

THE FUTURE AND ITS IMPACT ON THE TREE CARE PROFESSION IN CANADA

by Tom Lee

Clearly we are in an era of change and the environment, in all of its dimensions, is receiving heightened attention at local, national and international levels. Trees are often central to this interest, as was illustrated by international activities leading up to the recent United Nations conference on environment held in Brazil in June 1992

Initially the "Tree Issue" approved for the Brazil agenda appeared under a category of concern for desertification. It was seen originally as a third world problem originating with the domestic use of wood in marginal economies where no effective programs to replace the forest and restore the environment were in place. As the international discussions evolved toward Brazil 92, this original narrow definition of the issue took on new dimensions. Trees emerged as one of the major environmental concerns on an international basis. The original desertification issue was broadened into a set of principles dealing with forests as a key component of the life system on the planet and not an issue peculiar to third world countries. These principles, along with related international accords on climate and biodiversity, both issues in which the forests are clearly implicated, have helped to stimulate a reawakening of interest at all levels in the roles that trees play in our environment.

Why is this happening? In my view, there is within our nation, Canada, a sincere and deeply rooted interest in the environment. In fact, concerns sometimes surpass reality as knowledge and understanding are stretched to accommodate sharply conflicting viewpoints. Canada has about 10% of the world's forests and some of our citizens believe that these forests are being systematically raped and pillaged. This belief exists in spite of the fact that over 50% of Canada's forested area will never form part of the operating commercial forest

and will continue to provide environmental benefits to the planet as it has done since time immemorial. This belief exists despite the fact that the annual growth in our forest exceeds our annual harvest and that recent rates of reforestation exceed the rate of cut. In spite of the fact that we have set aside forested areas approximately twice the size of Italy, where commercial harvesting is not permitted, Canadians believe that the fundamental natural diversity of their forest has, or is about to, disappear forever.

In summary, we have forged a strong link between the environment and trees. We see a concern whose impact has now reached an international audience in the world's only international political institution. And we all know that, while literally speaking "trees don't vote," figuratively we know that they do. How will this new marriage be reflected in the urban forests of tomorrow?

Two New Dimensions to Urban Forestry

There are clearly two new dimensions being added to the urban forestry scene and these will dramatically alter the nature of our business over the next decade. 1) The traditional focus on beautification will be expanded to include massive near-urban plantings to help moderate urban climates, lessen urban pollution and conserve water, wildlife and soils. 2) New forms of partnerships will emerge in which the traditional, almost personal, world of the urban administrator, private consultants, and contractors will have to accommodate new entrepreneurial private sector sponsors, money, interest and priorities. Both of these trends are already clear, and they are firmly enough established to say that they will be here for this decade at least. Their impacts will be felt well into the 21st century.

On the trend toward mass near-urban plantings,

the following examples will serve as illustrations:

Mexico. Within the greater urban environment of Mexico City, the Mexican government has initiated a program to plant 100 million trees within a 5-year period. This program, entering its second year, has already planted in excess of 13 million trees.

United States. I will not elaborate on the United States program as it will be covered by Mr. Alan West of the United States Forest Service. Suffice it to say the United States government has mounted, in conjunction with a wide range of partners, a national program which will include mass-planting in near-urban areas.

England. Mr. Marcus Sangster of the British Nature Conservancy will describe a new program in England that has the same thrust as those of nations already described.

Canada. Canada, last year implemented a far reaching policy and program initiative known as the Green Plan. The Green Plan sets out for the nation our hopes and aspirations to sustain our environment, and to mitigate against the more environmentally damaging practices of an urban-industrial society. One of the many initiatives in Canada's Green Plan is a program called "Tree Plan Canada". This program is sponsored by the Federal Department of Forestry and has as its objective to support the planting of up to 325 million trees in near-urban areas in Canada over the next 6 years. This program was launched in 1992, and, while it is too early to report on successes, it can be said that interest and support for the program is extremely high.

This leads me into the second major change theme with respect to urban forestry - the changing nature of partnerships. We might briefly explore three factors influencing this change utilizing the following statements:

- Being green is good for business.
- Polluters are prepared to pay.
- People are prepared to participate.

