

## THE IMPORTANCE OF PRODUCING DISEASE AND DROUGHT RESISTANT PLANTS

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As I begin I do not wish to offend the producers of many popular plants. What I am about to say is only a reflection of what this small and inexperienced producer sees as problems not only for himself but also for our industry as a whole.

The subject of this paper is the importance of producing disease and drought resistant plants. We constantly produce plant material because it is an old favorite our customers always buy, because it has a spectacular flower or fragrance, or maybe just because for a variety of personal and sentimental reasons, we just like it. I mention this last because I know I frequently fall prey to my own sentiments.

At Quansett Nurseries we produce several hundred *Syringa vulgaris* plants each year and never have trouble selling them and yet each year we consistently spend time and energy and sprays trying, usually unsuccessfully, to keep them free of powdery mildew. There is a magnificent block of deciduous azaleas at the Arnold Arboretum that, when in bloom, has a range of color from pure white to bright red, including pinks, oranges, and delicate shades of all of the above. Truly outstanding when in bloom but very difficult to maintain as saleable plants after they finish blooming. How many times have we had to spray rhododendrons for phytophthera, or at least those few cultivars whose beautiful blossoms are just what we want to produce? For many years new roses have been produced with incredible color and fragrance. But how resistant are some of these to leaf spot and how much time will the end user spend in trying to keep black spot off them. Producers of turf have produced some of the most spectacular looking lawns of blue grass and yet how many home owners are capable of maintaining blue grass lawns without multitudes of chemicals, water, and care?

We are rapidly entering a period when the public will be requiring plant material that can stand its environment without lots of care; when disease and drought resistant plants will not be just desirable, but required.

We know how impatient most of our customers are, especially those in the southern half of this continent. They want a finished landscape immediately but also want it to take care of itself. We must remember our ultimate customers are often not horticulturists. They mostly want something they do not have to spend a lot

of time caring for.

When we started Quansett Nurseries eight years ago we realized with our limited resources we had to produce plant material that obviously was in demand and that could be produced in a short time without major capital outlay. As a result we grew several seashore plants such as *Rosa rugosa*, *Prunus maritime*, *Elaeagnus umbellata*, and *Cytisus*. We also produced old favorites of *Syringa*, *Spiraea*, and old-fashioned roses. As we grew we added perennials and ornamental grasses to our list. We probably should have started with the perennials and grasses as they were certainly the easiest to produce. Unfortunately we did not know this at the time.

We produce perennials and grasses from seeds, cuttings, and division, with the majority from seed and division. Perennial seedlings germinated in January and February are transplanted from plug trays into one and two gallon containers in March. The one gallon containers are saleable in May and the two gallon in June and July. Several crops are planted throughout the year with the last planting completed in October. These are saleable in late April after being stored in unheated polyhouses or under microfoam.

The grasses are produced from divisions taken in December and January. These divisions are grown in plug trays or quart containers until they are planted into two, three and even seven gallon containers in June. And, yes, even the seven gallon containers planted with the larger growing types such as *Miscanthus* and *Erianthus*, are saleable in September.

The demand for this material has grown a lot faster than our ability to produce it. Those garden centers we sell to tell us perennials are becoming a larger and larger part of what they sell. The landscapers are leaping at the ornamental grasses as they represent a relatively new set of plants for our area and require very low maintenance. When the gypsy moth scourge was upon us the grass and perennial areas in the nursery were the ones that required practically no spraying.

Thus we have plant material that takes, in some cases, less than one year to produce and generally two as a maximum. We have a rapidly increasing demand and fewer pests and diseases, as well as less required maintenance, but that is only part of the reason to produce this type of plant material.

I am from Massachusetts which, I realize is not considered a major agricultural producer. Partially because of this, government agencies and environmental groups do not consider our industry important. Frequently laws and regulations are proposed without sufficient study as to their impact on agriculture. Large users of water have had to register the specific amount of water they use in order to be allowed to continue to use that same amount of water in future years. Provision is given for increasing that use but only through a lengthy permit process. Agriculture has no special access

to water. Industrial and agricultural users are lumped together. This registration is only the first step in what promises to be a long and difficult battle.

