

NEW WAYS TO PLANT CITY TREES

For the millions of people in New York City – street trees are important. In fact, an estimated 2.5 million street trees can be found lining the concrete and asphalt of our fair town. Each year, 1,000 trees at the cost of about \$300 each are planted to replace those that are dead or dying. Half of these new trees die within three of 10 years, instead of living up to 80 and 100 years.

To find out what's ailing street trees and what could be done to alleviate the plight of urban trees in the future, Dr. Nina Bassuk, a specialist in urban horticulture at Cornell University, studied a number of street trees in Manhattan for three summers, from 1983 to 1985. The trees examined included linden and ash trees along Columbia Avenue between 69th and 75th Streets and young trees growing in large concrete containers on West 72nd Street.

The study led to one major conclusion: the trees in Manhattan are often forced to live in an environment similar to a desert. They are bombarded by reflected and radiated heat coming from concrete, asphalt, buildings, and cars parked on the street. As a result, the tree loses water from its leaves at a rate too fast to replenish it from the ground.

No more than a small pit, the planting site is severely constricted by concrete or asphalt pavements, networks or underground utility pipes, and sometimes subways.

Based on the results of her Manhattan work and other studies, Dr. Bassuk is formulating several new approaches to planting and maintaining street trees for urban areas that will impact not only New York City, but also Tokyo, Shanghai, London, and many other great cities around the globe.

For one thing, she is convinced that trees that are more tolerant of stressful conditions typical of modern cities need to be selected and planted. Fewer than 10 tree species now make up more than three-quarters of the trees in cities. Future plantings should not only include varieties of desirable form but also varieties tolerant to drought, salt, heat, and other stress factors.

Widening the planting site and providing it with a drainage system is another possibility to improve the tree's survivability. Expanded planting sites would help the tree intercept more life sustaining water and oxygen.

The Cornell scientist also called for planting trees in groups, rather than in the traditional single file. Trees growing together would shield each other from excessive heat and winds, thus helping to minimize moisture stress in trees.

Grouped plantings would also allow the use of a much more diverse palette of plants, those that do not now conform to the formal, standard lollipop-shaped tree that we envision lining our streets. This includes multi-stemmed, informally shaped, so-called junk or weedy trees and shrubs, such as Russian olive, alder, white mulberry, Osage orange, or even the tree of heaven (ailanthus). These "tough planted singly but would be really attractive when planted en masse.

Grouped plantings could be used in such areas as wide sidewalks, traffic islands, plazas, median strips and parking lots.

Planting beds should be raised slightly. The raised lip would serve as a barrier to salt water runoff in the winter and spring.

Dr. Bassuk believes that there are a tremendous range of trees to choose from for urban use, and that when city planners, urban horticulturists and landscape architects agree to new approaches, a renaissance in urban green space will begin.