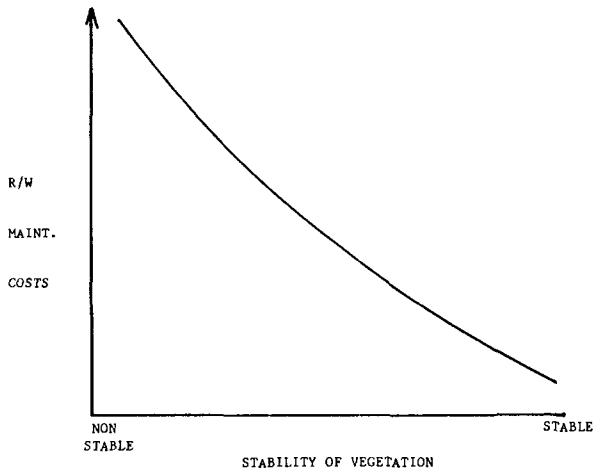
Figure 5.



the original component of trees are removed, i.e., they become more stable. In order to attain maximum potential benefit of natural vegetative plant communities on right-of-way systems, it is vitally important to have adequate information pertaining to vegetative cover types so that management decisions can be made which are both economically feasible as well as ecologically sound. Furthermore, an adequate system of records pertaining to R/W vegetation management is likewise essential in order to efficiently achieve long-term management objectives.

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ABSTRACTS

Cannon, W.N. Jr., and D.P. Worley. 1976. **Dutch elm disease control: performance and costs.** USDA Forest Service Research Paper NE 345, NE Forest Expt. Station, Upper Darby, Pa.

Saving the elms has been a community goal in many of our cities and towns. Some communities are meeting that goal; some are holding their own; some have failed. In many areas highly-valued American elm trees have been virtually eliminated by Dutch elm disease. The methods of disease control have been aimed at blocking the transmission of the fungus to healthy elms by elm bark beetles and through root grafts between diseased and healthy elms. Municipal programs to suppress Dutch elm disease have had highly variable results. Performance as measured by tree mortality was unrelated to control strategies. Costs for control programs were 37 to 76 percent less than costs without control programs in the 15-year time-span of the study. Only those municipalities that conducted a high-performance program could be expected to retain 75 percent of their elms for more than 20 to 25 years. Communities that experienced the fewest elm losses had a well founded program, applied it conscientiously, and sustained their efforts over the years.

Gibbs, J.N. and J. Dickinson. 1975. **Fungicide injection for the control of Dutch elm disease.** Forestry 48(2):165-176.

In the last few years much research has been conducted in Britain and North America on the injection of soluble formulations based on benomyl and its breakdown product carbendazim (MBC) for the control of Dutch elm disease caused by *Ceratocystis ulmi.* The superiority of the benzimidazole fungicides, and in particular of carbendazim (MBC), over other fungicides was shown by injection experiments on both artificially inoculated and naturally infected young elm. With carbendazim the degree of control depended in great measure on the formulation, and some evidence was obtained that the commercial formulation of carbendazim hydrochloride (Lignasan) produced in 1974 was less effective than an experimental formulation of the same chemical. Benefits from injection with Lignasan were most marked on trees below 25 m in height. The effect of various factors such as time of day, season, weather conditions and tree size on the rate of fungicide uptake are considered.