

Table 5. List of commonly used organic manure used for tilapia culture and their N:P ratio and NPK content

Type of fertilizers		N:P ratio and Ca and NPK content (%)			
		N:P ratio	Nitrogen (N)	Phosphorus (P)	Potassium (K)
FAECES/DUNG					-
	Buffalo	2.24	1.23	0.55	0.69
	Cattle	3.41	1.91	0.56	1.40
	Sheep	2.37	1.87	0.79	0.92
	Pig	2.06	2.80	1.36	1.18
	Poultry manure	1.99	3.77	1.89	1.76
	Duck manure	1.90	2.15	1.13	1.15
URINE					
	Buffalo	205.00	2.05	0.01	3.78
	Cattle	194.80	9.74	0.05	7.78
	Sheep	99.00	9.90	0.10	12.31
	Pig	8.70	10.88	1.25	17.86
MEALS					
	Blood meal	16.85	11.12	0.66	
	Bone meal	0.31	3.36	10.81	
PLANT MATERIALS					
	Wheat straw	4.45	0.49	0.11	1.06
	Rice straw	5.80	0.58	0.10	1.38
	Maize straw	1.90	0.59	0.31	1.31
	Soybean straw		1.30		
	Cotton stalks and leaves	5.87	0.88	0.15	1.45
	Cottonseed meal	7.83	7.05	0.90	1.16
	Groundnut straw		0.59		
	Groundnut hulls	8.75	1.75	0.20	1.24
	Groundnut shells	16.67	1.00	0.06	0.90
	Bean straw	4.91	1.57	0.32	1.34
	Coffee pulp	14.92	1.79	0.12	1.80
	Sugarcane trash	8.75	0.35	0.04	0.50
	Grass	13.67	0.41	0.03	0.26
	Green weeds		2.45		
	Oil palm pressed fibre	12.40	1.24	0.10	0.36
	Oil palm sludge cake	3.61	4.30	1.19	1.15
	Molasses	0.39	2.09	5.30	1.99
	Groundnut leaves	15.06	2.56	0.17	2.11
	Tree leaves (general)	3.33	1.00	0.30	0.57
AQUATIC PLANTS AND ALGAE					
	Water hyacinth	5.51	2.04	0.37	3.40
	Azolla sp.	18.40	3.68	0.20	0.15
	Lemna sp.	16.55	3.31	0.20	0.69
	<i>Ceratophyllum</i> sp.	7.02	3.30	0.47	5.90
	<i>Hydrilla</i> sp.	9.64	2.70	0.28	2.90
ANIMAL/PLANT (MIXED) MANURES					
	Rice straw bedding	3.93	1.06	0.27	2.00
	Wheat straw bedding	6.41	1.09	0.17	1.40
	Litter bedding	5.65	1.13	0.20	2.03
	Straw	2.95	0.62	0.21	0.49
	Rural composts (general)	3.79	1.10	0.29	1.37
RAW MATERIAL					
	Straw	6.89	1.31	0.19	7.81
	Cow manure	3.70	0.37	0.10	0.08
	Buffalo manure	3.14	0.44	0.14	0.11
	Pig manure	5.23	0.68	0.13	0.05
	Water hyacinth	3.04	1.40	0.46	0.54
	Cotton stalks	7.67	1.61	0.21	2.80
	Mixed crop residues	4.55	0.91	0.20	1.62
	Rice straw	4.00	1.04	0.26	0.85
	Azolla	3.53	3.88	1.10	1.60

Data source: Tacon (1987b)