

## Instructions for Summer Farmers' Market Data Project

PLEASE NOTE: For this project, it is incredibly important that all data collection is done in a consistent format so that individual farm and market data can be combined and compared. Therefore, there are detailed descriptions below explaining how to collect and handle data.

### Getting data from the field

1. Create a folder within the farm name folder named for the date of the market, naming the folder: ***farm name space market name space month number space date number***. The file location is: O: Matt LeRoux: Square Data: *farm name folder*.

2. Download the pictures of the market stall from the iPad or farmer emails and save in the farm's file on the O drive.

Name the market stall photos using this convention: ***market photo space farm name space market name space year number space month number space date number***. If there are more than 1 photo, add a number "1" and "2" after "market photo". If you are saving a price list photo, name it: ***price list space farm name space market name space year number space month number space date number***.

3. Scan or download the completed "Daily Market Log" for that market and save it in the farm/market folder using this naming convention: ***Daily Market Log space farm name space market name space year space month number space day number***. Note: A list of market names can be found at the end of these instructions.

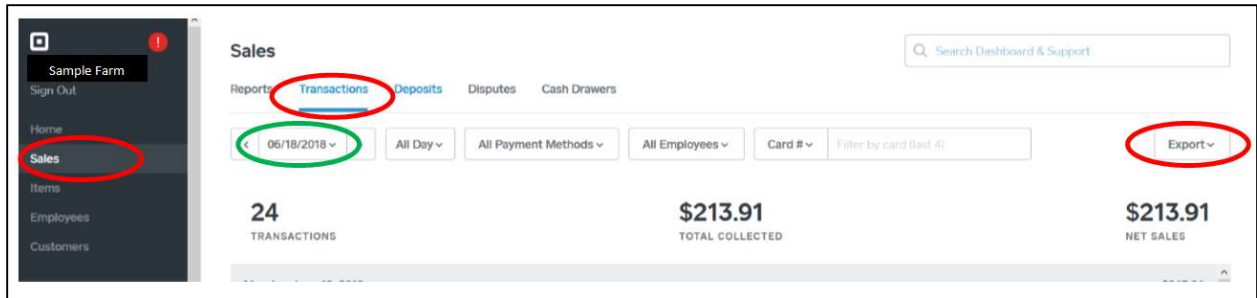
4. Log in to a farm's Square account to download OR save the files that they emailed for each market. Save the reports to the farm's file on the O drive. **The reports we need are:**

#### **"Transactions" (see screenshots below)**

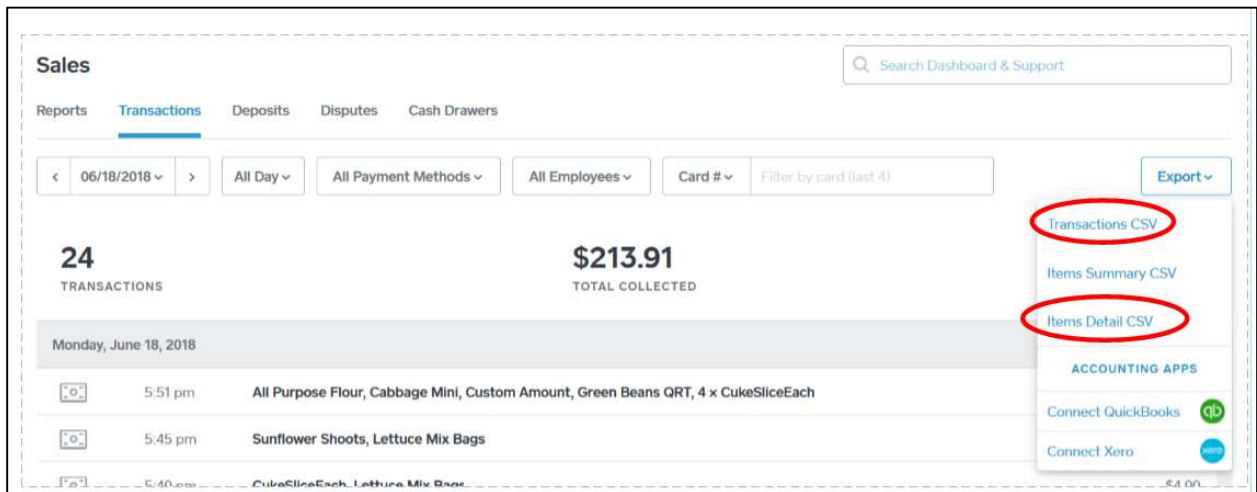
Go to the "Sales" tab on the left menu bar, then to "Transactions" on the upper menu bar. Choose the relevant date (for each single market). From the "Export" drop down menu, chose the "Transaction CSV" and save it to the O drive. On this report, please DELETE Columns Y, AH, and AI which are "Pan Suffix", "Customer ID", and "Customer Name" respectively.

