SUPER MARKET SALES DATA ANALYSIS

Our project focused on analyzing supermarket sales data using Excel.

We used various Excel functions and tools to extract specific information, perform calculations, and organize data effectively.

Excel proved to be an invaluable tool for tasks ranging from data sorting to sales trend forecasting.

This project highlighted the importance of data analysis skills in today's data-driven world.

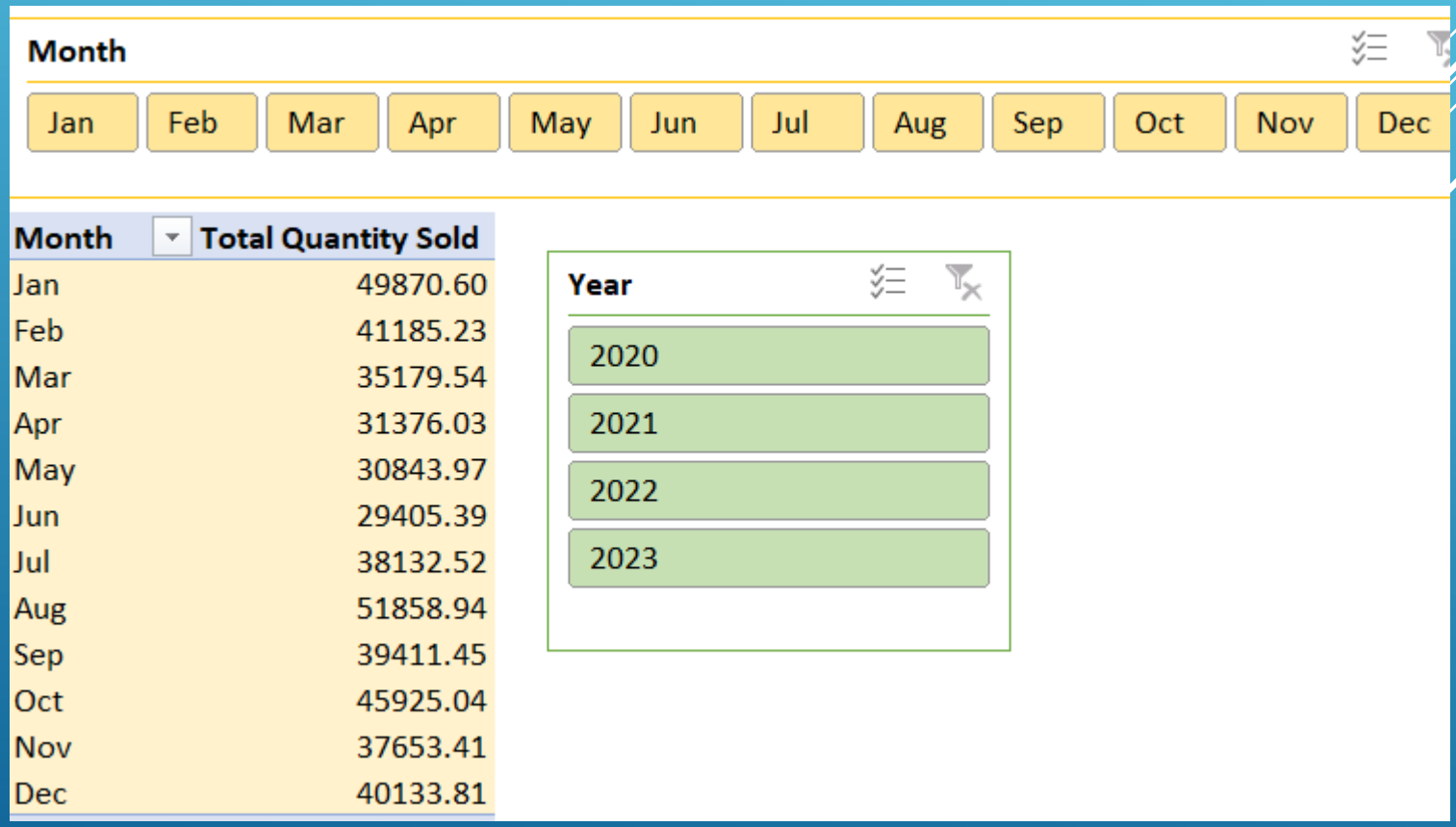
By analyzing supermarket sales data, we aim to uncover valuable insights for informed decision-making in the retail industry.

