

SOILS

Research yields findings for greenbrier control

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Most ranchers

are aware that greenbrier can be a problem in pastures and rangeland, and is hard to control. There are various ideas on how to

control greenbrier. Some think that herbicides are the answer; some think that mowing works best; and still others prefer a combination of mowing and spraying. Little scientific, replicated research is available on which of these strategies works the best.

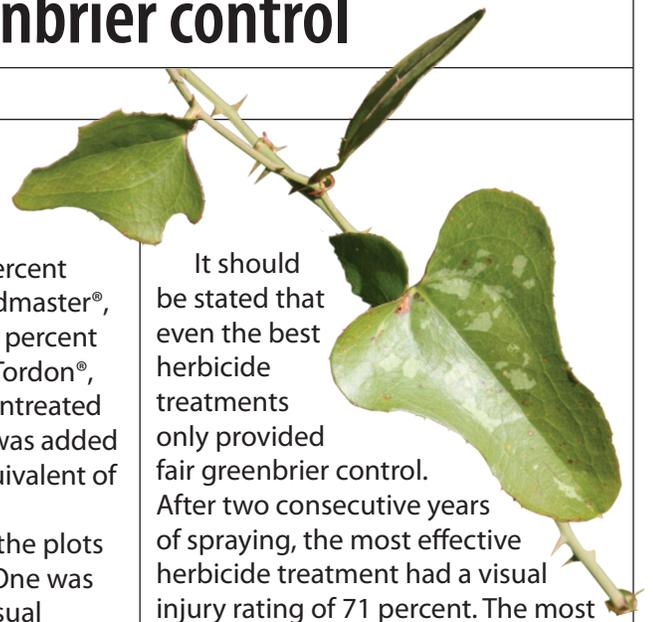
With this in mind, the Noble Foundation conducted research trials on greenbrier control from 2007 to 2010. We tested herbicide treatments alone, a combination of herbicides and mowing, and mowing alone. The plots were in rangeland in southern Oklahoma that was heavily infested with greenbrier.

Seven treatments were tested in both mown and unmown environments. This included six herbicide treatments and an untreated check. Mown plots were cut to a height of about 4 inches in April. Both the unmown plots and the mown plots were sprayed to wetting when the regrowth in the mown plots reached the desired height of at least 12 inches. This was usually in early June. The plots were

mown and sprayed for two consecutive years. Herbicide solutions used were 1.5 percent PastureGard®, 0.5 percent Remedy®, 0.75 percent Weedmaster®, 1.0 percent Surmount®, 0.25 percent Remedy® plus 0.50 percent Tordon®, 1 percent Tordon® and the untreated check. Nonionic surfactant was added at a rate of 0.25 percent (equivalent of 1 quart per 100 gallons).

At the end of two years, the plots were rated on two criteria. One was the estimated amount of visual greenbrier injury and the other was the number of live stems. Two herbicide treatments stood out above the others in their ability to cause visual injury to the greenbrier in both mown and unmown environments. These were 1.5 percent PastureGard® and 0.5 percent Remedy®. The least effective herbicide in our test was 1 percent Tordon®.

The live greenbrier stem counts provided some interesting and surprising information. In the plots that were not mown, 1.5 percent PastureGard®, 0.5 percent Remedy® and 0.75 percent Weedmaster® significantly reduced final live stem counts. In the mown plots, none of the herbicide treatments reduced greenbrier population any more than simply mowing the plots.



It should be stated that even the best herbicide treatments only provided fair greenbrier control. After two consecutive years of spraying, the most effective herbicide treatment had a visual injury rating of 71 percent. The most effective herbicide treatments caused a final stem reduction of greenbrier of about 63 percent. While this may seem good for a very tough plant like greenbrier, it is quite expensive for this level of control. Mowing worked just as well as herbicides for reducing stands of greenbrier and was considerably cheaper. Using both mowing and herbicides was not better than either mowing alone or spraying alone.

The Noble Foundation has the following recommendations for greenbrier control based on this study. There are other control measures for greenbrier, such as grazing by goats, but we did not test them and they are not part of these recommendations. However, they are a viable alternative to these recommendations in certain situations. ►

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If mowing is possible, it is the preferred method of greenbrier control due to lower cost. Plants can be mown anytime during the dormant season up through April. Repeated mowing will work better if it is feasible.

If the area cannot be mown due to the presence of large rocks or if the terrain is too steep or rough to mow, apply a mixture of 1.5 percent Pas-

tureGard®, 0.5 percent Remedy® or 0.75 percent Weedmaster®, and spray to wetting, but not runoff. Apply in the late spring to early summer, after the spring flush, but before the leaves have developed a thick waxy cuticle. Add the recommended amount of a nonionic surfactant or other recommended adjuvant listed on the herbicide label to the mixture. Repeated

treatments in consecutive years will improve control. There is no need to both mow and spray. Our mantra is, "If you mow, don't spray. If you spray, don't mow."

For more information, see *Greenbrier: Identification and Management* at www.noble.org/ag/soils/greenbrier. ■