



Pecans, a hard-shelled dry fruit that ripen in one year and are shed in the autumn <sup>1</sup>

### QUOTE:

*"It is unusual to have Walnuts collected from "neighborhood trees" and even less likely that the trees were treated with TGRs for control under electric lines. But when it occurs, I don't worry about any ill effects because PBZ has been registered and commercially used for many years outside the US. It is very likely most of the fruit we buy during the winter months have been treated with PBZ (i.e.: from Chile or Argentina).*

Mark Mann, PGMS-CEO

## Controlling the Growth of the tree family; Juglandacaceae -Hickories, Pecans, & Walnuts

### Can I Use TGRs on Hickories, Pecans, & Walnuts?

Controlling the growth of trees, such as Pecan, which can reach up to heights of 76 feet (25 m)<sup>1</sup>, can be easily achieved by using the tree growth regulator, ShortStop®. Since paclobutrazol has yet to be EPA Registered on Nut Trees in the US, it is not advisable to use paclobutrazol (PBZ) on trees that are commercially harvested for sugar, nuts, or fruit; this doesn't restrict the utility and arborist industries because the trees involved tend to be non-crop oriented.<sup>2</sup> Even if a tree is treated, it can be harvested after the first year of application.<sup>1</sup> As long as the tree's sugar, nut, or fruit are not grown for the intent of harvest, the ROW manager or Commercial Arborist can confidently treat any tree with paclobutrazol.

### What if the fruit is eaten incidentally ?

PBZ is not considered a potential danger to people. Many countries outside of the US have registered PBZ and have been commercially using it for quite a while. A person could eat an *impossible amount* of the nut or fruit *everyday* and still not ingest enough of the PBZ residue to have any ill effect. The EPA's Pesticide Database shows PBZ having an LD50 > 5000 mg/kg, which means its toxic by only 50% in levels greater than 5000 mg per kg of body weight—this is for the *pure concentrated product*, not the diluted liquid used during applications.<sup>3, 4</sup> The amount of PBZ required to inhibit the production of gibberellin and reduce stem elongation is minimal; the amount that finally resides in the seed is insignificant. In fact,

a recent field review by researchers at the University of Guelph showed no evidence of PBZ in harvested tomatoes following treatment.<sup>5</sup>

### Why isn't it allowed on food crops in the U.S.?

It has yet to be EPA Registered in the US for food uses by any of the present PBZ registrants. According to the EPPO Standard's Guidelines on good plant protection practices, PBZ is listed as an approved part of a strategy for aiding in fruit production (Europe & Mediterranean).<sup>6</sup> This example and other data can add to the impetus needed to reconcile EPA restrictions for a new label, but that needs to come from the agricultural community. The label does allow any tree *not commercially harvested* to be applied with Short-Stop® for growth control.

### What can be expected from using ShortStop®?

Proper rates for the following trees are:

Hickory & Pecan	3g - (150 mLs/ inch)
Walnut (small)	4g - (200 mLs/ inch)
Walnut (large)	2 applications needed*

(\*Please call your distributor or PGMS for directions)

The amount of growth control the first year of application will be about 40-60% normal depending upon when the application was made. The following years will show at least 90% growth control, even after re-application. The application will last a minimum of three years before re-application is needed. This is a wonderful tool for ROW managers to offer homeowners with trees that may cause concern for line safety.

### Cross-references:

- 1.) Trees of the Northern United States and Canada, J.L. Farrar, Black Publishing, 1995, p. 202-203.
- 2.) Shortstop® Label and Material Safety Data Sheet, 3/07/07, Manufactured for Greenleaf Chemical LLC.
- 3.) PAN Pesticides Database-Chemical Toxicity Studies for Paclobutrazol on All Organism Groups; EPA AQUIRE.
- 4.) US EPA- Pesticides Database, Pesticides and Food: What the Pesticide Residue Limits are on Food.
- 5.) Pitblado, R. and Souza-Machado, V., Tough Tomato Transplants, University of Guelph, Research Pub.
- 6.) EPPO Standards, Guidelines on good plant protections-POMES, PP2/18 (1).