AAKASH SHARMA

1. Calculate the average "Unit Selling Price (RMB/kg)" for each category and display the results in a separate table.

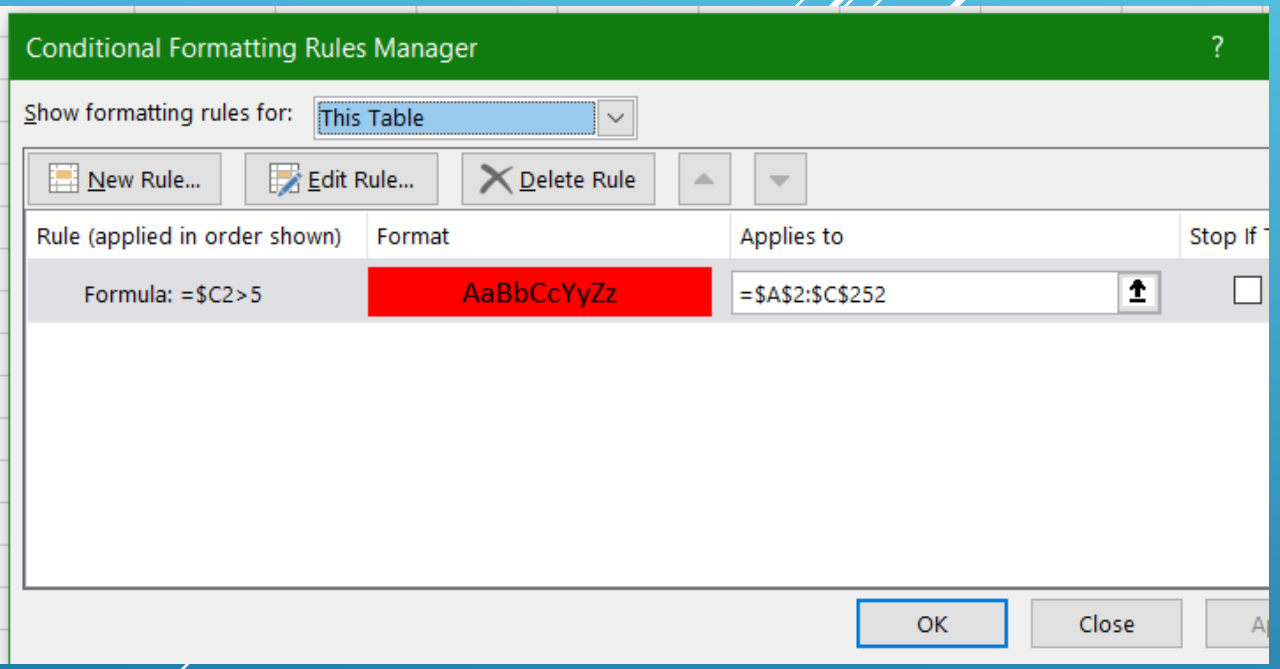
Category Name	Average of Unit Selling Price (RMB/kg)
Aquatic Tuberous Vegetables	9.69
Cabbage	9.14
Capsicum	10.58
Edible Mushroom	12.04
Flower/Leaf	6.32
Solanum	8.70

2. Create a pivot table that shows the total quantity sold for each Item in each month. Add a slicer for easy filtering by month.

