

Silvicultural Approaches to Managing Beech Bark Disease

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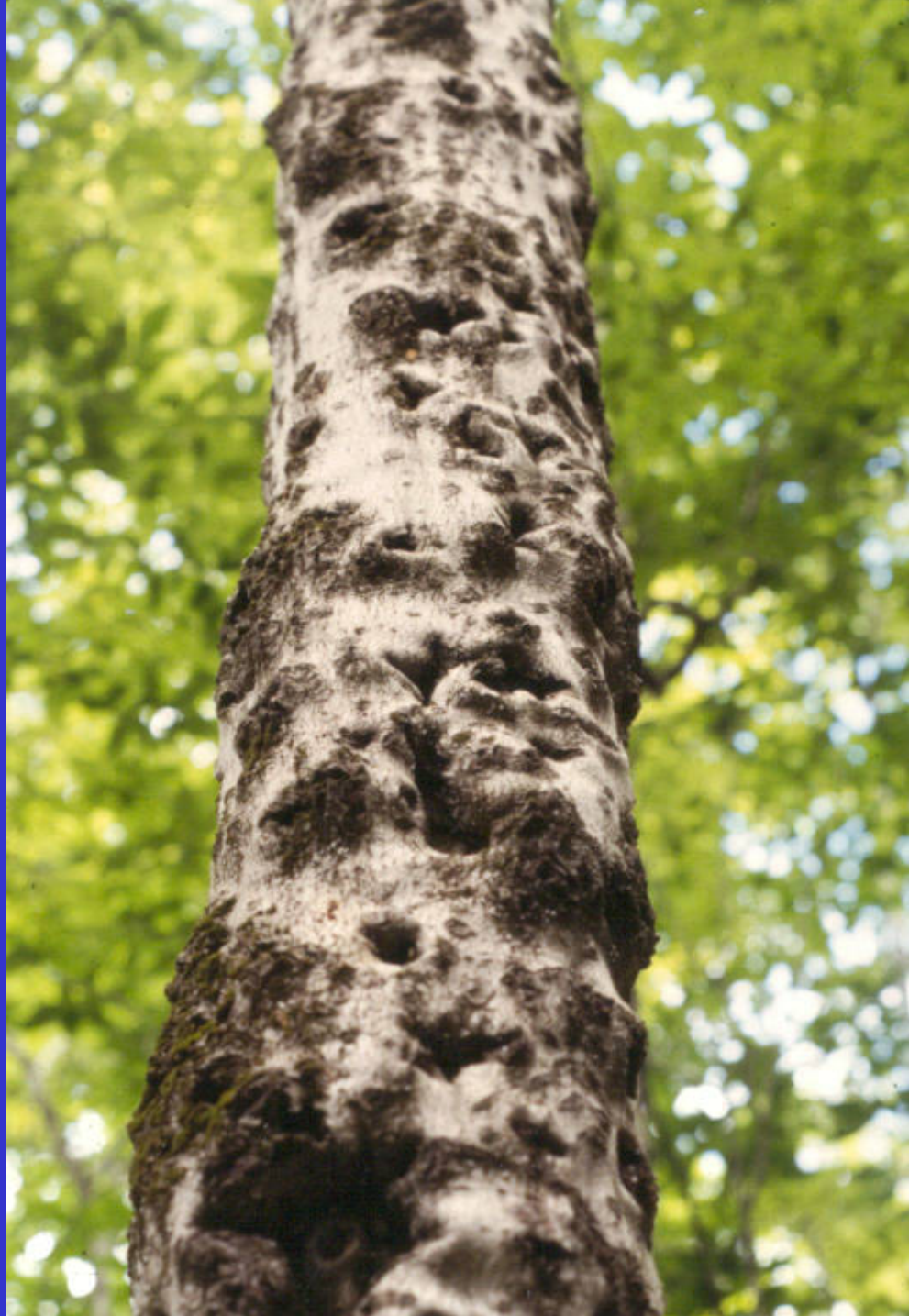










































Table 4.4. Current (1996) understory conditions in each treatment.

