SPREADSHEETS FOR MARKETING & SALES TRACKING - DATA ANALYSIS TOOLS USING MS EXCEL

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Objectives

By the end of the session, participants should be able to:

a) Identify Ms Excel tools used for data analysis

b) Analyze data using the tools

Ms Excel for Data Analysis

- Ms Excel provides powerful tools that for data analysis which include:

  a) **Sort:** Help to arrange data in either ascending or descending order. You can sort your data on one column or multiple columns

  b) **Filter:** This is a tool used to display records that meet a certain criteria

  c) **Conditional Formatting:** Conditional formatting enables one to highlight cells with a certain color, depending on the cell's value.

Ms Excel for Data Analysis

d) **Charts:** Enables one to present data in graphical form

e) **Pivot Tables:** A pivot table allows one to extract the significance from a large, detailed data set. It enables one to view data in summarized form which enable one to draws a meaning from the data

f) **Tables:** Tables allow one to analyze data quickly and easily.

Ms Excel for Data Analysis

g) **What-If Analysis:** What-If Analysis in allows one to try out different values (scenarios) for formulas and predict the possible outcomes based on different scenarios

h) **Solver**: This tool uses techniques from the operations research to find optimal solutions for all kind of decision problems

i) **Analysis ToolPak:** The Analysis ToolPak is an Excel add-in program that provides data analysis tools for financial, statistical and engineering data analysis.

Sort

- Steps:

i. With an open worksheet, click inside the data that you want to sort

ii. Click on data tab

iii. Click on sort from the data ribbon

iv. The sort dialog box below appear;

Sort
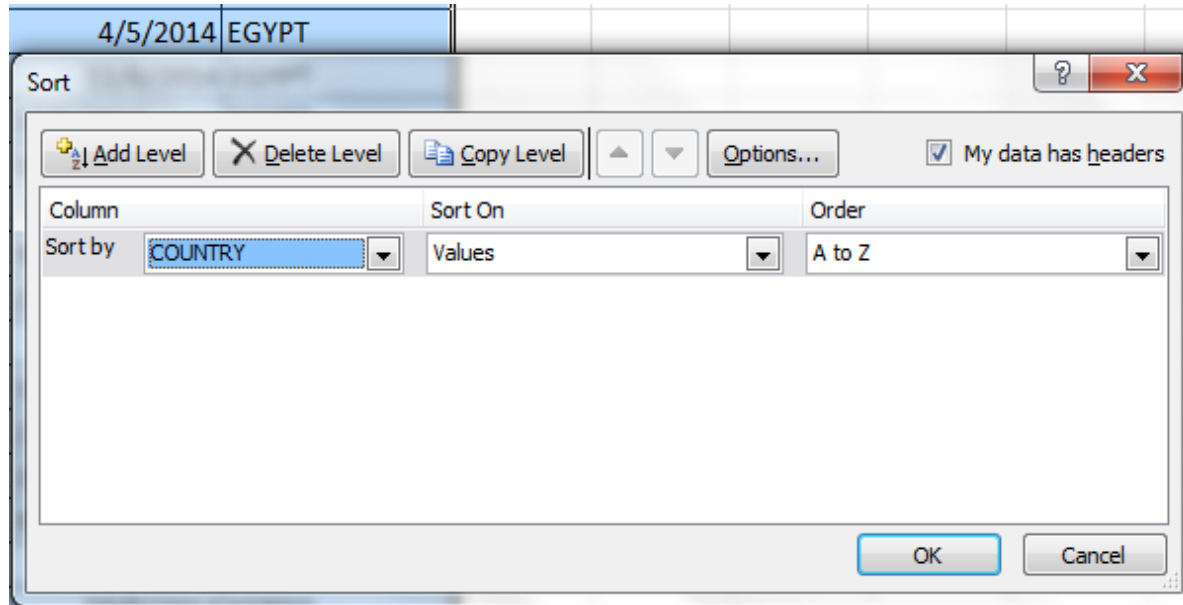
v. Select the field to sort by

vi. Select the order to sort by

vii. Click Ok

Filter

- One can do simple filter or advanced filter
- Steps for simple filter:

i.   Click inside the data you want to filter

ii. Click on the data table

iii. Click on filter under sort & filter group

iv. Click on the drop arrow next to the field you want to filter by

v.   Select the field to filter by

vi. Click Ok

NB: Click on filter under sort & filter group again to clear the filter arrows

Filter

Filter

Steps for Advanced filter:

i. Set the criteria range in two cells on adjacent rows using a field name and the condition

ii. Click inside the worksheet

iii. Click on data tab

iv. Click on advanced filter under sort & filter group to display the dialog box below;

