

02. Green manures-Oilcakes-Sewage sludge-Biogas plant slurry-Plant and animal refuges

GREEN MANURES

Green manure:

Growing the plants *in-situ* and incorporation in the field.

Green leaf manure

Addition of green or plant tissues obtained from elsewhere *viz.*, trees, herbs, shrubs pruning and unwanted weeds.

Benefit of Green manure or Green leaf manures

- a. Addition of organic matter.
- b. Adds Nutrient – Macro, Secondary and micro nutrients.
- c. It improves physical condition of soil.
- d. Act as a soil amendment to reclamation of problem soils.
- e. It act as a cover or catch crop to prevent soil erosion, conserve moisture, prevent nutrient leaching.
- f. Leguminous crops fix the atmospheric – N by the roots and improves N status of the soil.

Characteristics of Green manure

1. It should have rapid growth and shorter duration so that can be fitted in a crop rotation
2. It should yield abundant biomass and should be succulent to have rapid decomposition
3. It should have the ability to grow on poor soils.

Nutrient content of agricultural wastes

Agricultural wastes	N	P ₂ O ₅	K ₂ O
Sugarcane Begasse	0.25	0.12	0.20
Sugarcane Begasse compost	1.40	0.45	0.60
Sugarcane Begasse Press mud	1 – 1.5	2.0	-

Press mud – compost	1.5	1.5	-
Saw dust	Traces	0.2 0.25	-
Tobacco waste	0.5 – 1.0	0.8	1.0
Tobacco seed cake	4 – 4.5	7 – 15	5 – 5.5
Tea waste	2.8 – 3.6	0.3 – 0.4	1 – 2
Cotton dust	1 – 1.5	-	-
Textile waste	1 – 1.5	-	-

Nutrient content of Commonly used Concentrated manures

Oil cake	N	P2O5	K2O
Groundnut cake (Decordicated)	7.8	1.5 – 1.9	1.4
Lin seed cake	5.5	1.4	1.2
Mustard cake	4.5	1.5	1.0
Neem cake	5.2	1.0	1.4
Niger cake	4.8	1.8	1.0
Pungam cake	2.5	1.0	1.0
Safflower (decordicated)	7.8	2.2	2.0
Sesamum	6.2	2.0	1.2
Castor	5.8	1.8	1.0
Coconut	3.2	1.8	1.7

Slaughter House wastes

Wastes	N	P2O5	K2O
Blood meal	10 – 12	1.2	1.0
Meat meal	10.5	2.5	0.5
Fish meal	4 -10	3 – 9	0.3 – 1.5
Horn – Hoff meal	13	-	-

Leather - waste	7	0.1	0.2
Hair and wool waste	12.3	0.1	0.3
Sewage water	25ppm	5 ppm	15 ppm
Sludge	1.5 – 3.5	0.75 – 4	0.3 – 0.6

Nutrients content of Commonly used Green manures

Green manure	N %	P2O5%	K2O %
Sunhemp	0.5	0.1	0.4
Danicha	1.1	0.2	0.4
Sesbania	0.7	0.1	0.6
Pelli pesera	0.7	0.2	0.4
Cluster bean	0.3	0.1	0.3
Cow pea	0.7	0.2	0.6
Green leaf manure			
Kolungi	0.7	0.1	0.4
Calotropis	0.3	0.1	0.6
Pungam	1.2	0.2	0.8
Glyricidia	0.8	0.1	0.7
Puvarasu	0.8	0.2	0.9

Guano - Birds Excreta or bat Dung

Guano	2.6	4.2	0.6
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