more transplanters from being performed is the lack of availability of mature trees. If the trees are to be purchased from an outside source, the potential transplant may be discouraged if a particular species or size is not found. The availability factor is an important one, and sometimes necessitates compromises in the selection of species and size.

One way this problem could be solved is by creating Holding Nurseries where trees previously marked for destruction are temporarily transplanted for future permanent transplants. A minimum amount of maintenance is required for such a Holding Nursery and thus the endeavor becomes economically practical.

Of course, some care must be taken in selecting a site for the Holding Nursery. Availability of water and a good access road are just two points that contribute to the economic practicality of such a venture.

To find a reliable source that can successfully perform the transplant can be another problem. There just aren't that many companies who specialize in transplanting mature trees. That's why we invite anyone interested in tree transplants to write or call us for additional information. As this requires sophisticated, specialized equipment and the skills to operate them. Extensive knowledge of trees, including their growth patterns, vulnerability to diseases and adaptability to transplantation is essential for a successful transplant. This knowledge must accompany a company's service if the mature transplant is to succeed.

How can you determine if a particular source is capable in this field? Ask for references of past jobs that might be similar to the one you're considering. Call the greenskeeper at a local country club. Ask a landscape designer. Discuss requirements with as many sources as possible, then compare recommendations and cost estimates. And don't be afraid to use the phone—call out-of-state sources for further comparisons. Checking out a source costs very little. Poor judgment in transplanting could cost much more, so be thorough!

If a company is reliable and has confidence in themselves, they should, in my opinion, fully guarantee their work. It's been the practice of the American Tree and Landscape Co. to replace any tree furnished at no cost to the customer, if the tree transplant is unsuccessful. If the tree is furnished by the customer, my company generally will replace it at a reduced cost should the first tree die. There are, of course, always extenuating circumstances—lightning or hurricanes for instance. Some of these unusual conditions can be covered by an insurance policy with your present insurance company. In fact, check your policy, your trees may already be insured against such misfortunes. Although most tree transplants can be successful if performed properly, there are variables that bring an element of risk into the picture. It is always critical that the variables be recognized and controlled. One must realize that in transplanting a tree he is putting it through a traumatic experience. From a heavily shaded area, the tree might be moved to an open, sunny and windy area. A tree grown in a protected area is not as hardy as one that has been fully exposed to weather elements. Thus, the bark may split soon after the transplant. The root system may likewise find unfavorable conditions in the new soil. In the process of moving, there is also the possibility that the tree may be left to expose its tender roots to wind and air too long, sapping their vitality for new growth.

In addition, after the transplant is completed, proper care may not be administered that is essential to its initial adaptation, among which are a sufficient water supply and the proper fertilizer and chemical nourishment.

Even with these possible risks, the vast majority of tree transplants can be successful. The life or death of the tree will largely depend on a person's judgement and performance during the initial period of adaptation. For this reason I wish to repeatedly stress the importance of evaluating your technical source critically.

Sophisticated Irrigation System Designed Around Scarce Water

Perhaps the most sophisticated irrigation system ever designed for a golf course is being installed at the Castle Harbor Golf Course in Bermuda by Larchmont Engineering and Irrigation, Inc. of Lexington, Mass.

Due to the scarcity of water on the Island, Joseph C. Tropeano of Larchmont Engineering spent two years studying the response of the turf to various applications of water and rainfall. He observed that turfgrass responded very quickly to a very small amount of precipitation, especially at night.

A special system was designed which gave the greens first priority followed by the tees and then the fairways.

A unique timing system enables Castle Harbor to select landing areas to make the best possible use of water where it is most needed.

And in order to accomplish this remarkable feat, a Johns-Manville binar system was selected because this system had the greatest flexibility to meet with the requirements of Larchmont Engineering.

Irrigation is done at night when the soil cools down to eliminate surface evaporation and evaporation of the water while in its trajectory stream.

Night watering enables the moisture to soak into the root zone before the wind and sun has an opportunity to evaporate it.

Larchmont Engineering and Irrigation, Inc. feels that this concept in water conservation can be duplicated all over the world.