



Cotton Plant Mapping Survey (CPMS) Analysis using SPSS

Written By:

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|----------------------------|------------------|---------------------|
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**AGRICULTURE DEPARTMENT,
CROP REPORTING SERVICE
PUNJAB**

Cotton Plant Mapping Survey (CPMS) Analysis

Objective of the Analysis

- To Enhance the analytical capability of the Respected Officers
- Awareness about the latest version of the SPSS.
- How to use SPSS syntax file at Tehsil and District Level
- Sending the well organized and correct file to the Directorate.

In this analysis report, we will analysis all variables of the Cotton Plant Mapping Survey (CPMS).

1. No. of Plants Analysis

The following way can be used to evaluate the correct number of plants for any level

Step 1

(SPSS Path)



- A window is displayed as shown in Fig:1.1
- Click Identify Duplicate Cases', a new window is appeared in Fig 1.2

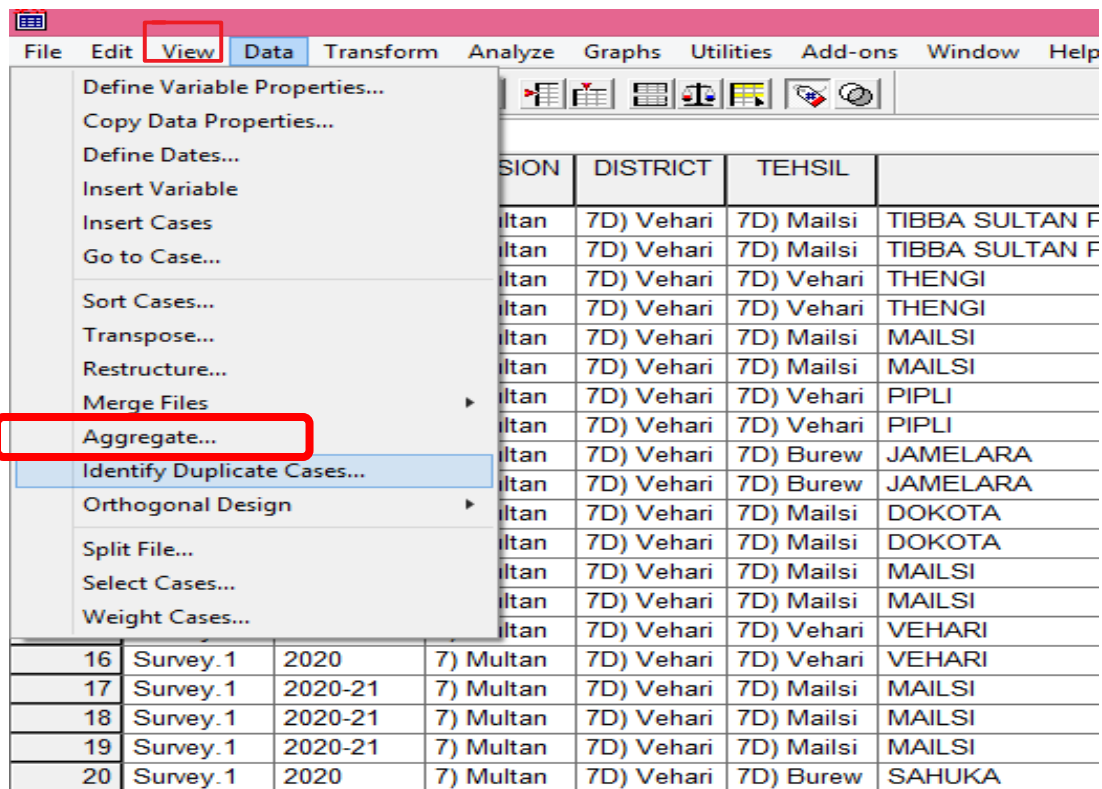


Fig 1.1

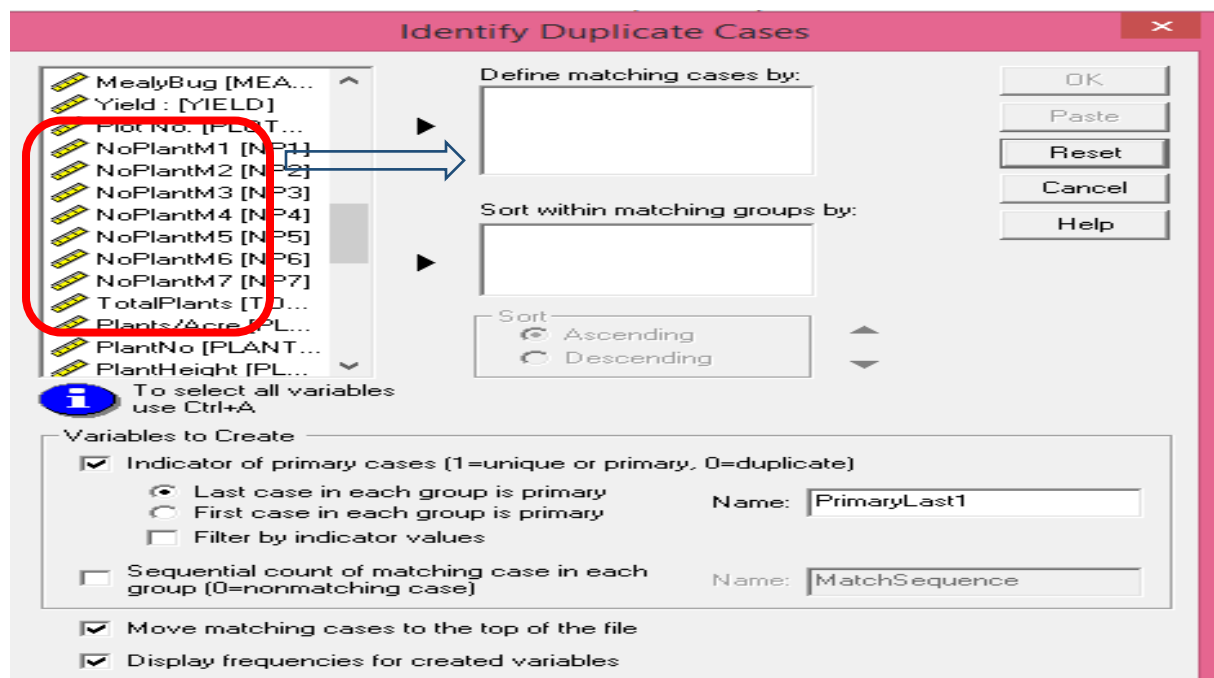


Fig 1.2

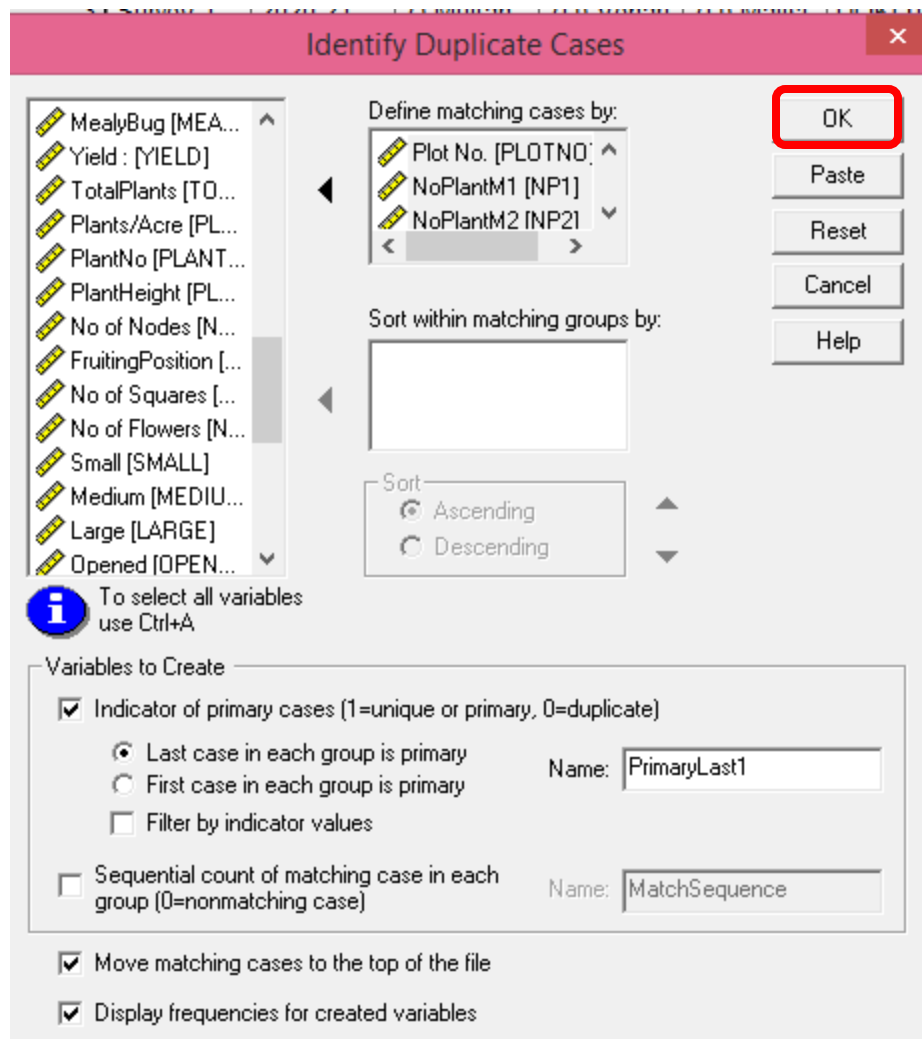


Fig 1.3

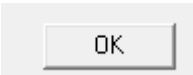
- Clicking  then following frequencies tables (Table 1.1) will be shown
- Generate a new variable namely **primarylast** as shown in fig: 1.4
- New variable has the following coding
 - 0 = “Duplicate case”
 - 1 = “Primary case”

