SEED TRANSMISSION OF THE ELM MOSAIC VIRUS

by: T. W. Bretz

Abstract of papers: Handpicked seed from a mosaic-infected American elm was planted in the greenhouse and the seedlings obtained were examined periodically for mosaic symptoms. Prior to planting the seed was divided into two lots; in one the seed was separated from the fruit covering; in the second the fruit covering was left intact. Over a 3-month period, approximately 1% and 3½%, respectively, of the seedlings developed characteristic mosaic symptoms. Because approximately 20% of the fruit was observed to be malformed, another planting of malformed versus normal fruits was made to determine whether a correlation existed between the appearance of the fruit and mosaic symptom expression. There appeared to be no such correlation. The percentage of seedlings showing mosaic symptoms was approximately the same in each lot. When leaf tissue from seedlings having mosaic symptoms was grafted into healthy elm seedlings, about 25% of the grafted seedlings developed typical mosaic symptoms within 5 months. Seedlings of the same lot in a control series remained healthy.

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ROOT GRAFTS AS A POSSIBLE MEANS FOR LOCAL TRANSMISSION OF OAK WILT.

by J. E. Kuntz and A. J. Riker

Abstract of paper: The progressive spread of oak wilt in local areas has been studied more intensively than the spread over long distances, because the greater feasibility of local control. Periodic examinations of 36 oak-wilt plots, established in central and southern Wisconsin from 1939 to 1947, have demonstrated such tree-to-tree spread. An additional 47 control plots included: (1) eradication of dead and wilting trees, (2) periodic application of DDT sprays, (3) combination of these, (4) various disposition of diseased material, and (5) poisoning trees. Items (1) through (4) had little effect on local spread. Abundant and widespread natural grafting of black oak roots was revealed by digging and washing out of root systems, and by the movement of poisons between trees--observed up to a distance of 28 feet. Dyes and spores of the oak-wilt fungus also readily passed through such grafts. Chalara quercina H. was isolated on the symptomless side of root grafts between wilted and "healthy" trees. Bur oak roots were found to graft with one another but not onto black oaks. Thus, adjacent oaks may have united root systems. Interruptions of these systems on six plots in 1947 by poisoning adjacent healthy trees have thus far given local control.

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Tam O'Shanter Country Club plans to install telephones at each tee on the course during the coming season.

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THE ? BOX

Q. I would like to hear some discussion on types of grass cutting equipment used for tee mowing?

A. J. S. uses a Toro Park Special set at 5/8 inch. W. K. uses a Toro Professional set at 1/2 inch. R. D. uses a Jacobsen Green Mower set at 1/2 inch. G. K. uses a Worthington Over-Green set at 1/2 inch.

Q. I would like to know what the disadvantages are in a very early spring fertilization program?

A. There is a danger of losing considerable nitrogen through washing away due to thawing and excessive rainfall, and perhaps early application of plant food might be taken up by objectionable vegetation before permanent grasses can respond to the treatment.

Q. How much fertilizer do golf courses use on fairways during the growing period?

A. This depends a great deal on the condition of turf, and what the membership desires for playing conditions. The following reports are approximate:

R.D. Heavy Spring & fall feeding w/5-10-5
Summer feeding w/Milorganite

M.W. May feeding w/10-8-6 at 450 lbs an acre
June Feeding w/Organics 500 lbs an acre
Fall feeding w/5-10-5 at 500 lbs an acre
(watered fairways)

A.L. Spring feeding w/5-10-5 & Milorganite
Fall feeding w/5-10-5 & Milorganite
(un-watered fairways)

Q. What about Bermuda grass in the district?

A. It is too early to make any comments concerning the merits of bermuda grass in this area. In experimental plots, bermuda grass has now turned a straw color and appears to be quite dormant but there are no indications of any winter kill to date.

Q. How early is it most practical to treat for snow-mold, and how often is it necessary to treat during the winter period?

A. If possible, first treatment should be applied just prior to the first snow-fall, and again after mid-winter thaws. Two or three applications has been the usual practice.

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