#### **"Items Detail" (see screenshots below)**

Go to the "Sales" tab on the left menu bar, then to "Transactions" on the upper menu bar. Choose the relevant date (for each single market). From the "Export" drop down menu, chose the "Items Detail CSV" and save it to your computer. On this report, please DELETE Column W, which is "Customer Name."



**Screenshot #1:** Choose “Sales” from the menu on the right, then “Transactions” above. Next, choose the date of your market from the calendar that pops up when you click where the green circle is. Next, click the “Export” button to the right. Then see the next screenshot for more.



**Screenshot #2:** Choose the reports circled here in red.

5. Next, open the two CSV files and “Save As” an Excel file. Delete the CSV files after.

6. Now open both Excel files. On the “transactions” workbook, select the worksheet tab (at the bottom of the screen, on the left side) and right click to reveal a menu. Choose the “move or copy” function. Select the sheet, click “create a copy” and on the drop down bar choose the “items” workbook to move it to. This action simply puts the two reports for that market/date/farm into one Excel file for simplicity and ease. Do another “SAVE AS” and name the file using this convention (for farm and market names, use consistent abbreviations):

***farm name space market name space year number space month number space date number***

**Example:** The record for Jane’s Farm at the Tuesday Ithaca Farmers’ Market on May 15, 2018 would be named: “Jane’s Tues IFM 2018 5 15”

7. On this new document there are now 2 worksheets. On the “transactions” sheet, make sure the farm deleted the “Pan Suffix”, “Customer ID”, and “Customer Name” columns. On the “items” sheet, make sure the farm deleted the “Customer Name” column. If they did not, please delete the entire columns before proceeding.

## Processing the Data

8. Make sure BOTH the “items” and “transactions” sheets are sorted chronologically. To do this, select the entire sheet by clicking the triangle located to the left of the “A” in columns and above the “1” in rows OR pressing the “Ctrl” and “a” keys at the same time. Next, click “Data” on the top menu bar, and select “Sort”. In the window that appears, make sure the “My data has headers” box is checked. Now set “Sort by” to Time, “Sort on” to Values, and Order to “Smallest to Largest.” Then click OK.

9. On the “items” sheet scroll to the far right and name the first empty columns:

Weather 1

Weather 2

Items Available Count

Total Vendor Count

Veg Vendor Count

10. On BOTH the “items” and “transactions” sheets, insert a new column to the right of the “Time” column and name it “Hour.” Right click on the column and choose “format cells,” choose “number” and 1 space after the decimal. Center the data in the column. Now enter numbers which correspond to the times in half-hour increments in this fashion: 8:00-8:29 AM is 8, 8:30-8:59 is 8.5, 1:00-1:29 PM is 13, 1:30-1:59 is 13.5, and so on.

11. On the “items” worksheet check to see if there is a “category” column, it should be Column E. IF NOT, click on column “F”, right click, insert a new column, and name it “category.” The new column should be column E. You can leave it blank.

## Manually entering data: Part 1

Since most of these factors are basically the same for the entire market, you can enter the values in the first cell and then drag down to copy into all rows. Enter data as follows:

1. **Weather 1 and Weather 2:** On the “items” worksheet, enter the codes from the Daily Market Log sheet. The key is also here:

**Weather 1 Key:**

1: Below 50 F (cold/chilly)

2: 51-80 F (pleasant)

3: 81+ F (hot!)

**Weather 2 Key:**

1. No rain

2. Passing showers

3. Constant rain

2. **Items Available Count:** Enter how many items the farm had available at market that day. If tomatoes were for sale by the pound *and* by the quart, that is 2 items.

