

# Mesquite: The Good, the Bad and the Ugly



## ■ Property Management

*For decades, the mesquite tree has served as an iconic landmark in Western novels and movies and as a key ingredient to the world-famous Texas barbeque brisket. Today, however, this Western icon is invading properties across the Southwest and causing property owners to re-evaluate how to best manage its invasive characteristics.*

Understanding how mesquite grows and proper ways to manage it can help property owners live in harmony with this landmark plant.

Traditionally, mesquite has not been an issue for landowners north of the Canadian River; however, with changing weather cycles, mesquite is now found in areas beyond this line and moving east as well. **Mesquite can be invasive in Texas, New Mexico, Arizona, Colorado, Oklahoma, Kansas, California and Louisiana.**

## How mesquite spreads

Seeds are eaten



Germination  
in dung



Plant  
establishment



## How mesquite grows

While often referenced as a tree, mesquite actually is a woody legume, or bush, which reproduces by seed. The trees produce pods (legumes) about 8" to 12" long that fall to the ground. Once on the ground, the seeds are **attacked by insects or the pods are eaten by animals, helping distribute the mesquite seeds** away from the original plant and allowing the bush to spread. A significant germination event does not take place each year with mesquite. The seeds will be housed in the animal's dung until there is enough precipitation for germination to occur.



Mesquite seed pods

Mesquite plants begin the growth cycle in April and May when leaves emerge and twigs grow. Vegetative growth generally is complete by June; however, new leaves may develop if sufficient rainfall is present. Once leaves develop on the tree, flowering will begin. Some of the flowers produce the seed pods, with the quantity varying each year. The mesquite bushes are deeply rooted with root buds up to 12" below ground which allows them to survive drought. The roots grow laterally and can extend up to 50' beyond the trunk.

The deep root buds make mesquite difficult to manage, especially once a seedling is 18 months old. Fire does not effectively manage the mesquite vegetation as the heat does not go deep enough into the ground to decimate the root bud.

Another growth trait of mesquite is the thick canopy it develops. The canopy can become quite dense and create a microclimate, affecting the soil and vegetative growth below and around the bush. While canopy can provide needed shade for livestock and wildlife, knowing the tipping point of when there is too much is important. Too much canopy can decrease grass productivity. A good rule of thumb to follow is that if the mesquite canopy covers more than 30 percent of the area, then control measures should be taken to develop better grass and vegetative growth under the mesquite trees.

Property owners can determine if they have 30 percent canopy by sampling the area they are managing, for example a pasture. If 30 percent of that area is in the shade of mesquite at high noon, then there is a canopy effect that likely needs to be managed.

### Take action when

# 30%

 of ground is shade  
at high noon

As a legume, mesquite is a nitrogen fixer, which means it can modify the soil under and around the tree. This can help cool-season and more shade-tolerant grasses grow under more mature, single-stemmed mesquite trees whose canopies aren't too dense, creating excellent forage for livestock and wildlife.



## Mesquite management – when and why

Properly managed, mesquite can bring diversity to your property in both habitat and wildlife. It all depends on the goal you have for the property, explains Shane Kiefer, director of ecological services with Plateau Land & Wildlife Management that has three locations across Texas.

“One of the first questions I will ask my landowners is to share the goal they have for their property,” says Kiefer.

---

*“Are they looking for forage production to graze livestock, wildlife habitat to hunt, or a combination of both?”*

---

Once Kiefer and the landowner determine the goal of the property, they can develop a plan to properly manage not only the mesquite but other vegetation impacted by the woody shrub.

From a production standpoint, mesquite is considered a competitor, as overgrowth of the plant can reduce grasses available for grazing livestock. However, if a property owner’s goal is to have an area that promotes wildlife, mesquite can be beneficial by helping jump-start favorable habitat.

“Not every mesquite is a bad mesquite,” says Kiefer. “It often acts as a ‘nurse plant,’ promoting the growth of desirable shrubs underneath, but if the density of the mesquite or other plants is interfering with other activities on the property such as discing or shredding, or it is limiting plant diversity, then it’s time to consider how to best manage the plant.”

## Mesquite management techniques

Managing that mesquite plant can be done in a variety of ways. Three main management techniques include cut-stump, basal bark and foliar application of herbicide. A review of the area and plants that need to be managed will determine which method will help control the mesquite plant.

### Cut-stump treatment

If you are cutting a single-stemmed tree, then the cut-stump treatment is the recommended application, particularly if the tree’s bark has started to wrinkle. Cut-stump treatment refers to treating the freshly cut stump with an herbicide labeled for mesquite control. The root collar area, sides of the stump and the outer portion of the cut surface are sprayed until wet, but not to the point of runoff. This application can be made at any time of the year, unless snow or water prevent the spray from reaching the ground line. Treatment on a cut stump is important as it will move through the remainder of the stump to the bud and prevent multiple stems from regrowing.

### Basal-bark treatment

The basal-bark method includes applying herbicide to the smooth stems of the mesquite plant. Starting at the ground, spray the stem 12” to 15” high, wetting the stem but not allowing the herbicide to run off. This method is most effective on new growth, but it can be applied at any time, including the winter months, except when the snow or water prevent spraying to the ground line. For best results, use an herbicide that can be mixed with diesel.



**Cut-stump treatment**



**Basal-bark treatment**



### *Foliar application*

### *Foliar application*

A foliar application may be best if there is a multi-stemmed, shorter-statured mesquite stand that is moderately dense. This application is done by spraying an actively growing plant after the rapid growth period of early spring. The bushes should be at least four feet tall to ensure adequate foliage to absorb the herbicide. The spray is applied to the leaves of the plant until they are wet. Thorough coverage helps increase positive results.

**“Herbicide really is the best way for a property owner to manage their mesquite,”** said Kiefer. “For those not completely familiar with herbicide applications, it’s important to ask questions so you get the most from your investment.”

For best results, consider the best time to apply the herbicide, the type of nozzle to use and the method used to mix the product. Kiefer suggests talking to feed-store employees or other suppliers to ask any questions a landowner may have about the product or details included in the product’s label. For questions about where and how much to treat, it’s best to consult with a natural resource professional.

“You want to ensure you’re getting the most from your herbicide investment,” explained Kiefer. “Details like the right nozzle can limit the herbicide drift to beneficial species. It also will help eliminate excessive herbicide use and make your investment go farther.”

Often, land is the most valuable asset a person owns. For land that includes mesquite, finding the balance between managing and treating the plant will make that property the vision one looks forward to waking up to each day and enjoying for years to come.



**BRUSHTOX® is effective  
in managing mesquite.**

BRUSHTOX® can be applied using either cut-stump, basal-bark or foliar applications. It is easy to mix with water, diesel or with other pesticides. Available at farm supply stores nationwide.

For more info, visit [raganandmassey.com](http://raganandmassey.com).



*When you apply an herbicide,  
allow two weeks for results.  
Next season, brush will be dead.*