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REACTION OF *COFFEA ARABICA* GENOTYPES TO *MELOIDOGYNE SPP.*

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Among the most damaging root-knot nematode species, *Meloidogyne exigua*, *M. paranaensis*, *M. incognita*, *M. arabicida*, *M. izalcoensis* and *M. mayaguensis* exert the main agronomic constraint on coffee-growing areas in Latin America countries. The resistance reaction to those six species was studied on a new genotype (MGH 419-5-4-5-2 progeny of the Paraíso cultivar) derived from *C. arabica* x *C. canephora* (Timor Hybrid) x Catuaí (IAC 30) hybridization in an experiment under green-house conditions. The cultivar IAC 144 (Catuaí vermelho) was used as control for susceptibility to *Meloidogyne* spp. The plants were inoculated with 6.000 eggs/plants and the experiment was in a completely randomized design, replicated 10 times for each *Meloidogyne* species and genotype. Evaluation was 240 days after inoculation and the reproduction factor (RF= Final population/6000) was used as the parameter to evaluate the resistance. The number of galls and egg masses was not recommended as a good parameter for resistance evaluations because the symptoms of damage caused by the *Meloidogyne* species on coffee are variable. *M. exigua* caused typical rounded galls mostly on new roots and egg masses are produced in the cortex under the root epidermis. *M. incognita*, *M. paranaensis* and *M. arabicida* caused swelling roots, peeling and cracking of cortical parts of the root tissue. The egg masses are produced outside (*M. incognita*) or under the root epidermis (*M. paranaensis* and *M. arabicida*). No symptoms were observed for *M. mayaguensis*. *M izalcoensis* caused very small galls, mostly on the extremity of new roots. Egg-masses are produced outside the roots in large quantities.

The cultivar IAC 144 was susceptible (FR>1.0) to all studied *Meloidogyne* spp., except for *M. mayaguensis*. This nematode isolate used in this experiment seems to be a weak parasite for coffee. The Paraíso genotype was resistant to *M. exigua* and *M. incognita* (FR<1) and susceptible to *M. paranaensis*, *M. arabicida* and *M. izalcoensis*. Considering the intraspecific variability of *M. incognita* and *M. exigua*, more studies will be necessary to confirm the resistance of Paraíso genotype.

PA201

PREFERENTIAL OVIPOSITION OF LEAF MINER (*Leucoptera coffeella*) FOR ERECTA (*Er Er*) COFFEE GENOTYPE

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The dominant mutation erecta (*Er Er*) of *Coffea arabica* originally described in Java affects the angle of plagiotropic fruiting branches changing them from the normal 50-70° to 26° and consequently determining an upright growth and a more compact plant habit. Breeding programs have tried to exploit this variation transferring it to commercial lines aiming at the reduction of the canopy projection area per plant thus allowing closer spacings. On the course of the investigations some good yielding segregants in the field apparently presented higher infestation of leaf miner (*Leucoptera coffeella*). In the present experiment four individuals representing homozygous F_3 *Er Er* progenies were compared to four homozygous *er er* individuals of F_3 progenies from the same original F_1 plant *Er er*. Eighteen months old plants were caged and subjected overnight to oviposition of adult insects. Eggs laid in the adaxial surfaces of the leaves were then recorded for all leaves of the plants. A total of 1486 eggs were recorded in 82 leaves (18,1 eggs/leaf) of *Er Er* genotypes and 867 in 80 leaves (10,8 eggs/leaf) of normal *er er* genotypes. Oviposition in erecta plants was higher in both ortotropic and plagiotropic branch leaves. Oviposition was higher in the second and third leaf pairs of plagiotropic branches and on the leaves of the middle part of the ortotropic branches. The preference of *L. coffeella* for *Er Er* genotypes could be determined either by a more attractive position of the leaves for oviposition or by a pleiotropic effect of the *Er* allele. Further experiments are under way in order to ascertain the underlying cause of the preference of leaf miner adults for oviposition in erecta plants.