

therefore, are not well adapted genetically for survival. The stress factors that result from poor adaptation can cause disease themselves or modify other disease-causing agents. Until we attack these stress factors we will not be able to deal effectively with urban tree diseases.

Within tree populations there is varying resistance and tolerance to urban stress factors such as air pollution, reduced aeration, moisture, and others (3). Selection and breeding programs can be utilized to develop trees that can tolerate these stresses. A few such breeding programs are underway. Many more are needed around the world to ensure that man can live in harmony with trees.

Trees in artificial ecosystems require some cultural care. They may need watering, feeding, and pruning, depending on the site in which they are grown. A breeding and selection program to develop trees for artificial ecosystems needs to take cultural practices into account. Trees can be selected that are compatible with existing cultural practices or that reduce the cost of such practices. This is not a new approach. Considerations of this nature are made when we breed and select our food crops. Most food crops are also grown in completely artificial ecosystems.

The Economics of Tree Disease Control in Urban Ecosystems

Because of economic and aesthetic reasons, the individual urban tree is much more valuable

than the individual forest tree. In urban ecosystems control practices can be designed for individual trees. Also, cultural practices can be performed on individual trees that reduce disease incidence. For these various reasons we may anticipate a number of innovative approaches toward the control of urban tree diseases.

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ABSTRACT

Grant, G. and D. French. 1976. **Mating disruption of tussock moths by atmospheric permeation with synthetic sex pheromone**. Bi-Monthly Research Notes 32(5): 25-26.

Sex pheromones show promise as an environmentally acceptable means of suppressing insect populations. The most appealing technique appears to be the permeation of the local atmosphere of a pest with a level of sex pheromone sufficient to disrupt its mating ability. Presumably, the atmospheric pheromone habituates the males rendering them incapable of responding successfully to the small amount of perhomone released by the females with the net result that males are unable to located females and mate with them. The sex perhomone of the Douglas fir tussock moth has been identified and is commercially available. It sexually stimulates and attracts in the field both white-marked and rusty tussock moths. Laboratory experiments were conducted to determine whether the ketone has the potential to disrupt the mating ability of these two species which are currently pests in several localities in Canada.