Treatment	Basal Area (m²/ha)	Density (stems/ha)	Beech Total Height (m)	All Species Total Height (m)	% Beech^a
Uncut	1.1 ^b (0.3-1.7)	1600 (333-3417)	2.5 (1.7-3.4)	3.4 (2.7-4.8)	25.8 (0-93)
Light Partial	2.8 (0.8-4.6)	3383 (1917-7250)	3.2 (2.9-3.5)	3.5 (2.6-5.6)	21.0 (0-61)
Heavy Partial	7.2 (4.7-13)	8633 (5583-9667)	3.4 (2.5-4.4)	4.0 (3.6-4.7)	29.4 (9-53)
Clearcut	14.9 (8.6-18.5)	17717 (10083-27333)	3.3 (1.8-4.3)	4.3 (3.2-5.1)	21.9 (16-31)

^a Percentage beech in terms of stems/ha

^b mean (range)



With increasing harvest intensities, the percentage of seedlings decreased and the percentage of sprouts increased.

However, sapling origin did not have a significant effect on height growth rates either post harvest or currently.

Neither beech, yellow birch, or paper birch had significantly different height growth rates by drainage class.

(Patton, 1997)

More beech sprouts developed in clearcuts than in partial harvests

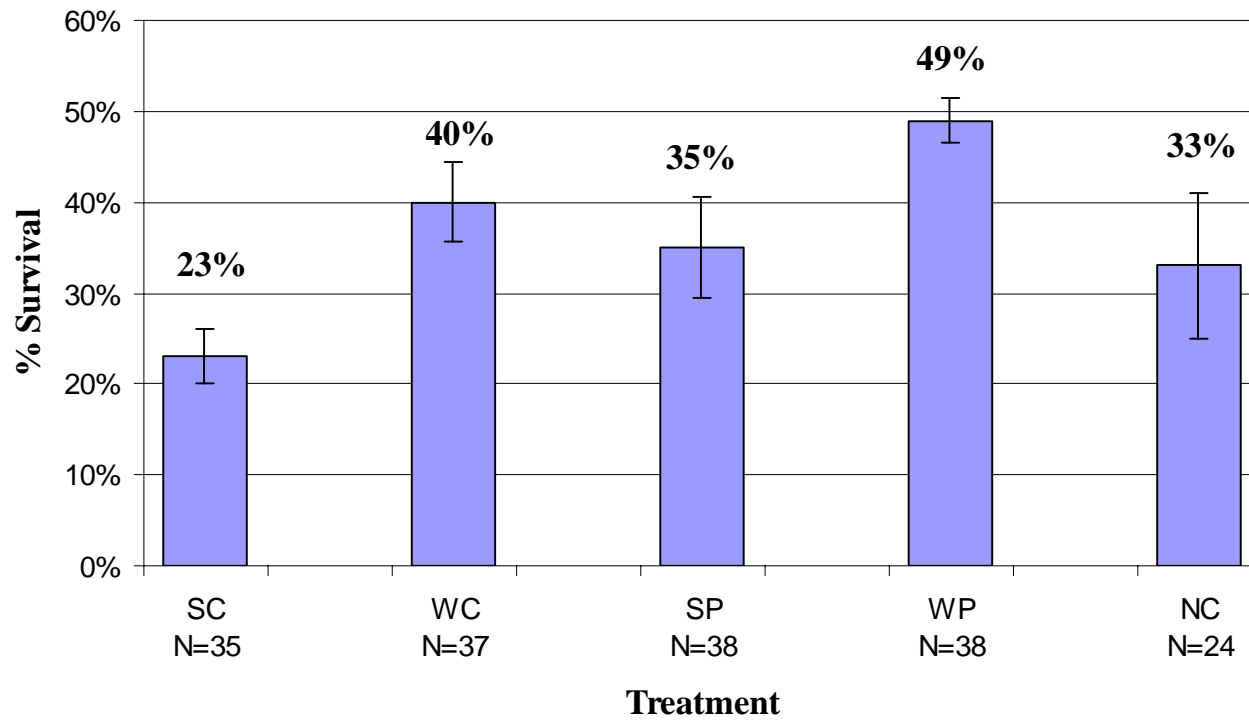


Beech sprout growth was best around resistant beech that were left, and poorest around susceptible beech that were cut

