Vegetable Sales Dashboard – Data Model Documentation

1. Tables Overview

Table1 – Product Details
Contains the master information of each vegetable item.
Columns:
• Category Code
• Category Name
• Item Code
• Item Name

Table3 – Sales Data (Fact Table)
Contains daily transactional sales data.
Columns:
• Date
• Time
• Item Code
• Quantity Sold (kilo)
• Unit Selling Price (RMB/kg)

Table4 – Wholesale Data
Contains purchase or wholesale cost details for each product and date.
Columns:
• Date
• Item Code
• Wholesale Price (RMB/kg)

Table5 – Loss Rate Data
Contains loss-related information for each product (spoilage, wastage, etc.).
Columns:
• Item Code
• Item Name
• Loss Rate (%)

2. Relationships Between Tables

• Table1[Item Code] → Table3[Item Code]
• Table1[Item Code] → Table4[Item Code]
• Table1[Item Code] → Table5[Item Code]
• Table3[Date] → Table4[Date]

This model follows a Star Schema, where Table3 (Sales) acts as the central fact table, and the other tables (Product, Wholesale, and Loss Rate) serve as dimension tables.

3. Key Calculations and Measures (DAX)

Sales Performance Measures:

- Total Sales = SUMX(Table3, Table3[Quantity Sold (kilo)] * Table3[Unit Selling Price (RMB/kg)])
- Total Quantity = SUM(Table3[Quantity Sold (kilo)])
- Average Selling Price = AVERAGE(Table3[Unit Selling Price (RMB/kg)])
- Total Cost = SUMX(Table4, Table4[Wholesale Price (RMB/kg)] * Table3[Quantity Sold (kilo)])
- Profit per Unit = [Average Selling Price] - [Average Cost per Unit]
- Total Profit = [Total Sales] - [Total Cost]

Loss and Markup Measures:

- Loss Value = [Total Cost] * (AVERAGE(Table5[Loss Rate (%)]) / 100)
- Net Profit After Loss = [Total Profit] - [Loss Value]
- Markup Value = [Total Sales] - [Total Cost]
- Markup % = DIVIDE([Markup Value], [Total Cost], 0)
- Profit Margin % = DIVIDE([Net Profit After Loss], [Total Sales], 0)

Time Intelligence Measures (If a Calendar table is added later):

- Sales of Last Year = CALCULATE([Total Sales], SAMEPERIODLASTYEAR(Calendar[Date]))
- Profit of Last Year = CALCULATE([Total Profit], SAMEPERIODLASTYEAR(Calendar[Date]))

4. Notes

Assumptions:

- All tables contain consistent and complete Item Codes.
- Date formats are standardized across all tables.
- Loss Rate (%) applies uniformly to all quantities sold for a given item.

Transformations:

- Created calculated columns for Total Sales, Profit, and Loss Values.
- Established key relationships on Item Code and Date fields.

Schema Type:

Star Schema — optimized for Power BI reporting and DAX calculations.

5. Data Model Diagram