Table 1.1

Statistics

Indicator of each last matching case as Primary

N	Valid	200
	Missing	0

Indicator of each last matching case as Primary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Duplicate Case	104	52.0	52.0	52.0
	Primary Case	96	48.0	48.0	100.0
	Total	200	100.0	100.0	

- Our concern is related primary cases as shown Table 1.1
- Primary case shows that our original cases of concern variables(no. of plants)

Verification of Original Cases for Plants

- As we know that every village has three fields (F1, F2, and F3) for CPMS.
- District Vehari has 32 villages for CPMS in 2020-21
- There are 96 original cases for the no. of Plants.
- Fig 1.4 shows that new created variable (primarylast)

1st PMS Vehari 20-2021.sav - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Add-ons Window Help

12:

	OPENED	PICKED	TOTALBOL LS	ROTTEN	ROSSET	EFFCLCV	EFFMALY BUG	EFFSQUA RE	EFFFLOW ER	EFFBOLL S	NEXT	PrimaryLast	var	var	var	var	var	var
1	0	0	0	0	0	No	No	0	0	0	Yes	Duplicate Case						
2	0	0	0	0	0	No	No	0	0	0	Yes	Primary Case						
3	0	0	11	0	0	No	No	0	0	0	Yes	Duplicate Case						
4	0	0	1	0	0	No	No	0	0	0	Yes	Primary Case						
5	0	0	0	0	0	No	No	0	0	0	Yes	Duplicate Case						
6	2	0	13	0	0	No	No	0	0	0	Yes	Primary Case						
7	0	0	3	0	0	No	No	0	0	0	Yes	Duplicate Case						
8	0	.	0	0	0	No	No	0	0	0	Yes	Primary Case						
9	0	0	20	0	0	No	No	2	1	0	Yes	Duplicate Case						
10	0	0	16	0	0	No	No	2	0	0	Yes	Primary Case						
11	0	0	1	0	0	No	No	0	0	0	Yes	Duplicate Case						
12	0	0	8	0	0	No	No	0	0	0	Yes	Primary Case						
13	6	0	8	0	0	No	No	0	0	0	Yes	Duplicate Case						
14	0	0	2	0	0	No	No	0	0	0	Yes	Primary Case						
15	0	.	0	0	0	No	No	0	0	0	Yes	Duplicate Case						
16	0	0	0	0	0	No	No	0	0	0	Yes	Primary Case						
17	7	0	31	0	0	No	No	0	0	0	Yes	Duplicate Case						
18	0	0	18	0	0	No	No	0	0	0	Yes	Duplicate Case						
19	0	0	0	0	0	No	No	0	0	0	Yes	Primary Case						
20	0	0	0	0	0	No	No	0	0	0	Yes	Duplicate Case						
21	0	0	0	0	0	No	No	0	0	0	Yes	Duplicate Case						
22	0	0	0	0	0	No	No	0	0	0	Yes	Primary Case						
23	0	0	4	4	0	No	No	0	0	0	Yes	Duplicate Case						
24	0	0	12	2	0	No	No	0	0	0	Yes	Duplicate Case						
25	0	0	9	5	0	No	No	0	0	0	Yes	Primary Case						
26	0	0	20	0	0	No	No	0	0	0	Yes	Duplicate Case						
27	2	0	22	0	0	No	No	0	0	0	Yes	Duplicate Case						
28	0	.	0	0	0	No	No	0	0	0	Yes	Primary Case						
29	0	0	0	0	0	No	No	0	0	0	Yes	Duplicate Case						
30	0	0	0	0	0	No	No	0	0	0	Yes	Duplicate Case						

Data View Variable View

SPSS Processor is ready

2:19 AM 9/21/2020

Fig: 1.4

STEP 2 (SPSS Path)

Data



- A window is shown is displayed Fig:1.5
- Click Select Cases', a new window as shown in Fig 1.6 is appeared

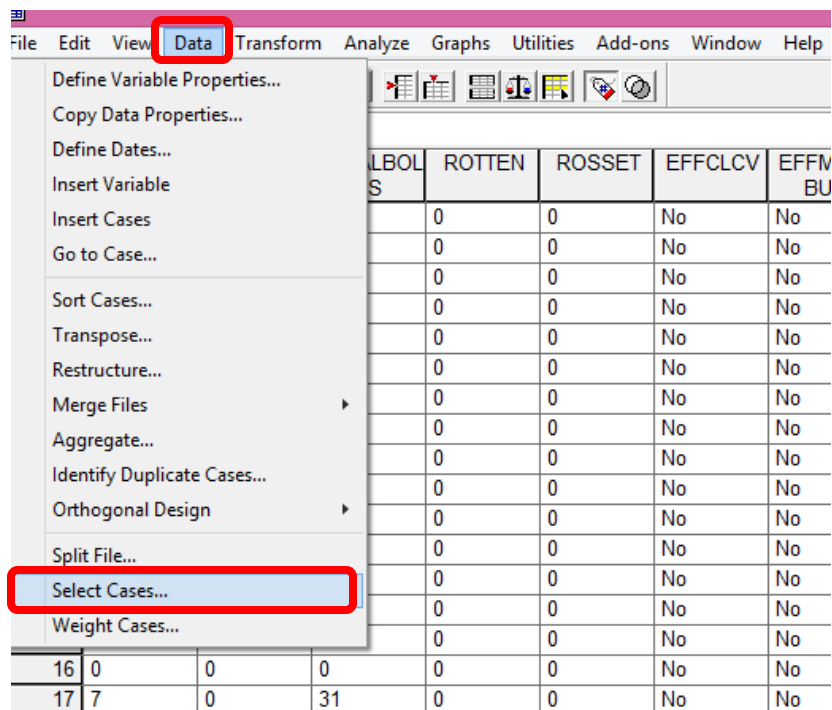


Fig: 1.5

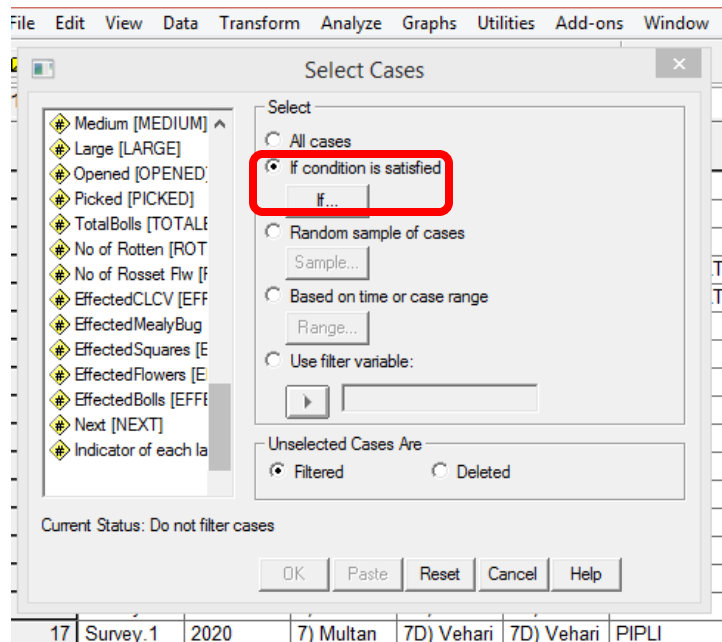


Fig: 1.6

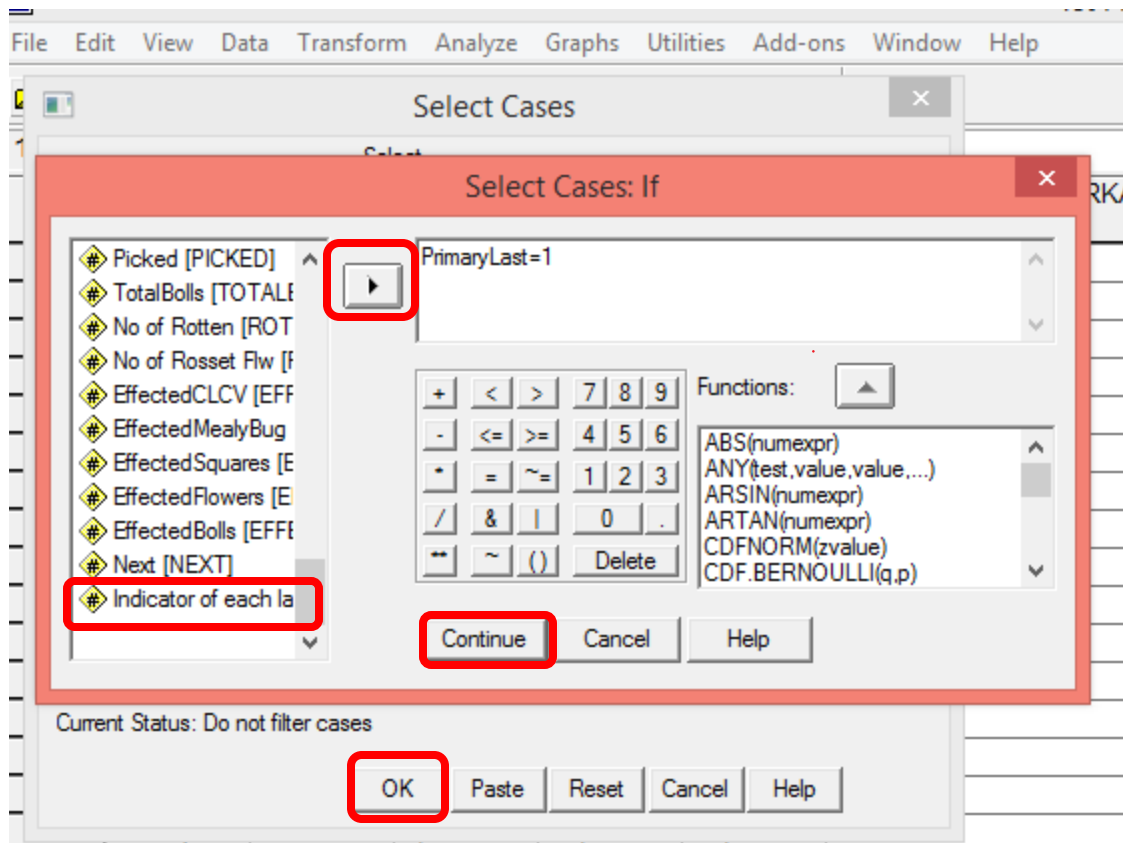


Fig 1.7

STEP 3

Method 1

(SPSS Path)

