

EXPERIMENTS AND EDUCATION: THE ROADWAY AHEAD

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Abstract

The long-term success of street tree plantings is the end result of a complex process involving many players. To date it would seem that there has been a fair amount of good luck rather than good management. As streets and roads become more intensively developed the number of constraints to be considered in the tree selection process increases. Community expectations continue to broaden. Society is becoming more litigious. Managers must be more accountable financially, environmentally and commercially. All of these factors make it more important than ever to develop a systematic process of tree selection and establishment that delivers the benefits to which we all aspire. TREENET can play a pivotal role in this process.

For this process to be successful, all of the stakeholders must be aware of the complexities within this process. The role of education in this process is essential and undeniable.

1.0 Introduction

In any field, the pursuit of knowledge requires thought, planning and a systematic investigation of all factors involved in the process being investigated. The process of selecting, installing and managing street trees is very complex indeed. The establishment of TREENET is a very important step in applying a more systematic approach to a process which has often been based on subjective rather than objective factors. There would be many examples around the country where the species chosen has been the favourite tree of the person planting the tree (or that of a local councillor). Similarly, the use of certain species has reflected what was in stock in the council nursery or what the local nursery had left over. In many areas it is simply luck that has left us with a legacy of well-grown and established street trees.

This is certainly not to say that "experiments" and trials have not occurred. Even Governor Arthur Philip "experimented" with trees such as *Quercus robur* and *Pinus* species in the earliest days of Sydney. Plantsmen such as Charles Moore, Joseph Maiden, Ferdinand von Mueller, Walter Hill, Charles Weston and Lindsay Pryor amongst others introduced a wide range of species over a wide range of environments. Some of these introductions have become the essence of the character of the landscape in many urban and regional areas.

2.0 The process and problems of tree selection and establishment

As anyone who has tried to do it knows, selecting street trees is extremely difficult. There are an increasing number of constraints, particularly in urban areas, and an increasingly litigious community. Whilst the community has the expectation that street trees exist to provide shade and beauty, they are becoming less tolerant of shedding leaves and fruit and are more likely to sue if they trip over pavement which

has lifted due to root growth. We all know that there is no such thing as the perfect street tree but search is on for the most appropriate plant for the particular site.

It is not only the successful selection of trees which often appears as a random event, so too is the establishment process. The ability to plant and maintain trees requires skill and thoughtfulness. It also requires that whoever is responsible for these seemingly simple tasks has some view of the future and a commitment to making a long term contribution to the environment. Unfortunately, poor stock quality, sloppy planting practices and little to no follow-up are the norm in many local government areas. This may be partly due to inadequate staff who may or not be trained and increasingly tight budgets. How many well planned and planted streetscapes have been destroyed by the careless use of mowers and whipper-snippers?

The people who manage our streetscapes must have a handle on all aspects of tree selection, establishment and management. How do you manage something if you don't know what it is, where it is or in what condition it is? The answer is that it is very difficult and that the usual result is crisis management and more seemingly random events.

The end result of this type of process is a very conservative approach to tree selection and "management" ie. stick with what we've always used, bung it in the ground and hope for the best. It also produces a limited palette of species that people are prepared to use and therefore growers are prepared to produce. Landscapes become predictable with a sense of sameness from region to region. Poor establishment practices lead to a visually degraded landscape. Community expectations of trees may not be achieved and those in control of budgets may see landscape as an unreliable expenditure.

Australia is a huge country with many regional differences which should be celebrated and enhanced through the selection of species that perform to their best.

3.0 Experimentation and Education

So where do experimentation and education come into this process. Education is essential for all stakeholders, the extent and detail being dependant on their role. Clearly those that select, those that plant and maintain, and those that manage our street trees must have the latest information on the best arboricultural practices. One hopes that this information can be provided by the many public and private institutions which purport to be able to do so.

Plant users should also be aware of the problems faced by plant growers (and vice versa). Plant growers should also be aware of the latest developments in producing plants of the highest quality in an economically viable way.

Similarly, "tree" people must also be aware of the other users of the street. Authorities who install, maintain and manage services, roads, transport and other infrastructure have their own legal and logistical issues which are no less important. The community's expectations of the reliability of these services would probably outweigh their expectations of the landscape. As above, these authorities also have an obligation to manage their assets in an environmentally sensitive manner.

The community must also be made aware of the complexity of the environment in which they live. Most people are blissfully unaware of how their power, water and gas materialise in their houses. Likewise they are largely unaware of the difficulty of selecting, establishing and maintaining their street trees.

I firmly believe that increasing everyone's awareness of the requirement of all players leads to a more constructive debate and the achievement of a sensible compromise.

It would be great to think of TREENET as a clearing house for the dissemination of information. The basis of this appears to be well under way in South Australia with many influential people on the Advisory Board. The challenge will be considerable for other larger and diverse States but hopefully not impossible. There is now a network of tree-related organisations throughout Australia which could instigate and manage a number of planting trials.

For many years I have suggested to students and others that most councils have hundreds of kilometres of trialing grounds at their disposal - streets, parks, reserves and schools where many potential new street trees can be tested under local conditions. Botanic Gardens are often just zoos for plants. Whilst I don't think Botanic Gardens are good trialing grounds for street trees as the level of care is too intense, they undoubtedly hold many species that should be tested under more rigorous growing conditions. It was love at first sight when I first visited the Waite Arboretum. Here is a place where the trees are essentially left up to their own devices in a climate which is pretty tough.

Places like Centennial Park in Sydney once had a role in experimentation but changes in management which reflected the change in park usage have let that role slip. The new Tree Master Plan for the park should go some way to restoring that role.

The scope for arboricultural education is the best it has ever been. My concern is that there are still many horticultural myths and legends being promoted and practiced. Arboricultural knowledge has increased exponentially over the past decade. It is essential that those who consider themselves educators in the field of arboriculture are up to date.

As diploma, undergraduate and post-graduate courses in arboriculture and urban forestry develop there will be more opportunity to involve students in the design and implementation of tree planting programs. It would be very useful to involve people from forestry schools. Part of the success of Canberra's street trees is based on the early involvement of foresters.

4.0 Conclusions

I have said nothing new in this ramble but the time is right to start applying a more systematic approach to tree selection and to explore the enormous diversity of trees that we have on this planet. Apart from species that are related to the tried and true but ubiquitous street trees we already use, what about the exciting cultivars that we can read about in nursery catalogues but rarely see in the field. I also find it extraordinary as to how little we have explored and used our own flora as street trees.

What lies ahead is exciting stuff but lots of hard work. It will certainly take some inspiring individuals to start the ball rolling. I think that the arboricultural industry and the educational support which now exists in Australia has reached (or is reaching) a critical mass from which ventures such as TREENET can take off. The increase in arboricultural knowledge has increased exponentially over the past decade and educators in the field must continue to work hard at spreading this knowledge to all who need it.