

# *Bamboo*

## *Caring for, Controlling & Planting*

### Basic Terms

**Culm** is the above-ground stem, often called the “cane”. It has nodes, usually hollow between the nodes.

**Shooting** is the rapid growth of the new culm. The height it reaches that season is the height for the life of that culm. An individual culm lives from 5 to 10 years.

**Mature size** is stated as a maximum height and maximum culm diameter as reported by the American Bamboo Society. The growth of bamboo is site specific. The more ideal the growing conditions the more likely it is to attain the maximums. Timber bamboos and mid-size bamboos may reach their mature height and diameter in 10 to 15 years. Shrub and dwarf bamboos may take only 3 to 5 years to reach their maximums.

**Rhizome** is the woody, cane-like jointed root. The amount of spread is dependent upon the species, time in the ground and the growing conditions of sun, soil, and water. Two common types of rhizomes are:

- **Running bamboo** (leptomorph) produces rhizomes that grow laterally through the upper surface of the soil and sometimes right above the surface. In the Pacific Northwest these primarily grow from early summer until mid-fall. New culms shoot up in spring to early summer from buds spaced along the rhizome.
- **Clumping bamboos** (pachymorph) slowly spread wider each year and do not run. Some have rhizome that are more elongated than others. Culms on cold-hardy clumpers often shoot in late spring to mid-summer and again in the fall. They grow off the tip end of the rhizome.

**Flowering** most bamboo flowers once every 60 to 130 years depending on the species. Bamboo is grown vegetatively from a mother plant. When a bamboo plant flowers it is in danger of dying but they do not always die. There are two main types of flowering:

- Gregarious Flowering where the plant has reached the end of its life cycle and will die.
- Sporadic Flowering which is typically brought on by environmental factors versus genetics and the plant seldom dies.

*Rock Mountain Products, LLC does not sell plants that we know to be going into flower and there is no way to predict when a bamboo plant will flower or die.*

## Planting

The temperate bamboos we sell are frost hardy and suitable for USDA zones 6–9. A few are suitable for the cold of zones 4 and 5. In the Pacific Northwest where our climate is often mild, you may plant bamboo any time of year except during severe freezing or hot temperatures. If your location receives cold winter winds then it is best to plant in the spring, or to provide protection until the bamboo has had time to acclimate.

**Soil Preparation** All types of bamboo tolerate most types of soil, but they prefer a loamy, slightly acid soil with a pH between 5.5 and 6.5:

- For heavy and poor draining, clay soil, then mix compost into the top foot until the soil easily crumbles in your hand.
- For sandy soil mix in compost to retain moisture and provide nutrients. We use the Special Garden Mix from Pacific Topsoil.

**Spacing** Dig a hole as deep as the root ball and twice as wide. Space root balls a minimum of 3 to 6 feet apart if you want to create a hedge. The size of the root ball will ultimately determine spacing, i.e., 5-GAL plants can be planted with less spacing in between, while 15-GAL plants will have larger root balls and need more spacing. *Planting without adequate spacing will require the plant to be divided, split, or replanted that much sooner.*

**Plant Preparation** Remove the bamboo from its container and gently loosen the soil and rhizomes around the outside of the root ball. Though it may appear root-bound it is better to not cut or separate the rhizomes unless it is severely root-bound, or you wish to propagate small starter plants. Set the bamboo in the hole so the base of the culm is close to ground level.

**Back Filling and Watering** Replace soil until the bamboo is half planted. Then flood the pit with water and wait until it drains away. This washes soil into air pockets. Then complete the back filling. Create a reservoir (mounded ring of soil) and tamp down the soil inside. This will trap and hold water for your new planting.

**Staking** Tall or top-heavy bamboo needs staking for the first couple years so it will not rock in the wind. This would disturb the newly forming root system. Place 3 small stakes outside the root ball and tie nylon stockings or non-abrasive ropes from a stake to about halfway up a culm.

## Watering

**Newly Planted Bamboo** Keep the soil moist, not soggy, for the first two weeks. Too much water will cause excess leaf drop. During the shorter daylight and rainy seasons, the bamboo will use less water. Rainfall may not reach the bottom of the root ball so be sure to check for moisture below the top inches of the soil.

**First & Second Year** Water deeply at least once or twice a week during warm-dry/light rain or cold-dry weather. Make sure the water is going into the roots, not just running off. Soaker hoses (or drip irrigation) grow healthier plants with less water. Very dry soil can repel water, so check carefully for depth of moisture. Water regularly as new culm shoots appear.