Analyze



Tables



Basic Tables

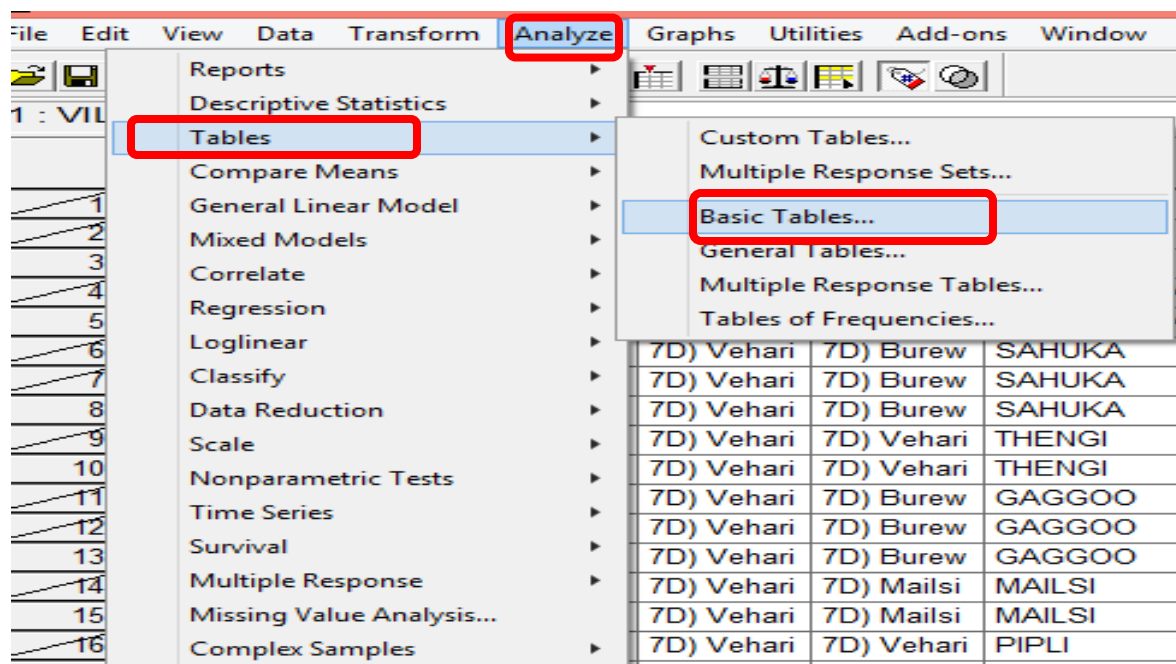


Fig 1.8

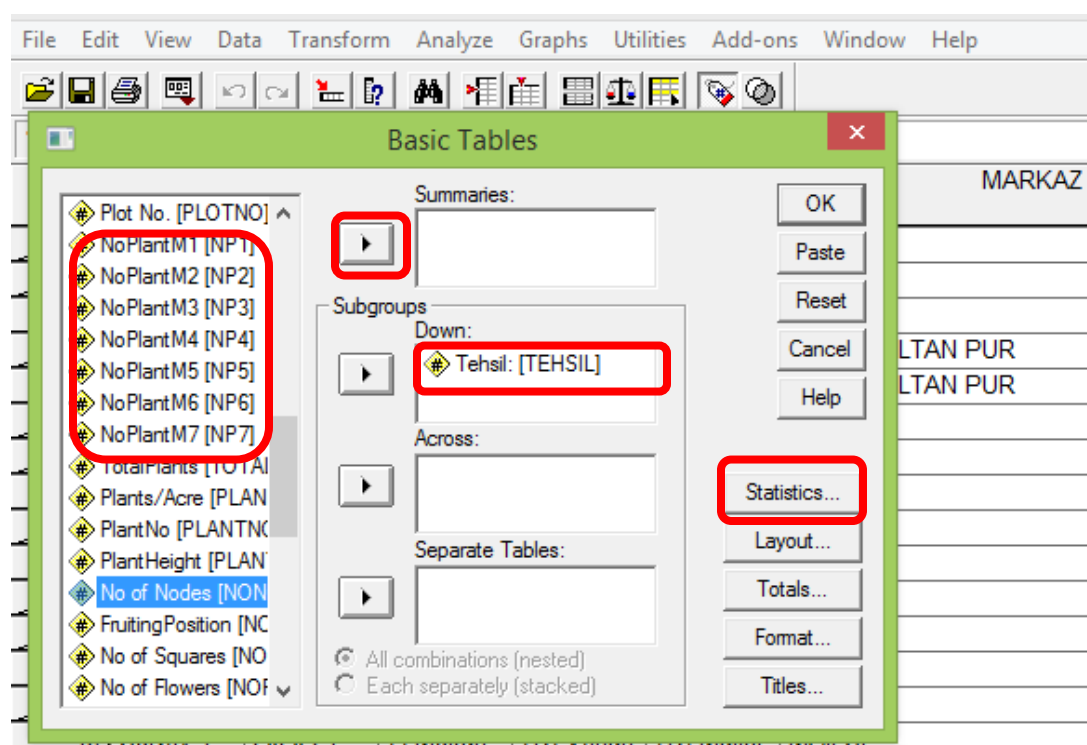


Fig: 1.9

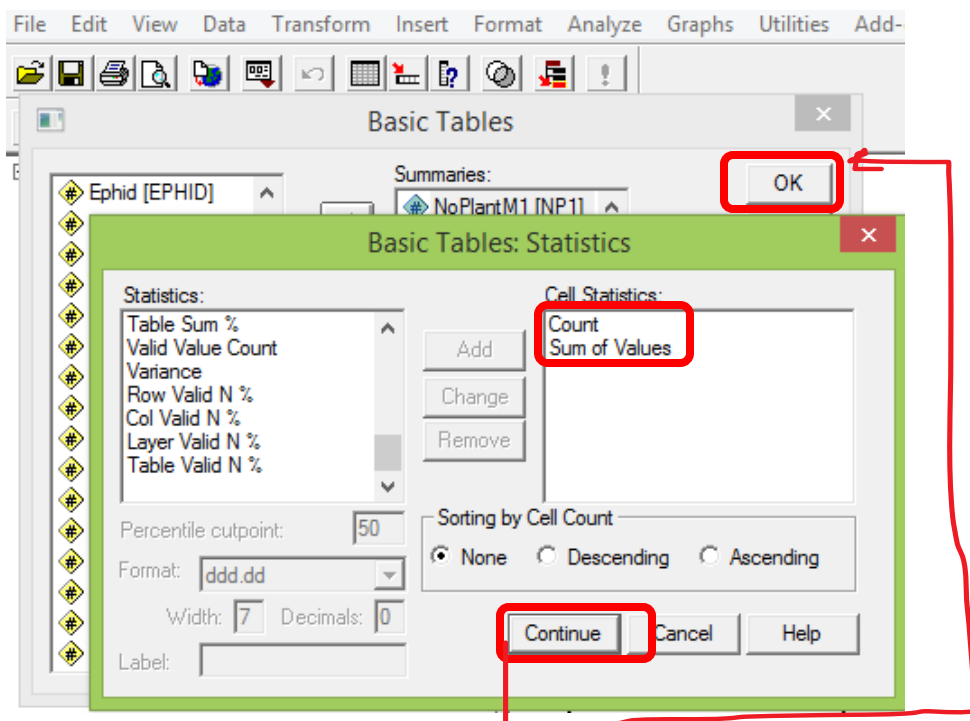


Fig: 1.10

Table 1.1

			Count	Sum
Tehsil: 7D) Vehari		NoPlantM1	27	66
		NoPlantM2	27	69
		NoPlantM3	27	68
		NoPlantM4	27	66
		NoPlantM5	27	72
		NoPlantM6	27	73
		NoPlantM7	27	60
7D) Burewala		NoPlantM1	27	54
		NoPlantM2	27	66
		NoPlantM3	27	58
		NoPlantM4	27	57
		NoPlantM5	27	57
		NoPlantM6	27	53
		NoPlantM7	27	62
7D) Mailsi		NoPlantM1	42	76
		NoPlantM2	42	77
		NoPlantM3	42	99
		NoPlantM4	42	86
		NoPlantM5	42	81
		NoPlantM6	42	99
		NoPlantM7	42	85

STEP 3

Method 2

First go to (SPSS Path)