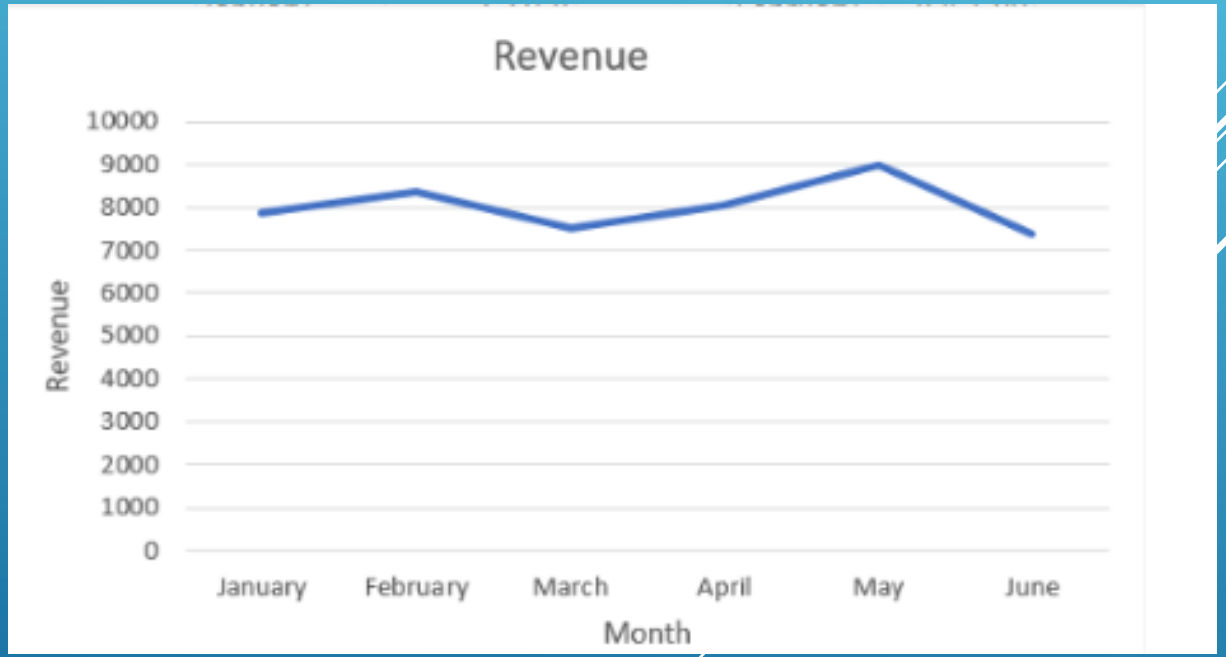


3. Use Excel's conditional formatting to highlight cells with a "Loss Rate (%)" greater than 5%

Item Code	Item Name	Loss Rate (%)
102900005115168	Niushou Shengcai	4.39
102900005115199	Sichuan Red Cedar	10.46
102900005115250	Xixia Black Mushroom (1)	10.8
102900005115625	Local Xiaomao Cabbage	0.18
102900005115748	White Caitai	8.78
102900005115762	Amaranth	18.52
102900005115779	Yunnan Shengcai	15.25
102900005115786	Zhuyecai	13.62
102900005115793	Chinese Cabbage	7.59
102900005115816	Nanguajian	13.46
102900005115823	Shanghaiqing	14.43
102900005115854	Radish Leaves	5.35
102900005115861	Niushou Youcai	12.17
102900005115878	Garden Chrysanthemum	6.27
102900005115885	Caidian Quinoa Artemisia	0.47



4. Calculate the total revenue for a specific item over the past six months. Create a line chart to visualize the revenue trend.



5. Use the SUMPRODUCT function to calculate the total revenue for a specific category.

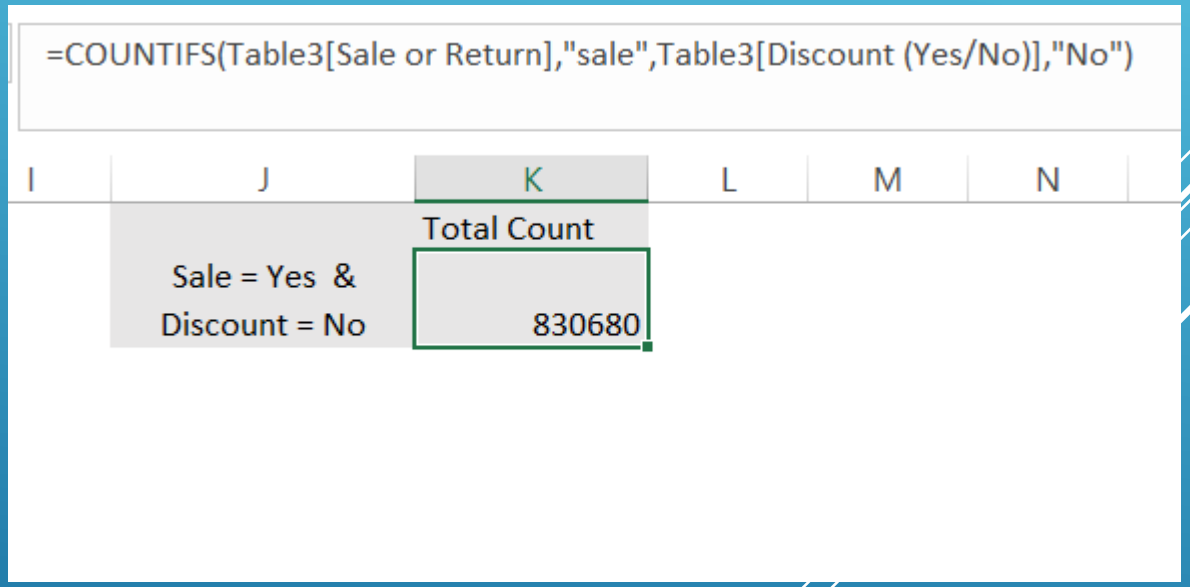
```
=SUMPRODUCT((Sheet6!$D4:$D253=H4)*(Sheet8!$C4:$C253))
```

