

**Slow Release Natural/Organic Fertilizers
In Nursery Crop Production**

Farmer/ Grower Grant- Final Report FNE00-320

This project was the continuation of FNE99-281. Originally designed to measure the differences, if any, between slow release natural/organic fertilizers and controlled release conventional fertilizers. The goals of the 1999 project could not be completed due to the severe drought in the northeast that year. WE sought to continue our study and compare nursery crops for their color, flowering, size, and saleability.

Our farm remains as it was when we began the project, 55 total acres, 40 acres in hardwoods, 12 acres in old pasture, and 3 acres in intensive nursery crop production.

Our collaborators were chosen from a number of state and federal agencies and private companies, all involved with nursery and agricultural crops for many years. They assisted us in the design of the project, interpreting soil test results, recommending potting media components/ratios, and they also assisted in the final evaluations.

Soil tests were conducted at the beginning of the growing cycle. Fertilizers were added as per manufacturers directions. In group #1, ninety (90) plants plus controls were tested. Spirea 'Little Princess', Blue Rug Juniper, Euonymus 'Burning Bush' were in this group. IN the second group, fifty (50) plants each of Gold Thread Cypress and 'Moonglow' Juniper were tested. We had two fertilizers in two groups plus controls. All plants were potted up to two gallon containers with random placement in growing beds for each replication.

The 2000 growing season was the opposite of the 1999 season, Drought/sun in 1999 and rain/overcast in 2000. Except for an occasional plant loss, we did not suffer any significant crop loss. Once past a very cool, wet spring, our local weather was more or less normal. Some irrigation of the nursery crops was necessary during the summer months.

By October, 2000, our final evaluation was done with our collaborators. Decisions concerning size, color, flowering, saleability, etc., were discussed by the members of the group.

Blue Rug Juniper-both fertilized groups showed better color, all were judged to be about the same in size, none reached a saleable size at this time.
'Little Princess' Spirea-those treated with Osmocote had slightly more flowers, however those with Fertrell showed better color and density. Saleability for the overall groups was good, most were 12 inches in size. All plants, except the Osmocote group, had extensive roots into the surrounding mulch.

Euonymous- Burning Bush-the Fertrell fertilized group showed somewhat better growth along with the controls. The groups with composted chicken manure and the Osmocote fertilizer suffered a bit- salt sensitive ? Most plants will reach the 12 inch size by spring 2001 and should be saleable.

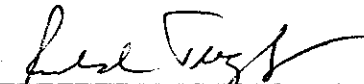
'Moonglow' Juniper-"Slightly bushier and taller" said one evaluator for the Fertrell Holly Care group. Color was good across the board. Plants looked healthy and vigorous. They should be saleable as 18 inch plants in spring 2001.

Gold Thread Cypress- again "slightly bushier" was another evaluator's judgement for the group fertilized with the natural/organic Fertrell Holly Care. Color for all groups was good and quite similar. Plants should be saleable in the 12-15 inch size in spring 2001.

Overall, there were few differences in growth, color, size, saleability, etc., of all the groups. The fertilized groups showed slight improvements over controls. Perhaps the most important difference was in the cost of the fertilizers--- \$15/50 lbs of natural/organic vs \$63/50 lbs of controlled release fertilizer. In addition, compost based systems, such as ours, have shown that they can perform as well as more conventional systems.

Our farm has been "certified organic" for a number of years. and we still feel this is the best way for us to go in the future. As regulations and nutrient management requirements hit production nurseries, large and small, we feel that we will be well positioned to meet or exceed those requirements.

Copies of the research results as published are enclosed. Other groups, including NOFA-NJ, and PASA also published the results of our research in 2000. In addition, an article is to be published in the 5/15/01 issue of American Nurseryman on this same topic.

Respectfully submitted by  4/30/01
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