



**Contact:**

Misty Mimms

Education Coordinator

432.756.2136

education@pbuwcd.com

**For Immediate Release**

## The Dominating Mesquite

Mesquite is one of the toughest, most obnoxious and invasive species of brush in the world. It is considered a pioneer species because it is capable of establishing out in open grasslands. Mesquites are native to Texas, however, their wide spread proliferation occurred over the last 100 years. After settlement, fire suppression and overgrazing allowed them to out-compete the native grasses. Persistent seed, effective seed dispersal, fire tolerance at a young age, and tolerance to water stress are some reasons why mesquite grows so rapidly and takes over our rangelands.

Mesquite trees produce fewer seeds per tree than lots of other invasive species, however, these seeds are capable of remaining viable in the soil for many years. What's more, these seeds are effectively dispersed by livestock. Seeds consumed by livestock are usually less likely to be destroyed by mastication and are frequently more viable because of scarification of the seed coat. Seed dispersal by livestock is a major influence of grazing on rangelands that is frequently overlooked in developing management strategies.

One contributing factor to the dominance of woody plants is altered fire regimes. Pre-European settlement, fires used to burn across prairies, maintaining open grasslands. It has been shown in studies that infrequent fires can help to maintain open grasslands, but once fire is removed from the system many of the open grasslands will become closed canopy woodlands. And with a long enough interval between fires, shrub and brush species can reach sufficient size or age to resist fires. This is one more strong hold that mesquite have over other invasive species, when exposed to flames equivalent to a hot grass fire, the survival rate exceeds 60-90% for seedlings that are as little as 2-3 years old. Meanwhile, other species can be 50 years old and still susceptible to fires.

Mesquites have been known for absorbing high quantities of water. It has been estimated that they can consume 20 gallons of water per day. Water spenders typically have adaptations to allow the plant to acquire greater water resources than herbaceous plants, as in the case of the mesquite tree, its extended tap root system allows it to tolerate water stress. This allows resource partitioning where soon after germination, shrubs are not competing with herbaceous plants for shallow resources.

Sadly, one of the only enemies that mesquite seems to have is humans. Unless people make the decision to try to control this invasive species it will continue to spread like wild fire and continue to dominate our rangelands and consume what water is given to these lands. Clearing of this brush species can increase spring flows in some areas and improve livestock grazing and wildlife habitat. There are many appropriate management practices including bulldozing, shearing, burning and spraying, etc. Brush management can be costly and will need continually maintained, however there could be benefits to maintaining mesquite if done in the correct areas.

For more information regarding brush control, the Permian Basin Underground Water Conservation District invites you to visit their website at [www.pbuwcd.com](http://www.pbuwcd.com) or call them at 432-756-2136.

Literature Cited: Ball, Laura and Melinda Taylor. 2003. Brush Management Myths and Facts  
Fuhlendorf, Samuel D. Why Does Brush Dominate Our Rangelands?