Filter

v.   Select the list range and the criteria range

vi. You can copy the filtered data in another location within the same sheet or a different sheet by choosing the copy to another location option on the dialog box
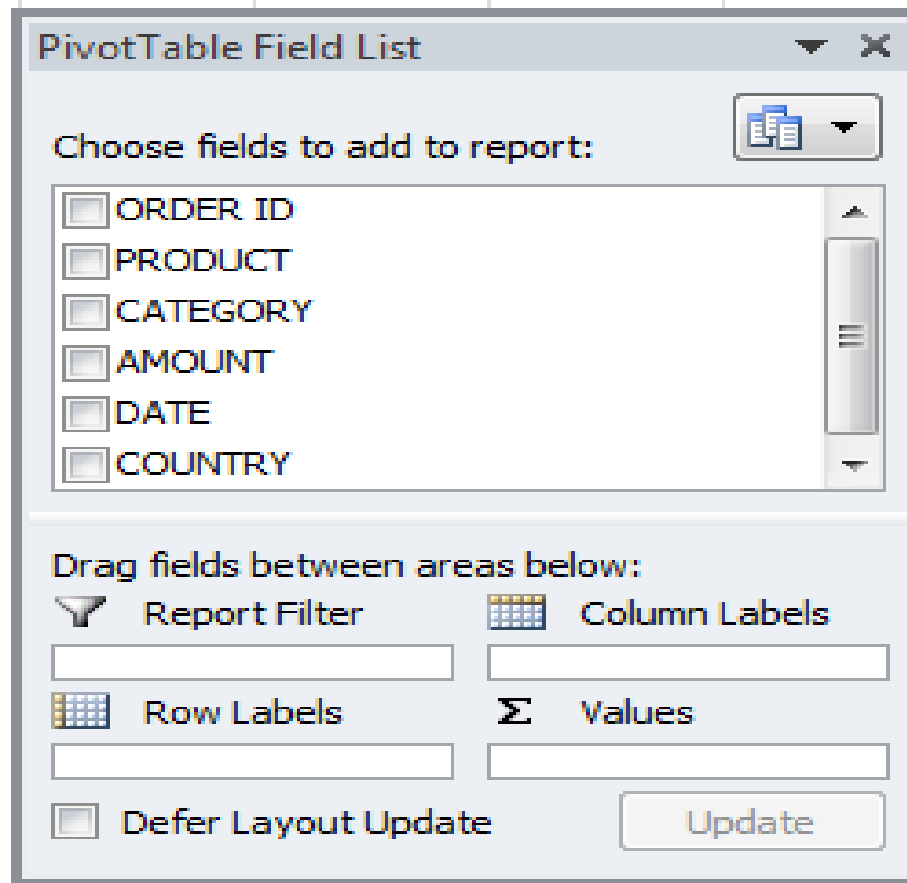
vii. Click Ok

PivotTables

Steps:

i.   Click on insert tab

ii. Click on pivot tables from the ribbon

iii. The create PivotTable dialog box below appears;

