

SOURCES OF DATA

INTERNAL SOURCES - Data is incorporated into the SAS program using the **CARDS** statement. This requires having a copy of the data in every program. This may be cumbersome with large sets of data. It is best and easiest to use this option when data sets are small. NOTE: In later versions of SAS, the **DATALINES** statement can be used in place of **CARDS**.

EXAMPLE 1

SAS Code:

```
DATA EXP1;  
  INPUT SOIL $ TRT COUNT1 COUNT2;  
  
  CARDS;  
  
    A      1      10      15  
    A      2       9      12  
    B      3      11      16  
    B      4      10      11  
;
```

NOTE: One semicolon at the end of the data to indicate SAS should stop reading data. No semicolons are used within the data.

EXTERNAL SOURCES

ASCII - Data is brought into the program from an ASCII or text file using the **INFILE** statement. This technique keeps the data in one place while still enabling other programs to access it. In its simplest form, the data file should be arranged in column format with values separated by spaces only, i.e. no commas or tabs.

Other Formats - Data is imported directly into SAS from an external program such as EXCEL or DBASE. Imports can be done through a menu system or through special codes. Typically the menus are easier to use. The spreadsheet should be arranged in column format and have the variable names as the first row of data (column headers). Individual worksheets may be entered separately into SAS as distinct SAS datasets.

External ASCII Files

EXAMPLE 2

Suppose we have a data file named **A:\EXP.DAT**.

Data File EXP.DAT

A	1	10	15
A	2	9	12
B	3	11	16
B	4	10	11

SAS Code:

```
DATA EXP1;  
  INFILE 'A:\EXP.DAT' ;  
  INPUT SOIL $ TRT COUNT1 COUNT2;
```

EXAMPLE 3

The **INFILE** statement may also use the **FIRSTOBS = #** option. This allows you to put descriptive text (i.e. column headings, etc) at the beginning of your data file.

Data File EXP.DAT

This is my data.

<u>SOIL</u>	<u>TRT</u>	<u>COUNT1</u>	<u>COUNT2</u>
A	1	10	15
A	2	9	12
B	3	11	16
B	4	10	11

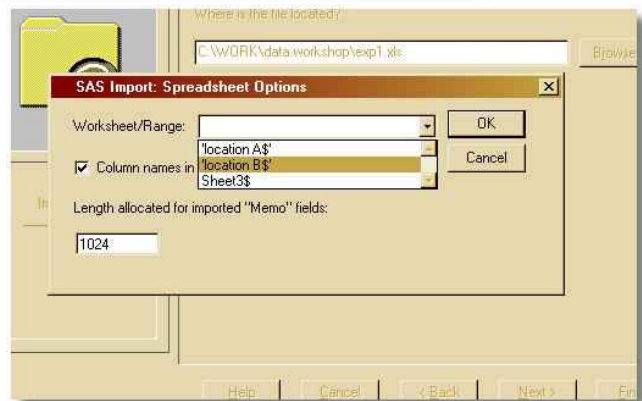
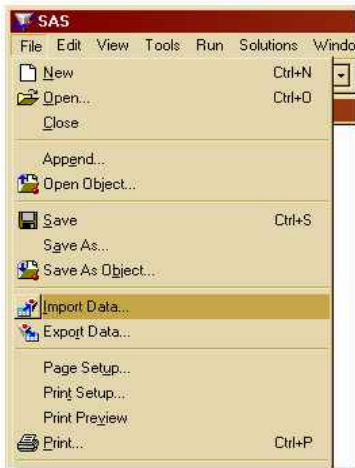
SAS Code:

```
DATA EXP1;  
  INFILE 'A:\EXP.DAT' FIRSTOBS=3;  
  INPUT SOIL $ TRT COUNT1 COUNT2;
```

Other External Sources

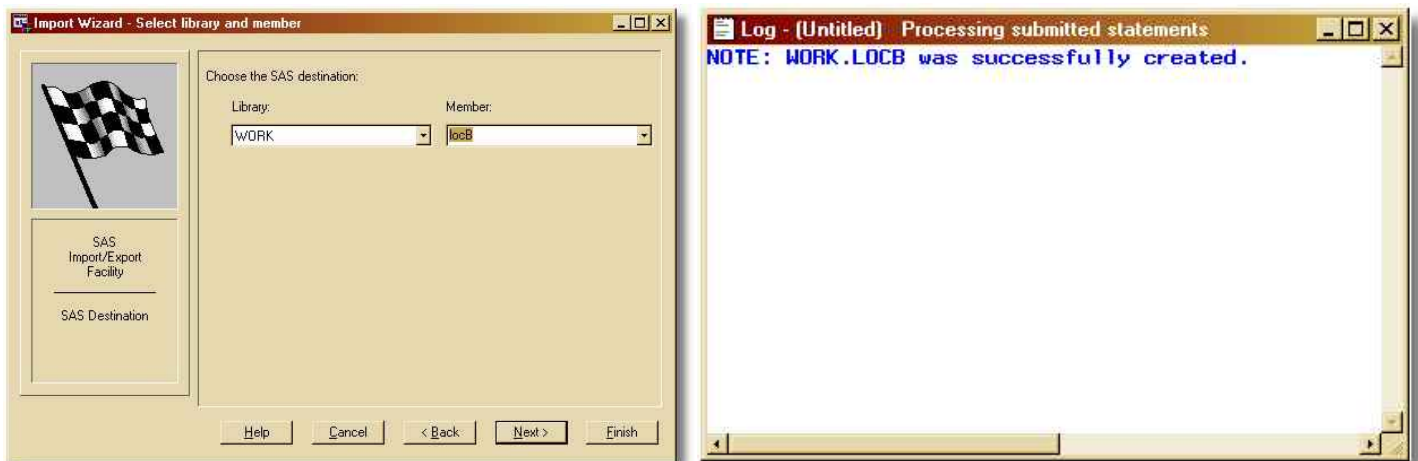
The source of data is EXP1.XLS, an EXCEL spreadsheet. The data is in column format with the first row being variable names. There are two worksheets labeled location A and location B.

	A	B	C	D	E	F	G	H
1	trt	rep	wt					
2	1	1	12.3					
3	1	2	14.8					
4	1	3	11.9					
5	1	4	10					
6	2	1	22.3					
7	2	2	21					
8	2	3	17.5					
9	2	4	25.1					
10	3	1	19.8					
11	3	2	17.3					
12	3	3	18.8					
13	3	4	16.9					
14								
15								
16								
17								
18								
19								



Start the import by selecting IMPORT DATA from the file menu. This starts the import dialog where you can select the type of file you wish to bring into SAS.

Next, use the browse menu to find the file. If you have multiple worksheets in the spreadsheet, then use the OPTIONS button and select the correct one. In this case, the sheet "location B" is selected.



Lastly, SAS will ask for a Member name. This is simply the name of the SAS dataset you are creating. Here I've used "locB". Typically, the Library name WORK will be ok. This is a place that SAS will temporarily store data. If you need a permanent SAS dataset, you should select the appropriate Library name from the list (see handout 11 for more information on permanent datasets).

After clicking on the FINISH button you should get a LOG message telling you the data was successfully created. If you are having trouble, check that you have selected the right type of file and that it is closed before trying to use it in SAS.