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# Purchasing Topsoil

Topsoil. It's arguably the most precious stuff on earth, sustaining all land-dwelling animals, including humans. It takes nature 500 years to make an inch of it.

Until recently, most folks interested in topsoil were farmers and their advisors concerned with how to work it, increase its fertility, maximize its productivity and protect it.

But gradually, over the past 20 years, "topsoil" has been transformed into a hot commodity, a multimillion dollar industry responding to demand from homeowners and businesses seeking to establish or improve their landscapes, lawns and gardens. Homes are also going up on steep, barren or rocky sites once considered unbuildable, where the only option for a lawn or garden is to import topsoil.

Since New Hampshire has no legal definition of topsoil and no regulations governing its sale, just what are consumers getting when they buy a load of topsoil (also sometimes sold as "loam.")?

The soil you buy might have come directly from prime farmland being developed into an office park, from a recently clear-cut tract of forest land or from a long-abandoned field grown up to brambles and thistles.

It might contain herbicide residues that could inhibit germination of plants you want to grow. It might be full of roots and rocks, or undesirable weed seeds. Some vendors might even have adulterated the original topsoil with a lot of additional sand, adding commercial wood ashes to darken the final product.

On the other hand, some vendors are marketing a superior growing medium, amending native topsoil with just enough wood ashes to bring its pH into the optimum range for lawns and gardens, then adding compost to boost the soil's water and nutrient-holding capacity.

Although most people know good topsoil is dark, crumbly and sweet-smelling, soil experts say it's impossible to judge topsoil quality just by looking at a pile of it. About the only way for consumers to protect themselves is to learn as much as possible about the soil they are considering buying. It's worth the time - after all, this is one product you can't take back to the store.

Here's a list of guidelines from experts to help boost your confidence that the topsoil you purchase will grow good vegetables, fruits and flowers, or a nice lawn:

- Know your supplier and ask about the source of the topsoil he or she is selling. If it's an amended product, ask the vendor for the 'recipe.'
- If you are buying soil from a garden or landscape supply center, ask the vendor for the product's test data. If the topsoil hasn't been tested, ask for a small sample and have it tested yourself. You can get a soil test kit, with instructions for sampling soil, by visiting your county UNH Cooperative Extension office or by calling Extension's toll-free Family, Home & Garden Education Center Info Line at 1-877-398-4769, weekdays 9 a.m. - 2 p.m.)

At the very least, soil experts say, the soil analysis should include pH, a measure of the relative acidity of the soil, and soil texture class, a classification based on the relative percentages of sand, silt and clay particles in the soil.

- A topsoil with a pH between 5.5 and 7.5 is acceptable. As far as texture goes, a classification of *loam* or *sandy loam* is best. It's possible to raise or lower pH and add nutrients, but very difficult to change a soil's texture. Soils with a high percentage of sand won't hold water or nutrients well, while high-clay soils won't drain well and can become extremely difficult to work.
- If you are buying topsoil you haven't seen, ask if the loam has been screened. Unscreened topsoil can be full of rocks and roots. Perhaps you're willing to rake them out yourself if the price is right, but it's definitely something you'll want to know about up front.
- Don't buy a product that has a chemical, or other, off-odor. State regulations governing potting soils were prompted initially by investigations of complaints from consumers who purchased bagged potting soils that smelled of gasoline.
- Occasionally, topsoil stripped off farmland may contain herbicide residues that could hinder crop germination. If you have any concerns about residues, take a sample home, plant a few seeds in it and see if they germinate okay. Try a variety of different seeds, especially if you're planning on planting a vegetable garden in this soil. Herbicide residues can affect some crops but not others. The process of test-germinating seeds will also help a prospective buyer determine if the soil is infested with difficult-to-control perennial weeds, such as quackgrass or thistles.

Whatever its source, most unamended New Hampshire topsoil is low in organic matter, which is important for holding moisture, improving soil structure and retaining plant nutrients. Add plenty of organic matter to purchased topsoil in the form of compost and animal manure. (Note: Don't plant vegetable crops in soil recently amended with fresh animal manures. Age or compost the manure first, or plant a cover crop and turn it under before planting vegetables.)

Finally, be sure to incorporate both the organic matter and the purchased topsoil into the top few inches of your existing soil rather than simply spreading the new soil on top. Plant roots grow best in a single zone of topsoil.

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