



Pruning Foster's 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 in 1999 did not increase breaks and did not produce fuller plants. Pruning young growing tips only produced a single break while pruning back into heavier wood produced several breaks and tighter plants.

Promalin is a growth regulator used on apples and cherries to increase breaks and the number of branches. It is a combination of benzyladenine and gibberellin. It can be applied with a brush when mixed with a latex paint. Promalin (33ml) was mixed with 100 ml latex paint and applied to long unbranched holly stems about 12" apart up and down the stems.

Ten 15 gallon pot-in-pot Foster's holly were pruned by 1) cutting back branches 6 inches or at least five nodes, 2) cutting back branches 10" or at least 10 nodes, 3) painting on Promalin mixed with latex paint two times during the growing season and 4) the standard pruning or pruning for shape two times during the production season.

Three gallon hollies were stepped into 15 gallon pots in early spring 2000 and placed in pot-in-pot with spray stakes. Ten replicates of each treatment were completely randomized in this study. New growth began in spring and no pruning was done before flowering and fruit set in April and early May. The first treatments began on June 1, 2000 and concluded on September 30, 1999.

The time spent with each pruning treatment was recorded to estimate the costs of the treatments.

Results and Discussion:

Table 1. Average Time (in seconds) Required to Perform Each Treatment / Plant				
Date	Treatment 1 (6" Cutback)	Treatment 2 (12" Cutback)	Treatment 3 (Prune Time)(Paint Time)	Treatment 4 (Control)
6/1/00	13.9 sec/plt	15.5 sec/plt	(14.2 sec/plt)(none)	20.0 sec/plt
6/29/00	39.5 sec/plt	24.0 sec/plt	(22.1 sec/plt)(69.6sec/plt)	none
8/10/00	35.4 sec/plt	29.2 sec/plt	(30.3 sec/plt)(42.6 sec/plt)	34.2 sec/plt
Total	88.8 sec/plt	68.7 sec/plt	(66.6 sec/plt)(112.2 sec/plt)	54.2 sec/plt

Treatment 4, the standard pruning treatment was the fastest to perform and required one less pruning than the other treatments. The standard pruning treatment produced the best shaped plants. Treatment 3, pruning and painting with Promalin, took the greatest total time and did not produce acceptable shaped plants. The Promalin paint failed to initiate bud breaks in the areas of application. Long stems were treated about every foot up the stem from lower thick gray stems on up to young green stems. Leaf browning and drop occurred in the areas painted. No bud expansion took place. Treatments 1 and 2 produced plants that were more open and had more long unbranched stems than the Control.

Summary:

The Control treatment (pruning twice during the year for shape) produced the best quality plants. Treatments 1 and 2 were more open and produced more long unbranched stems. The Promalin growth regulator was ineffective in producing bud breaks on Foster's Holly. Paint applications on green wood and woody gray stem produced no bud breaks. Promalin was ineffective in breaking buds and initiating new branches.