Category Name	Total Revenue
Aquatic Tuberous Vegetables	$104.36
Cabbage	$38.98
Capsicum	$287.01
Edible Mushroom	$433.56
Flower/Leaf	$622.28
Solanum	$66.37

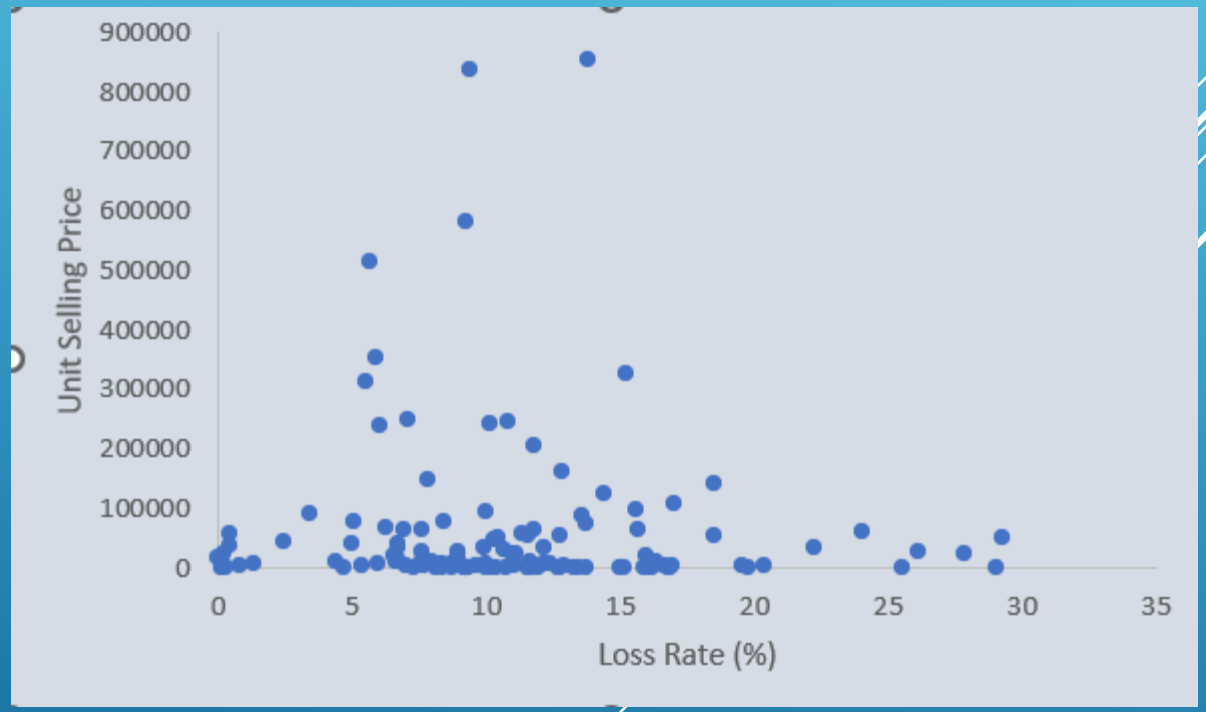
6. Calculate the profit margin for each item, considering the "Unit Selling Price" and "Wholesale Price (RMB/kg)." Display the results in a new column.

