

## How to Prepare an Excel Input File for Simple Experimental Design (CRD, RBD)

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### Download the Sample File

Start by downloading the sample Excel input file. It will have:

- One sheet named "Define"
- One or more sheets for data based on year, season, period or location

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### Rename the File (Optional)

You can rename the sample file to any name you prefer.

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### Understand the Format First

The format of the input file depends on the type of data analysis you choose. So, before entering your data, carefully study the format in the sample file.

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### One File per Character

If you want to analyze multiple characters (like seed yield, plant height, days to flowering), create a separate Excel file for each character.

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### Fill in the "Define" Sheet

Open the 'Define' sheet and enter your experiment details such as:

- Title
  - Character
  - Unit
  - Centre
  - Location
  - No. of control (Only for comparison of control verses rest treatments)
- (Fill in all required fields)

	A	B
1	Expt. Title	Effect of foliar application of nano urea on growth, yield and quality of custard apple ( <i>Annona squamosa</i> L.) cv. GJCA- 1
2	Character	Total sugar
3	Unit	%
4	Centre	College of Horticulture, CoA, JAU, Junagadh
5	Location	Junagadh
6	No. of Control	2

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### Number of Sheets Needed

For single year/season/location analysis: Your file should have two sheets – one "Define" sheet and one data sheet (e.g., "2020").

For pooled analysis across years/seasons/locations: The file should have multiple data sheets, one for each year/season/location, plus one Define sheet.

Example: For two locations, sheets can be – "Define", "1-Junagadh", and "2-Anand".

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### Naming the Data Sheets

You can rename the data sheets, but make sure the sheet names start with a number.

Examples:

2020, 2021

2020-21, 2021-22

1-Week, 2-Week

1-Kharif, 2-Rabi

1-Junagadh, 2-Anand

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### Data Sheet Format

The first row is the header (column names). You can change the titles.

You can use any number of columns for replications, but it's best to keep it within 8 for better output formatting.

	A	B	C	D
1	Tr. ID	R1	R2	R3
2	T1	23.03	22.07	23.06
3	T2	23.71	23.32	22.07
4	T3	22.73	21.8	21.82
5	T4	20.62	19.12	21.64
6	T5	21.48	21.43	20.68
7	T6	21.95	22.01	21.51
8	T7	20.13	19.46	19.68
9	T8	20.3	21.11	21.21
10	T9	20.83	22.94	20.22
11	T10	18.82	19	19.76
12	C1	18.63	18.73	18.99

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### Entering Data Rows

Enter all treatment data from the second row onwards. For comparison of control verses rest treatments, the last row(s) must be for control treatments.

Example:

(1) If you have 12 treatments including 2 controls, the data sheet will have 13 rows:

- first for the header
- next ten for basic treatments and
- last two for control treatments (placed at the bottom)

(2) If you have 10 treatments without controls, the data sheet will have 11 rows:

- first for the header
- next ten for all treatments

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### Before Uploading

Double-check that:

- Number of sheets, columns, and rows are exactly as required
  - There are no extra sheets, no extra columns or rows, and no extra cell values
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## How to Prepare an Excel Input File for Factorial Experimental Design (FCRD, FRBD)

### 1. Download the Sample File

- Start by downloading the sample Excel file.
- It will have:
  - One sheet named "**Define**"
  - One or more sheets containing data for each year, **season**, or **location**

### 2. Rename the File (Optional)

- You can rename the sample file to any name you prefer.

### 3. Understand the Format First

- The format of the file depends on the **type of analysis** selected.
- Before adding your data, **check the sample file carefully**.

### 4. One File per Character

- If you are analyzing more than one character (like **yield**, **plant height**, or **days to flowering**), use a **separate Excel file for each character**.