3. **Total Vendor Count:** Enter the total number of vendors at that market that day. This includes all types of vendors. We track this to identify the market size. You get the number by counting vendors at the market. IF you are at one of the IFM markets, a tally sheet will be provided to you by the market manager.

4. **Veg Vendor Count:** Enter the total number of vendors selling mainly vegetables at the market. “Mainly vegetables” is determined by volume and/or selection. We track this to identify the number of competitors at a market. You get the number by counting vendors at the market. IF you are at one of the IFM markets, a tally sheet will be provided to you by the market manager.

**Example 1:** A fruit farm or a flower farm that also has 2-6 kinds of vegetable but mainly sells fruit or flowers, you DON’T count them as a vegetable farm.

**Example 2:** A farm has only tomatoes, but a large number of them. You DO count them as a vegetable farm.

### Manually entering data: Part 2

1. On the “transactions” worksheet tab, place the “gross sales,” “net sales,” and “transaction id” columns side by side using the “cut” and “paste” function. You can cut and paste by right clicking at the top of a column choosing “cut” and then click on the column to the right of where you want it and right click, choosing “insert cut cells.” Leaving the “transaction id” column where it is, paste “gross sales” to its immediate right and “net sales” to the right of that. It should look like this:

S	T	U	V	
Net Total	Transaction ID	Gross Sales	Net Sales	Payment ID
\$3.00	7ISpNWtP5G20kCeKwxFwLgveV	\$3.00	\$3.00	P9vmwXlvKTE
\$7.00	PHIq7aq7EoAAv3oEp4KArf2eV	\$7.00	\$7.00	zn9J7wuXsblU
\$6.00	bTdhc9tvQu4vlyiFl6jG693eV	\$6.00	\$6.00	bJsN7crPr8L2
\$3.00	v5zBKzAs1FfwAn59vnddfAfV	\$3.00	\$3.00	dUvmOGFM1

2. Next, on the “items” worksheet, insert 3 new empty columns to the right of the “transaction id” column (they should be columns “P,” “Q,” and “R”.) You do this by clicking on the column currently to the right of “transaction id” (it should be called “payment id”) then right click and choose “insert”. From left to right, name the columns: “Transaction Total,” “Transaction Net,” and “Order Item Count.” It should look like this:

O	P	Q	R	S
Transaction ID	Transaction Total	Transaction Net	Order Item Count	Payment ID
Gm4LePTxRPuZFdFe4tmz1l1eV				khyvTTBV1R
Gm4LePTxRPuZFdFe4tmz1l1eV				khyvTTBV1R
iqVUsQLNMeGbu6xOGnD1dDleV				mQx3BpSJ8a
87xZiheliBWfhtkl6lJlFQ4eV				WuyyBEWZl

### 3. These are the definitions for each of the new columns:

**Transaction Total:** This is the “gross sales” value from the “transactions” report. It shows the value of the total customer order before discounts.

**Transaction Net:** This is the “net sales” value from the “transactions” report. It shows the value of the total customer order after discounts.

**Order Item Count:** This is the number of items in the customer order.

#### 4. To fill in these new columns, follow the instructions below:

##### VLOOKUP Formula

1. On the “transactions” tab, highlight all the contents of the “Transaction ID”, “Gross Sales”, and “Net Sales” columns by clicking and dragging your mouse to select every cell. Now right-click on the selected block of fields and select “Define Name” (may be called “Name a range”) from the menu. In the pop-up box, name the range “Sales” and click OK.
2. On the “items” tab, select the first cell in the “Transaction Total” column and type in the following formula: **=VLOOKUP(O2, Sales, 2, FALSE)** *Note: The “O2” cell in all of the following formulae refers to the first cell in the “Transaction ID” column with a value.*
3. Select the first cell in the “Transaction Total” column, the cell in which you’ve entered the formula. Click and drag the small green box in the bottom right corner and drag to the bottom of the worksheet. This should fill the column with their respective values.
4. Select the first cell in the “Transaction Net” and insert the following formula: **=VLOOKUP(O2, Sales, 3, FALSE)**
5. Once again, select the first cell in the “Transaction Net” column, the cell in which you’ve entered the formula. Click and drag the small green box in the bottom right corner and drag to the bottom of the worksheet. These values should be the same as the values in the “Transaction Total” column unless a discount has been applied.
6. Center the new values and format them as currency.