In Massachusetts the drought was obviously nothing like what occurred in other parts of the country. But even in parts of Massachusetts we had a dry year. This dryness combined with fast paced building development has placed considerable pressure on existing water supplies. This caused several municipalities to put water bans into effect. This essentially shut down landscaping in those areas, and this was in an area that would be considered wet by standards across the country this past summer.

In addition to water use, Massachusetts is in the process of enacting strict ground water regulations. These regulations promise to have a significant impact on pesticide use. Already we have felt pressure from the State Pesticide Board to ban the use, handling, or storage of a wide variety of chemicals in a significant distance from water recharge areas. Again, these regulations were drawn up without any study on agricultural impact.

This pressure has increased so dramatically in recent years the Massachusetts Nurseryman's Association has had to hire a lobbyist to ensure a decent climate for the nursery industry. This has not only been at significant cost but also requires a sacrifice of substantial time from the membership.

But why am I telling you these problems in Massachusetts? Because they are basically the same ones each of you are facing or soon will face. In fact, I am sure some of you have heavier regulations than I have mentioned. I am tired of being labeled as an environmental polluter by environmental groups. I always believed our industry was an improver of the environment. If we are to continue to be, we must be more responsive to this public pressure. We are always advertising how effective our products are in increasing the value of land. How about advertising how we improve the environment and are dedicated to a reduction in water use.

We can reduce pesticide and water use by improving integrated pest management for our industry and designing more efficient irrigation systems, but we can also develop and produce more disease and drought-resistant material.

In the September 1, 1988, issue of the *American Nurseryman* we learned that a city ordinance passed in Los Angeles requires landscaping for all commercial, industrial, and multi-family housing to meet "xeriscape" requirements. A point system drawn up by the city planning department awards points for plants capable of flourishing on natural rainfall after two years of irrigation. Those without sufficient points will be denied building permits.

How long before other areas require similar or even stricter regulations, especially with such chronic water shortages?

In conclusion, I believe it behooves all of us to pay more atten-

tion to the reasons we produce individual plant material. The production of disease resistant and drought tolerant material not only represents great selling opportunities but may also be a requirement before we are ready for it if we do not pay attention now.

## **MT. CUBA CENTER AND THE UNEXPLOITED WEALTH OF THE PIEDMONT**

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Since World War II we have had a resurgence of interest in new plants from faraway places rivaling that of the Golden Age of Plant Exploration (1840 through 1920). Both eras focused on faraway places—particularly the Orient, and ignored the places easily reached.

But during the 18th century, prior to the opening of the Far East, there had been a frenzy of exploration centered on the eastern coast of North America, involving men like John and William Bartram, Andre Michaux, John Mitchell, and Peter Kalm. These people had friends and patrons in Europe who were avid collectors of minerals, artifacts, animals and plants. The cabinets of curiosity which they assembled served as study collections for these wealthy savants and later as nuclei around which museums, arboretums and zoological gardens were formed. They served also as introduction gardens from which new and useful plants were distributed. Indeed, many of our most useful and widely grown ornamentals came into gardens via this route. Plants like *Phlox paniculata*, the common garden phlox, which exists in hundreds of cultivars, were grown and selected first by amateurs and ultimately by the seed firms and nurseries that were arising to serve the leisure needs of an educated middle class.

But with the opening of Asia by commercial trading companies, such as the Dutch East India Company and the British East India Company, the attention of plantsmen turned from eastern North America, so that our flora was left to the botanists to study. American gardeners regarded European gardens as the source of quality plants, and the incompletely exploited wealth of native American ornamentals was ignored.

We are now seeing renewed interest in our own plants; those of the Coastal Plain, the Piedmont<sup>1</sup>, and the mountains. Mt. Cuba

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<sup>1</sup> Hilly upland region of the eastern U.S. between the Atlantic coastal plain and the Appalachians, stretching from southeast New York to central Alabama.