A new dimension in the business world is that it pays to be green. Green can be combined with advertising and be used to augment sales. You need not be a polluter to benefit from being seen as a supporter of the environment. Firms are

increasingly interested in capitalizing on being seen as a contributor to environmental quality.

Polluters have a particular role to play and a particular need to be seen playing it. Seven out of ten Canadians believe that tree planting is as important as recycling or environmentally friendly products. Pollution contributors, whether they be the petro-chemical industry, coal-electric or automobile companies, can substantially reduce their image problems by being seen to contribute positively to offset some of the inevitable negative environmental impact of their products.

Finally, Canadians (67%) have indicated that they are personally prepared to participate in tree planting. Urban forestry is about to be invaded by a new set of partners. They do not come trained with the urban forester's handbook or the policy, procedural and financial manuals for safe and sensible urban administrators. They come with a combination of the entrepreneur's sense of a good business transaction and the missionary's zeal to play a part in saving the world from itself. We, as individuals in this profession, will need to rejuvenate our ideas, our traditions and our practices to fully capitalize on these new opportunities and new relationships.

Science and the Urban Forestry of Tomorrow

We are at the beginning of a new era in respect to the science of forestry and, in at least three areas, we may anticipate advances that will profoundly benefit our professional practices.

The first of these pertains to insects and diseases. In an age in which the raw use of chemicals of yesteryear is no longer tolerable, we will see their replacement by a new generation of naturally occurring products. Canada has been a leader, for example, in developing bacterial pathogens to combat the mountain ash sawfly and in refining the use of *Bt* (*Bacillus thuringiensis*) in combatting pests such as the Asian gypsy moth. Our past efforts are being greatly expanded at this time through Insect Biotech Canada, an institution without walls, combining the best talent across Canada in a thrust, for example, to isolate, replicate and apply naturally occurring viruses to combat tree pests and diseases. These products

are amazingly specific to their target and will present new challenges to successfully register and bring them into commercial production. Nevertheless, it is clear that many of these new generation products will become available within this decade.

The second science area is tree genetics. Breakthroughs in recent years have ushered in a new era with our ability to effectively clone trees, i.e., produce exact replicas. In Canada, we have, within the past few years successfully developed a technology for genetic replication of softwoods. In a larger sense we are introducing the knowledge and the technology leading to identification and decoding of the genetic make up of trees. It is this knowledge which holds the hope of development of disease resistant varieties, fast growing varieties and a whole host of specific and desirable traits, perhaps even tailored directly to urban needs. Tree genetics will develop this decade, but its fruits will not be realized until the early part of the 21st century.

I expect that we will see within this decade expanded use of, and greatly enhanced capability in, the use of air borne observation and monitoring systems. Satellite technology is already used to a large extent in the commercial forests. With refined and enhanced capacity, there is a strong possibility that you will be users of a generation of products that can effectively monitor disease, growth, impacts of weather, and a host of other applications far beyond those currently available.

Conclusion

The future will greatly expand the scope of urban forestry. The future begins now. It is marked by a broadly based interest and concern about the environment which is planetary in its thinking and international in its boundaries.

One major identifiable change will be the development and growth of urban forestry plantings on a mass scale. These will be used to moderate the urban climate, reduce impacts of pollutants and to conserve soil, water and wildlife.

A second major change will occur in the nature of involvement of businesses, organizations and people. What up to now has been a small world is about to be invaded by many new participants. They will challenge and change the rules of the game.

Finally, science will also change our world. Within this decade a new generation of biologically based tools will start to become available to assist you in managing insects and diseases. Refinements in satellite surveying systems will introduce new tools for monitoring the urban forest. And finally, in the longer term, realistically in the early part of the 21st century, we may have achieved scientific breakthroughs which will bring you genetically "trained" trees specific to the needs of your urban environment.

*Assistant Deputy Minister
Forestry Canada
351 St. Joseph Blvd.
Hull, Quebec K1A 0G5
Canada*