Influence of Pesticides on Yeasts Colonizing Leaves

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The effect of nine different pesticides on the growth of yeasts isolated from the leaves of fruit and forest trees was investigated. Four insecticides (with the active ingredients: thiacloprid, deltamethrin, lambdacyhalothrin, and thiamethoxam) and five fungicides (with the effective substances: bitertanol, kresoxim-methyl, mancozeb, trifloxystrobin, and cupric oxychloride) were tested. The concentrations of chemicals were those recommended by the manufacturers for the spraying of trees. The yeast strains isolated from the leaves of fruit trees were not sensitive to any of the insecticides. The majority of yeast strains isolated from the leaves of forest trees were either not sensitive or only to a small extent. While *Rhodotorula mucilaginosa* and *Pichia anomala* were not affected by any insecticide, the strains of *Cryptococcus laurentii* and *Rhodotorula glutinis* showed the highest sensitivity. The effects of fungicides on the growth of isolated yeasts were more substantial. The fungicide Dithane® DG (mancozeb) completely inhibited the growth of all yeasts. All strains isolated from fruit tree leaves were more resistant to the tested fungicides than those isolated from the leaves of forest trees. The most resistant strains from the leaves of fruit trees belonged to the species *Metschnikowia pulcherrima*, *Pichia anomala*, and *Saccharomyces cerevisiae*, whereas *Cryptococcus albidus* and *C. laurentii*, originating from the leaves of forest trees, showed the highest sensitivity to fungicides.

Key words: Yeasts, Pesticides, Inhibition