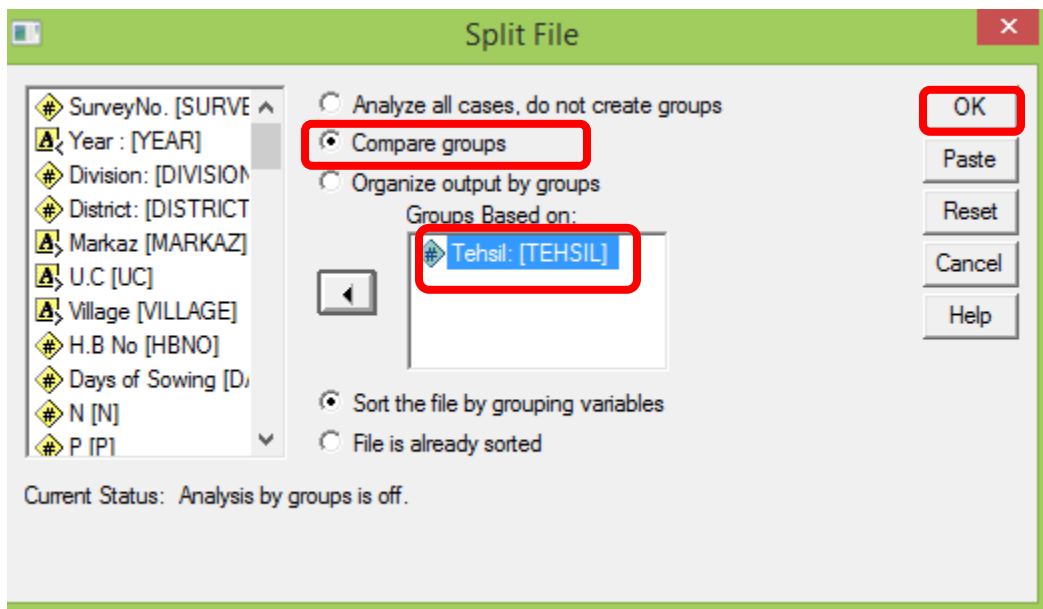
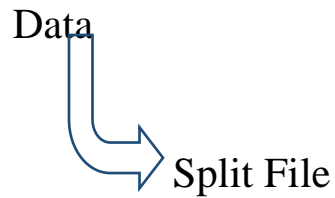
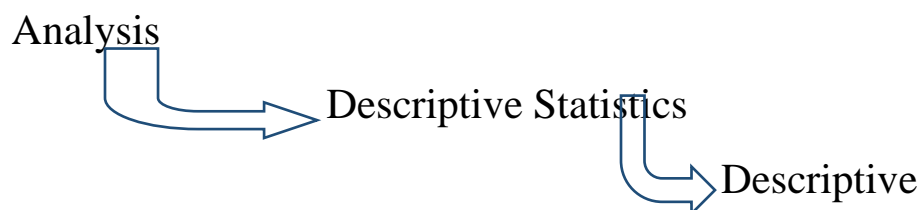


Fig: 1.11

Then go to



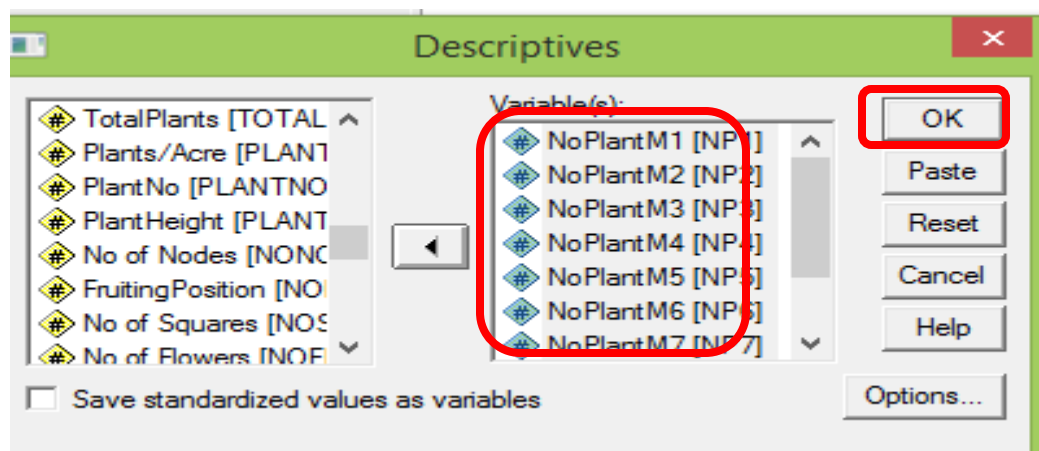


Fig: 1.12

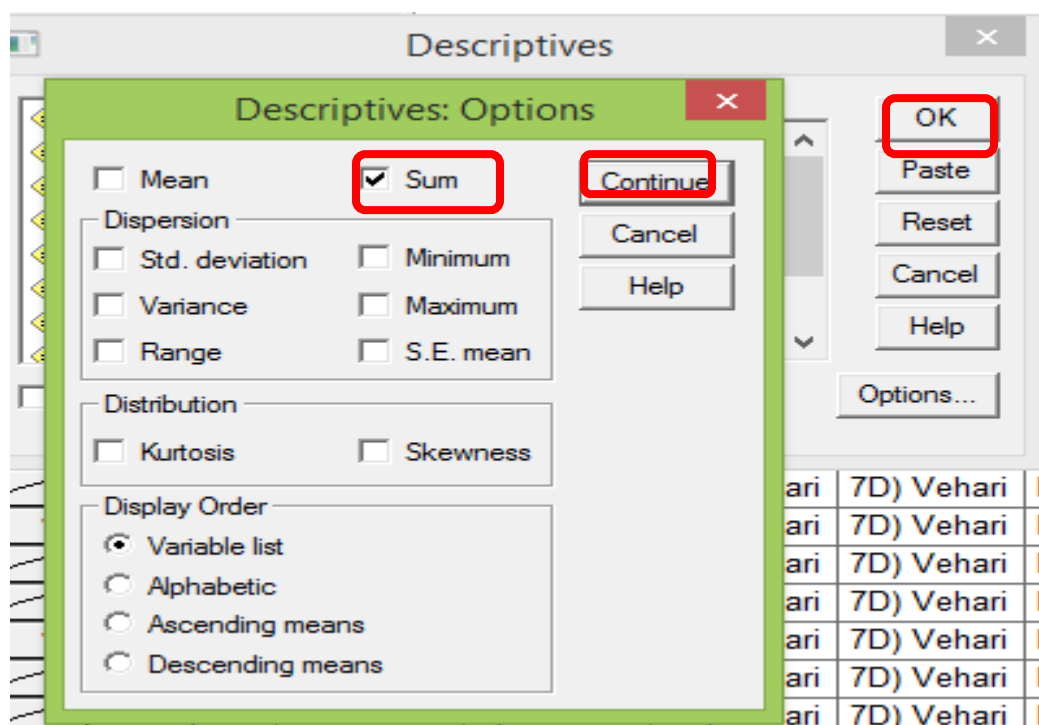


Fig: 1.13

Table 1.2

Tehsil:		N	Sum
7D) Vehari	NoPlantM1	27	66
	NoPlantM2	27	69
	NoPlantM3	27	68
	NoPlantM4	27	66
	NoPlantM5	27	72
	NoPlantM6	27	73
	NoPlantM7	27	60
	Valid N (listwise)	27	
7D) Burewala	NoPlantM1	27	54
	NoPlantM2	27	66
	NoPlantM3	27	58
	NoPlantM4	27	57
	NoPlantM5	27	57
	NoPlantM6	27	53
	NoPlantM7	27	62
	Valid N (listwise)	27	
7D) Mailsi	NoPlantM1	42	76
	NoPlantM2	42	77
	NoPlantM3	42	99
	NoPlantM4	42	86
	NoPlantM5	42	81
	NoPlantM6	42	99
	NoPlantM7	42	85
	Valid N (listwise)	42	

2. Analysis From Sowing Days To No. of Sprays

- First delete created new variables namely
 1. Primary Last
 2. Filter\$

The following way can be used to analysis the above mention variables for any level

Step 1

(SPSS Path)

Data



Identify Duplicate Cases

- A window as shown in Fig:1.14 is displayed
- Click Identify Duplicate Cases', a new window as shown in Fig 1.15 is appeared