iv. Click Ok
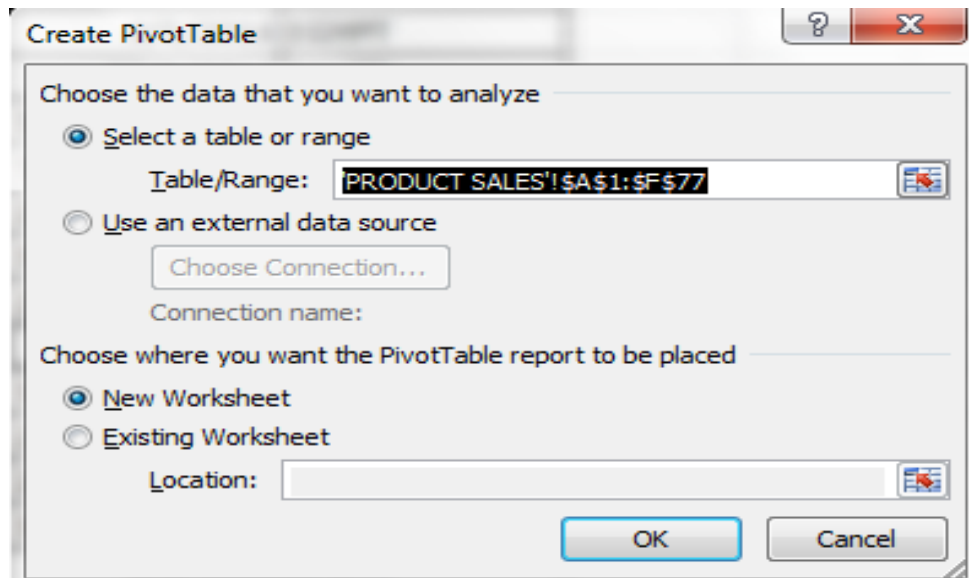
PivotTables

- The PivotTable field list appears;

PivotTables

- In our sample data, to get the total amount exported for each product, drag the following fields to the different areas;

  1. Product Field to the Row Labels area

  2. Amount Field to the Values area

  3. Country Field to the Report Filter area

