

CONTROL OF COFFEE RUST (HEMILEIA VASTATRIX) WITH BACILLUS SUBTILIS

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Cell suspensions of the isolates AP-3 and AP-150 of Bacillus subtilis totally inhibited uredospores germination of the races I, II, XXV, XXIX and XXXI of Hemileia vastatrix when Bacillus concentration was higher than 5×10^7 cells/ml. A higher than 70% inhibition was achieved with Bacillus concentration of 5×10^6 cells/ml, but the germinated uredosporos showed high level of deformation. The spray of cell suspensions on coffee leaves, variety Caturra, autoclaved or not, of the isolates AP-3 and AP-150 in concentrations of $2,2 \times 10^8$ and $4,3 \times 10^8$ cells/ml, respectively, reduced the number of injuries in 87, 62, 73 and 72%, respectively. When those isolates were sprayed on young plants the inhibition was 89, 67, 63 and 59%, respectively. In a field test in the 89/90 season, with 3-year-old coffee plants variety "Catuaí vermelho", the direct application of the fermentative material of AP-3 and AP-150 diluted 1:10 showed a control of 26 and 25%, respectively, based on number of injured leaves, 24 and 29% on percentage of injured leaves, and 27 and 32% based on number of injuries per injured leaf. Copper oxichloride (3,360g/1000 plants) was considered the check treatment and showed a control of about 81%.