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STUDIES TO ENHANCE THE RESISTANCE OF WINTERING ITALIAN BEE FAMILIES

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SUMMARY

The experiment was conducted on two bee species: the Carpathian breed *Apis mellifera carpatica Foti*) and the Italian breed (*Apis mellifera ligustica*). The bees were housed in multi-storey hives. The experimental period lasted between October 15, 2005 and July 15, 2006. The following apicultural parameters were monitored: honey production, wax production, pollen production, resistance to wintering, queen bee prolificacy, flight intensity during harvesting, flight intensity during bad weather, irascibility, behaviour of the bees during the survey, predisposition to swarming. The productions of honey, wax and pollen were close statistically ($p \geq 0.05$). Mortality was 49% higher in the Italian bee than in the autochthonous bee ($p \leq 0.001$). Queen bee prolificacy and the rate of old bees replacement was significantly higher in *Apis mellifera ligustica*. On the other hand, flight intensity during bad weather was 22.4% higher, which caused high losses during the overcast periods. This breed didn't display the swarming instinct.

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