Wind also dries out the plant so you will need to monitor in windy areas or on exceptionally windy days  
**Later Years** Bamboo will become more drought tolerant with each year. Occasional deep watering during summer or fall dry spells should be sufficient in the Pacific Northwest. If you notice leaves curling up, it is a sign of stress. Dryness is often the cause.

**Wise Watering Tip** Irrigate for 15 minutes, then turn the water off. Check several hours later to see if water has infiltrated the bamboo's root zone (top 8–12 inches). If necessary, irrigate and check again.

## **Fertilizing**

**Newly Planted Bamboo** A root stimulator is recommended weekly for the first month to help establish the plant and reduce root shock. A slow-release fertilizer specified for lawns, i.e., 14-14-14 or 16-16-16 may also be used.

**Caution:** Do not allow high nitrogen fertilizer to be in direct contact with the root-ball since it may scorch newly forming roots.

**First and Second Year** Most soils have the nutrients needed for bamboo to stay healthy. If you wish to encourage new shoot growth and provide a general feeding, it is best to apply the fertilizer in the fall when rain can water it in. You may use 1/2 inch of manure with a couple of inches of compost across the planting bed or a slow-release fertilizer specified for lawns (typically higher in nitrogen than phosphorus and potassium.) or spread the bed with 1/2 inch of aged manure or compost in early spring.

**Mulching** Cover the planting bed with 2–3 inches of coarse mulch. Bark chips, leaves or grass clippings may be used to conserve water and prevent weeds. If you plant in late fall or winter, mulching is essential for protecting the roots.

**Tip:** Allow bamboo leaves to remain on the ground. They return silica to the bamboo and prevent weeds. Remove bamboo leaves if they have mites.

## **Control of Bamboo**

### **Running Bamboo**

Bamboo plants require maintenance, and nothing is foolproof but for bamboo planted in the ground there are a few ways to minimize the spread. The best method is rhizome pruning, the next best is a partial barrier and third a barrier encircling the entire bed. Above ground containers are other methods. Our guidelines are based on experiences in the Pacific Northwest where bamboo tends to travel horizontally in the top foot of soil but may go deeper when encountering an obstruction.

**Rhizome Pruning:** In July or August and again late October, edge prune along the perimeter of the bed. (Late October is sufficient if your bamboo is not in a confined space.) Do this by stomping a sharp, flat-bladed shovel to about 8–12 inches deep and remove rhizomes outside the cut line. To monitor for rhizome spreading, dig a narrow trench 10 inches deep for a few feet along your borderline or do some trial picking into the soil.

**Tip:** *Planting in a one-to-two-foot soil elevated mound can make the edge pruning easier.*

**Partial Rhizome Barrier:** Use this method if your bamboo is close to a fence or you need to give assurance to neighbors. Surround only one part of the planting bed, in a 'C', to give rhizomes an easy path for traveling, rather than having to grow deeper. Dig a trench and install the 40-mil high-density, polyethylene barrier. A depth of 28 inches is recommended, though a minimum depth of 22 inches is often used in clay or hardpan soil. Place barrier in the trench so if it slants, the top points out to direct rhizomes upward. Leave up to 3 inches of barrier above soil line. Rhizomes will tend to go up and over the barrier. When they do, cut them off

and remove. Follow the rhizome pruning technique twice a year on the open side and at least every other October inside the barrier (annually if the ground space is getting filled).

**Full Rhizome Barrier:** If you choose to surround the entire planting bed be aware that *barrier does not stop rhizomes*, it redirects them. Bamboo within a barrier is a vigorous plant in a bottomless pot. Overlap the barrier at least one foot and sandwich it together with two strips of stainless-steel, one on each side and held together with nuts and bolts and washers. Rhizome should be pruned inside the barrier once a year. (New plantings or lots of space within the barrier may allow more time between pruning.)

**Tip:** Extra care is needed to not cut into the barrier. Caution: Before you dig call your public utilities company to have underground utilities located. This is usually a free service.

**Raised Bed in a Box:** Use Corten Steel Edging or Treated Lumber to create a two-foot-deep by at least two-foot-wide, dirt-bottom box that could later be taken apart to remove rhizomes when the bed fills. Rhizomes might travel deeper if they become root bound in this space. Use compacted soil in the lower foot and nicer soil on top. Being bottomless allows water to move through.

**Decorative Pot:** Place bamboo in a durable, frost-proof pot or wood container with drainage holes. Or place a large plastic pot within a decorative pot with drainage. For mid-size bamboos a pot of at least 18 inches deep and 24 inches wide is recommended. Smaller bamboo may go in smaller pots. *Move or protect the pots during a severe cold spell to prevent rhizomes from freezing.* When bamboo becomes root-bound, pull it out of the pot and slice the root-ball in half or thirds.