Item Name	Sum of Unit Selling Price (RMB/kg)	Sum of Wholesale Price (RMB/kg)	Profit Margin
7 Colour Pepper (1)	18303.5	6392.32	65%
7 Colour Pepper (2)	25430.9	3376.06	87%
7 Colour Pepper (Bag)	91	33.45	63%
Agaricus Bisporus (Bag)	79.8	17.02	79%
Agaricus Bisporus (Box)	22624.6	1350.03	94%
Aihao	112	13.26	88%
Amaranth	52229.4	2657.83	95%
Amaranth (Bag)	1168.3	87.94	92%
Apricot Bao Mushroom (1)	76613.1	4721.08	94%
Apricot Bao Mushroom (2)	59498.7	2262.13	96%
Apricot Bao Mushroom (250 G)	49	24.99	49%
Apricot Bao Mushroom (Bag)	7377.9	1684.82	77%
Artemisia Stelleriana	392.4	248.54	37%
Basil (Bag)	148.9	50.96	66%
Bell Pepper (1)	8515.2	2856.89	66%
Bell Pepper (2)	4615.3	859.88	81%
Bell Pepper (Bag)	16.5	7.56	54%
Big Broccoli	38	12.92	66%
Black Chicken Mushroom	3671.2	1004.58	73%
Black Chicken Fir Bacteria (Box)	69.3	46.45	33%

7. Use the COUNTIFS function to count the number of transactions where both "Sale or Return" is "Yes" and "Discount" is "No."



8. Create a scatter plot to explore the relationship between "Loss Rate (%)" and "Unit Selling Price (RMB/kg)" for all items.



9. Calculate the total quantity sold for each item that had a discount applied. Compare it with items without discounts.

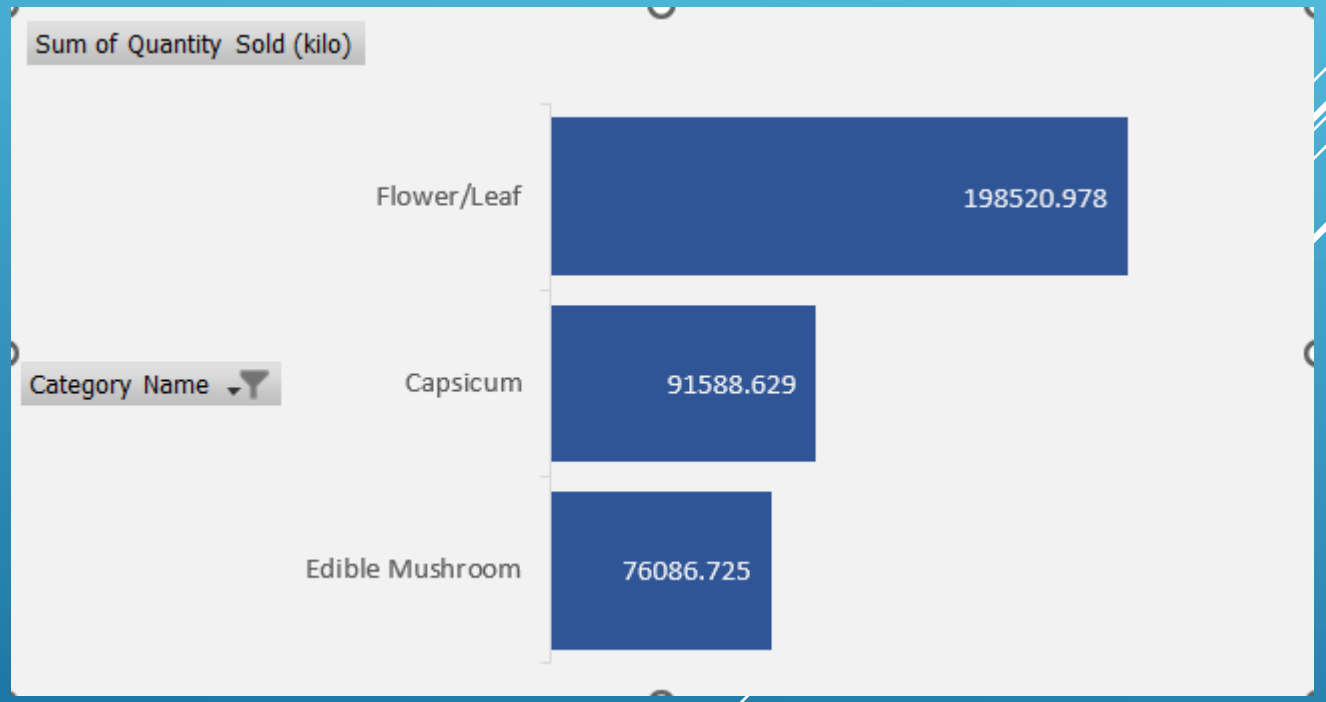
Sum of Quantity Sold (kilo)	Discount (Yes/No)	
Item Name	No	Yes
7 Colour Pepper (1)	259.639	3.553
7 Colour Pepper (2)	313.632	56.401
7 Colour Pepper (Bag)	17	1
Agaricus Bisporus (Bag)	8	2
Agaricus Bisporus (Box)	3385	844
Aihao	10.512	
Amaranth	5047.603	52.458
Amaranth (Bag)	302	124
Apricot Bao Mushroom (1)	2367.83	37.147
Apricot Bao Mushroom (2)	910.676	393.876
Apricot Bao Mushroom (250 G)	10	
Apricot Bao Mushroom (Bag)	1412	33
Artemisia Stelleriana	1.509	0.715
Basil (Bag)	35	5
Bell Pepper (1)	208.569	3.474
Bell Pepper (2)	73.174	3.422
Bell Pepper (Bag)	5	1
Big Broccoli	1.246	6.234
Black Chicken Mushroom	5.655	0.14
Black Chicken Fir Bacteria (Box)	3	1
Black Mushroom (Bag)	3	
Black Porcini	0.446	0.638

