

up to 75 mm alternate lines. Outer box is of 600mm x600mm x500mm. For outer box total 3 holes provided of 18mm, One is at a upper side & two in opposite face at bottom side. Initially locally available black cotton soil collected & its testing done for its content. Results are as follow.

Table 1: Details of sampling result at sampling location near to 14 No. Municipal school

Sample No.	I	Initial Temp.	28° C
Locaiton	Near to 14No. Municipal School	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	8.23	6.1-8.5
2	Electrical Conductivity	0.26	Up to 1.0mS/cm
3	Nitrogen	261	210-670 kg/hc
4	Phosphorous	28	20-60kg/hc
5	Potash	234	150-440kg/hc
6	Calcium	8450	4550-13200ppm

Table 2: Details of sampling result at sampling location near to Murgi nalla

Sample No.	II	Initial Temp.	28° C
Locaiton	Near to Murgi Nalla	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	8.28	6.1-8.5
2	Electrical Conductivity	0.36	Up to 1.0mS/cm
3	Nitrogen	255	210-670 kg/hc
4	Phosphorous	30	20-60kg/hc
5	Potash	236	150-440kg/hc
6	Calcium	8455	4550-13200ppm

Table 3: Details of sampling result at sampling location near to Dhamaka Band

Sample No.	III	Initial Temp.	28° C
Locaiton	Near to Dhamaka Band	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	8.33	6.1-8.5
2	Electrical Conductivity	0.31	Up to 1.0mS/cm
3	Nitrogen	263	210-670 kg/hc
4	Phosphorous	25	20-60kg/hc
5	Potash	241	150-440kg/hc
6	Calcium	8445	4550-13200ppm

Table 4: Details of sampling result at sampling location near to Bedar pool/Bridge

Sample No.	IV	Initial Temp.	28° C
Locaiton	Near to Bedar Pool/Bridge	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	8.20	6.1-8.5
2	Electrical Conductivity	0.27	Up to 1.0mS/cm
3	Nitrogen	270	210-670 kg/hc
4	Phosphorous	27	20-60kg/hc
5	Potash	244	150-440kg/hc
6	Calcium	8461	4550-13200ppm

Then 180g of Tendu leaves taken with 9.52 kg of black cotton soil in to the centrl box. This central box is surrounded by black cotton soil 89.29kg. Added 21.25lit water. Added 1kg Eisinia Fetida earthworms in to the soil

which allow to help decompose the tendu leaves. Later 13.70 lit water is added to sustain moisture in the soil. After 6 weeks vermicomposted black cotton soil sample tested & found results as follows.

Table 5: Details of sampling result at sampling location near to 14 No. Municipal school after vermicomposting

Sample No.	I	Initial Temp.	28° C
Locaiton	Near to 14No. Municipal School	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	7.38	6.1-8.5
2	Electrical Conductivity	1.36	Up to 1.0mS/cm
3	Nitrogen	525	210-670 kg/hc
4	Phosphorous	43.5	20-60kg/hc
5	Potash	362	150-440kg/hc
6	Calcium	10430	4550-13200ppm

Table 6: Details of sampling result at sampling location near to Murgi nalla after vermicomposting

Sample No.	II	Initial Temp.	28° C
Locaiton	Near to Murgi Nalla	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	7.7	6.1-8.5
2	Electrical Conductivity	1.5	Up to 1.0mS/cm
3	Nitrogen	370	210-670 kg/hc
4	Phosphorous	36	20-60kg/hc
5	Potash	284	150-440kg/hc
6	Calcium	9780	4550-13200ppm

Table 7: Details of sampling result at sampling location near to Dhamaka Band after vermi-composting

Sample No.	III	Initial Temp.	28° C
Locaiton	Near to Dhamaka Band	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	7.4	6.1-8.5
2	Electrical Conductivity	1.40	Up to 1.0mS/cm
3	Nitrogen	500	210-670 kg/hc
4	Phosphorous	40	20-60kg/hc
5	Potash	350	150-440kg/hc
6	Calcium	10300	4550-13200ppm

Table 8: Details of sampling result at sampling location near to Bedar Pool/Bridge after vermicomposting

Sample No.	IV	Initial Temp.	28° C
Locaiton	Near to Bedar Pool/Bridge	Lab Temp.	27° C
Sr.No.	Parameters	Results	Normal Range
1	pH	7.3	6.1-8.5
2	Electrical Conductivity	1.35	Up to 1.0mS/cm
3	Nitrogen	520	210-670 kg/hc
4	Phosphorous	42	20-60kg/hc
5	Potash	360	150-440kg/hc
6	Calcium	10370	4550-13200ppm

4.8 Laboratory Result analysis for soil.

Laboratory analysis is done for four samples taken in consideration with soil nutrients/properties

