



SILVICULTURE FIELD TIP

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Division of Forestry

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PROTECT OAK TREE SEEDLINGS FROM DEER BROWSING USING BALLOONS FOR BUDCAPS

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Depredation by deer on planted and natural oak tree seedlings can be a severe problem. Repeated browsing will restrict growth dramatically, create very deformed seedling/saplings, cause repeated dieback and re-sprouting, or even cause mortality eventually. After many years of efforts to control this using tree shelters, repellants, fencing, and drywall joint tape, we believe we have found an easy to apply, relatively inexpensive and effective method for protecting the terminal buds. The solution simply involves the placement of ordinary balloons over the terminal buds.

One should use ordinary water bomb or party balloons of a least three different sizes. The different sizes are needed to accommodate various caliper sizes of oak stems/leaders. These balloons are available at any local variety store, or in quantity at party supply stores.

An appropriate sized balloon (opening diameter) matching the caliper size of the terminal leader should be selected and pulled over the top buds and down the stem. Then the bottom (open end) of the balloon should be stretched/pulled out from the stem and a staple applied through the balloon as closely as possible to the stem at the bottom end of the balloon without damaging the leader. The balloon will then pull back tightly around the leader to hold the balloon in place through strong

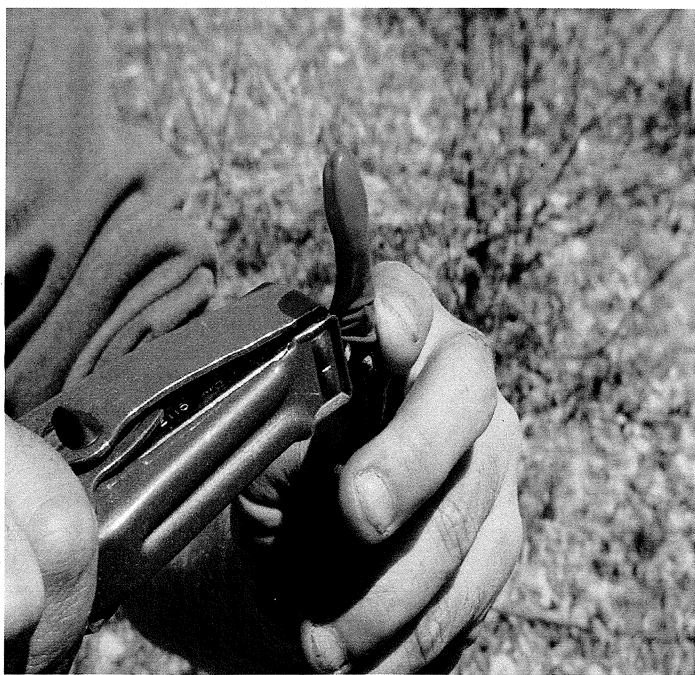
winds and inclement weather. Use a common office desktop stapler or it's equivalent.

The balloons can be applied from October on, after dormancy. Because oaks tend to retain their leaves even after they change color & dormancy, leaves may have to be pulled off before placing the balloon over the leader. No leaves should be left attached where the balloon will be placed or it will be almost impossible to pull the balloon over the leader. No leaves should be left attached where the balloon will be placed or it will be almost impossible to pull the balloon over the leader and to keep it firmly in place.

There may be a concern about removing the balloons in the spring so that the new buds may break. Our experience is that at about bud break time in May, the sun's UV rays have broken down the balloons sufficiently, so that they either fall apart completely or are so weakened that the buds will push right through the balloons. Apparently the sun's rays are of sufficient duration and the sun is high enough in the sky to cause rapid deterioration of the balloon at that time. In April there is very little indication of breakdown, so it happens right about the time that browsing ends, as other deer edibles appear, and bud break begins.



Select the correct size of balloon to match the caliper of the terminal. Place the balloon over the terminal bud and pull down to fit snugly.



Stretch the end of the balloon out and away from the terminal. Staple the stretched balloon without injuring the terminal.

- Bud caps may be placed starting in October and may be continued as late as weather permits or browsing begins. December or by January 1 at the latest.
- At least three different sizes (opening diameter) of balloons should be available for use.
- Bottom of balloon must be pulled out and away from stem and one staple applied at the bottom end of the balloon without damaging the stem.
- Balloons should be applied every year until trees are at least 5 feet tall. Deer will reach a long way for a big oak bud.
- If bids are taken for this work, it should be done on a per acre basis. Need to know average trees/acre within the area to be capped.
- About 100-150 balloon bud caps per hour can be applied by an experienced applicator. This is about one-half what white pine bud capping averages. This is due to the increased difficulty of identifying oak seedlings and the time needed to place the balloon over the terminal bud and down the leader.
- Applicators/contractors absolutely must be able to identify oak (or any deciduous tree) seedlings with or without leaves on the tree. Most work will be done leaf off.
- Contracts for supplying and attaching bud caps have recently averaged about 10 cents per tree, but that will probably rise. But at this price and level of effectiveness, no other deer deterrent matches up, that we've tried.
- In most cases, all planted and naturally seeded oak seedlings on a site shall be bud capped. But in some cases where there has been heavy additional natural seeding in oak shelterwoods a selected spacing or "crop seedling" capping regime may be adopted.