### 5. Fill in the "Define" Sheet

- In the '**Define**' sheet, fill in the details of your experiment:
  - Experiment Title
  - Character
  - Unit
  - Centre
  - Location
  - Number of Control Treatments (only if you want to compare control vs Rest treatments)
  - Factor Names and their Treatment Levels
- **Example-1 for two factors without control treatments**

Exp. Title	<b>Effect of Manure and Fertilizer on the yield of crop</b>
CHARACTER	<b>Yield</b>
UNIT	<b>Kg per Plot</b>
Center	<b>Department of Horticulture</b>
Location	<b>Junagadh</b>
<b>Factor Name</b>	<b>Factor Treatment Name</b>
M	M1,M2
F	F1,F2,F3,F4,F5

- **Example-2 for five factors with five control treatments**

	A	B
1	Exp. Title	<b>Effect of Manure and Fertilizer on the yield of crop</b>
2	CHARACTER	<b>Yield</b>
3	UNIT	<b>Kg per Plot</b>
4	Center	<b>Department of Horticulture</b>
5	Location	<b>Junagadh</b>
6	No. of Control	<b>5</b>
7	<b>Factor Name</b>	<b>Factor Treatment Name</b>
8	M	M1,M2
9	F	F1,F2
10	N	N1,N2,N3
11	P	P1,P2
12	K	K1,K2,K3

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## 6. Number of Sheets Needed

- **Single period/season/location:** 2 sheets → "Define" + one data sheet (e.g., "2020")
- **Multiple years/seasons/locations (Pooled Analysis):** "Define" + One sheet for each year/season/period/location

### Example:

Sheet names for two locations: "Define", "1-Junagadh", "2-Anand"

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## 7. Naming the Data Sheets

- Data sheet names **must start with a number**

### Examples:

- 2020, 2021
  - 2020-21, 2021-22
  - 1-Week, 2-Week
  - 1-Kharif, 2-Rabi
  - 1-Junagadh, 2-Anand
- 

## 8. Data Sheet Format

- The **first row** is the header (column names) – you can change these titles.
- The **first column** is for the **treatment name**
- Next 2–5 columns: Factor levels
- Following columns: Replication values

✓ You can use up to **5 replications** for better output formatting.

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## 9. Entering Data

	A	B	C	D	E	F
1	Treatment	Factor-1	Factor-2	R1	R2	R3
2	M1F1	M1	F1	36	59	41
3	M1F2	M1	F2	56	50	34
4	M1F3	M1	F3	55	37	48
5	M1F4	M1	F4	54	36	36
6	M1F5	M1	F5	32	53	33
7	M2F1	M2	F1	53	42	42
8	M2F2	M2	F2	47	34	31
9	M2F3	M2	F3	48	34	44
10	M2F4	M2	F4	32	60	51
11	M2F5	M2	F5	57	35	53

- Start entering data from the **second row**.
- If you have control treatments, put their data **at the bottom of the sheet**.

⚠ The combination of factor levels must be correct — incorrect combinations will give **wrong results**.

### Important Formula:

- **Total Columns** = 1 (treatment name) + Number of Factors (Fn) + Number of Replications (Rn)
- **Total Rows** = 1 (header) + All Factor Combinations ( $L_1 * L_2 * \dots$ ) + Number of Control Treatments (Cn) where  $L_i$  = No. of levels for  $i^{\text{th}}$  factor,  $i=1,2,\dots,5$

**Example:**

**(1) Two factors (2 and 5 levels), 3 Replications, No control**

→ **Columns** =  $1 + 2 + 3 = 6$

→ **Rows** =  $1 + (2 \times 5) + 0 = 11$

✓ So, the sheet must have **6 columns** and **11 rows**

**(2) 3 Factors (2, 5, and 4 levels), 4 Replications, 3 Control Treatments**

→ **Columns** =  $1 + 3 + 4 = 8$

→ **Rows** =  $1 + (2 \times 5 \times 4) + 3 = 44$

✓ So, the sheet must have **8 columns** and **44 rows**

**(3) Five factors (2, 2, 3, 2, 3 levels), 3 Replications, 5 controls**

→ **Columns** =  $1 + 5 + 3 = 9$

→ **Rows** =  $1 + (2 \times 2 \times 3 \times 2 \times 3) + 5 = 78$

✓ So, the sheet must have **9 columns** and **78 rows**

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***10. Before Uploading***

✓ Check that your file has the **correct number of sheets, columns, and rows**

✗ Do not include any **extra sheets, rows, columns, or values**

## How to Prepare an Excel Input File for Regression Analysis?

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### Download the Sample File

Start by downloading the sample Excel input file. It will have:

- One sheet named "Define"
  - One or more sheets for data based on year, season, period or location
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### Rename the File (Optional)

You can rename the sample file to any name you prefer.

