

GROWERTALKS

Features

9/30/2026

Homegrown Growing Media: Inorganic Products & Producers

Dr. Brian E. Jackson



Sourcing growing media components domestically can provide greater supply-chain resilience, shorter and more predictable lead times, lower exposure to international freight disruptions, tariffs, and geopolitical risks. Domestic sourcing may also enable closer grower-supplier relationships, improved traceability and quality control, and greater flexibility in inventory management. Another positive aspect of sourcing domestic horticultural products is the support it

provides to regional economies and some small businesses.

Figure 1: Inorganic materials produced domestically, including (clockwise) perlite, pumice, vermiculite, scoria, stone/mineral wool and tuff.

For growers looking to source inorganic substrates domestically, the United States offers a broad range of options, including perlite, pumice, vermiculite, clays, sand, expanded shale and slate, mineral wool products, tuff, scoria, and engineered foams to name a few (Figure 1). This article highlights only a brief summary of some of these products and it offers no comparison to similar ones that are imported. Additionally, no assumptions are made regarding available annual volumes of these materials specifically for the growing media market.

Inorganic options

The U.S. has a well-established domestic supply of volcanic-based aggregates used in horticultural growing media, although production is concentrated in regions with past volcanic geological activity. Figure 2 illustrates the regions where perlite deposits are present (not all of the places where it's actively mined). Perlite production is relatively concentrated, with approximately six companies operating nine active mining operations across Western states, including Arizona, California, Idaho, Nevada, New Mexico and Oregon.

Additionally, there are over 50 perlite ore processing (expansion) facilities across nearly 30 states, with many of them producing horticultural-grade perlite. In 2025, U.S. crude perlite mine production (ore) was estimated at roughly 730,000 metric tons. While U.S. data doesn't directly report how much perlite is ultimately used in horticulture, estimates suggest that approximately 70,000 to 80,000 metric tons of perlite are used annually by the U.S.

horticulture industry. The U.S. Geological Society (USGS) estimates that horticultural consumption accounts for about 15% of domestic expanded perlite use, equivalent to roughly 69,000 metric tons in 2025.

Similar to perlite, U.S. pumice deposits are concentrated in the Western states (Figure 2) with about 10 operations currently active in five states—California, Idaho, Kansas, New Mexico and Oregon. These operations produced an estimated 430,000 metric tons of pumice in 2024, but only a small percentage of that went to horticulture since the material is predominately used as/in abrasives, concrete mixtures, building products, filtration and absorbent products. Although the U.S. has substantial pumice resources, production is sensitive to transportation (it's very heavy) and mining costs. For this reason, pumice is primarily used by growers on the west coast due to transport costs.

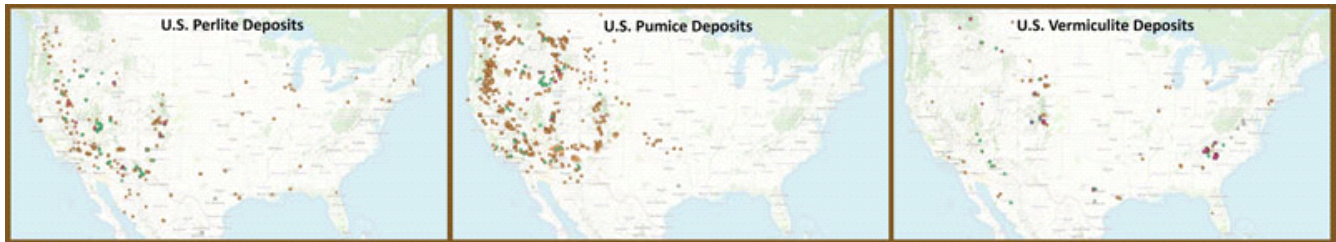


Figure 2: Deposits of perlite, pumice and vermiculite sources in the U.S. | Images courtesy of the U.S. Geological Society.

Vermiculite currently has two main commercial producers, located in Virginia and South Carolina, which produce roughly 100,000 metric tons annually. While only two mines are active, there are over a dozen exfoliation (processing) plants across the country that process the vermiculite into many different products. Other states—including Colorado, Nevada, North Carolina, Montana, Texas and Wyoming—have known vermiculite deposits or resources, but these aren't currently operating as commercial mines (Figure 2).

There's domestic U.S. production of stone (mineral) wool products for horticultural growing media, although the market is currently relatively small compared to imported products. Stone wool products include propagation cubes, grow blocks, slabs, granules and loose fiber, however, most U.S. production of stone wool serves the insulation market rather than horticulture.

While existing companies may expand production of wool for horticulture in the future, other inorganic fiber products are also being developed, including one by Owens Corning, which is developing a glass-based component for use in peat- and coir-based growing media. It's being developed as a consistent, domestically sourced option for extending conventional substrate materials, but it's not yet commercially available.

Other materials, including calcined and expanded clays, shale and slate, and other mineral-based products used in horticultural growing media represent a relatively small specialty market within a much larger domestic mineral-processing industry. According to the USGS Mineral Commodity Summaries, the U.S. production of all types of clay and shale totaled an estimated 26 million metric tons in 2023 produced by nearly 120 companies in 38 states (Figure 3).

While the U.S. produces significant quantities of clay, most is for markets such as construction, ceramics and absorbents, while production volumes specifically for horticultural substrates isn't tracked in national mineral statistics and therefore unavailable. Production of materials like scoria, tuff and volcanic cinders also occurs in the western U.S., but their geographic locations (deposits) and weight may restrict broader national distribution and use due to transportation costs.



Engineered horticultural foams represent a specialized segment of the U.S. growing-media industry, used primarily for seed germination, vegetative propagation, hydroponic crop production and by the floral industry (florists). Two long-established U.S. floral foam manufacturers are FloraCraft (Michigan), which manufactures its own extruded polystyrene and produces a range of dry floral foams, and Smithers-Oasis (Ohio), the producer of OASIS floral foam and other floral-design media. A newer entrant is Phoom Labs (Minnesota), which manufactures Phoom, a plant-derived industrially compostable PLA foam developed as an alternative to conventional petroleum-based floral foam.

Figure 3: Organizations that support inorganic material production and use include the U.S. Geological Society (mineral commodity reports), the Vermiculite Association and the Perlite Institute.

Growers can search their respective regions for specific companies that produce and sell inorganic substrates. There are also industry organizations, including The Vermiculite Association and the Perlite Institute, whose websites offer comprehensive resources for growers to learn about and source suppliers and products (Figure 3).

With the increasing demand for growing media (volumes and product offerings) in the coming years, it's likely that the domestic inorganic product industries will continue innovating, improving and developing new products for the horticultural sector. They've been instrumental in horticultural crop production (in substrates) for many decades—and will continue to serve a vital role in the future. **GT**

Brian E. Jackson is a Professor and Director of the Horticultural Substrates Laboratory at North Carolina State University. Brian can be reached at Brian_Jackson@ncsu.edu.