Compost and Manure - Commercial

These are commercially bagged (or equivalent bulk) soil amendments.

Amendment	N¹	P^1	K ¹	Incorporated materials	Comments	Reference
Chicken Manure ²	1.5	0.5	1.5-2	Chicken manure, fine bark, composted.	May contain 5% salts. Chicken manure is considered the 'hottest' (with fastest release of Nitrogen) ³ . Some products may have added lime. Chicken manure should no longer contain arsenic compounds, as Canada suspended use of roxarsome (an antibiotic containing arsenic) in 2011. ⁴	
Mushroom Manure ²	1.0	0.5	1.0	Medium for growing mushrooms contained horse manure, straw, peat moss and a blend of fertilizers	May contain 5% salts. May have added lime and or gypsum. Consider product pH if applying to acid-loving plants. May contain pesticides used to control fungus gnats. ⁶	
Steer Manure ²	1.5	0.5	0.5	Steer manure, fine fir bark, composted.	May contain 5% salts	5
Fish Compost (Earthbank brand) ⁷	1.5-2	0	0	Recycled clean wood waste (mainly bark from fir and hemlock, ground up yard clearing debris, some sawdust from local mills) and fish waste (fish offal, farmed fish mortalities) from farmed and wild local processors.	High temperature composting (+60C) destroys all pathogens whether they are from fish, humans, or anything else. (Fish diseases are harmless to humans). Antibiotics in farmed fish are low when compared to other farmed products, and the composting process breaks down any remaining residue. Testing shows low heavy metals content. Organic Materials Review Institute (OMRI) certified.	
Fish Compost – Sea Soil ⁸	2.1	0.16	0.1	Fish and forest fines, composted for two years	Tested for heavy metals, E-coli and fecal coliform bacteria. OMRI certified https://www.omri.org/omri-canada	
Worm Castings ²	~1.0	0	0	Earthworm castings	Nutrient content may not be listed on the package. Value of 1-0-0 is an estimate based on 1 product.	
Organic Compost ²	0.8	0.4	0.5	Composted grass clippings, yard and garden waste, ground wood by-products and other organic matter	Nutrient content of home-made composts will be variable but will have similarly low NPK content.	

Salts from animal manures can accumulate in soil and be a problem in poorly drained soil³ (such as heavy clays). On Vancouver Island in well drained soils, salts will likely be washed away by our winter rains. Antibiotics in farm manures: Veterinary antibiotics are degraded during animal manure composting at a rate of 64-90% depending on the antibiotic. As these antibiotics are not completely degraded, potential for soil contamination remains.⁹ Studies of (raw) manure-applied vegetables showed some uptake of antibiotics¹⁰. Uptake was via water transport and passive absorption, and concentrations were greater in leaves than stems than roots¹¹.

¹ Nitrogen–Phosphorus-Potassium values may vary depending on the product. See label on the bag.

² Cinnabar Valley Farms brands include: Westcoast Gardener, Cinnabar Valley Farms, Islands Finest, Growell, Grower's Delight, My Soil, Secret Mix

³ <u>http://ecochem.com/t_manure_fert.html</u>

⁴ https://www.theglobeandmail.com/life/health-andfitness/sales-halted-after-arsenic-found-in-chickendrug/article591962/

⁵ https://cinnabarfarms.com

⁶ https://www.westcoastseeds.com/blogs/gardenwisdom/poop-manure

⁷ https://fishcompost.com/

⁸ http://www.seasoil.com/products.html

⁹ https://www.ncbi.nlm.nih.gov/pubmed/30308823

¹⁰ https://pubs.acs.org/doi/abs/10.1021/jf404045m

¹¹https://www.sciencedirect.com/science/article/pii/S026 9749110002149