

## WHICH IS BEST? PLASTIC VS. WOODEN TREES



***Saddlers Note: Although both may suffice, the following information will help you make an educated decision. The question becomes which material is best suited for the job and why.***

### **NATURAL OR SYNTHETIC?**

I have seen claims for trees which are so flexible that they can move with the horse's movement. Although they may in fact move when the horse moves, they can not possibly move in "concert" with the horses movement. To do so they would have to conform to a multitude of dynamic vectors and the exact speed and timing of muscle movements. Not even skin can do that. That is why skin slides. Saddle trees of any material which are flimsy are similar to insecure back packs, they cause instability and discomfort.

An improperly designed tree, regardless of the material, will be uncomfortable and hinder performance.

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### **SYNTHETIC PLASTIC TREES**

- A property often associated with plastic is the "creep factor". The creep factor describes the tendency of plastic to be unstable and lose it's shape over time or as a result of environmental factors.
- It is more problematic to test plastic trees before mass producing them because of the cost to make prototypes to test. Too much vertical flexion or torsion can cause the tree to over flex and injure the horses back. Too little does not allow for dampening of the forces applied to the horses back.
- Although there is a significant initial cost to produce a plastic mold, molding plastic trees significantly speeds up production and decreases costs to manufacturers.
- Because of the high cost of initially producing a plastic mold, there may be less incentive for the manufacturer to make changes necessary to correct faults in the mold or designs by producing another mold.

### **NATURAL WOODEN TREES**

- Wooden trees are hand made from laminates such as beachwood, similar to the way wooden ships were traditionally shaped and manufactured.
- Vertical flexion or torsional rotation can be easily tested in wooden trees and corrected for by adding or reducing laminates in various areas. Although it is much more expensive and time consuming to hand make wooden trees, design benefits make it worthwhile.
- Wooden trees made from laminates are generally considered to be more comfortable for both the riders and the horse's backs.
- The term "Spring Tree" refers to the spring steel reinforcement of the tree allowing for dampening the pressure applied to the horse's back while controlling the degree of vertical flexion. It does not mean, as I once read, that the tree springs up and down.
- Trees made from solid wood are referred to as rigid trees and are virtually never used in modern saddlery manufacturing. As the name implies they tended to be as rigid as many plastic or composite trees.