



# GAMIING Nature Centre

## Live Stakes

Live Staking is simply the installation of live cuttings of carefully selected plant material taken from stems or branches, cut into lengths and inserted into the ground that have the ability to root and grow thus acting as stakes. They can be used as a simple and economic means of vegetation and stabilizing small, uncomplicated areas. Live stakes also work very well as a means of introducing a particular plant species to a site. They are also used as a means of securing other soil bioengineered structures or erosion control measures to the ground.



### **Application:**

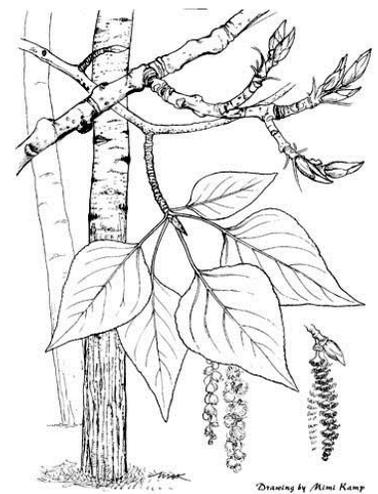
Installed on their own, live stakes can be planted in slopes and shorelines to help control minor or shallow erosion. In this role the root network of the growing plant provides the stability. When using live stakes for this purpose it is important to remember that the stakes will provide no protection until they have had an opportunity to grow. Considering this aspect, live stakes should not be relied on when facing large or deep earth movements or bank failures. They are also an effective means of securing fascines, brush mattresses, and erosion control blankets. The added advantage of using live stakes to secure a treatment lies in the extra plant growth that the stake itself will provide. Live stakes can also be used to add growth to existing treatments. For instance, if there is sufficient soil present, live stakes can be added to the rip rap to provide some natural strength and diversity.

### **Types of Trees and Shrubs Used in Live Stakes:**

The easiest plants to propagate from cuttings are **Native Willows** (*Salix* sp.) and **Cottonwood** (*Populus trichocarpa*, *P. balsamifera* ssp. *trichocarpa*). **Poplar** (*Populus balsamifera*, *P. balsamifera* ssp. *balsamifera*, *P. tremuloides*) and **Native Dogwoods** (*Cornus* sp.) are also good candidates.

