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THE EFFECT OF BARLEY YELLOW DWARF VIRUSES ON THE YIELD OF WHEAT IN MEXICO.

P.A. BURNETT, R. RANIERI, and M. MEZZALAMA

Wheat Program CIMMYT Apdo. Postal 6-641 06600 Mexico D.F., Mexico

Bread wheat lines that had low symptom scores for infection with barley yellow dwarf viruses (BYDVs) for several cycles of field screening were chosen to be yield-tested for two years during the summer cycle at CIMMYT's El Batan station (19°31'N 98°50'W 2249 masl) in Mexico. In these experiments the cultivar Anza was used as a resistant check and Bobwhite as a susceptible check.

A randomized split plot design with six replicates was used with the cultivars as the subplot and treatments as main plot. Plots were 3 rows and 5 m in length. The treatments were natural infection, artificial infection at the three-four leaf stage with greenhouse reared *Metopolophium dirhodum* transmitting an MAV serotype and a control, protected with insecticides. Plant height, biomass, grain yield, and 1000 seed weight were measured. The losses in yield ranged from 15% to 30%.

A resistance index was obtained by dividing the yield of the sprayed plots by the yield infected plots.

The bread wheat lines Vee#5/Trap, PF79765, Trap, ALV110/2*IAS54/6/TP/4/TZPP/SN64//NAPO/3/CNO67/5/PF6968, SDY/CHRC/3/AU/UP301//BOW, and Parula produced ratios that were lower than the ratio for Anza, indicating that these lines were less susceptible to BYDV than Anza.

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