

From Roots to Branches: The Art of Burlapping

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Burlapping is the act of moving an adult tree from one location to another. Trees that have had extensive burlapping recover gradually. Tree transplantation typically entails a significant amount of root removal due to the extensive scope and shape of the tree root system. The trees that are going to be moved should be in good shape, health, and structure. Trees with poor structure, health, or form/architecture shouldn't be transplanted. It should be possible for a transplanted tree to grow enough roots to support itself. To determine the operation's cost-effectiveness, the trees' post-transplant lifetime and health must be taken into account.

Placement of burlapped trees correctly

- If preserving the existing trees is not feasible, the damaged trees should be transplanted as soon as possible inside the project site. This will lessen the amount of green space lost in the surrounding area and increase the tree's chances of surviving the transplant. If that is not possible, transplant the affected trees ex-situ to a suitable permanent location. The receptor site should ideally be situated close to the project site in order to preserve the amenity effect in the area.

System quality and root ball size

- In order to allow more roots for appropriate stability, anchoring, and regrowth, larger trees need larger root balls. The ratio of root ball diameter to trunk diameter should be between 8:1 and 10:1, per international guidelines. A larger root ball is recommended for more mature plants in order to enhance transplant recovery.

Species suitable for burlapping

- In Indian burlapping principles, palms are a common plant.

Native or Indigenous trees recommended for burlapping.

- Neem tree, Pungam tree, Mango tree, Sacred fig tree, Java plum tree, Ashoka tree, Jack fruit tree, Tamarind tree, Banyan tree, Jujube tree and Sandalwood tree.

Trees suitable for burlapping

- Pipal, Kanji, Silk cotton tree, Millettia, Mahua, Drumstick, Teak, Khair, Pendula, Arjuna, Amla, Sissoo, Semal, Kaijelia, Mango, Peltophorum, Tamarind and Gulmahor.
- Availability and suitability of a receptor site
- Before transplanting, it is pertinent that a permanent receptor site, either within and outside the project site, should be located.

Trees that should not be transplanted

- Trees with low amenity value; trees whose form cannot be recovered after transplanting; trees with a low transplant survival rate; trees that are very large; trees that exhibit over-maturity and the onset of senescence; trees with poor health, structure, or form (such as

an unbalanced form, leaning, or with significant cavities, cracks, or splits); undesirable species (such as the invasive *Leucaena leucocephala*).

Handling and lifting root-balled trees

- Before lifting, make sure the root ball is securely wrapped. A machine with the proper capacity attached to the support around the root ball and not to any other part of the tree should be used for direct lifts, protecting the tree with padding. Trees should be raised by their root balls, which should be prepared and wrapped, rather than by their trunks as this might seriously injure the trunk. When transplanting, improperly protected root balls would quickly collapse under their own weight.
- Containerised root ball
- Containerised trees are more resilient to root deterioration while being transported. Given that the root ball is well protected and that raising the boxed root ball during transplantation will improve protection, this is a recommended transplanting technique. Improve the tree's subsequent establishment.

Planting

- Ideally, trees should be positioned in the same direction as when they were first planted. Before the last back filling, all root ball supporting materials should be taken out of the planting hole. The root ball's top surface shouldn't be below the surrounding soil after it has finally set. To stabilise a tree, the backfill dirt should be compacted tightly around the base. To get the root ball to field capacity, water should be added to both the backfill and the root ball. The dirt will naturally settle with the help of soaking. If necessary, subterranean guying or guys and stakes should be used to anchor the tree in place. Create a soil saucer so that irrigation or rainfall can be held and gradually seep into the root ball's perimeter.

Post planting care

- Until a typical spreading root system has formed, all recently planted trees are under stress. Strong fencing should be in place to keep them safe. To help the tree recover from the transplant shock, all recently transplanted trees should receive the appropriate maintenance care. A tree's stress might be seen either right away after transplantation or gradually over time. A higher success rate, reduced stress, and survival are all made possible by proper post-transplant care. If trees are not properly cared for after transplanting, time and money may be wasted. Trees that are tall, slow to recover, and thickly foliated require mechanical support.
- Each transplanted tree needs scaffolding for approximately one and a half months in order to provide external support; the scaffolding should be taken down as soon as the tree is able to stand on its own.
- During the growing stage, the transplanted tree takes roughly 30 to 45 days to produce new branches and foliage. The tree will gain strength more quickly if the support is removed as soon as possible.

Mulching and watering

- Mulch can be utilised to restore organic matter and nutrients in the soil, control weeds and other competing vegetation, buffer extremes in soil temperature, and preserve soil moisture. Mulch should not be applied too close to the tree trunk or root collar since a well-established layer of mulch can retain more water than the soil itself without reducing soil aeration. The first two years after planting, the area where roots will grow is typically covered with a mulch layer that is about 5 cm thick.
- For trees to establish properly, there should be no shrubs or other plantings in the root zone or base of the tree. Appropriate and adequate irrigation is essential for healthy root development. Both above and below ground, support should be provided. Until enough roots are formed to anchor the tree, staking or initial guying may assist keep the tree

upright. Once the tree is established, the supports can be taken down. Trees will suffer more harm than good if supports are left in place for an extended period of time without being properly adjusted.

Chemical use

- Unless nutrient deficit is verified, fertilisation may not be required. During the early establishing phase, a moderate release of nutrients from the breakdown of mulch and organic matter added to backfill soil may be adequate. A clear sign of a plant not getting enough water is fertiliser burn, which is brought on by an excessive fertiliser application.

Cost of Transplanting

- It estimated that complete operation *i.e.*, transplanting and post transplanting care will cost around 4000/-Rs. per tree.
- The cost to plant an average tree will vary with tree size and type, the accessibility of its location, and labour rate.

Conclusion

- Burlapping is useful technique for protecting the trees during transplanting and promoting healthy growth.