**Potting Tip:** Do not use a container with a mouth smaller than the side walls. Rhizomes will fill in and may not be possible to remove.

### **Clumping Bamboo**

Reduction of Clumping Bamboo: If it ever becomes a wider clump than you want, use a wolverine™ shovel or tree spade; a bamboo slammer; or a saws-all to cut straight down through the rhizomes. This may be done any time of year though late winter is less apt to shock the plant if you wish to replant the divisions. Barrier material is not needed due to the limited amount of spread each year.

### **Pruning**

**Newly Planted Bamboo:** In general, it is best not to prune newly planted bamboo. The leaves store energy for next year's growth. If the bamboo has a few tall culms, it is okay to clip out the small bushy ones for appearance. New culms are tender like asparagus until they leaf out.

**Second or Third Year and Thereafter** Prune for appearance and for a healthy plant with lush foliage. The goal is to allow light to reach leaves in the top two-thirds and for air to circulate. When removing culms, cut them flush with the ground. Clippers, loppers, and hand pruning saws are useful.

**Mid-Size and Timber** bamboo are usually pruned in spring before new culms shoot up, but any other time of year is also fine. First cut out old culms and those that are too short, too tall, or are leaning. On a grove older than 4 years also remove culms so those remaining are at least 6 inches apart. This makes room for the new growth in spring. When the new shoots appear, remove any too close to other culms or that are smaller than you want. To keep a shorter hedge, remove all large diameter new shoots. Early removal of new shoots saves having to dispose of a full-grown culm. New 6–12-inch shoots may be peeled, sliced, and stir-fried for eating.

Mature culms on Timber Bamboo do not have lower branches. You can trim off the lower branches and, if desired, cut off the wispy tip of each culm to clean up the base. We don't recommend planting Timber

Bamboo in containers unless they are low to the ground and sufficient in size to accommodate 50' heights.

**Shrub-size** bamboo with winter damaged leaves may be selectively trimmed. Otherwise, be patient and wait for old leaves to drop as new leaves appear. Culms may be removed as desired for appearance.

**Dwarf** bamboo with winter damaged leaves or a leggy appearance, may be cut back to about 3 to 4 inches just before new growth starts in spring (often April in the Northwest). The new flush of foliage will grow to the former height. Variegated varieties will have a brighter variegation. To maintain a low groundcover, cut or mow after the new rhizomes and culms appear.

## ***Bamboo in Pots!***

Bamboo is a versatile plant that adapts well to living in containers if the container is adequate.

### **Select a container:**

- Find a frost-proof pot at least 20-24" wide and 18" deep that has straight sides. It can be difficult to remove bamboo from curved pots that allow the rhizomes to fill in the widest part of the pot, effectively 'locking' the root ball in the pot so avoid containers that are narrow at the top.
- Drainage holes are critical. Add more as needed.
- Ceramic pots work well. Corten Steel, Black Powder Coated Steel and Galvanized stock tanks (troughs) are popular for large urban containers, but you will need to offset the metal's heat and cold conducting nature by insulating the interior with corrugated plastic, carpet padding, etc.
- Inserting bamboo barrier allows you to experiment with any container.
- The larger the pot or planter box, the greater the opportunity for height and expected growth.

***Bamboo will not grow to full size when confined in containers that are not sized adequately. It will also outgrow any contained space over time and require thinning/splitting to maintain a viable plant. If you start with a smaller container, you will have to make adjustments that much sooner.***

**Add some bamboo** Follow recommended spacing at a minimum of 3 feet to 6 feet between each plant. The size of the root ball will also determine the spacing requirements, i.e., 5-GAL plants can be planted with less spacing in between, while 15-GAL plants will have larger root balls and need more spacing. ***Planting without adequate spacing will require the plant to be divided, split, or replanted that much sooner.***

Timber Bamboo is NOT recommended for smaller container planting. The Timber species are too tall and will make the planter top heavy and prone to tipping/breaking. Groundcover Bamboo adds interest and helps keep bamboo roots cool.

**Keep it happy & healthy** A course-grained potting soil works well. If your potting soil has a powdery texture, mix it half and half with compost. Add fertilizer with NPK of 8-2-4 or similar ratio. We use a Special Garden Mix from Pacific Topsoil with 14-14-14 or 16-16-16 heat released fertilizer applied mid-spring and late summer. A good organic fertilizer with microorganisms helps to maintain healthy soil and reduces water requirements.

The amount of water needed depends on the bamboo, the amount of sun and heat, the container material, the soil medium and the time it has been growing in the pot. Stick your finger in the soil, it should be moist but not soggy. Bamboo does not like to sit in water or boggy areas.

