

Pruning Foster Holly

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Nature of Work:

Large container and field grown hollies are usually pruned one to three times each season. Pruning is usually heavy, removing much of the growth produced by each flush. Pruning to remove young growing tips should increase breaks and produce larger fuller plants in a shorter time.

Ten 15 gallon pot-in-pot Foster's holly were pruned by 1) weekly pinching out the tips of branches when reaching 12", 2) pinching out branch tips at 12" every 2nd week, 3) pinching out branch tips at 12" every 3rd week, and 4) the standard pruning or pruning for shape two times during the production season.

Three gallon hollies were stepped into 15 gallon pots on April 8, 1999 and placed in pot-in-pot with spray stakes. New growth had just begun. The new growth flush did not reach 12" before a terminal bud was set and thus none were pruned. Flowering and fruit set in April and May slowed growth to nearly none. Pruning began on June 1, 1999 and treatments were concluded on September 30, 1999.

The time spent with each pruning treatment was recorded to estimate the costs of the treatments. Plant size (height and width) was recorded at the initiation and termination of the trial. The differences in initial and ending height and width were determined as height and width growth.

Results and Discussion:

The pruning treatments were timed to determine how long each treatment required to prune the ten replications (Table 1). Not all plants in a treatment required pruning each time the treatment was conducted. The more frequent the pruning treatment, the less time was required to prune the plants. However the total time and expense was greatest for the most frequently pruned treatment. The total time spent for treatments 2 and 3 were very close but nearly twice as long as the standard nursery pruning (treatment 4).

There were no differences in height growth between treatments. However for width growth, treatment 4 was much narrower than the rest. For all the other treatments, width growth was not different (Figure 1). The increased number of pruning times resulted in wider plants with more lateral breaks.

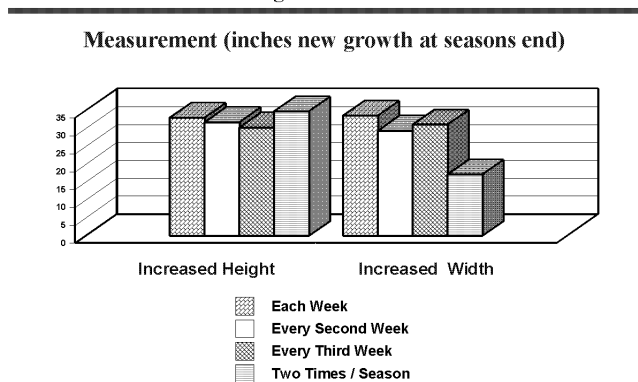
The weekly pinching (treatment 1) resulted in many soft tips being removed. This very soft tissue would usually break a single branch directly below the pinch. The pinching every 3rd week (treatment 3) resulted in woody stems being cut and removing several inches of growth. The breaks below the cuts usually resulted in several new branches developing. The standard, pruning two times (treatment 4), resulted in several breaks below the cuts with even more growth removed.

Table 1. Foster Holly Pruning Treatments and Time Spent Pruning

Treatment	# Times Pruned	Total Time Pruning (minutes)	Average Time Each Pruning
1 Weekly	18	127.8	7.1
2 Every 2 nd Week	9	70.8	7.9
3 Every 3 rd Week	6	71.9	12.0
4 2 Times / Season	2	39.3	19.6

The single breaks resulted in plants with many long unbranched stems. The plants are not very compact and not acceptable for sale. The greatest amount of time thus dollars were spent on treatment 1. The plants with multiple breaks were more compact and more desirable. Treatment 3 appears more compact and desirable than the standard treatment. However, they were pruned six time rather than two and required nearly twice as much time and expense to prune.

**Figure 1. Fosters Holly Pruning Evaluation
Height and Width**



Significance to the Industry:

Foster holly is a difficult plant to produce because of its pruning requirements. Pruning woody stems produces more breaks than pinching very soft growing tips. Pruning more than two times a season produces wider fuller plants but not taller. Pruning 6 times a season takes about twice as long as the nursery standard of twice a season.