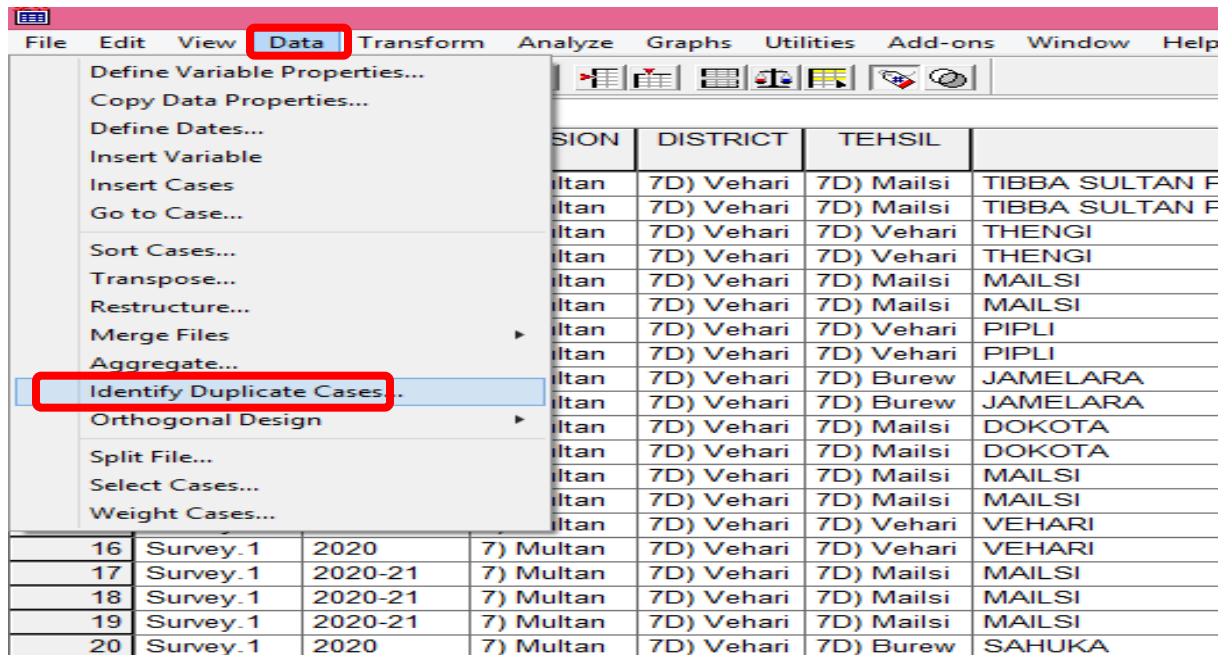


Fig: 1.14

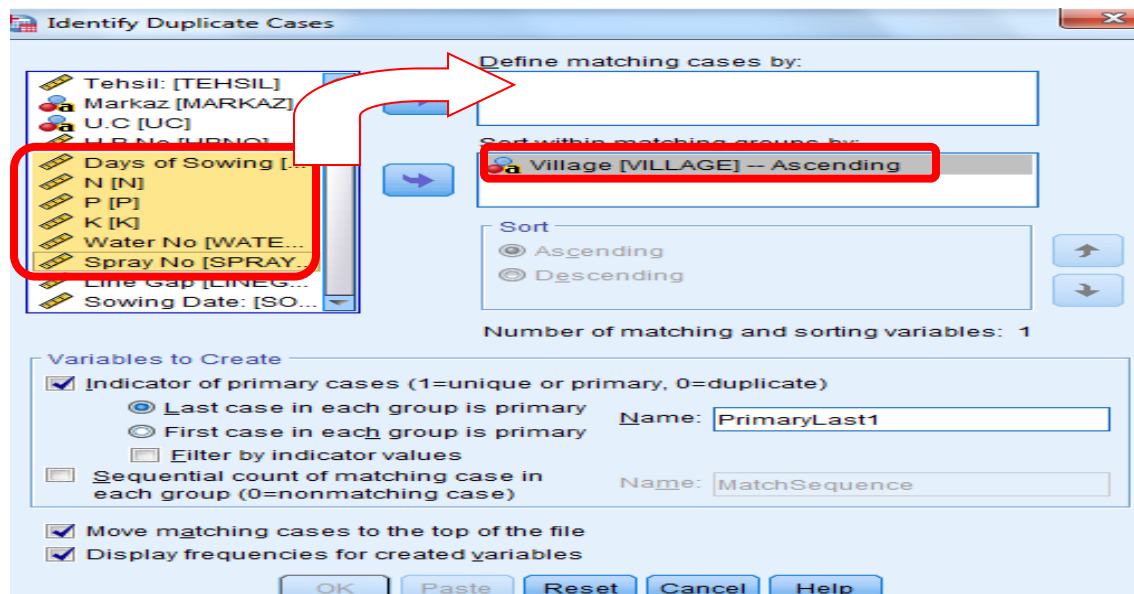


Fig: 1.15

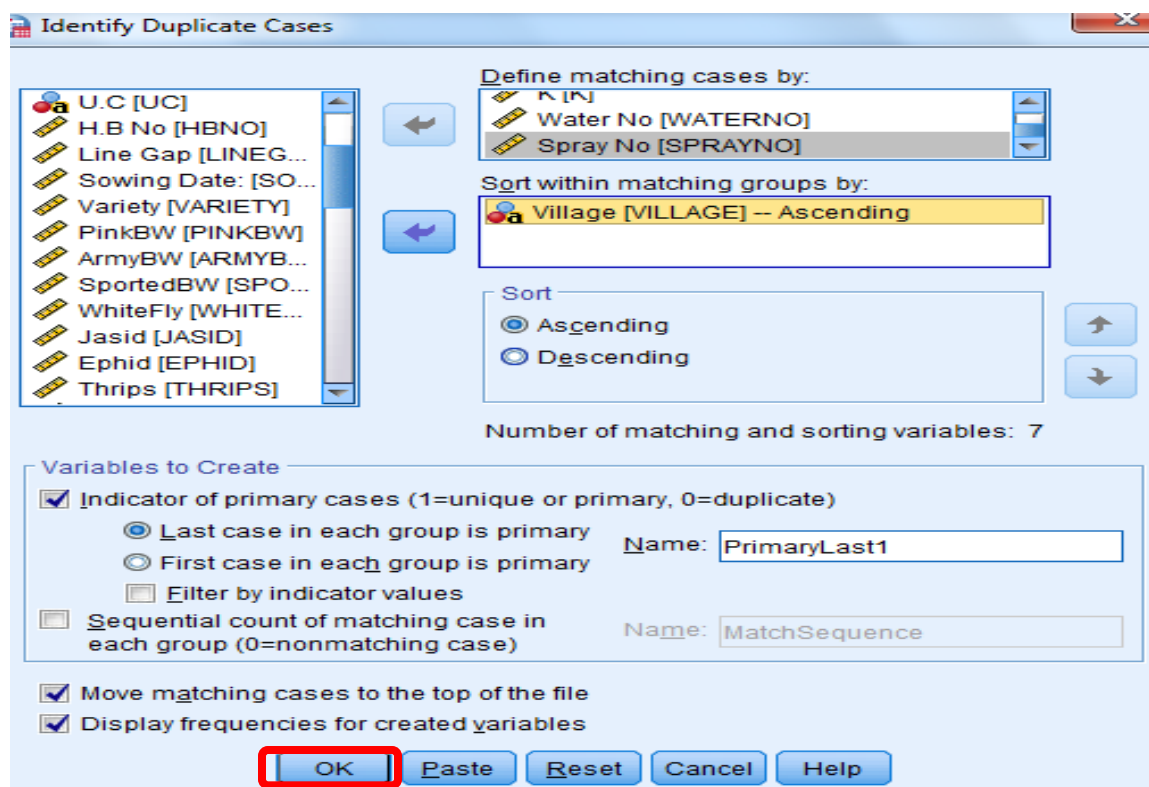
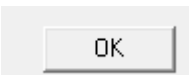


Fig: 1.16

- Clicking  then following frequencies tables (Table 1.3) will be shown
- Generate a new variable namely primary last

- New variable has the following coding

0 = “Duplicate case”

1 = “Primary case”

Table 1.3

Indicator of each last matching case as Primary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Duplicate Case	168	84.0	84.0	84.0
	Primary Case	32	16.0	16.0	100.0
	Total	200	100.0	100.0	

- Table 1.3 shows that 32 primary cases
- 32 villages in Vehari Dist
- All variables mention above should be original cases is equal to no. of villages
- Here cases of variables are equal to no. of villages.

STEP 2 (SPSS Path)

Data



Select cases

- A window as shown in Fig:1.17 is displayed
- Click Select Cases', a new window as shown in Fig 1.18 is appeared

