

Appendix

Appendix 1. Mineral nutrient contents of some common organic resources (based upon the TSBF Organic Resource Data Base)

Material	Part analyzed	N	P	K	Ca	Mg	Lignin	Total Soluble PP
		----- kg ton ⁻¹ -----						
Agroforestry Species								
<i>Acacia sp</i>	leaf	25.3	1.7	10.6	7.2	2.4	144.5	99.6
<i>Adanisionia digitata</i>	leaf	35.3	3.6	25.5	.	.	.	.
<i>Albizia sp</i>	leaf	34.5	1.8	4.1	7.3	3.0	106.0	33.4
<i>Alnus acuminata</i>	leaf	16.0	1.6	3.4	.	.	211.4	47.1
<i>Azadirachta indica</i>	leaf	18.4	1.6	22.2	15.7	2.0	220.4	55.7
<i>Balanites aegyptiaca</i>	leaf	30.7	1.4	32.7	31.4	6.2	.	.
<i>Bambusa vulgaris</i>	leaf	15.9	1.5	17.2	3.7	3.8	81.1	5.6
<i>Calliandra calothyrsus</i>	leaf	32.8	1.7	8.5	10.6	3.1	165.5	94.6
<i>Calliandra calothyrsus</i>	leaf litter	20.4	0.9	2.3	9.3	.	189.7	52.6
<i>Calliandra calothyrsus</i>	prunings	29.1	2.3	12.8	5.5	.	154.5	142.1
<i>Cassia siamea</i>	leaf	34.8	2.4	16.1	12.9	1.6	.	.
<i>Chamaecytisus palmensis</i>	prunings	32.5	1.2	5.9	10.5	.	69.0	.
<i>Cocos nucifera</i>	leaf	8.5	1.1	.	.	.	76.5	27.4
<i>Coffea robusta</i>	leaf	28.0	1.9	27.5	11.4	2.6	152.7	71.7
<i>Croton macrostachyus</i>	leaf	43.4	2.5	32.5	8.7	5.9	63.3	31.1
<i>Croton megalocarpus</i>	leaf	27.1	2.5	24.4	17.1	4.4	140.8	23.4
<i>Dactyladenia barteri</i>	leaf	17.3	0.9	6.0	9.2	2.0	213.8	41.7
<i>Eucalyptus camaldulensis</i>	leaf	10.7	0.7	2.4	17.1	2.3	58.0	75.4
<i>Gliricidia sp</i>	leaf	31.4	1.4	10.6	17.1	3.0	136.4	13.9
<i>Grevillea robusta</i>	prunings	15.1	0.8	10.8	1.0	1.8	240.8	45.7
<i>Inga edulis</i>	prunings	23.6	1.8	12.5	7.4	1.7	238.2	42.1
<i>Leptospermum petersonii</i>	leaf	18.9	3.0	14.0	11.1	3.0	343.3	97.9
<i>Maesopsis eminii</i>	leaf	27.2	1.6	11.0	13.8	6.1	113.9	28.0
<i>Markhamia lutea</i>	leaf	22.2	1.5	15.3	16.6	3.2	232.8	34.1
<i>Morus alba</i>	prunings	27.8	1.6	24.1	31.6	4.9	.	.
<i>Psidium guajava</i>	leaf	23.3	2.0	15.4	9.4	3.2	19.2	138.6
<i>Pterocarpus santalinoides</i>	leaf	3.1	1.1	12.3	13.9	3.8	241.0	26.3
<i>Rbus natelensis</i>	leaf	24.4	1.9	34.7	12.2	4.8	52.5	4.0
<i>Samanea saman</i>	leaf	39.9	1.4	8.2	23.6	2.8	.	67.0
<i>Schinus molle</i>	leaf	28.2	1.9	16.1	13.7	5.9	99.5	48.0
<i>Senna sp</i>	prunings	23.4	1.3	13.0	14.3	2.1	133.8	25.4
<i>Sesbania sesban</i>	leaf	34.7	2.1	14.0	18.4	3.6	50.7	58.9
<i>Sesbania sesban</i>	leaf litter	28.8	1.4	9.5	12.2	2.3	142.8	32.1
<i>Spathodea canipulata</i>	leaf	19.8	1.9	16.6	22.1	3.5	245.0	44.5

