

FREQUENTLY ASKED QUESTIONS ABOUT THE SAFETY OF SOILS AND COMPOST FOR SALE AND HOW THEY ARE REGULATED IN MARYLAND

WHY SHOULD URBAN GARDENERS AND FARMERS CONSIDER ADDING IMPORTED SOIL OR COMPOST TO THEIR GARDENS?

Urban soils may be contaminated with harmful metals and other chemicals. Importing “clean” soil is generally considered a best practice when growing edible plants in an urban area. Importing clean soil can dilute levels of contaminants, and make them less available for plants and people to take up. Compost and some fertilizer-containing top soils may also be added to improve soil fertility.

ARE THERE REGULATIONS TO ENSURE THE SAFETY AND/OR QUALITY OF IMPORTED SOIL AND COMPOST?

There are no federal regulations for soil and compost products. States may create their own guidelines and enforcement policies regarding the purity and safety of soil and compost products sold and distributed within state lines. The state of Maryland regulates the safety and quality of some types of soils and compost that are available for sale.

WHO IS RESPONSIBLE FOR REGULATING SOIL AND COMPOST FOR SALE IN MARYLAND?

The State Chemist Section (SCS), housed within the Maryland Department of Agriculture (MDA), regulates the sale and distribution of soil conditioners (including compost) and fertilizers within Maryland. The Section also regulates the sale and distribution of pesticides, liming materials, fertilizers/pesticides, animal feeds, and pet foods. We spoke with staff in the State Chemist Section to learn more about their regulatory activities regarding soils and compost. The information in this guide is based that conversation.



WHAT KINDS OF SOILS AND COMPOST FOR SALE ARE REGULATED IN MARYLAND BY THE STATE CHEMIST SECTION?

- ▶ Companies selling compost must have their products tested at least annually for some nutrients, organic contaminants (such as dioxins, PCBs, and PAHs) and inorganic contaminants (such as heavy metals).
- ▶ Companies selling top soils and potting soils with added fertilizers and/or nutrients must have their products tested annually for nutrient content and for some contaminants.
- ▶ Companies selling top soils and potting soils without added fertilizer or nutrients are NOT regulated by MDA, and thus are not required by the state to test their products for contaminants.

Table 1: Summary of MDA soils and compost regulations

Product	Regulated by MDA?	Contaminants tested ^a (safety)	Nutrients tested ^b (quality)
Compost	Yes	arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), plastic, man-made inerts	Mainly nitrogen, potash, and phosphate
Top soils and potting soils with added fertilizers and/or nutrients ^c	Yes	arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, polycyclic aromatic hydrocarbons (PAHs)	nitrogen, phosphate, potash, boron, calcium, chlorine, cobalt, copper, iron, manganese, molybdenum, magnesium, sodium, sulfur, zinc
Top soils and potting soils without added fertilizers or nutrients ^c	No	None	None

a For regulatory limits for each contaminant, see: www.dsd.state.md.us/comar/comarhtml/15/15.18.04.05.htm

b For minimum amounts of each nutrient required, see: www.dsd.state.md.us/comar/comarhtml/15/15.18.03.02.htm

c Items with claims on label about improving plant growth are regulated as top soils with added fertilizers/nutrients.

HOW IS COMPOST FOR SALE REGULATED IN MARYLAND?

Producers of compost must register all products for sale with the State Chemist Section. The initial registration must contain a product description (including its source, date of manufacture, and intended use) as well as a copy of the product's label. Laboratory testing results are also required (as specified in Table 1 on page 2).

The State Chemist Section staff told us that they make sure that in the first year of sale of any compost product, the producer must test the compost for contamination (and send all results to SCS) every quarter, or once for every 20,000 tons of compost produced, whichever is more frequent. The State Chemist Section, in partnership with the Maryland Department of the Environment, is developing guidelines for how to interpret testing data and what actions to take when results reveal concentrations of certain levels of metals and other contaminants.

The State Chemist Section reviews all submitted testing results submitted and may inspect and/or sample any registered compost product at any time and without notice to validate the submitted laboratory results. Any samples in violation of limits or guidelines may be subject to a penalty, stop-sale order, or registration cancellation. The State Chemist Section reserves the right to conduct marketplace samples at retail outlets, warehouses, and compost production facilities to verify submitted laboratory tests.

HOW ARE TOP SOILS AND POTTING SOILS FOR SALE REGULATED IN MARYLAND?

With added fertilizers and/or nutrients

The requirements for top soils and potting soils with added fertilizers and/or nutrients for registration with the State Chemist Section are similar to those for compost products. The producer must test their soils for primary nutrient content (e.g., nitrogen, phosphate, and potash) and secondary nutrient content (e.g., metals such as calcium, magnesium, and sulfur), in addition to contaminant metals (see Table 1). Any product found to have contaminant metals, primary nutrient, or secondary nutrient levels above or below regulatory levels is subject to a stop-sale order. Producers must also include a laboratory analysis showing the product's nutrient content compared to the values of these nutrients advertised on the product label. The Section reserves the right to require additional testing done on the final product, depending on the input source of the ingredients used.

Without added fertilizers and/or nutrients

Top soils and potting soils without added fertilizers or nutrients are not regulated. That said, certain products may be regulated if they improve soil fertility. Any testing completed by the producer for contaminants or nutrients in these soils is voluntary. Informal conversations we had with some producers have indicated a wide range of testing protocols – from robust testing before and/or during sale to no existing testing protocols.

RECOMMENDATIONS FOR CONSUMERS

- ▶ Consumers are advised to contact companies directly to learn more about their testing practices and results.
- ▶ Consumers may consult the State Chemist Section list of currently registered soil conditioners and fertilizers to determine whether companies test their products according to MDA requirements: https://mda.maryland.gov/plants-pests/Pages/state_chemist_reports.aspx