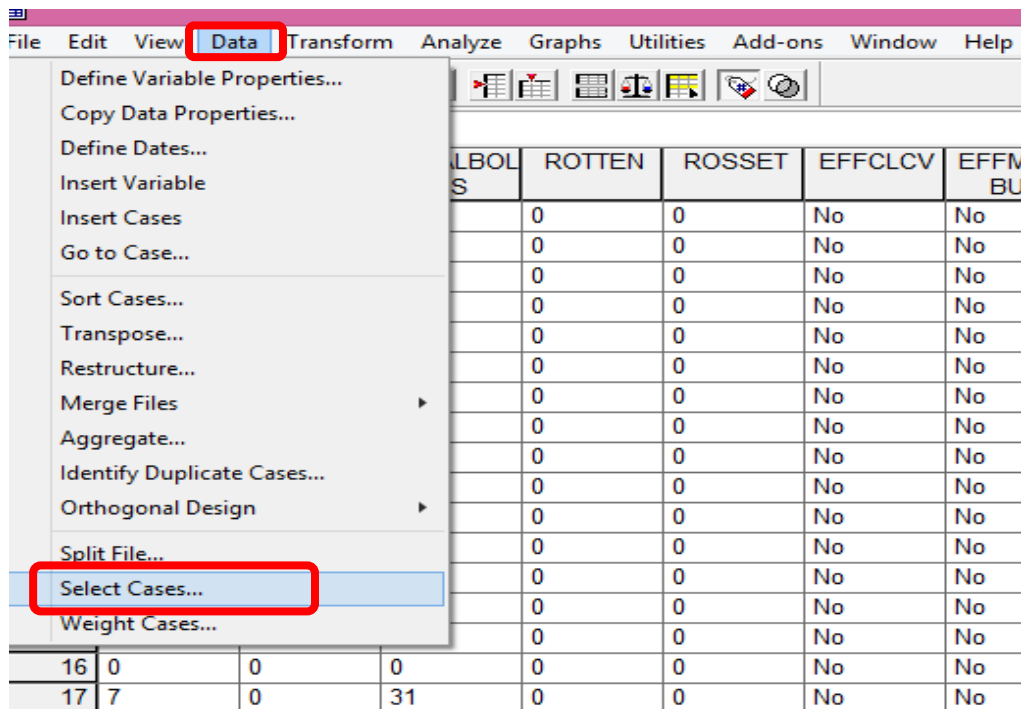


Fig: 1.17

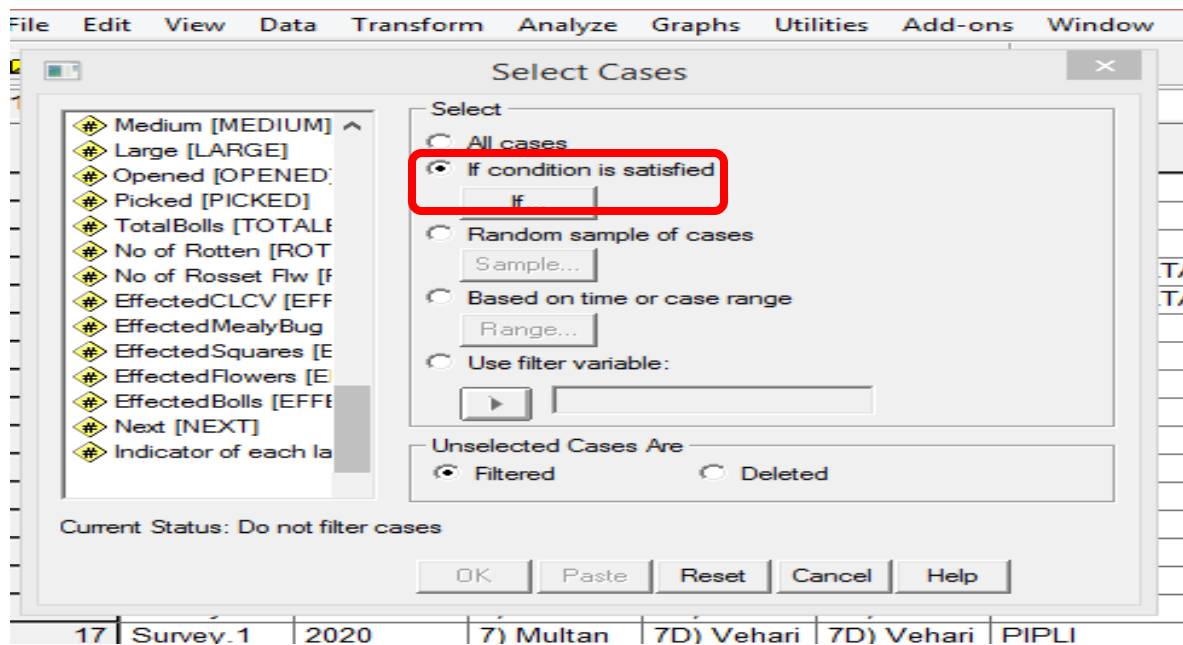


Fig: 1.18

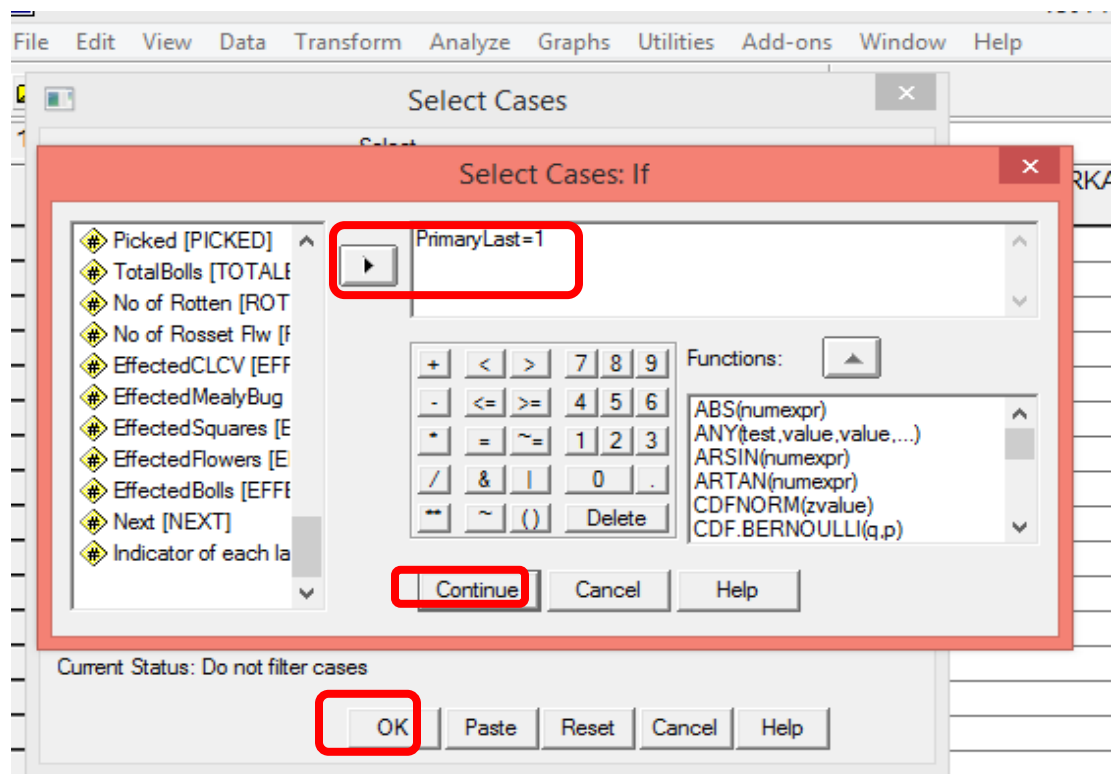


Fig: 1.19

	FFLOW VER	EFFBOL S	NEXT	PrimaryLast	filter_\$
1		0	Yes	Duplicate Case	Not Selected
2		0	Yes	Duplicate Case	Not Selected
3		0	Yes	Primary Case	Selected
4		0	Yes	Duplicate Case	Not Selected
5		0	Yes	Duplicate Case	Not Selected
6		0	Yes	Duplicate Case	Not Selected
7		0	Yes	Duplicate Case	Not Selected
8		0	Yes	Duplicate Case	Not Selected
9		0	Yes	Primary Case	Selected
10		0	Yes	Duplicate Case	Not Selected
11		0	Yes	Duplicate Case	Not Selected
12		0	Yes	Duplicate Case	Not Selected
13		0	Yes	Primary Case	Selected
14		0	Yes	Duplicate Case	Not Selected
15		0	Yes	Duplicate Case	Not Selected
16		0	Yes	Duplicate Case	Not Selected

Fig: 1.20

STEP 3

First go to (SPSS Path)

Data

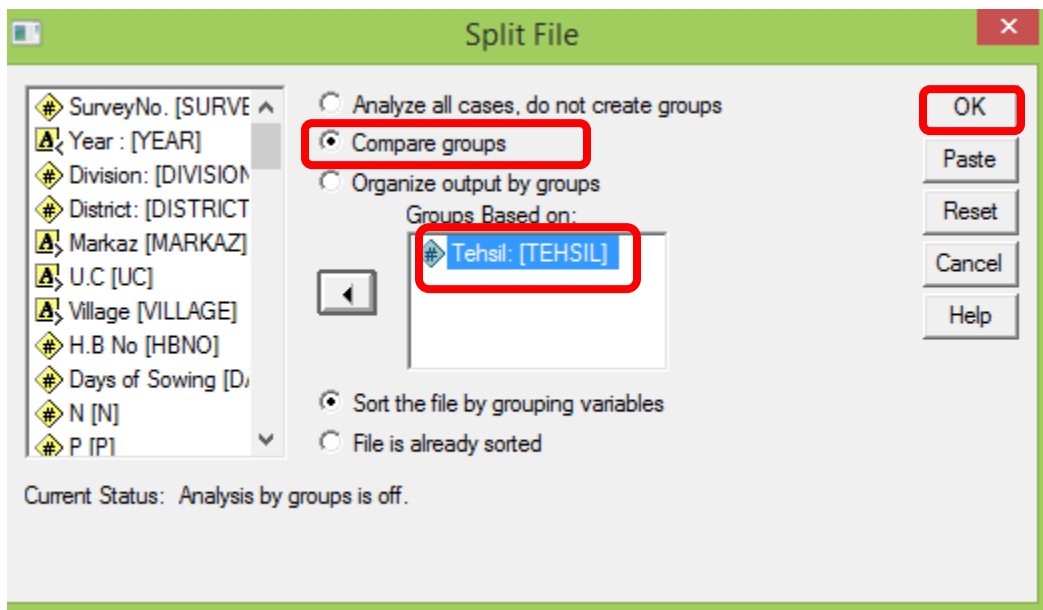
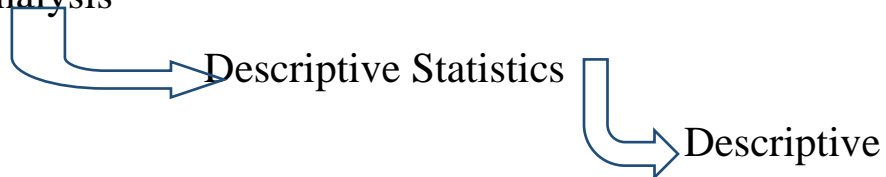


Fig:1. 21

Then go to

Analysis



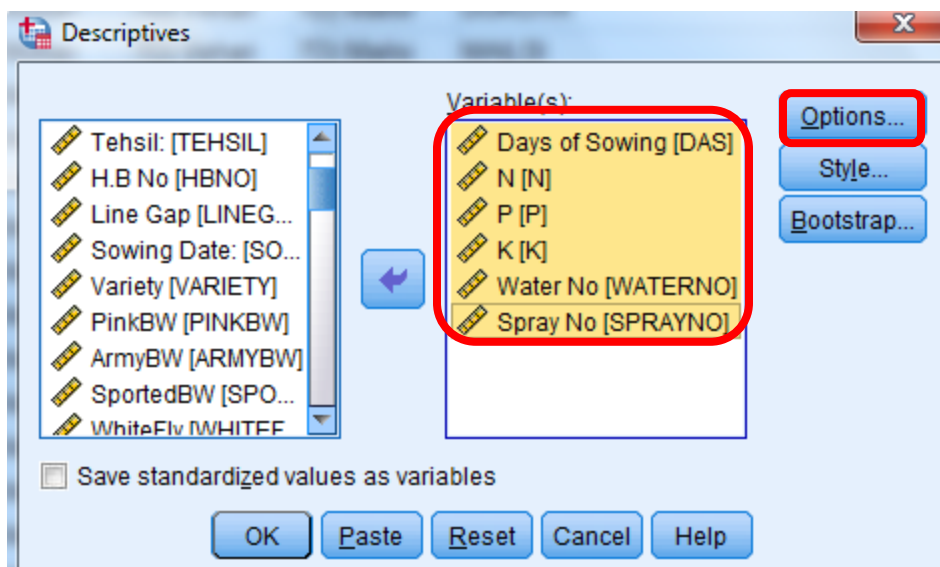


Fig: 1.22

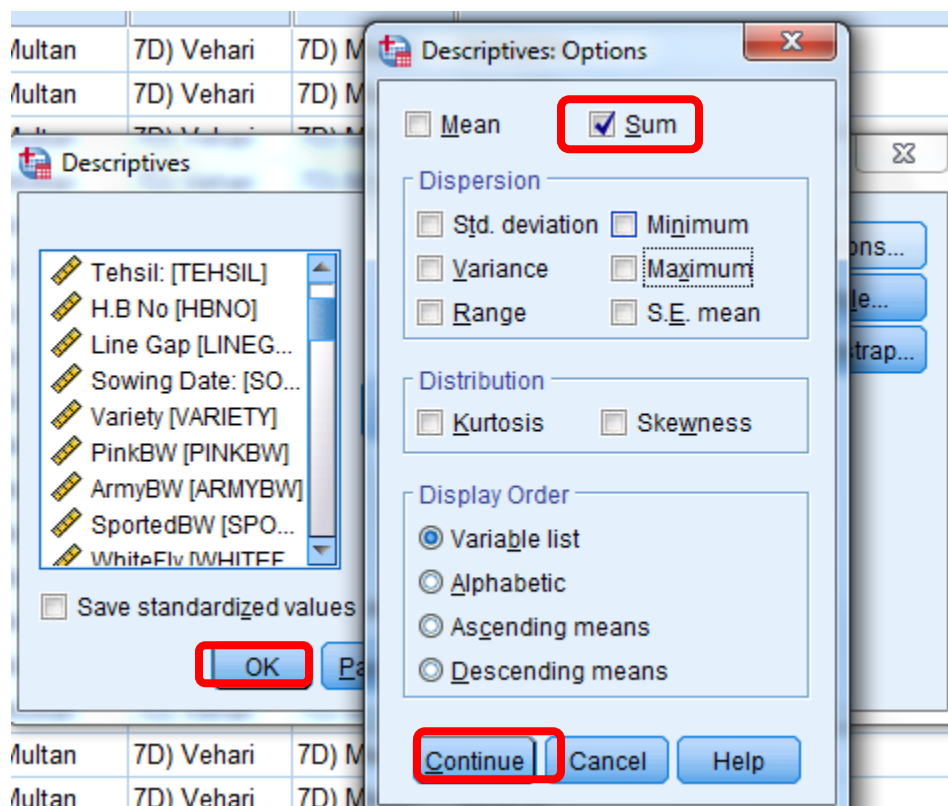


Fig: 1.23

Table 1.4

Descriptive Statistics		
	N	Sum
Days of Sowing	32	2374
N	32	884
P	32	560
K	32	0
Water No	32	307
Spray No	32	106
Valid N (listwise)	32	

