



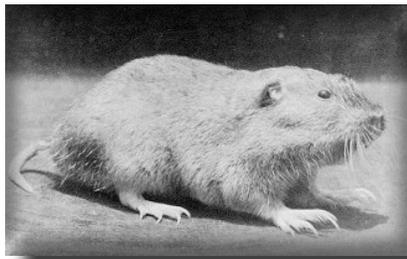
TEXAS A&M FOREST SERVICE

Forest Health: Reforestation Animal Pests

Gophers will occur primarily in open to semi-open fields and only on sandy, well-drained sites. Some gopher activity may occur in cleared areas but is generally minor. Deer, rabbits and rats can occur on all sites but normally cause minimal damage.

Description:

Gophers can cause severe damage and seedling mortality can be high if treatment is not performed. On heavily infested sites, mortality can occur for 2-3 years after planting. Gopher presence is indicated by 3 or more mounds of “fresh” or “old” soil in an irregular pattern connected together by underground “runs”. The seedlings, when cut, will change from a green, healthy look to a yellowish and finally red color. The timing of color change will depend upon current weather and soil conditions. When cut, the seedlings can be easily pulled out of the ground as all roots are gone. The stem will generally be cut at a 45-degree angle. One or more seedlings in the same row/s may be cut at a single time. Whole seedlings are sometimes pulled underground. Gophers can be active all year round but are most active on sunny days during the winter.



Treatment is recommended two weeks prior to planting, however most sites are treated just prior to planting. Treatment should never take place more than a month in advance of planting. A .25 strychnine bait should be applied around the perimeter of the field in 4 rows approximately 8 feet apart. Depending upon the infestation, rows approximately 15-25 feet apart may be installed across the field connecting with the perimeter rows. Generally, 4 pounds of bait per acre is needed. During the winter, on some soil

types, gophers may only be found on the “mounds” (higher ground) and can be treated individually. An additional spring treatment in areas of heavy infestation may be needed and can be applied between the seedling rows but more frequently. In areas of light infestation or follow-up treatment, a metal probe may be used to find the gopher run and the bait is then deposited in the run. Gopher traps may also be used in areas of light infestation but require constant checking.

Damage from deer is normally minimal. This damage is identifiable by a straight browse cut on the upper part of the seedling. When this occurs, seedlings will normally develop a new terminal. Rabbits and rats will make a 45-degree angle cut closer to the ground and damage is normally minimal and isolated. A rat will generally leave the cut portion close to the seedling and usually bother the seedlings only if the seedling is planted in its “run”. Protection is expensive and generally unnecessary.

Benefits of Control:

Gopher control, if needed, is important and provides increased survival rates and future timber revenue.

Precautions:

The bait is highly toxic to birds and other animals and caution should be taken to minimize spillage. All label directions should be read and followed. Bait level and machine operation should be checked frequently to ensure proper application. Application timing is important and should not be performed if there is a threat of heavy rain as the effectiveness of the treatment may be greatly reduced.