10. Use the AVERAGEIF function to find the average "Loss Rate (%)" for items in a specific category.

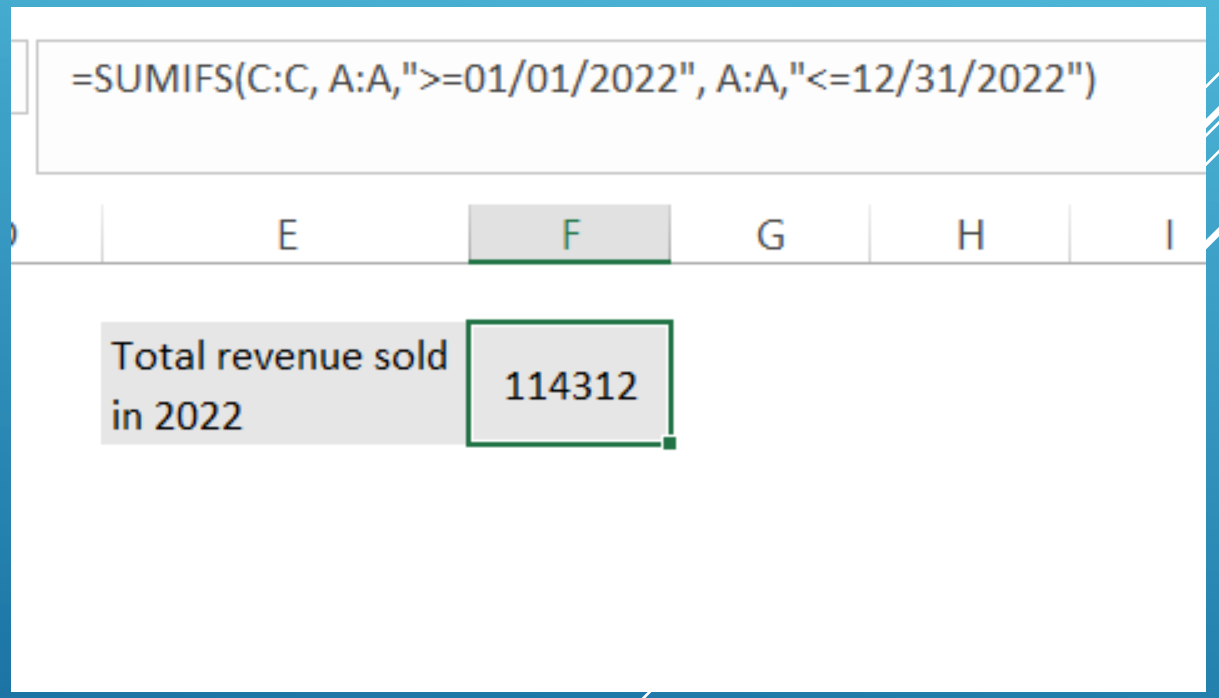
```
=AVERAGEIF(Table1[Category Name],'Annex 4'!F3,Table7[Loss Rate (%)])
```

