

Longer branches are more challenging to extricate from the canopy (Mann et al. 1995). After initial cuts are made, there is an increased risk of workmanship error, with longer branches potentially resulting in power interruptions as well as a greater challenge for managing larger branches than smaller branches on the ground for efficient branch processing (Ball and Vosburg 2010). Working with untreated branches averaging 285.8 cm in length versus 162.1 cm is dramatically different for the arborist using an aerial bucket (Table 6). This reduction leads to both a reduction in cost of labor for pruning and processing time, as well as a reduction in potential injuries while on a job site (Table 6) (Ball and Vosburg 2010).

Ideally, the timing of PBZ application to live oak trees is between 90 days pre-prune and 90 days post-prune (Table 1; Table 2; Table 3; Table 4; Table 5; Table 6). Although statistically significant differences exist between the results from application times of PBZ, the maximum of 12.8% difference in reduction of branch growth may be negligible for the end user, indicating greater flexibility in application timing (Table 2). Additionally, due to the inherent subjectivity in the pruning of the trial trees there is a high level of variability in the branch re-growth data.

Paclobutrazol is a tool that can predictably reduce the vegetative re-growth on *Q. virginiana* trees pruned for utility line clearance. The application of this tool results in reduced vegetative growth leading to reduced pruning and chipping time by line-clearance crews. This reduction in time decreases the maintenance cost necessary for pruning and increases the safety of pruning crews. The timing of PBZ application on live oak trees in relation to the pruning event, though statistically significant, would not drastically affect operation efficiency on live oak trees in Louisiana. However, the savings in labor for the pruning and processing of the biomass is significant when PBZ is utilized compared to no application of PBZ. Further research is required to understand how the severity of the initial pruning event relates to the quantity and length of resurgent growth.

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