

December 7, 2003

NEWS RELEASE FROM THE OFFICE OF:

Dennis Smith
County Extension Agent - Agriculture
Gregg County

***Expanded Shale - A new Possibility for
Amending Clay Soils***

A form of expanded shale is now available to gardeners that will be useful in loosening tight clay soils and making them more workable.

'Blue Shale' from the Midway Shale formation is present in a pattern across Texas. It is usually found 10-15 feet underground. It was formed during Cretaceous times when Texas was a large lakebed and the lakebed sediments solidified under pressure into the present-day shale formation.

Jack Sinclair of TXI Industries has explained that the shale is mined and ground to 1" to 1/2" range particles and then kiln fired. As it progresses through the kiln for 40 minutes at 2,000 degrees C, certain chemical processes take place in the silica content (60-70%) causing the material to expand. The expansion of Kitty Litter (calcined clay), for example, occurs at only 800-900 degrees.

As the material cools, cavities are left after gases escape, leaving a porous lightweight chunk capable of absorbing water and releasing it slowly at a later time.

Recommendations for using expanded shale with containerized plants call for putting one-third of the material in the bottom, then mixing the expanded shale with potting soil 50-50 for the rest of the pot.

For flower beds with sticky or gumbo-type soil, Dr. Steve George of the Texas Cooperative Extension recommends putting down 3 inches of expanded shale on top of the area, and tilling it in six to eight inches deep. Also add 3 inches of finished, plant-based compost as well, which results in a 6-inch raised bed. Crown the bed to further improve water drainage.

Dr. George also remarked:

"Based on a two-year research study and six years of field trials, I feel that expanded shale will open up and aerate heavy, sticky clay soils faster than any material that I have ever tested. Due to its porous nature, it provides aeration from within the shale particles and, in poorly aerated clay soils, resulted in a more extensive and healthier root system than the other treatments being tested....Even though I dearly love finished, plant-based compost, if I were limited to only one application of one soil amendment with which to open up heavy clay soils, I would take expanded shale and never look back!"

Several trials are underway at the present time to test the long-term effects of using expanded shale. Last June Dr. Frank Allen and the city of Duncanville laid out perennial flower beds in black gumbo and the city of Carrollton (situated on Blackland Prairie soils) is working on field trials with Dr. Steve George. Trials include working with black gumbo only, lava sand with gumbo, compost with Blackland soil, and compost and expanded shale in existing soil. It is anticipated that the lightweight material might create a permanent physical change in the Blackland soil (or, according to Dr. George, last at least 10 years as a conservative estimate).

The amendment is now sold by the TXI Corporation under the brand name 'Tru-Grow.' at some local garden centers.

Master Gardener Training

The deadline for registering for the 2004 Master Gardener Intern Training class is Friday, *December 19, 2003*. The Gregg and Harrison County Extension Horticulture Committees will be sponsoring the classes beginning on January 7, 2004. Classes will be held each Wednesday for 10 weeks beginning at 8:30 a.m. each morning. The cost to enroll in the program is \$100.

In exchange for the training, Master Gardeners contribute time as volunteers, working through the Extension Office and the Gregg County Master Gardeners Association to provide horticulture related information to the communities. Those completing the training are required to complete a minimum of fifty hours of Master Gardener volunteer service during the next 12 months to become a "Certified Texas Master Gardener." To register or for additional information contact the Gregg County Extension Office.

Pesticide Recertification Courses

Several pesticide recertification trainings for licensed pesticide applicators have been planned for the next few months. The first course will be held in Overton at the Texas A&M University Agricultural Research and Extension Center on December 11 and repeated again on December 16, 2003. The course will begin at 7:30 a.m. with the presentations starting at 8:30 a.m. Registration at the door is \$20.

The Gregg, Harrison and Upshur County Extension offices will be conducting a pesticide recertification program on February 20, 2004. The program will be held in the Gregg County Extension Auditorium. Complete details will be provided later.

Dennis Smith can be contacted at the Gregg County Extension Office by e-mail at dq-smith@tamu.edu or telephone at: 903-236-8429.

Extension programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability, or national origin.