Arid Zone Times

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Planting for the Future

Alternative Planting Methods for Desert Trees. In the last few years horticulturists have begun reevaluating the methods used for planting trees. Questions have been raised about the size, shape and depth of the planting hole, the usefulness of organic amendments and the value of post-transplant pruning. Dr. Jimmy Tipton (with the Department of Plant Science at the University of Arizona) has come up with some recommendations that landscape professionals should consider when drawing planting details or planting trees. These recommendations are based on the fact that the majority of active tree roots are found within two feet of the soil surface.

The traditional planting method requires a hole dug slightly larger and deeper than the dimensions of the box size being planted. The short comings of this method include: 1. trees may sink lower than desired exposing trunks to soil-borne diseases; 2. excavation of planted trees has shown that this method does not have the effect of promoting deep rooting; 3. deep holes create a very poor interface between the root-ball/back-fill and the existing soil; 4. availability of oxygen in root zone may be limited.

An alternative method of planting is to excavate a planting hole that is rough and uneven on the sides and bottom with the hole no deeper than the root-ball and three to five times as wide as the root-ball. This method will allow a better interface between back-fill and existing soil, and improve lateral root development. Not all planting locations can accommodate this alternative planting method. For example, trees planted along narrow street medians. In those instances a long narrow planting hole is suggested, to help encourage lateral root growth. Another alternative that may have limited use for planting trees in compacted or heavy clay soils, is to excavate three to five times the width of the box but only half for the depth of the root-ball. Un-compacted topsoil is then mounded over and above the rest of the root-ball to create a rooting area with half of the soil actually above the original soil line.

Back-fill should not be amended with organic matter. Organic amendments in the back-fill tend to restrict root spread and reduce top growth. Where heavy clay soils are encountered, sand can be added to the back-fill to increase the rate of water penetration and improve drainage. **The development of new roots** is stimulated by and dependent upon the growth of leaves and stems. The practice of pruning trees following planting reduces the stem and leaf growth and can actually delay establishment. Such pruning is considered unnecessary and potentially detrimental to the tree. Dr. Tipton's alternative planting methods offer the possibility of improving tree planting practices for the benefit of all, however time and experience will be needed to determine if these methods can be efficient and economical when used in commercial landscape design and construction.

Planting Boxed Trees: The University of Arizona in cooperation with the Arizona Landscape Contractors Association has produced an excellent video tape on planting landscape trees. This tape, titled Planting and Staking Landscape Trees," is available through the Agriculture Communications Department of the University of Arizona and is a must for landscape contractors who plant container and boxed trees.

The following are essential for successful boxed tree planting: 1. Do not try to remove the bottom of the box. The wooden bottom provides a solid base that will help keep the root-ball from settling, shifting or breaking during planting. The bottom gradually decomposes and will not inhibit rooting or water penetration. Attempting to remove the bottom prior to planting can cause serious damage to the root system and ultimately kill the tree. 2. Set the tree grade. Make sure the soil surface in the box is level with the surrounding native soil. 3. Back fill the hole half way up the sides of the box before removing the sides. This will help support the root-ball and prevent cracking that may damage roots. 4. Make sure the root-ball is moist before planting and irrigate immediately after planting. This will insure that the roots are not water stressed or damaged by contact with dry soils.