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### Understand the Format First

The format of the input file depends on the type of data analysis you choose. So, before entering your data, carefully study the format in the sample file.

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### Number of Sheets Needed

You only need **one sheet** to enter your data.

This sheet should include the values for:

- **Independent variables** (like temperature, rainfall, etc.)
  - **Dependent variable** (like crop yield).
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### Naming the Data Sheets

You can rename the data sheet to any name you prefer.

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### Data Sheet Format

- The **first row** of the sheet should have **column names** (headers). You can rename these as needed.

#### *For Simple or Polynomial Regression:*

- Use **only two columns**:
  1. First column: **Independent variable**
  2. Second column: **Dependent variable**

	A	B
1	x	y
2	5	99
3	7	86
4	8	87
5	7	88
6	2	111
7	17	86
8	2	103
9	9	87
10	4	94
11	11	78
12	12	77
13	9	85
14	6	86

#### *For Multiple Linear Regression:*

- Use the **first 'n' columns** to enter your **independent variables** (n = number of variables you want to include).
- The **next column** should be for the **dependent variable**.
- You can use as many independent variables as needed, but it's best to keep them within **10 columns** for better formatting of results.

	A	B	C	D	E	F	G
1	x1	x2	x3	x4	x5	x6	y
2	38.50	25.90	55.69	55.21	9.92	59.80	0.00
3	31.80	27.20	70.92	70.57	10.93	34.00	0.00
4	30.00	26.00	72.38	72.14	10.50	72.00	0.00
5	27.00	23.50	71.38	68.43	10.79	22.00	0.00
6	30.00	27.00	60.62	59.57	9.85	0.00	0.00
7	30.00	26.00	59.54	59.36	7.77	41.80	0.00
8	30.50	24.00	75.46	76.36	9.08	50.20	0.00
9	22.00	24.00	86.85	84.86	10.04	124.40	0.00
10	28.00	25.00	81.54	79.86	10.12	327.40	0.00
11	27.00	24.00	76.08	74.71	8.32	53.40	0.00
12	28.50	25.00	71.69	70.29	4.77	0.00	0.00
13	29.50	26.20	72.08	71.93	4.82	62.60	0.00
14	28.20	26.00	72.08	71.29	5.76	11.40	0.00
15	29.00	24.50	72.31	71.43	6.06	0.00	3.50
16	28.80	23.00	70.77	68.71	5.27	0.00	5.00
17	27.00	22.10	53.31	49.86	4.69	0.00	10.50
18	28.50	20.50	64.88	66.39	5.03	0.00	15.00
19	26.40	15.50	57.77	56.00	4.00	0.00	22.50

### Entering Data Rows

- Start entering your data **from the second row** (just below the header).
- Fill in the values for all **independent variable(s)** and the **dependent variable** in each row.
- Each row should represent **one complete set of observations**.

### Before Uploading

Double-check that:

- Number of sheets, columns, and rows are exactly as required
- There are no extra sheets, no extra columns or rows, and no extra cell values

## How to Prepare an Excel Input File for Regression Analysis?

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### Download the Sample File

Start by downloading the sample Excel input file. It will have only one sheet.

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### Rename the File (Optional)

You can rename the sample file to any name you prefer.

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### Understand the Format First

The format of the input file depends on the type of data analysis you choose. So, before entering your data, carefully study the format in the sample file.

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### Number of Sheets Needed

You only need **one sheet** to enter your data.

This sheet should include the values for:

- **Independent variables** (like temperature, rainfall, etc.)
  - **Dependent variable** (like crop yield).
- 

### Naming the Data Sheets

You can rename the data sheet to any name you prefer.

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### Data Sheet Format

- The **first row** of the sheet should have **column names** (headers). You can rename these as needed.

