Specialisation pattern of the aphid Rhopalosiphum maidis is not modified by experience on a novel host

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The effect of alternative host condition on the pattern of specialisation of the aphid Rhopalosiphum maidis (Fitch) was studied. R. maidis commonly occurs in Chile on Johnson grass (Sorghum halepense L.) but rarely on contiguous wheat (Triticum durum L.) crops. The performance of 23 clones of R. maidis on S. halepense (established host) and T. durum (novel host) before and after rearing on wheat for 20 asexual generations was evaluated. Prior and after the period of conditioning on wheat no negative correlation of performance parameters between both hosts was found. Only 8 out of 23 clones survived the 20 asexual generations on wheat. Further, after conditioning on wheat, survival of three out of eight clones increased on wheat and three clones improved rm on Johnson grass but not on wheat. Although some genotypes of R. maidis were able to withstand wheat stressing conditions, the conditioning on this alternative host did not cause a decreased capacity to use Johnson grass as host. The