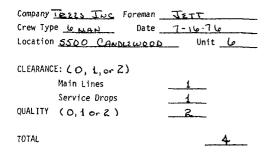
CREW EVALUATION¹

by Calvin Simmons

The function of Houston Lighting and Power' Company's Right-of-Way Clearance Department is to obtain and maintain adequate clearance on company transmission and distribution systems, while adhering to acceptable and efficient tree trimming methods, sound economical principles and with customer approval and consent.

To follow these dictates an in-depth crew evaluation study should be available to your company; however, at present we do not have this in-depth evaluation capability.

In past years our evaluation was based on the contractor's daily and weekly time report which were periodically field checked for accuracy. Computations were made at six month intervals and an attempt was made to evaluate crew performance. This was rather like setting the fox to guard the chickens.



REMARKS (Neatness, Courtesy, Effeciency, Etc.):

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Company foresters now use an abbreviated form that is filled out each time a crew is visited in the field. His work is graded as to quality and quantity, the forester's impression of crew ability, neatness, how well their supervisor has kept up with their progress and with our instructions for line clearing.

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This information is placed with the contractor's daily and weekly time reports submitted by this particular foreman into a log which is kept of the work area being trimmed. At monthly intervals, a tabulation is made of the number of hours worked and trees trimmed or removed. Cost per tree and hours per tree are then developed from this tabulation.

Starting in 1971 a need developed for more supervision above the foreman level, and consequently our line clearing contractors were instructed to add a field supervisor for each ten

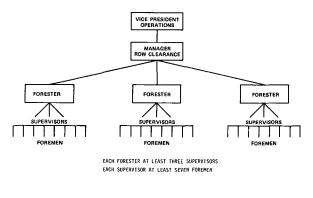
¹ Presented at the annual conference of The International Society of Arboriculture in St. Louis, Missouri in August, 1976.

Billing	Hours	Trees	Cost/ Hour	Cost/ Tree	Hours/ Tree	
\$2,281,376.92	516,620	404,899	\$4.42	\$5.63	1.28	
2,824,882.39	590,300	466,823	4.79	6.05	1.26	
2,840,489.41	568,630	507,680	5.00	5.59	1.12	
3,786,205.65	661,547	588,271	5.72	6.43	1.12	
4,792,885.15	739,353	741,961	6.48	6.45	0.99	
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## CIRCUIT MAINTENANCE — 1971 THRU 1975

crews. This proved to be an excessive number of crews and was lowered to eight per supervisor. We now appear to have the right balance.

Time required to trim or remove trees began to decline and is stabilizing at an hour per tree. Better supervision, aerial lifts, small power saws in the trees and a common dump have all contributed to this time lowering with the biggest plus to be given supervision.



But who supervises the supervision?

Each company forester will have under his direction one-third of the contractor's supervisors along with the attendant line clearing crews. These groups will remain stable for six months and then an evaluation will be made comparing group to group, supervisor to supervisor, forester to forester. We feel that management can at least get a better handle on the ability of all its supervisory personnel.

To bolster our findings, we are looking over all available crew evaluation material we can obtain by hook or crook; talking with any individual who professes an interest in the matter and hopefully, by our next meeting, we will have developed an accurate in-depth evaluation capability for the Gulf Coast area.

Houston Lighting and Power Co. Houston, Texas

Kozlowski, T.T. 1976. Susceptibility of young tree seedlings to environmental stresses. American Nurseryman 144(12): 12-13, 55-59.

Young seedlings of woody plants generally grow at threshold levels of physiological growth requirements. After a young seedling depletes reserve foods contained in the seed, its growth depends on food synthesized by cotyledons or synthesized by the first true leaves. Such young seedlings are very susceptible to such environmental stresses as low light intensity, drought, low or high temperatures, air pollutants, and various applied chemicals, including some insecticides, fungicides, and herbicides. Harmful effects of chemicals may include growth inhibition, abnormal seedling development (e.g., curling, shriveling, and fusion of cotyledons; chlorosis, and distortion of seedlings) and killing of seedlings. For these reasons, young seedlings in the cotyledon stage of development require intensive care to avoid even temporary unsuitable environmental conditions.