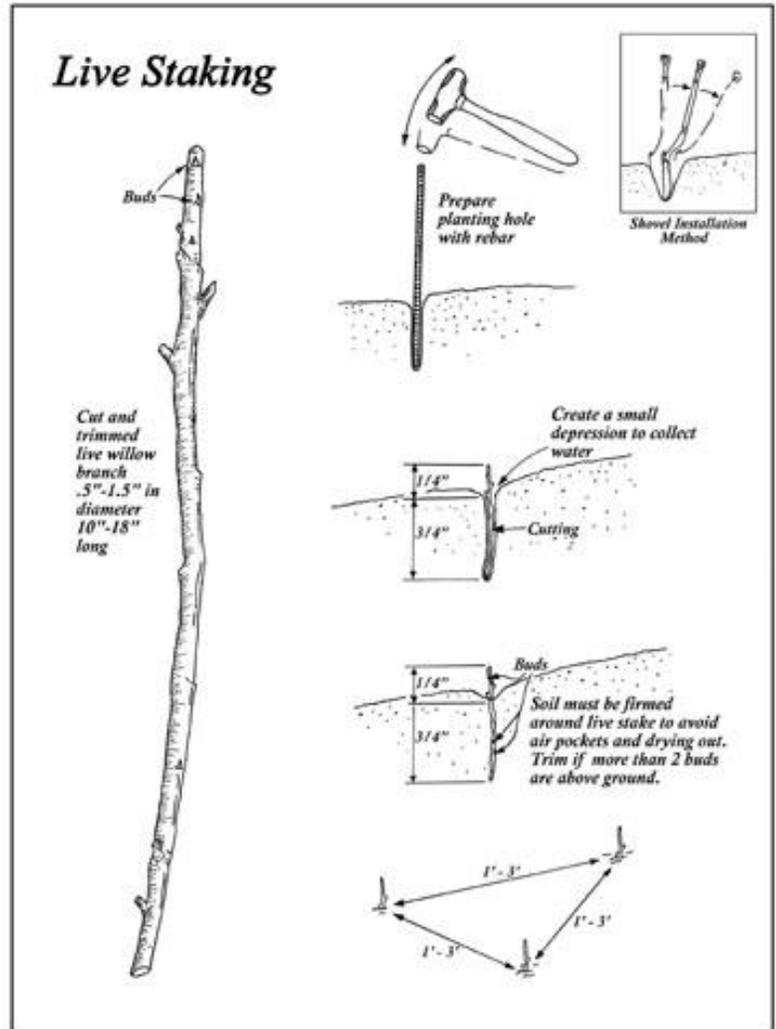
### **Steps:**

- Take cuttings using a sharp knife or pruners, during late winter while plants are fully dormant - January or February in most areas.
- Collect them from over a wide area to ensure genetic variety in your stock and avoid stressing any one plant. Ask permission from neighbours or the provincial or regional government but please do not take cuttings unless you have received permission.
- Cut the shoots a minimum of 30 cm long with a diameter of 3 cm. Identify the tops of your cuttings by making a horizontal cut at the top, cutting 0.5 cm above a node (the place where a leaf or side branch would join the stem).
- Make a slanted cut (roughly 45°) at the bottom end, angling it down from a point approx. 0.5 cm below a node. This ensures the best success and makes it easier to insert the cutting into the ground.
- While you work, put the shoots in a plastic bag that contains a moist piece of paper towel to prevent them from drying out.
- Store the cuttings in a dark, cool, moist place until you are ready to plant them in the early spring. You can store them in your refrigerator in plastic bags with a small moist piece of paper towel. Don't worry if the cuttings sprout roots or shoots in storage, they should be okay but do plant them as soon as is practical.



### **When to Plant:**

- The best time to plant is during the spring, after the ground has thawed but while the shoots are still dormant. Consult a local nursery, or obtain advice from a local conservation group, to determine the recommended spacing and other planting requirements for the particular plant(s) you are using.
- Soak the cuttings in water for a day or two before planting.
- Poke a hole in the ground using a pencil or sharp stick roughly the same diameter as your cuttings. Try to make the depth of the hole match the length of the in-ground portion of the cutting; you don't want an air pocket underneath your cutting.
- Gently insert the cutting into the hole so that at least 70% of the cutting is in the soil, leaving 30% above ground. This is very important as it encourages the cutting to produce plenty of roots.
- Be sure to fill any gaps around the cutting with soil, water well, and add more soil as required so that no air pockets remain around the cutting. Use your fingers to gently firm the soil around the cutting.
- To protect them from being trampled, you may want to mark the cuttings with a stake. To provide protection from animals, you can surround them with a small cylinder of fine screening (such as a ¼ inch hardware cloth) anchored to the ground.



### **Patterns and Spacing:**

The planting pattern you choose will depend on the species you are planting, the number of cuttings you have, the size of the area you want to plant, and the landscape you envision. Keep in mind that most likely not all cuttings will survive and you can always thin them out later. Generally, it is advisable to arrange your cuttings randomly rather than in rows, spacing willows and dogwoods approx. 30 to 90 cm apart. Because of their size, trees such as cottonwoods and poplars should be planted further apart. Keep an eye on the soil and water the cuttings if necessary; it is critical that the soil stays moist while they grow roots and become established. If a lot of the cuttings survive, you will probably need to thin them out as they grow or they will start crowding each other or shade the water too much. You can weed them out, or ideally, transplant them to another area, perhaps offering any extras to your neighbour(s).

### **Gamiing Nature Centre Can Help:**

If you need help, have further questions, or need live cuttings from our Native Nursery contact us.

#### **For More Information:**

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