



WSDA Organic Program – Manure and compost guidelines

Table 1: National Organic Program standards and equivalency to international organic standards:

	NOP	EEC 2092/91 (EU)	JAS (Japan)	COR (Canada)
Raw Manure	<p>§205.203(c)(1):</p> <p>(c) The producer must manage plant and animal materials to maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances. Animal and plant materials include:</p> <p>(1) Raw animal manure, which must be composted unless it is: (i) Applied to land used for a crop not intended for human consumption;(ii) Incorporated into the soil not less than 120 days prior to the harvest of a product whose edible portion has direct contact with the soil surface or soil particles; or (iii) Incorporated into the soil not less than 90 days prior to the harvest of a product whose edible portion does not have direct contact with the soil surface or soil particles;</p>	<p>In addition to NOP requirements, the following conditions apply:</p> <p>All manure sources must be documented</p> <p>No raw manure from caged poultry operations</p> <p>Manure sources must be tested annually for heavy metals and pesticide residues and meet standards as outlined in Table 2</p>	NOP equivalent	<p>In addition to NOP requirements, the following conditions apply:</p> <p>All manure sources must be documented</p> <p>No raw manure from caged poultry operations</p> <p>Manure sources must be tested annually for heavy metals and pesticide residues and meet standards as outlined in Table 2</p>
Composted Manure	<p>§205.203(c)(2):</p> <p>(2) Composted plant and animal materials produced through a process that:</p> <p>(i) Established an initial C:N ratio of between 25:1 and 40:1; and (ii) Maintained a temperature of</p>	<ul style="list-style-type: none"> All manure sources must be documented Manure sources must be tested annually for 	NOP equivalent	<ul style="list-style-type: none"> All manure sources must be documented Manure sources must be tested annually for pathogens, heavy metals, and pesticide residues and



	NOP	EEC 2092/91 (EU)	JAS (Japan)	COR (Canada)
	<p>between 131 °F and 170 °F for 3 days using an in-vessel or static aerated pile system; or (iii) Maintained a temperature of between 131 °F and 170 °F for 15 days using a windrow composting system, during which period, the materials must be turned a minimum of five times.</p> <p style="text-align: center;">OR</p> <p>November 9, 2006 NOSB Recommendation for Guidance Use of Compost, Vermicompost, Processed Manure and Compost Tea “This recommendation denotes other materials and practices that would be acceptable under 205.203(c)(2) which applies to plant and/or animal material mixes...”</p>	<p>pathogens, heavy metals, and pesticide residues and meet standards as outlined in Table 2</p>		<p>meet standards as outlined in Table 2</p>
Processed manure	<p>Follow NOP Technical Guidance NOP 5006 – Processed Manure</p> <p>Processed manure products must be treated so that all portions of the product, without causing combustion, reach a minimum temperature of either 150° F (66° C) for at least one hour or 165° F (74°C), and are dried to a maximum moisture level of 12%; or an equivalent heating and drying process could be used. In determining the acceptability of an equivalent process, processed manure products should not contain more than 1x10³ (1,000) MPN (Most Probable Number) fecal coliform per gram of processed manure sampled and not contain more than 3 MPN Salmonella per 4 gram sample of processed manure.</p>	<ul style="list-style-type: none"> • All manure sources must be documented • Manure sources must be tested annually for pathogens, heavy metals, and pesticide residues and meet standards as outlined in Table 2 	NOP equivalent	<ul style="list-style-type: none"> • All manure sources must be documented • Manure sources must be tested annually for pathogens, heavy metals, and pesticide residues and meet standards as outlined in Table 2



Table 2: Testing requirements for raw, composted, and processed manure used under the WSDA International Organic Program

	Analytes	Accepted Test Methods	Standard																				
Pathogens (composted and processed manure only)	Fecal coliform, salmonella	No specific requirements if performed at an independent laboratory	May not contain more than 1x10 ³ (1,000) MPN (Most Probable Number) fecal coliform per gram and not contain more than 3 MPN Salmonella per 4 gram sample																				
Metal testing	Arsenic (As), Cadmium (Cd), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn) Registered commercial fertilizers may substitute the metal analysis required under Chapter 16-200 WAC	No specific requirements if performed at an independent laboratory	As given in Chapter 173-350-220 WAC: <table border="1"> <thead> <tr> <th>Metal</th> <th>Limit (mg/kg dry weight)</th> </tr> </thead> <tbody> <tr> <td>Arsenic</td> <td>< = 20 ppm</td> </tr> <tr> <td>Cadmium</td> <td>< = 10 ppm</td> </tr> <tr> <td>Copper</td> <td>< = 750 ppm</td> </tr> <tr> <td>Lead</td> <td>< = 150 ppm</td> </tr> <tr> <td>Mercury</td> <td>< = 8 ppm</td> </tr> <tr> <td>Molybdenum</td> <td>< = 9 ppm</td> </tr> <tr> <td>Nickel</td> <td>< = 210 ppm</td> </tr> <tr> <td>Selenium</td> <td>< = 18 ppm</td> </tr> <tr> <td>Zinc</td> <td>< = 1400 ppm</td> </tr> </tbody> </table>	Metal	Limit (mg/kg dry weight)	Arsenic	< = 20 ppm	Cadmium	< = 10 ppm	Copper	< = 750 ppm	Lead	< = 150 ppm	Mercury	< = 8 ppm	Molybdenum	< = 9 ppm	Nickel	< = 210 ppm	Selenium	< = 18 ppm	Zinc	< = 1400 ppm
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Pesticide residues	Broad spectrum of organochlorines and organophosphates	<u>Organochlorines:</u> EPA test methods 8081 or 8081A <u>Organophosphates:</u> EPA test methods 8141, 8141A, or 8141B Other test methods may be allowed with prior approval.	Must be below FDA Action Level or below 5% of the EPA Tolerance level																				

Blended Products

Many fertilizers contain raw, composted, or processed manure as a minor ingredient. Blended fertilizers which contain manure will be evaluated on a case-by-case basis. Products which contain manure as an ingredient at significant levels (e.g. ≥10%) will be required to meet the additional testing requirements noted in Table 2.