Category Name	Avg. (Loss Rate)
Aquatic Tuberous Vegetables	9.44
Cabbage	9.17
Capsicum	8.00
Edible Mushroom	8.30
Flower/Leaf	11.16
Solanum	6.75

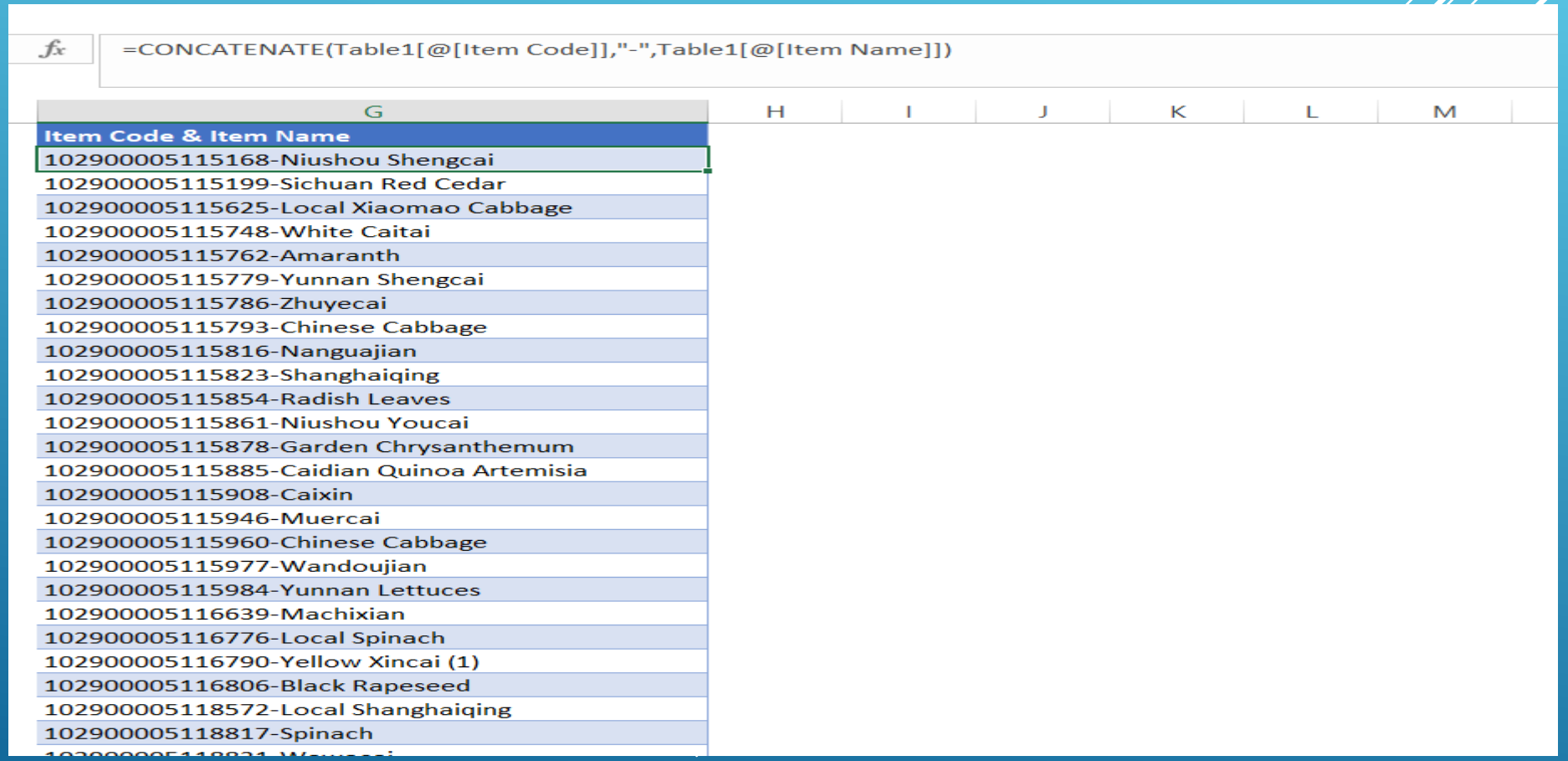
11. Create a bar chart to compare the total quantity sold for the top three categories.