Note that:

- Vehari Dist .has 32 villages for Cotton Plant Mapping Survey
- 32 will be minus from variable (Water No) and variable (Spray No).

3. Analysis from Height To Effected Bolls

First Go to Path

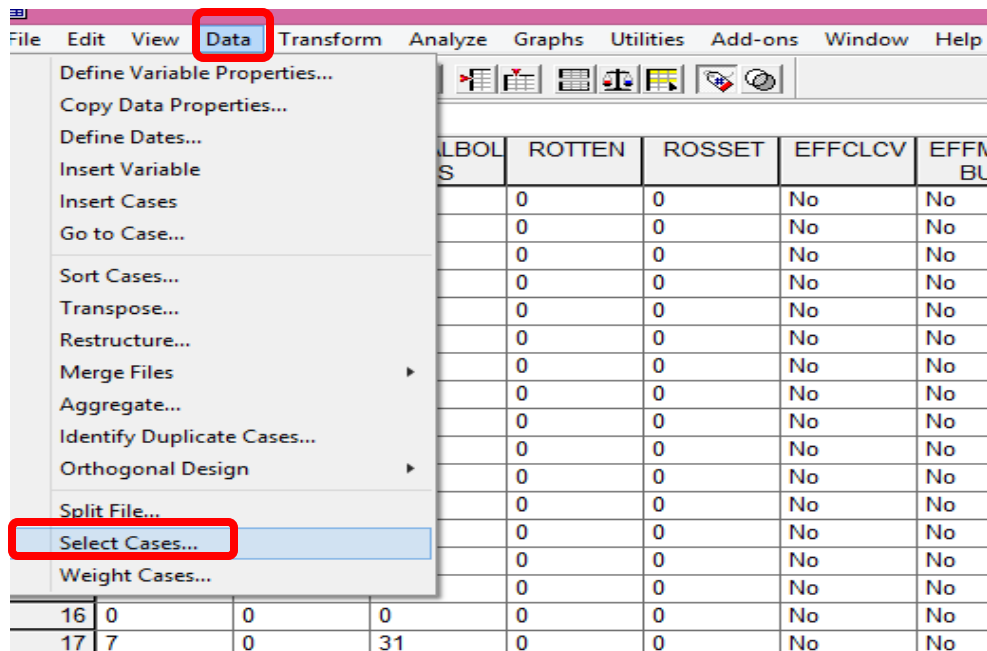


Fig: 1.24

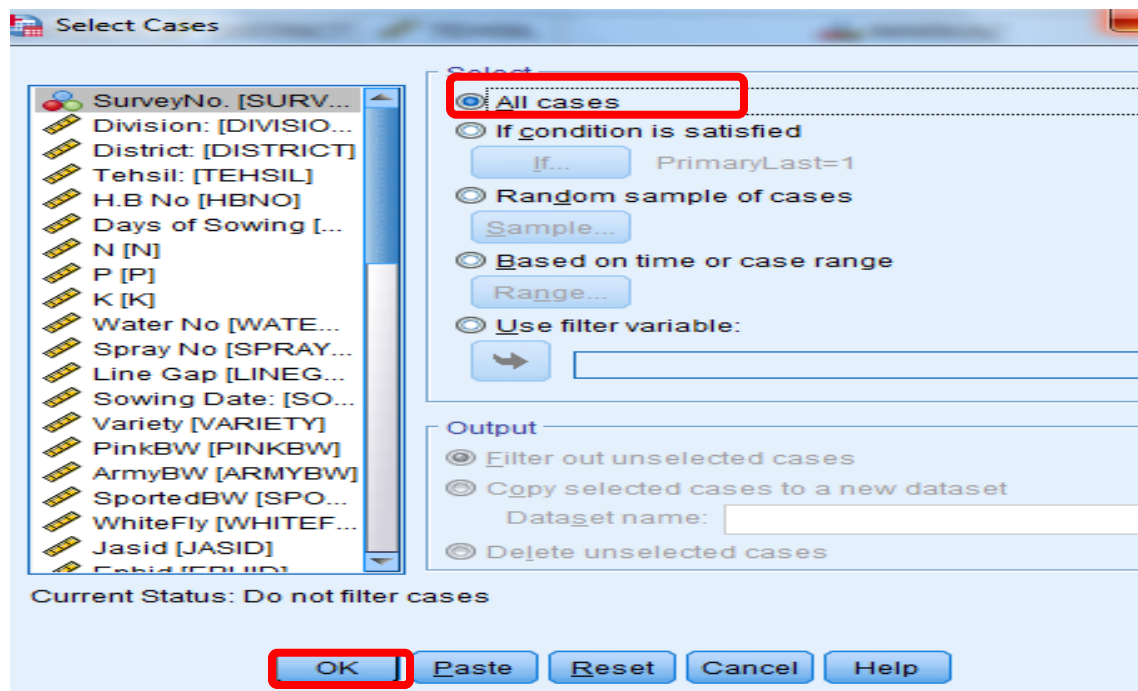


Fig: 1. 25

Then go to

Analysis

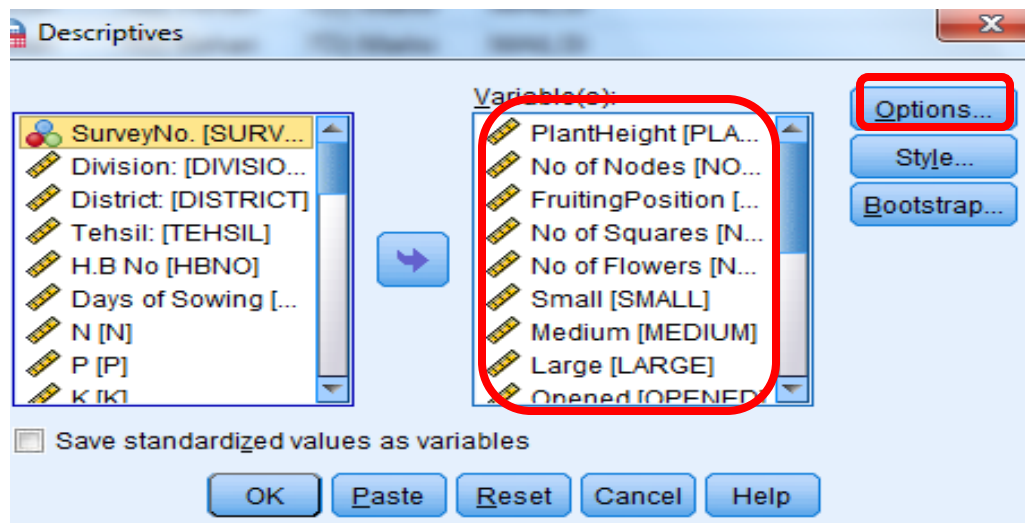
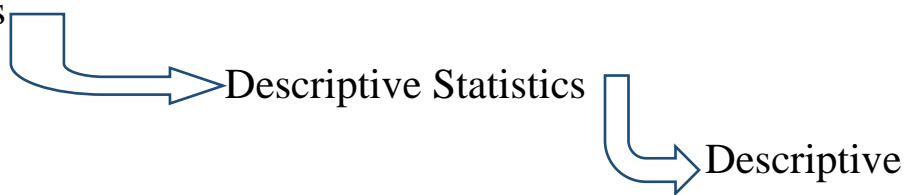


