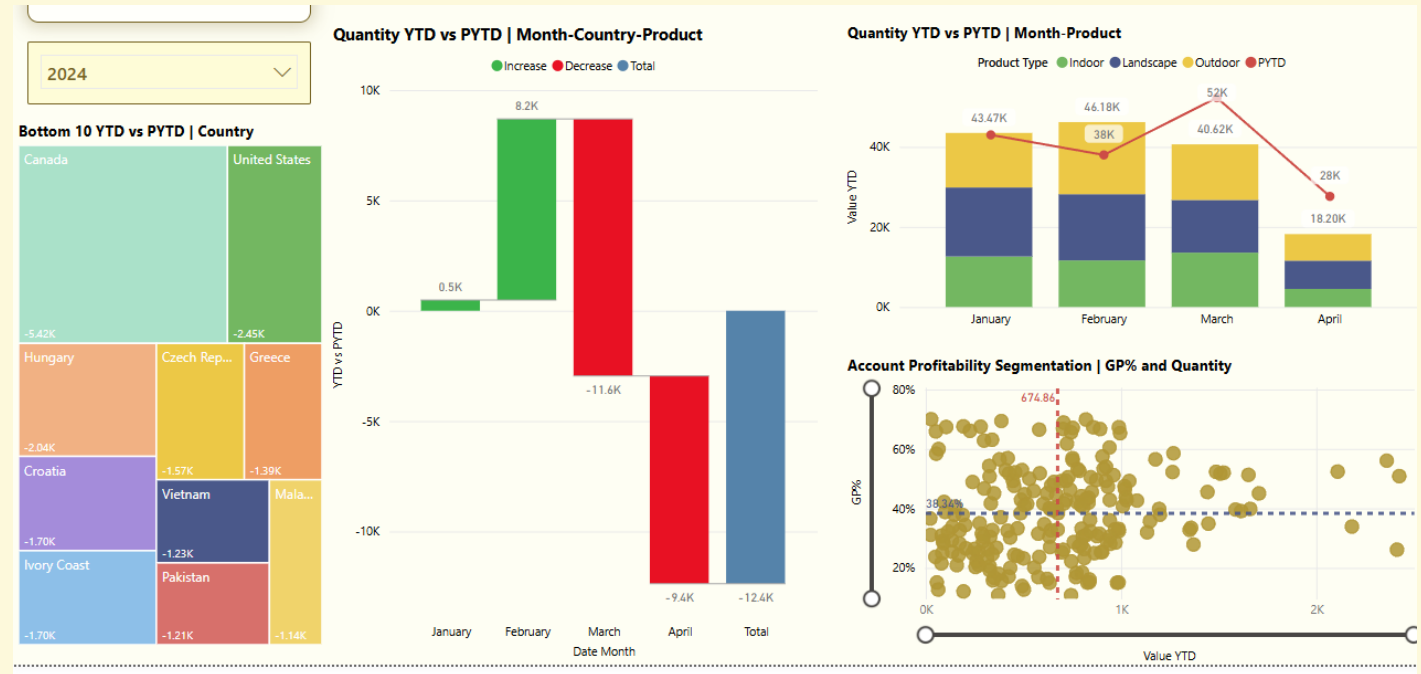
PYTD

**160.84K**

GP%

**39.15%**

# Quantity Sold Breakdown



- The **Quantity YTD** is **148.47K**, which is **12.37K** lower than **PYTD (160.84K)**.
- The **biggest drop** in quantity happened in **March (-11.6K)** and **April (-9.4K)**.
- The product category breakdown follows a similar trend to Gross Profit—**March had the highest quantity sold (~52K)**, followed by a **major dip in April (~28K)**.
- Country-wise losses: **The biggest drops** in quantity were in **Canada (-5.42K)**, **United States (-2.45K)**, and **Hungary (-2.04K)**, meaning these markets might have lower customer demand or distribution issues.