Material	Part analyzed	N	P	K	Ca	Mg	Lignin	Total Soluble PP
----- kg ton ⁻¹ -----								
Agro-industrial by-products								
<i>Coffea robusta</i>	husk	16.7	1.3	29.0	.	1.8	3 9.6	13.8
<i>Oryza sativa</i>	husk	6.3	1.4	3.8	0.8	0.4	166.6	0.1
<i>Vitis vinifera</i>	leaf	33.4	2.4	24.9	8.2	4.8	54.3	26.5
Animal manures								
Cattle manure	dry	9.8	2.2	8.5	4.0	2.3	84.8	1.7
Cattle manure	fresh	15.0	5.4	6.4	.	.	.	.
Goat manure	composite	15.0	4.0	5.3	.	.	.	.
Pig manure	composite	2.0	11.9	4.9	.	.	.	.
Poultry manure	composite	28.8	15.8	22.5	32.0	6.9	119.3	.
Rabbit manure	composite	16.0	4.0	5.0	.	.	.	.
Sheep manure	composite	12.8	4.7	57.7	11.0	14.5	51.8	.
Composts								
Compost	Mixed waste	18.2	10.0	15.1	30.6	5.7	76.4	.
Tree litter compost	mixed	14.7	1.1	3.8	2.2	3.2	188.5	.
Crop residues								
<i>Arachis hypogaea</i>	leaf	32.5	1.8	24.1	13.4	4.0	50.8	28.7
<i>Cajanus cajan</i>	leaf litter	19.9	1.0	1.8	14.7	2.4	23.7	31.0
<i>Cajanus cajan</i>	prunings	23.9	1.5	12.4	5.7	.	15.5	52.3
<i>Cajanus cajan</i>	leaf	34.1	1.9	15.3	15.6	2.5	11.9	28.0
<i>Cicer arietinum</i>	leaf	41.7	2.7	28.8	.	4.6	.	.
<i>Glycine max</i>	prunings	26.9	1.9	21.6	.	.	85.3	17.7
<i>Helianthus annuus</i>	leaf	24.1	18.0	29.3	23.5	7.3	154.7	36.6
<i>Ipomoea pandurata</i>	leaf	23.2	3.6	46.9	9.8	3.9	96.4	40.8
<i>Lablab purpureus</i>	leaf	39.0	2.0	15.3	17.5	4.0	68.4	21.2
<i>Lablab purpureus</i>	prunings	30.2	2.5	24.7	14.0	2.6	54.0	.
<i>Lablab purpureus</i>	leaf litter	29.4	2.3	8.8	20.2	4.1	157.7	7.8
<i>Lablab purpureus</i>	stem	13.3	1.9	12.4	10.3	4.0	149.5	3.3
<i>Manihot esculenta</i>	leaf litter	29.8	1.9	7.3	10.9	5.6	375.2	.
<i>Musa sp</i>	leaf	19.0	1.2	21.9	11.6	3.2	107.5	11.4
<i>Musa sp</i>	stem	6.0	1.2	39.7	3.9	3.0	54.9	0.1
<i>Oryza sativa</i>	leaf litter	8.5	0.6	13.6	3.8	1.6	.	.
<i>Phaseolus vulgaris</i>	leaf	37.2	2.6	27.5	15.6	3.6	62.0	23.9
<i>Phaseolus vulgaris</i>	stover	9.9	1.1	19.3	9.2	2.6	108.2	3.4
<i>Pisum sativum</i>	stover	13.7	0.8	11.1	14.1	2.6	82.0	16.0
<i>Saccharum officinarum</i>	stover	3.9	0.4	7.0	2.4	0.4	160.2	3.5
<i>Sorghum bicolor</i>	leaf	6.3	1.0	14.0	4.9	1.4	42.3	29.2
<i>Vigna radiata</i>	leaf	34.5	1.6	16.9	.	5.2	33.8	29.5
<i>Vigna unguiculata</i>	prunings	24.2	3.1	11.0	12.2	7.1	127.0	11.1
<i>Voandzeia subterranea</i>	leaf	35.9	2.0	20.0	.	3.8	.	.
<i>Zea mays</i>	leaf	13.8	1.3	11.5	2.2	1.9	129.0	7.7

<i>Zea mays</i>	stover	8.3	0.8	12.5	3.4	1.9	88.2	7.4
Material	Part analyzed	N	P	K	Ca	Mg	Lignin	Total Soluble PP
		----- kg ton ⁻¹ -----						
Green manures								
<i>Canavalia brasiliensis</i>	leaf	37.1	2.7	17.9	10.4	3.5	65.2	84.0
<i>Crotalaria sp</i>	leaf	41.6	1.9	13.5	15.6	3.7	66.9	15.9
<i>Desmodium intortum</i>	leaf	32.9	1.4	21.0	14.5	.	77.0	47.6
<i>Desmodium intortum</i>	prunings	21.5	1.5	.	5.2	.	164.9	113.3
<i>Desmodium uncinatum</i>	leaf	30.9	1.6	19.7	16.3	.	116.6	49.8
<i>Desmodium uncinatum</i>	prunings	34.5	2.8	18.1	7.8	.	85.2	31.2
<i>Glycine wightii</i>	prunings	26.7	2.3	13.2	14.4	3.9	.	.
<i>Lantana camara</i>	prunings	19.7	1.8	29.0	9.9	.	152.4	33.9
<i>Lantana camara</i>	leaf	29.7	2.7	22.9	12.7	4.5	144.8	63.1
<i>Leucaena sp</i>	prunings	30.5	1.8	15.7	10.1	3.8	164.7	71.6
<i>Mucuna deeringiana</i>	prunings	13.7	1.7	5.8	.	3.8	104.5	29.7
<i>Mucuna pruriens</i>	leaf	44.1	3.0	15.5	10.0	4.5	86.8	75.2
<i>Mucuna pruriens</i>	prunings	29.3	2.3	15.3	9.0	5.4	78.6	88.1
<i>Pennisetum purpureus</i>	leaf	22.5	1.3	21.0	12.6	1.4	47.1	1.8
<i>Tephrosia vogelii</i>	leaf	21.4	1.0	8.2	14.6	2.9	16.8	63.9
<i>Tithonia diversifolia</i>	leaf	38.4	3.8	45.5	19.5	4.1	116.6	34.6
<i>Tithonia diversifolia</i>	stem	20.0	2.0	47.8	7.8	3.0	115.8	11.6