

Neuse Education Team i m p a c t s

Agricultural Impacts 2.

Novel Nursery

A Johnston County nursery project is using a constructed wetland to reduce nitrogen reaching the Neuse River and possibly producing sought after plant species.

NC STATE UNIVERSITY

COLLEGE OF AGRICULTURE AND LIFE SCIENCES

“Science tells us that wetlands act as nature’s wastewater treatment plants. They have the unique ability to remove nutrients, sediment and other contaminants.”

*—Bill Lord,
Neuse Education Team agent*

Begin in the fall of 1998, this nursery nutrient demonstration project addresses the fact that container ornamental crop production is a major and growing industry in the Neuse River Basin. Water soluble nutrients are used in container production. They can be lost to the environment if proper best management practices (BMPs) are not used.

There is a growing market for wetland plants across North Carolina. This project seeks to divert nursery runoff into a constructed wetland to produce container plants and to remove nutrients from the runoff. The plants do the dirty work by using the nitrogen in the runoff.

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• Neuse Team contact:
• Bill Lord
• 919.496.3344
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- A four cell wetland was constructed and a flash-board riser was installed to feed nursery runoff into the wetland via gravity flow. Wetland plants were donated by Cure Nursery and were planted at the beginning of the summer of 1999.
- Two preliminary water tests in the summer of 1999 showed that the wetland was removing about 50% of the nitrate-nitrogen dissolved in the water. The plants in the nursery that are receiving the water are using the nitrogen efficiently, thus reducing the overall amount of nitrogen that leaves the nursery.
- Demand is increasing for wetland plants as interest in building wetlands grows. This project will explore which species of plants are most appropriate for Neuse River Basin conditions.
- Partners in the project include Sandy Lee and Sons Nursery, the Johnston County Soil and Water Conservation District and the Johnston County Extension Center.