- A PivotTable as the one below appears and changes as you select different fields

PivotTables

PivotTables

- You can sort, filter and change the summary calculations using the options provided under the PivotTable tools shown below;
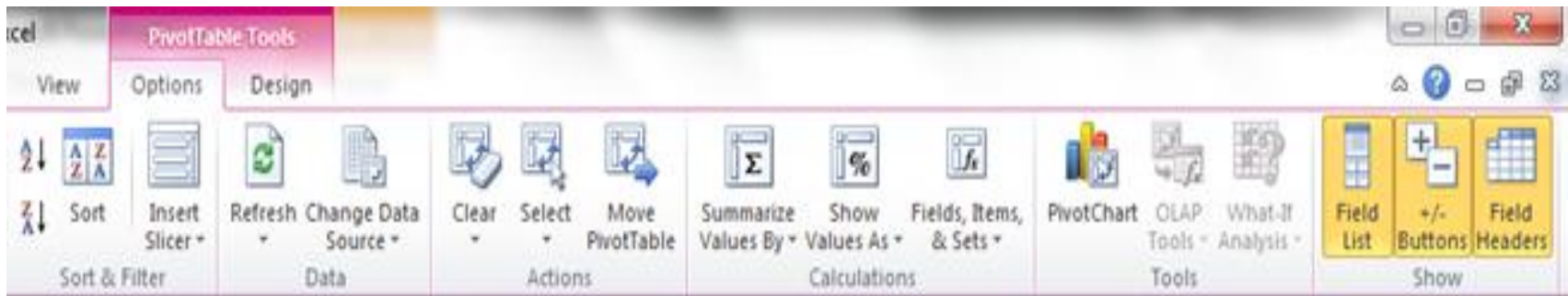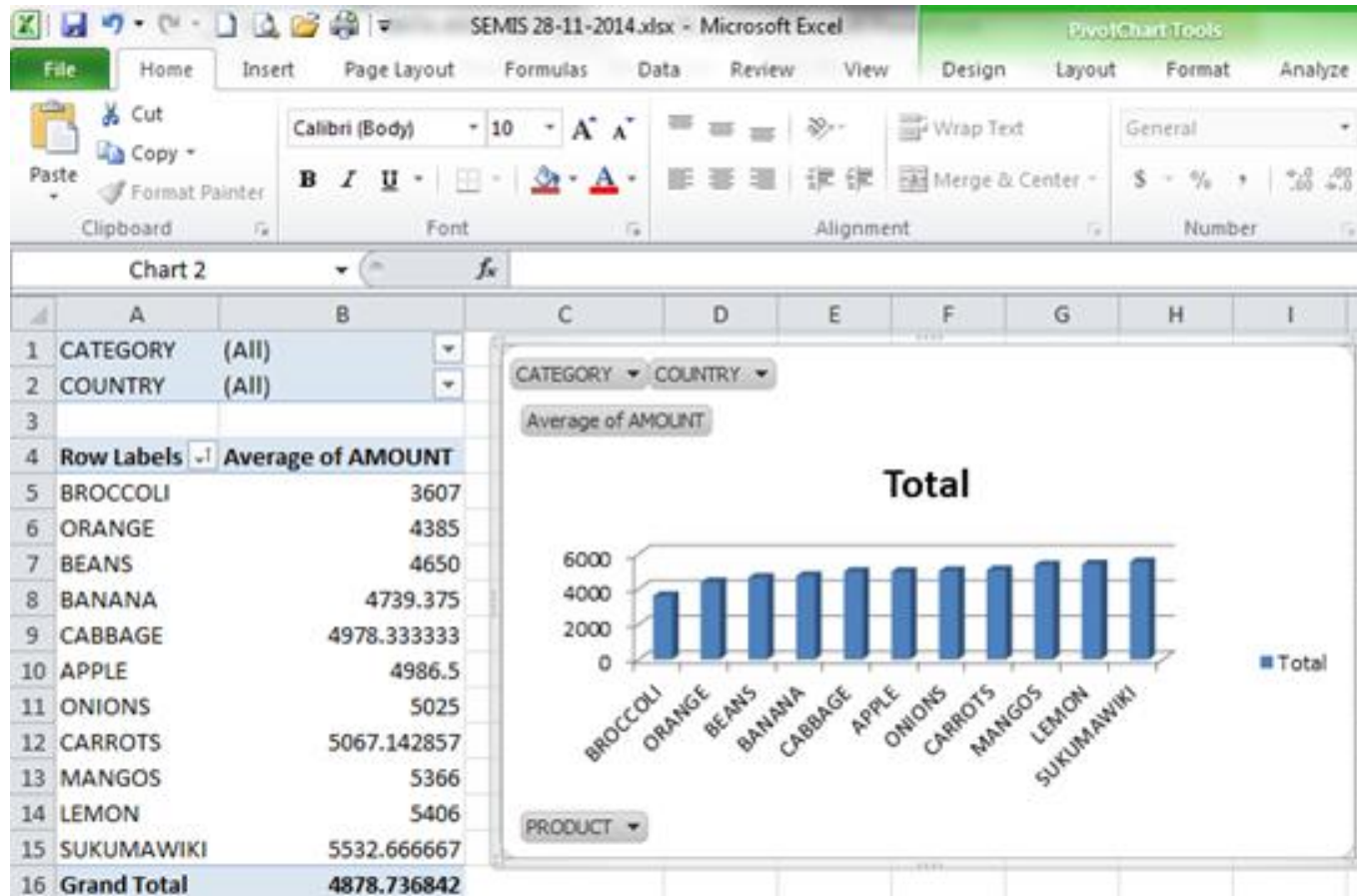
PivotChart