Fig:1. 26

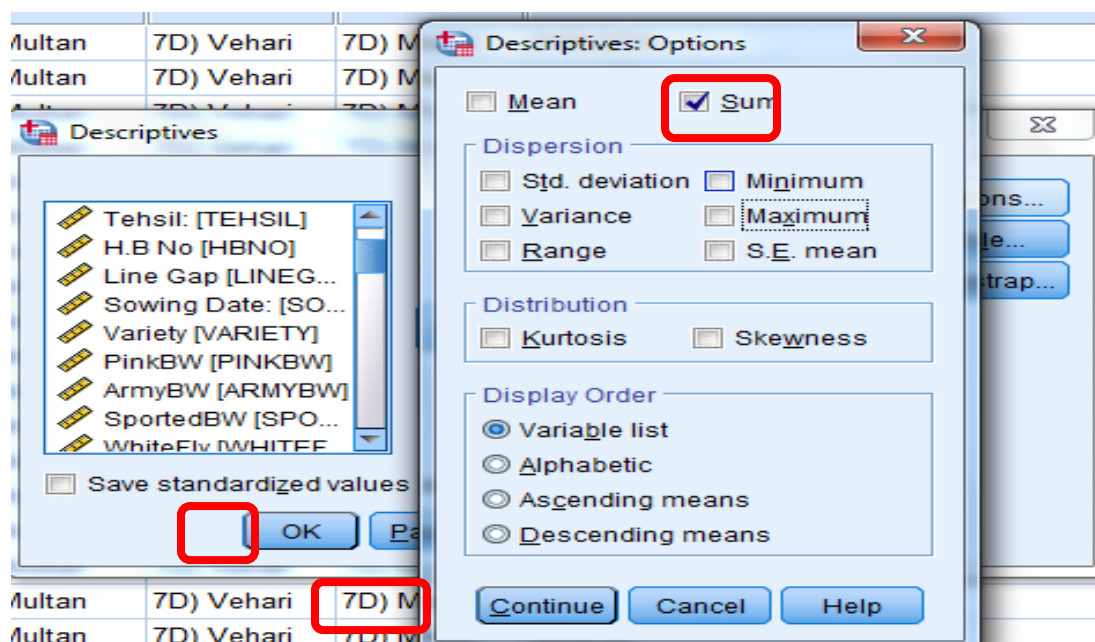


Fig: 1.27

Table 1.5

	N	Sum
PlantHeight	199	13571
No of Nodes	199	4242
FruitingPosition	199	7692
No of Squares	199	1961
No of Flowers	199	174
Small	199	432
Medium	199	269
Large	199	538
Opened	199	235
Picked	187	107
TotalBolls	199	1559
No of Rotten	199	30
No of Rosset Flw	199	0
EffectdCLCV	199	0
EffectdMealyBug	199	0
EffectdSquares	199	11
EffectdFlowers	199	3
EffectdBolls	199	0

Use of Syntax

- Plant Mapping Survey Syntax file can be use for making consolidated report at any level like Tehsil and district level.
- For opening the syntax file, first open the general file of Plant Mapping Survey then use the following way to open the syntax file.

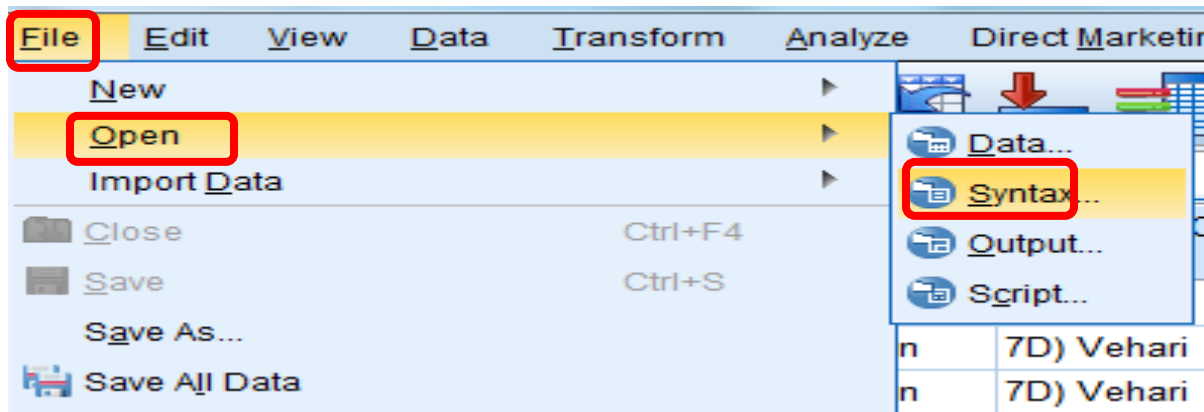


Fig: 27

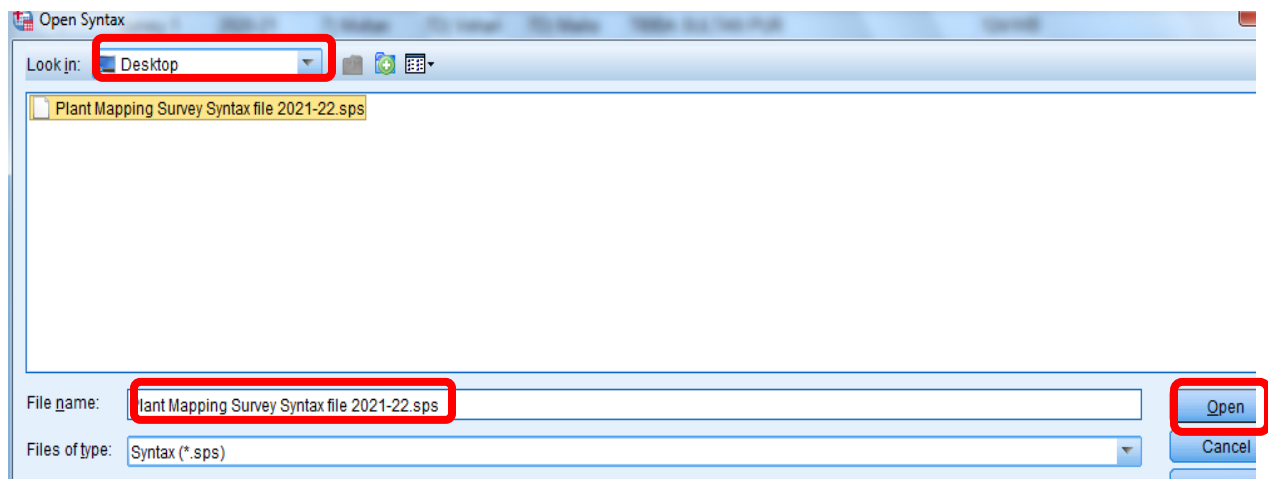


Fig: 28

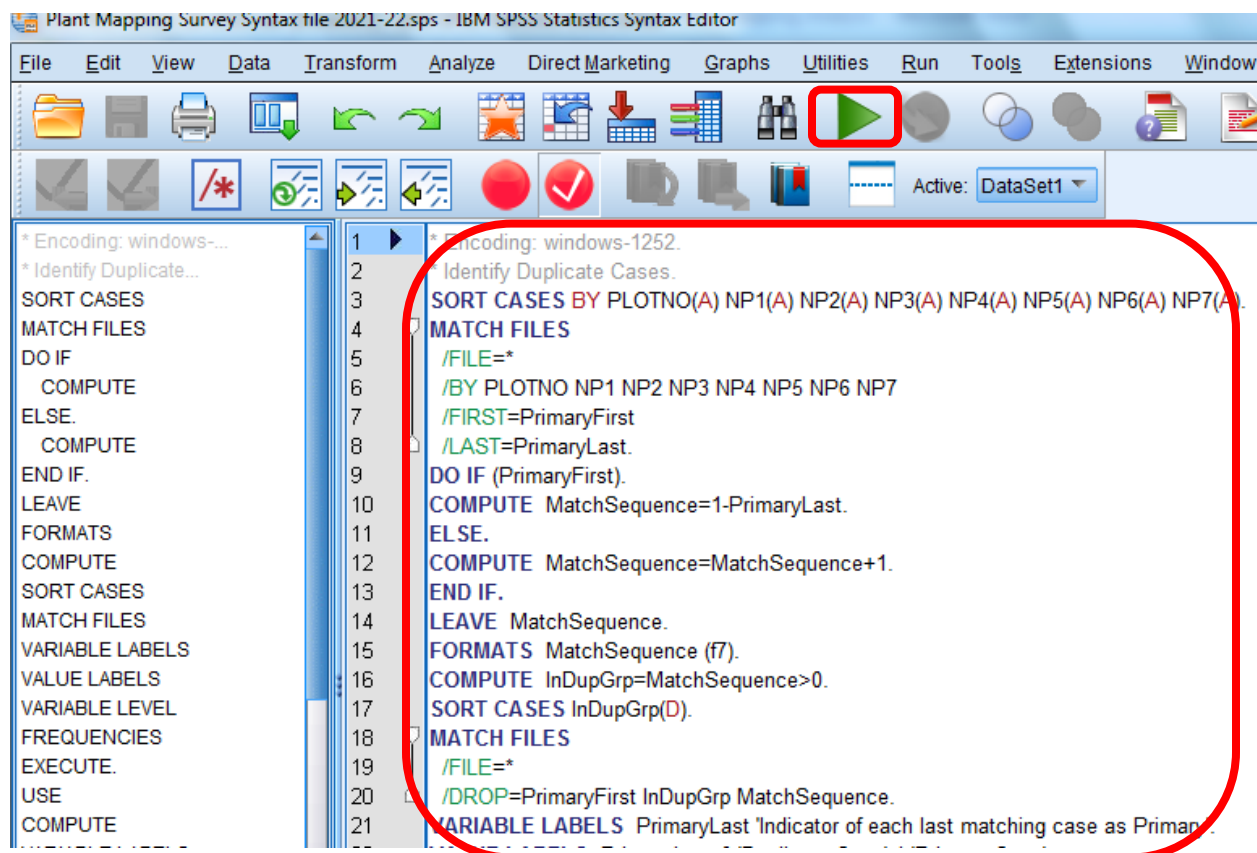


Fig: 29


- First Select the all commands then click on 
- The following output will be generated automatically (Table 1.6)

Table 1.6

Descriptive Statistics

	N	Sum
NoPlantM1	96	196
NoPlantM2	96	212
NoPlantM3	96	225
NoPlantM4	96	209
NoPlantM5	96	210
NoPlantM6	96	225
NoPlantM7	96	207
Valid N (listwise)	96	

Descriptive Statistics

	N	Sum
Days of Sowing	32	2374
N	32	884
P	32	560
K	32	0
Water No	32	307
Spray No	32	106
Yield :	4	119
Valid N (listwise)	4	

	N	Sum
PlantHeight	199	13571
No of Nodes	199	4242
FruitingPosition	199	7692
No of Squares	199	1961
No of Flowers	199	174
Small	199	432
Medium	199	269
Large	199	538
Opened	199	235
Picked	187	107
TotalBolls	199	1559
No of Rotten	199	30
No of Rosset Flw	199	0
EffectuatedCLCV	199	0
EffectuatedMealyBug	199	0
EffectuatedSquares	199	11
EffectuatedFlowers	199	3
EffectuatedBolls	199	0

=====END=====