1) pH

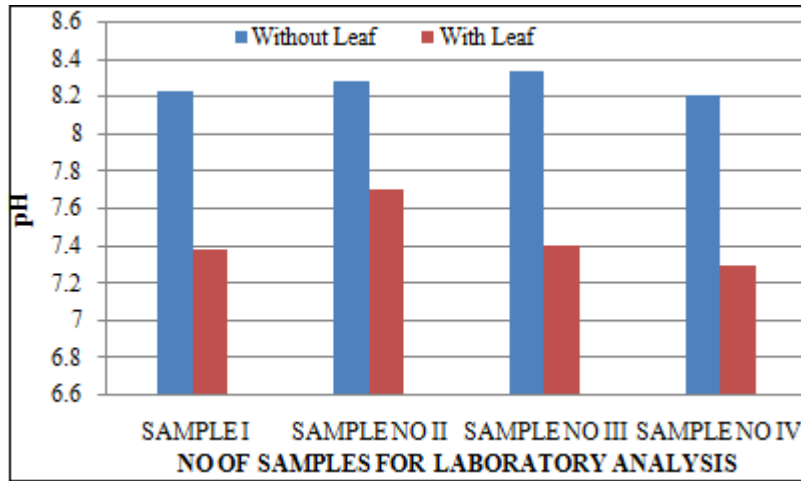


Figure 1: Graphical Representation Showing Variation in pH

2) Electrical Conductivity

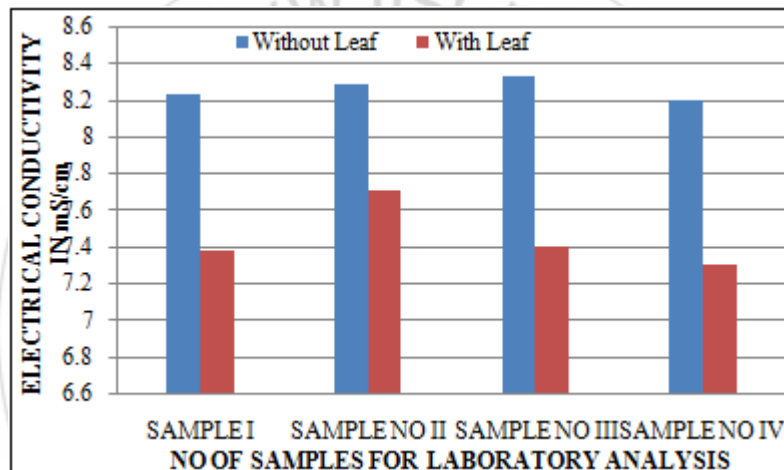


Figure 2: Graphical Representation Showing Variation in Electrical Conductivity

3) Nitrogen

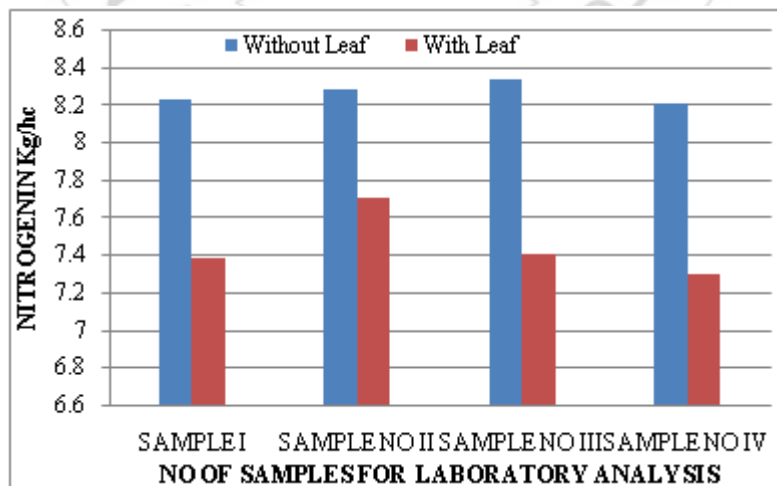


Figure 3: Graphical Representation Showing Variation In Nitrogen

4) Phosphorous

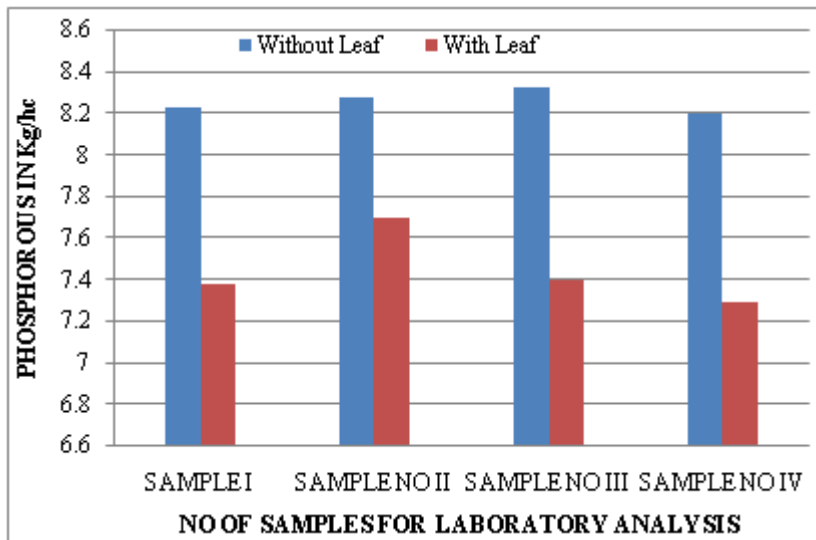


Figure 4: Graphical Representation Showing Variation in Phosphorous

5) Potash

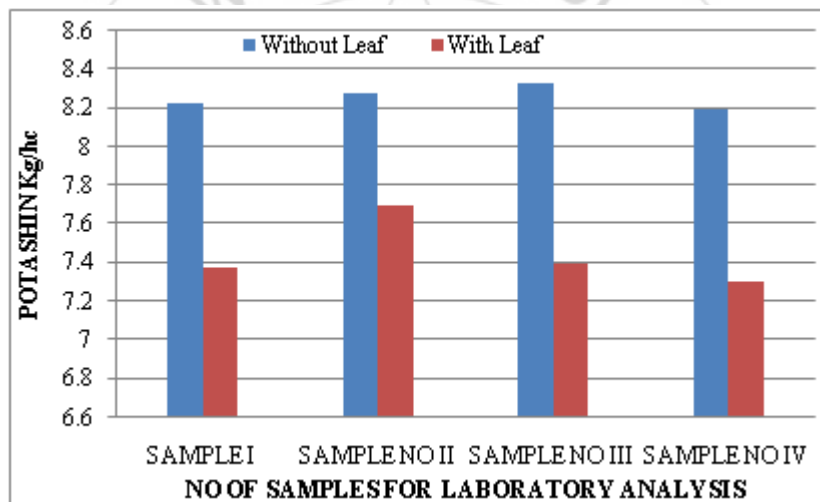


Figure 5: Graphical Representation Showing Variation in Potash

6) Calcium

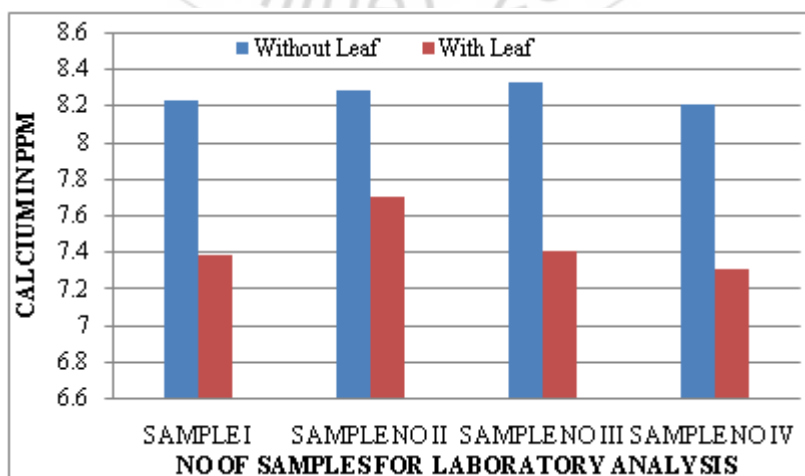


Figure 6: Graphical Representation Showing Variation in Calcium

5. Result & Discussion

After vermicomposting pH value of soil decreases up to 7.38 from 8.23. Electrical conductivity increases up to 1.36mS/cm. Nitrogen content increased up to 525 kg/hc from 261kg/hc. Phosphorous content increased up to 43.5 kg/hc from 28. Potash value increased up to 362 kg/hc from 234kg/hc. For plant/crop growth nitrogen, phosphorous & potassium plays a very important role. Calcium value increased up to 10430ppm from 8450.

6. Summary

The tendu leaves used for Bidee industry are responsible for large waste generation. This industry produces cutting of tendu leaves as refuse which pollutes the dumping sites creating solid waste disposal problem of alarming scale. It is necessary to find out effective method of disposal of waste Tendu leaves or its proper utilization which minimize the waste quantity.

As life of thousands families involves in activities from collecting of Tendu leaves to rolling it in to Bidee, it is necessary to pay proper attention to provide required health facilities to them.

7. Future Scope

- 1) To provide better disposal facility
- 2) Necessity for public awareness
- 3) Appropriate action to minimize the waste
- 4) Detailed study of Life cycle Analysis of Tendu leaves
- 5) To protect the mother earth with proper solution for disposal
- 6) Try to get cash recovery product from these Tendu leaf waste generated.

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