**Thin out some culms every spring** Aim for a spacing 4” – 6”. Just cut them above a node near the base. Cut out small or old or thin floppy culms at any time. You may safely top it if it’s too tall but do so by cutting about ¼ of an inch above the node. New leaves will eventually grow at the top but the bamboo won’t grow upward anymore.

**Divide bamboo every few years** Remove the plant and slice off at least 1/3 of the rhizomes that are within the soil. A clean cut is best. Repot with fresh potting soil.

Bamboo does best when divided and/or transplanted in mild weather so ideally Spring after the last freeze and in the Fall to allow it time to root in prior to the first freeze.

**Avoid letting bamboo get root bound** It will require more frequent watering and have a more difficult time in a cold winter. If your bamboo cannot be removed from your container, trim culms off as needed to gain space and then cut down into the area to be removed. The best time to do this is late winter before the new culms appear. *Selecting an adequate container when planting the bamboo will keep the plants from getting root bound too quickly.*

## Common Questions

### **Why do I have yellow leaves?**

As new leaves appear in the spring one-third to one-half of the older leaves turn yellow and fall off. This shedding is mostly during spring and then at a lesser rate in the fall. It may also mean the plant isn’t getting enough nutrients so it might need fertilizer or even Miracle Grow. It may also be rootbound and need more space to grow.

### **What causes leaf tips to brown?**

There are various possible causes. It may be due to excess fertilizer, an imbalance of soil nutrients, or too much water. Some of the dwarf varieties normally get brown tips during the winter cold and may be sheared early spring.

### **Why have the leaves become sparse?**

This may occur if the canopy of leaves becomes too dense to let light into the interior, so prune for light exposure. On culms 5 or more years of age, they will decrease their leaf production as the culms begin to die. Prune these out to allow for new culms. If the old rhizomes are tightly massed, remove sections of rhizomes to allow space for new rhizomes. If there is significant leaf loss on newly planted bamboo it may be from transplant shock, from either insufficient or excess water, or from the root-ball shifting in the wind and destroying new feeder roots.

**My bamboo is looking healthy but not spreading after two or more years in the ground. Why?** The most common reason for this is that sun-loving bamboo is in an area with too much shade. Another reason could be that it was planted in very compact soil. Try amending the soil with compost and adding fertilizer in spring and early summer.

### **Why do some new culms shoot up a few feet and then die?**

If this occurs after some healthy shoots have successfully grown, then it is just that the bamboo has tried to overproduce. This is not cause for concern. However, if most shoots wither, then you may need to test your soil for deficiencies or problems.

A few culms came up at a 45-degree angle and never straightened. This can occur when the growing tip of the new rhizome comes out of the soil. It will try to act like a new culm. Cut it off at ground level.

### **Snow has bent the tops of the bamboo. Should we remove it?**

The typical Pacific NW snowfall will cause the bamboo to bend and be covered with snow for just a few days. Leaving it this way will protect leaves from the winter sun or drying wind, and the bamboo will pop back up when the snow melts. If the snowpack is heavy or likely to remain for more than a few days, then shake it off. If culms have broken and leaves remain, cut right above a node and the culm below will live. If ice forms on the plants, you will need to wait until it melts, or you can snap and break off the culms trying to remove it.

## **Pest Management**

**Bamboo Mites/Aphids** Older bamboo and those stressed by undesirable environmental conditions (e.g., too much sun for a shade-lover or too little water) are more prone to mites that create spots that are sometimes mistaken for leaf minor damage, nutritional deficiency, or variegation.

### **Environmentally Sensitive Treatment Methods:**

- Use refined horticultural, spray oil or insecticidal soap.
- Clear-cut for a severe infestation Remove all old culms just as the new shoots begin to leaf out. Then spray to prevent mites.
- Avoid drought stress.
- Remove leaf litter when a mite problem exists.
- Do not use dormant oil.
- Water heavily 24 hours prior to spraying.
- Avoid use of broad-spectrum pesticides, as they are more likely to kill predator insects and seldom result in eliminating mites.
- Allow good air circulation and don't over-fertilize.
- Regular pruning.
- Spray on an overcast day.

**A note about hardiness:** Bamboo plants are hardy & evergreen, but if placed in stressful conditions or when temperatures approach the killing temperature, leaves can drop, and branches may die back. Wind, drought, root-bound roots, or hard frosts (especially after a warm spell) all cause stress.

## ***Rock Mountain Products, LLC***

Summer Hours: **Monday through Friday 7:30am-4:30pm**

Winter Hours (**December thru February**):

**Monday through Friday 7:30am-4:00pm**

**Closed Saturday and Sunday**

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