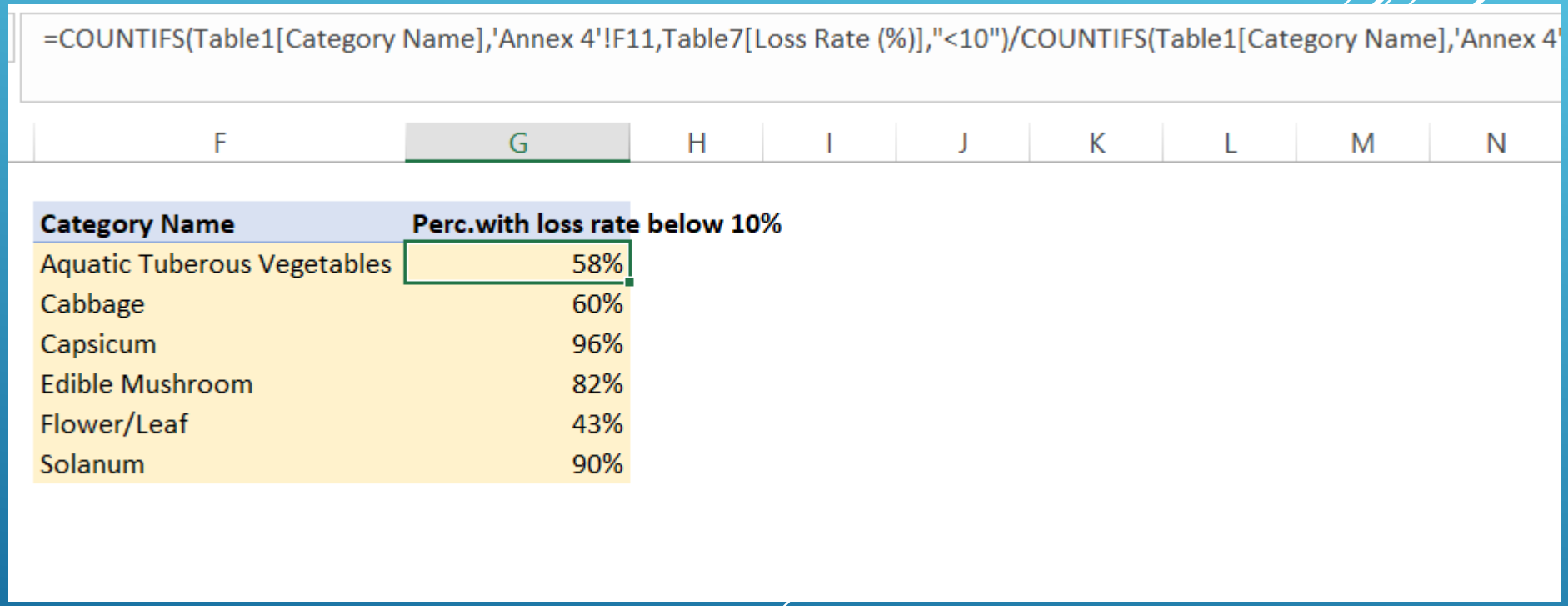
12. Calculate the total revenue for items sold in 2022. Use the SUMIFS function to filter by date.



13. Use the CONCATENATE function to combine "Item Code" and "Item Name" into a single cell.



14. Calculate the percentage of items with a "Loss Rate (%)" below 10% for a specific category.



15. Utilize Excel's What-If Analysis tools to analyze how a change in "Unit Selling Price" affects total revenue for a chosen item.