## Sales Revenue Performance

- Current YTD Sales Revenue: \$3.57M
- Previous YTD Sales Revenue: \$3.71M
- YTD vs PYTD Change: -135.89K (-3.7%)
- Gross Profit Margin (GP%): 39.15%

YTD

**3.57M**

YTD vs PYTD

**-135.89K**

PYTD

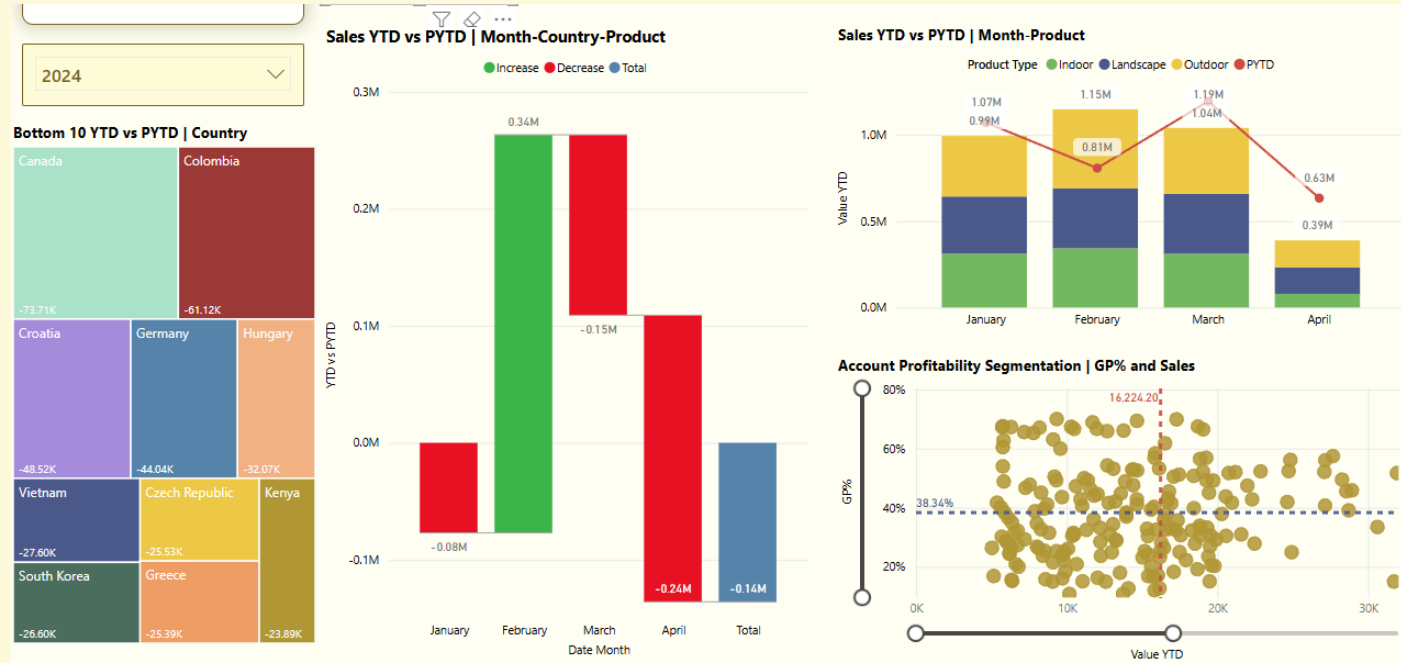
**3.71M**

GP%

**39.15%**



# Sales Revenue Breakdown



- The **Sales YTD** is **\$3.57M**, which is **\$135.89K lower** than **PYTD (\$3.71M)**.
- The **biggest sales decrease** happened in **April (-\$240K)** and **March (-\$150K)**, aligning with declines in gross profit and quantity.
- The product category breakdown shows that **sales peaked in March (\$1.19M)**, but **declined sharply in April (\$630K)**.
- Country-wise losses: The **biggest sales losses** were seen in **Canada (-\$73.7K)**, **Colombia (-\$61.1K)**, and **Croatia (-\$48.5K)**.