#### *For Simple or Polynomial Regression:*

- Use **only two columns**:
  1. First column: **Independent variable**
  2. Second column: **Dependent variable**

#### *For Multiple Linear Regression:*

- Use the **first ‘n’ columns** to enter your **independent variables** (n = number of variables you want to include).
  - The **next column** should be for the **dependent variable**.
  - You can use as many independent variables as needed, but it's best to keep them within **10 columns** for better formatting of results.
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### Entering Data Rows

- Start entering your data **from the second row** (just below the header).
  - Fill in the values for all **independent variable(s)** and the **dependent variable** in each row.
  - Each row should represent **one complete set of observations**.
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### Before Uploading

Double-check that:

- Number of sheets, columns, and rows are exactly as required
  - There are no extra sheets, no extra columns or rows, and no extra cell values
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## How to Prepare an Excel Input File for t-tests?

### Download the Sample File

Start by downloading the sample Excel input file. It will have only one sheet.

### Rename the File (Optional)

You can rename the sample file to any name you prefer.

### Understand the Format First

The format of the input file depends on the type of data analysis you choose. So, before entering your data, carefully study the format in the sample file.

### Number of Sheets Needed

You only need **one sheet** to enter your data.

### Naming the Data Sheets

You can rename the data sheet to any name you prefer.

### Data Sheet Format

#### For one sample t-test:

Cell	Description	Instructions
A1	Column Header	Enter a header name (e.g., "Sample Values"). You can rename it as needed.
A2↓	Sample Data	Enter your sample values vertically, starting from cell A2 downwards.
B1	Population Mean Label	Must contain the <b>text</b> : $\mu=$ (Don't modify this text).
C1	Population Mean Value	Enter the value of population mean ( $\mu$ ). Example: 50
D1	Unit Label	Must contain the <b>text</b> : Unit= (Don't modify this text).
E1	Unit	Enter the unit of measurement. Example: kg, cm, etc.

	A	B	C	D	E
1	Green gram yield	$\mu=$	12	Unit=	q/ha
2	14.3				
3	12.6				
4	13.7				
5	10.9				
6	13.7				
7	12				
8	11.4				
9	12				
10	12.6				
11	13.1				

#### For pair t-test:

##### ◆ Header Section (Rows 1 to 3)

Cell(s)	Content	Instructions
A1:A3	Pair t-test type (Select type from 1 to 3)	<b>Do not change</b> this text. It must appear exactly in cells A1, A2, and A3.
B1	1, 2, or 3	Enter <b>only one number</b> to specify the type of t-test (as per below descriptions).

◆ **t-Test Type Descriptions (Cells C1 to C3)**

Cell	Text (Fixed)	Meaning
C1	1: Comparison of two population means - Independent samples with equal variances	Use 1 in cell B1 for this type
C2	2: Comparison of two population means - Independent samples with unequal variances	Use 2 in cell B1 for this type
C3	3: Comparison of population means for correlated samples	Use 3 in cell B1 for this type

	A	B	C
1	Pair t test type	1	1: Comparison of two population means - Independent samples with equal variances
2	(Select type		2: Comparison of two population means - Independent samples with unequal variances
3	from 1 to 3		3: Comparison of population means for correlated samples
4	Amonium chloride	Urea	
5	13.4	12	
6	10.9	11.7	
7	11.2	10.7	
8	11.8	11.25	
9	14	14.8	
10	15.3	14.4	
11	14.2	13.9	
12	12.6	13.7	
13	17	16.9	
14	16.2	16	
15	16.5	15.6	
16	15.7	16	

## Entering Data Rows

Observation Entry (from Row 5):

Column	Start Cell	Description
A	A5↓	Enter observations for Sample 1
B	B5↓	Enter observations for Sample 2

- Enter each sample's data in its respective column, one value per row.
- Ensure equal number of observations for both samples, especially for **paired** tests.

## Before Uploading

Double-check that:

- Number of sheets, columns, and rows are exactly as required
- There are no extra sheets, no extra columns or rows, and no extra cell values