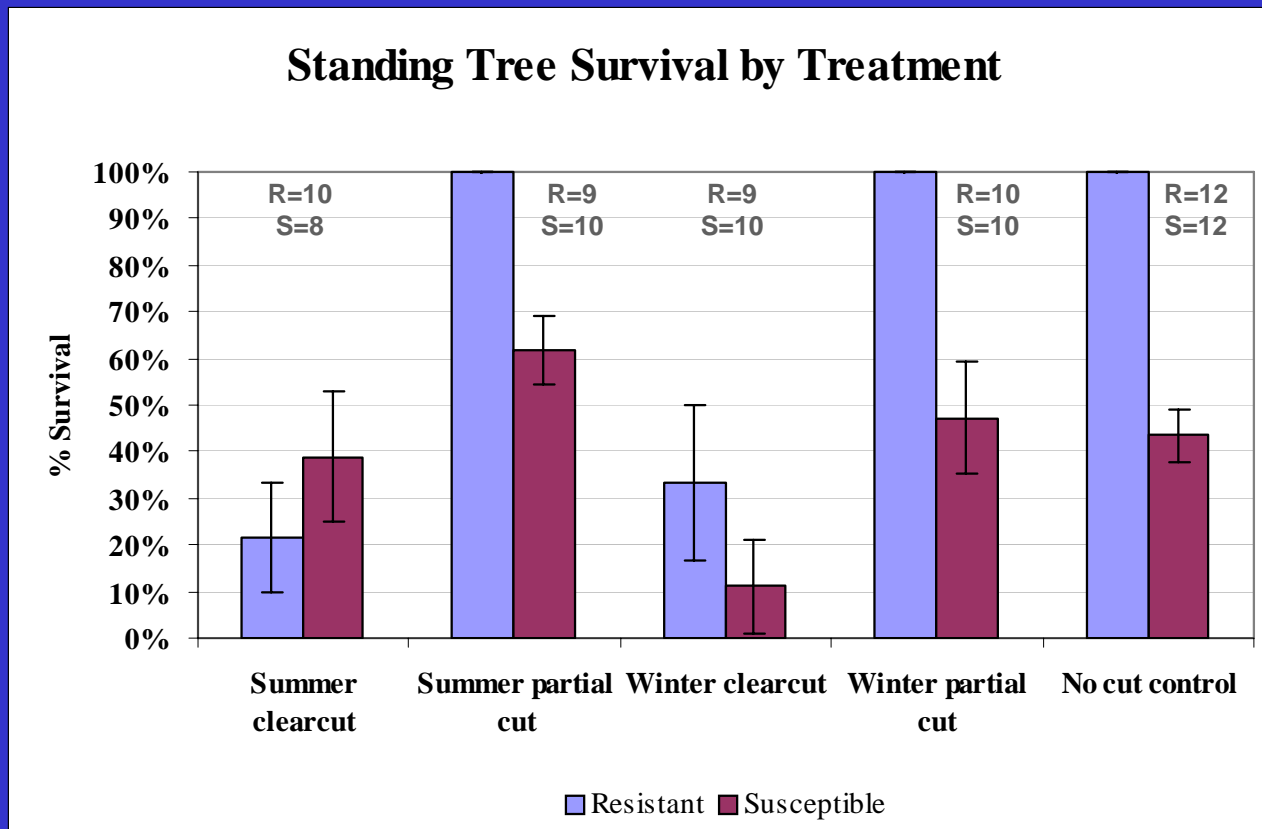
Higher proportions of beech in the initial stand, only clearcuts will likely materially affect stand composition (Houston, 2001)

Results

Regeneration Survival by Treatment



Results





EXPECTATIONS FOR IMPROVEMENTS

The silviculture applied needs to account for an initially unbalanced stand condition.

Shifts can be initiated, but several entries/cutting cycles and rotations are likely to be required before optimization of site potential is realized.

Harvesting along with more intensive management practices should be considered for long-term improvement



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