- Steps for inserting PivotChart

i.   Click on the PivotTable

ii. Click on PivotTable tools

iii. Under options, click on PivotChart

iv. From the insert chart dialog box, select the type of the chart to use e.g. 3-D Clustered Column
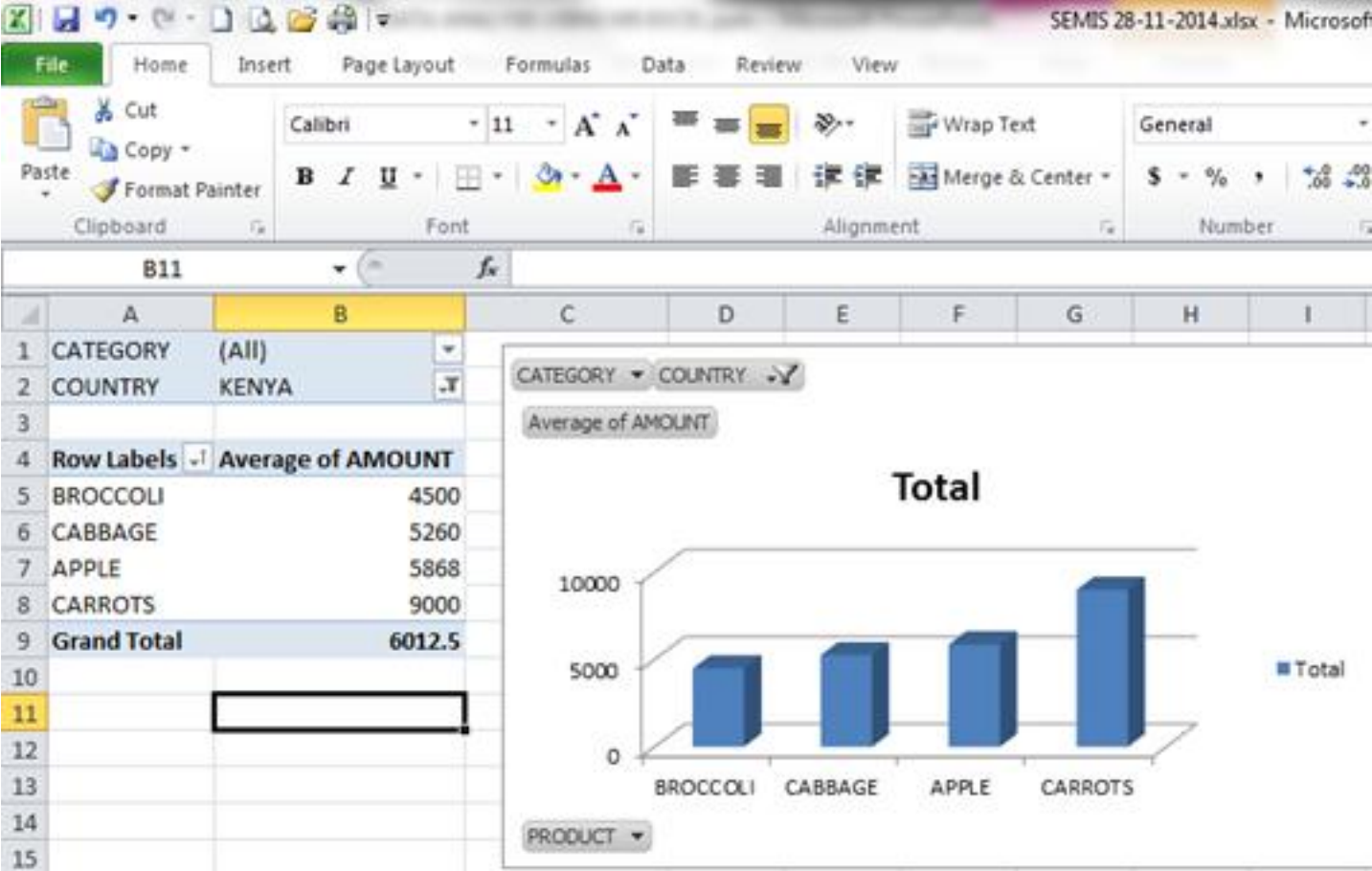
v.   Click Ok

NB 1: Under PivotChart tools, you can change chart layout options as you want e.g. chart title, chart axis titles, etc

NB 2: The chart display changes as you change the filter criteria under the PivotTable e.g.

PivotChart with all data in the PivotTable

PivotChart with filtered data in the PivotTable

WHAT-IF ANALYSIS

- What-If Analysis in allows one to try out different values (scenarios) for formulas and predict the possible outcomes based on different scenarios

- Steps
  i.   Click on your worksheet
  ii. Click on data tab
  iii. Click on What-if Analysis on the data ribbon
  iv. Choose to use scenario manager or goal seek or table

