

## Rockwool Use Trends in Horticulture

*Mark Kelley*  
*Graduate Research Assistant*

**R**ockwool is a man-made fiber. First produced in the early 1900s, rockwool is manufactured by heating basaltic rock and then forming the extruded fibers into slabs, or loose aggregates.

The primary uses of rockwool are for insulation, fireproofing and soundproofing (Anon., 1988). Rockwool was first used horticulturally in Denmark in the late fifties to overcome export restriction on nursery stock containing contaminated soil. From there its use spread to Germany, Holland, England, Israel, Australia, Canada and the U.S. (Hanger, 1982; Norris, 1987). Holland was particularly interested in developing man-made soil amendments as their supply of naturally occurring soil amendments became limited. As a result, the Dutch researched the horticultural use of rockwool (Krause, 1982).

Northern Europe now has vast acreages devoted to vegetable and cut flower production in rockwool (Norris, 1987). In the early 1980s, rockwool cubes were used for vegetable transplant production in the U.S. Most recently in the U.S. rockwool has been used to grow foliage and holiday potted plants, vegetables and cut flowers.

Rockwool is commercially available in several forms. Grodan and Partek have full lines of rockwool in slabs and blocks of various sizes. Both of these companies offer loose and granulated forms of rockwool suitable for use as soil amendments. In addition, Partek and Hyde Park have preformulated ready-to-use bag mixes containing peat:rockwool blends, the so called "peatwools."

Recent research in the U.S. has found loose rockwool to be a good root medium for cut flower production as well as the following pot crops; mums, poinsettias, Easter lilies and geraniums (Hanan, 1983; Hanan, 1986; Lee and Goldsberry, 1988; Lee et al., 1988). When used alone, rockwool requires very precise nutritional monitoring. Researchers at Colorado State University have made available detailed information on the nutritional handling of rockwool. This information can be obtained by writing: Colorado State University, Department of Horticulture, Fort Collins, CO 80523.

Research in the U.S. has focused on using rockwool in combination with peatmoss, perlite, vermiculite, bark and soil (Fonteno and Nelson, 1990). Similar, research is underway at The University of Connecticut.

Studies indicate crops produced in rockwool amended media performed comparable to those produced in commercially available peat-lite media. At The University of Connecticut, good quality Asiatic and Oriental lilies were produced in peat/rockwool mixes. However, supplemental calcium and trace elements were necessary.

The authors research, currently underway, involves the evaluation of potted hybrid lily growth in 12 different peat:rockwool media and the determination of the physical properties of these media.

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