

Growth Regulation of Shrubs

Chad M. Rigsby, PhD, Research Scientist

Residential Landscape

Properly maintained shrubs and hedges contribute aesthetic value to landscapes and provide other services such as privacy screening, erosion control, and attracting beneficial organisms. Because of how they are used in landscapes, shrubs often require frequent pruning to maintain consistent size and shape. However, products called “growth regulators” can considerably reduce the need for pruning, even if strict dimensions are desired.

What is Trimtect®?

Decades ago, plant pathologists were exploring new chemistries to manage plant diseases. One of the substances tested, paclobutrazol, dramatically reduced plant growth [1]. Practitioners recognized the usefulness of this “growth regulation” and formulated products that could be used in agriculture, horticulture, and urban forestry. Today, Bartlett Tree Experts utilizes one such product, Trimtect®, because of its success in maintaining overall plant form.

How Trimtect® Works

Regulating the growth of a shrub may seem detrimental, but it does not harm plant health. Paclobutrazol, the active ingredient in Trimtect®, reduces the production of specific growth hormones in the plant [2]. These hormones are responsible for making plant cells larger. When Trimtect® is applied, the same number of the cells are produced, but the plant cells expand less. As a result, the shrub has compact growth and darker green foliage.

How to Use Trimtect®

Trimtect® should be applied after shrubs have been shaped, and research has shown that the shape-holding effect of Trimtect® lasts well into the following

Figure 1: Trimtect®-treated hedge section with compact form (left) and untreated section (right)



growing season when applied at the end of the current growing season. Since timing applications soon after shaping is important for optimal results, we recommend that your Bartlett Arborist Representative perform both the shaping and product application or coordinate with individuals conducting the shaping.

Certain species of shrubs are better candidates for growth regulation than others. Contact your Bartlett Arborist Representative to learn more.

References

- [1] S. Bai, W. Chaney and Y. Qi, "Wound closure in trees affected by paclobutrazol," *Journal of Arboriculture*, vol. 31, pp. 273-279, 2014.
- [2] W. Rademacher, "Growth retardants: Effects on gibberellin biosynthesis and other metabolic pathways," *Annual Review of Plant Physiology and Molecular Biology*, vol. 51, pp. 501-531, 2000.

