Vermiculite Storage

You long-time *FNN* readers may remember that we had this same thing happen a few years ago when they closed a US vermiculite mine due to a scare about the health risks of an asbestos-related material called tremolite (see *FNN* January, 1994; April, 1991 and October, 1991 and 1992).

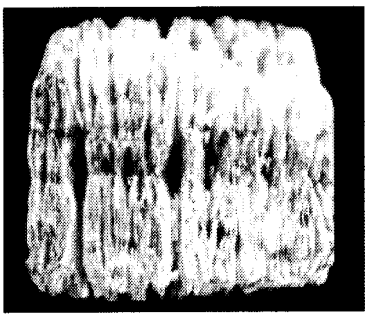

Figure 7. Coarse grade vermiculite particle.

Well, it's happening again. Coarse grade vermiculite, the preferred grade for growing forest and conservation nursery crops, has been in short supply for the last year, and the outlook isn't much better for 1996 (Figure 7). Several factors have contributed to this shortage. Vermiculite ore is screened into several different grades after it is mined and processed (Table 3). The vermiculite mines in the United States are only able to produce fine and medium grades of ore, so suppliers of growing media are having to purchase their coarse grade ore from foreign sources. Currently, most US suppliers are purchasing coarse vermiculite from mines in South Africa. There are additional mines in China and Brazil, but they are not exporting to the US at the present time. The South African mines can meet the demand, but like everything else, politics is getting into the act. Last spring, exporters were diverting coarse grade vermiculite shipments to the European markets where they can get a higher price. This means that US producers must pay for their vermiculite ore in advance of shipment, and even that doesn't guarantee that they will get their shipments on time. This year, the US vermiculite producers have stockpiled raw ore in warehouses so that they can meet the demand, but coarse grade vermiculite will remain in short supply.

The bottom line is that container growers should make sure that they send their vermiculite and growing media orders to suppliers early. Michelle Miller supplied the information for this section, and if you would like more details, she can be reached at:

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Sources:

Landis, T.D.; Tinus, R.W.; McDonald, S.E.; Barnett, J.P. 1990. Containers and Growing Media, Volume Two, The Container Tree Nursery Manual. Agric. Handbk. 674. Washington, DC: USDA Forest Service. 88 p.

Table 3. Physical characteristics of vermiculite grades

Grade	Bulk Density (k /m3)	US Sieve Size	Range of Particle Sizes (mm)	Aeration Porosity (%)	Water Retention (% by weight)	(% by volume).
1	64.1 to 112.1	3/8 to 16	1.2 to 10.0	44.3	297	30.7
2*	64.1 to 128.2	4 to 30	0.6 to 4.7	40.4	412	39.0
3*	80.1 to 144.2	8 to 100	0.1 to 2.4	29.9	530	52.4
4	96.1 to 176.2	16 to 100	0.1 to 1.2	24.5	499	54.4

* = Standard horticultural grades