# Detailed Breakdown of Key Issues

## 1) March-April Sales & Quantity Drop

- **Observation:** March had the highest performance in both quantity and sales, but April saw a sharp decline.
- **Possible Causes:**
  - **Seasonal Demand Fluctuations:** If Plant Co. sells seasonal products, April might be a low-demand month.
  - **Marketing & Promotion Gaps:** There may have been strong promotions in early Q1 that were not sustained into April.
  - **Supply Chain Disruptions:** Delays in production, logistics, or distribution could have impacted sales fulfillment.
  - **Competitive Pressure:** If competitors launched aggressive campaigns in April, it may have drawn customers away.

# Detailed Breakdown of Key Issues

## 2) Country-Specific Challenges

- **Observation:** Some key markets (Canada, Germany, Japan, Colombia, Croatia) are showing significant declines.
- **Possible Causes:**
  - **Economic Conditions:** Inflation or currency fluctuations may have impacted consumer purchasing power.
  - **Pricing Issues:** Products might be priced too high relative to competitors.
  - **Marketing Ineffectiveness:** Advertising may not be resonating with local customer bases.
  - **Logistical Bottlenecks:** Shipping delays or stock shortages could have led to lower sales.

# Detailed Breakdown of Key Issues

## 3) Gross Profit Decline

- **Observation:** Gross Profit Percentage (GP%) remains stable at 39.15%, but absolute profit has declined.
- **Possible Causes:**
  - **Increased Costs:** Raw materials, production, or logistics expenses may have risen.
  - **Discounting Strategies:** If price reductions were used to stimulate sales, margins may have been impacted.
  - **Shift in Product Mix:** Lower-margin products may be making up a higher percentage of sales.

# Strategic Recommendations for Improvement

## 1) Revive Sales & Quantity Growth Post-March Decline

- **Launch an April-May Sales Campaign:**
  - Offer targeted promotions or discounts on underperforming product categories.
  - Use email and social media campaigns to re-engage past customers.
- **Optimize Stock Availability:**
  - Check inventory levels to ensure high-demand products are well-stocked in Q2.
  - Identify slow-moving products and consider bundling strategies.
- **Competitor Benchmarking:**
  - Analyze competitor pricing and promotional activities to stay competitive.

# Strategic Recommendations for Improvement

## 2) Improve Country-Specific Performance

- **Canada, Germany, Japan, Colombia, and Croatia:**
  - **Reassess Pricing Strategies:** If the issue is price sensitivity, consider localized discounts or price adjustments.
  - **Strengthen Local Partnerships:** Work with local distributors or retailers to improve reach.
  - **Boost Digital Marketing:** Run geo-targeted ads and campaigns tailored to these regions.
- **Re-engage Customers in Declining Markets:**
  - Use past customer data to send personalized offers.
  - Introduce a loyalty rewards program to encourage repeat purchases.

# Strategic Recommendations for Improvement

## 3) Optimize Gross Profit & Cost Efficiency

- **Cost Control Measures:**
  - Negotiate better rates with suppliers to reduce production costs.
  - Optimize shipping logistics to cut delivery expenses.
- **Increase High-Margin Product Sales:**
  - Identify top profit-generating products and promote them more aggressively.
  - Offer upsell and cross-sell bundles to increase the average order value.
- **Minimize Unnecessary Discounts:**
  - If discounts are hurting profits, introduce tiered pricing instead (e.g., bulk discounts for larger purchases).

# Conclusion

- Sales and profitability have declined compared to last year.
- Major declines observed in March and April across all metrics.
- Key improvement areas: Market expansion, targeted promotions, cost optimization.
- Data-driven strategies are required to drive growth and profitability.