##### SUMIF Formula

1. In the “items” report tab, select the first cell under the “Order Item Count” column header. In the formula bar input the formula: **=SUMIF( )**. Within the parenthesis, the range of the “transaction ID” column will be entered in the following format: **O:O** (*this number will be the row number of the first transaction ID cell in the items sheet*), **O2**. For example: **=SUMIF(O:O,O2,G:G)**.
2. Select the first cell in the “Order Item Count” column, the cell in which you’ve entered the formula. Click and drag the small green box in the bottom right corner and drag to the bottom of the worksheet. This should fill the column with their respective values.

#### 5. Add the Payment Type Field to the items worksheet:

- A. In the transactions worksheet, click the gray triangle in the top right corner to select all cells in the worksheet. Click “Sort and Filter” in the top right and select “Custom Sort”.
- B. In the drop down “Sort By” menu, select “Card” and click OK.

C. Scroll to the bottom of the worksheet and identify the transactions where cards were used by finding nonzero values in the “Card” column.

D. Next, open the items worksheet and once again click the gray triangle in the top left and create a “Custom Sort”. In the “Sort By” menu, select “Transaction ID” and click OK. The transaction IDs should now be sorted in alphabetical order.

E. Insert a new column to the right of the Transaction ID column and name the column header “**Payment Type**”.

F. In the first cell of the Payment Type column, type “cash”. Select this cell, then click and drag the small green box in the bottom right of the cell all the way down the column.

G. Finally, refer to the nonzero values that you identified in the transactions worksheet and their corresponding transaction IDs. Each time those transaction IDs appear in the items worksheet, replace “cash” in the Payment Type column with “**card**”.

**6. Location and Farm name:** We need both the farm and market name on the “items” worksheet. If the default “Location” column from Square contains the farm’s name, then rename it “Farm”. Insert a column to the right and name it “Location” and name the market using our chart of abbreviated market names.

When you are done, Column Y should be “Farm” with the farm name filled in and Column Z should be “Location” with the market name filled in.

**7. Cut and paste for values:**

A. Once all formulas have been applied to the items worksheet, click the gray triangle in the top left corner to select all cells in the worksheet.

B. Type CTRL+C to copy the selected cells.

C. Open a new worksheet by selecting the + symbol at the bottom of the Excel window. Open this new tab and click the drop down arrow below the clipboard symbol in the top left.

D. Under the “Paste Values” row, select the third tile (entitled Values and Source Formatting).

E. This will paste only the values produced by the formulas from your previous worksheet. Name this new sheet “Combined.”

**8. Final Step:** Now you have a complete and properly formatted Excel spreadsheet saved and named for the farm, market, and date. The last step is to COPY all rows of data from that sheet and paste them in to the farm’s Excel file of ALL transactions, called *farm name compiled*.

## Table of Names for Farmers Markets

Farmers' Market Name	Day of the week	Name for Excel Sheets
Broome Regional	Saturday	Broome Sat
Broome Regional	Tuesday	Broome Tues
Corning Farmers' Market	Thursday	Corning
Grove Park Farmers' Market	Monday	Grove Park
Ithaca Farmers' Market	Tuesday	IFM Tues
Ithaca Farmers' Market	Wednesday	IFM Wed
Ithaca Farmers' Market	Thursday	IFM Thurs
Ithaca Farmers' Market	Saturday	IFM Sat
Ithaca Farmers' Market	Sunday	IFM Sun
Trumansburg Farmers' Market	Wednesday	Tburg

### Quick reference for naming files:

Each Market Date Folder: ***farm name market name month number date number***

Market Stall Photo: ***Market Photo space farm name space market name space year number space month number space date number***. If there are more than 1 photo, add a number "1" and "2" after "market photo".

Market Price Sign Photo: ***Price List space farm name space market name space year number space month number space date number***.

Daily Market Log (completed): ***Daily Market Log space farm name space market name space year number space month number space date number***.

Market Date Excel file (completed): ***Farm Name space market name space year number space month number space date number***.