WHAT-IF ANALYSIS

Using the Scenario Manager

- Click on Scenario Manager from What-if-Analysis drop down list
- The dialog box below ap
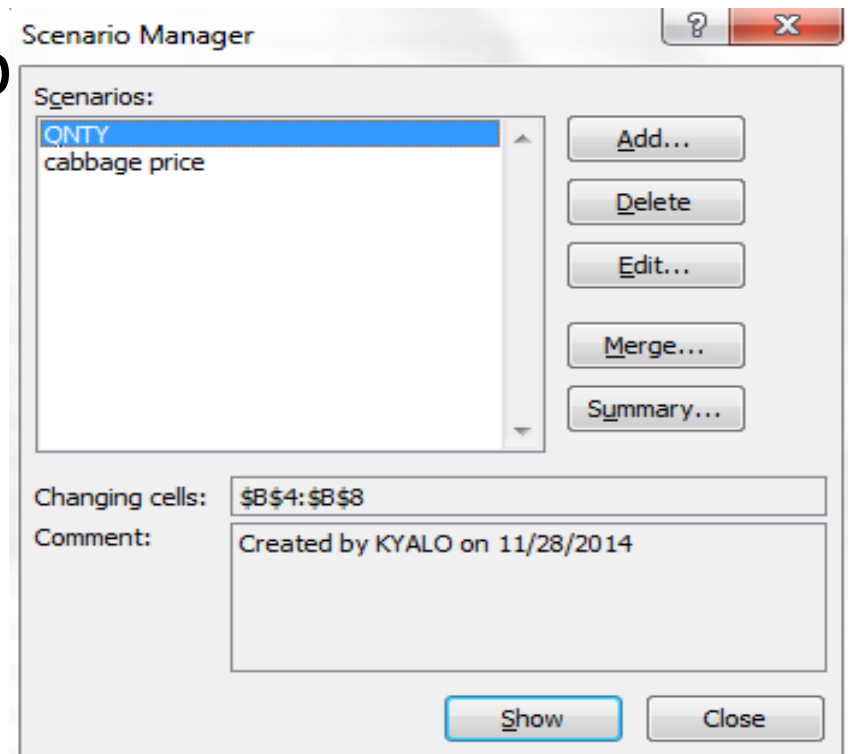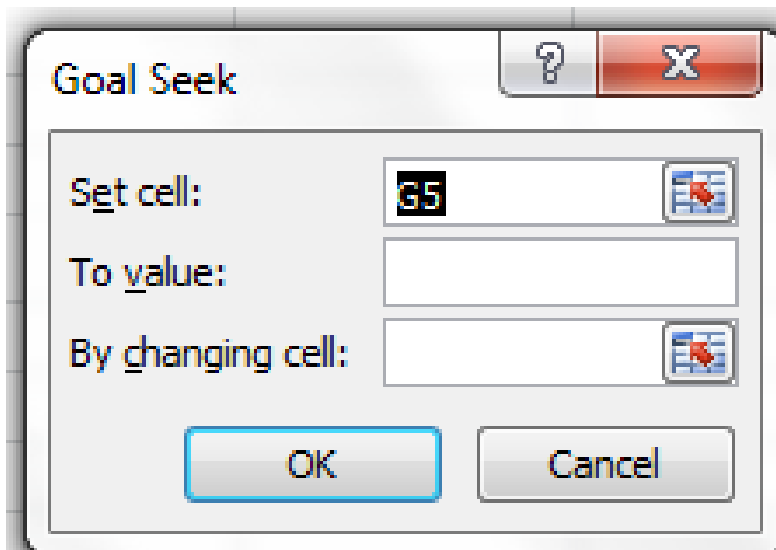
WHAT-IF ANALYSIS

v.   Click on add to add a Scenario

vi. Type scenario name

vii. Choose the changing cells e.g. Quantity

viii. Enter new values for the changing cells

ix. Click ok

x.   Then click show to view the changes in the calculated values

WHAT-IF ANALYSIS

- **Using the Goal Seek**

i.   Select the cell containing the formula that will return the result you're seeking; in this example, cell G5

ii.   On the Data tab, choose What-If Analysis→Goal Seek in the Data Tools group

NB: Dialog box below appears;

WHAT-IF ANALYSIS

iii. Select the To Value text box and enter the goal

iv. Select the By Changing Cell text box and select the cell that you want to change

v. Click OK

vi. If you want to keep the values entered in the worksheet as a result of goal seeking, click OK as in the diagram below;

WHAT-IF ANALYSIS

	A	B	C	D	E	F	G
1	WHAT IF ANALYSIS						
2							
3	PRODUCT	QUANTITY (KGS)	UNIT BUYING	TOTAL BUYING PRICE	UNIT SELLING PRICE	SELLING PRICE	PROFIT
4	BEANS	500.00	105.00	52,500.00	120.00	60,000.00	7,500.00
5	MAIZE	350.00	126.00	44,100.00	144.00	50,400.00	6,300.00
6	SOGHURM	250.00	89.00	22,250.00	101.71	25,428.57	3,178.57
7	MILLET	420.00	95.00	39,900.00	108.57	45,600.00	5,700.00
8	PEAS	600.00	98.00	58,800.00	112.00	67,200.00	8,400.00
9	TOTAL SALES			217,550.00		248,628.57	31,078.57
10							
11							
12		PROFIT MARGING		14%			
13							

Goal Seek Status

Goal Seeking with Cell G4
found a solution.

Step

Pause

Target value: 7500
Current value: 7,500.00

OK   Cancel

...END...