

COMMUNITY OF LEAF-EATING LEPIDOPTERA ON APPLE IN TWO REGIONS IN BULGARIA

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Apple is a traditional fruit crop in Bulgarian agriculture. Even though it is not native to Europe, apple is the fruit crop attacked by the highest number of pest species in Bulgaria. In the cases when pesticide treatments are reduced as a result of integrated pest management practices and/or selective methods (e.g. mating disruption against codling moth) are applied, some non-target pests may cause damage and reduce yield. During the period 2005-2006, orchards in Plovdiv – South Central Bulgaria and Sofia region – West Bulgaria were sampled for leaf-eating Lepidoptera. Three orchards in Plovdiv region with different types of cultivation practice were sampled: conventionally managed, organic and abandoned (no management) orchards. One abandoned orchard in Sofia region was sampled. Differences in the community structure of leaf-eating lepidopterans were established in connection to the cultivation practice in the orchards and the regional peculiarities. Significant differences were also established for the two consecutive years. In the abandoned orchard in Sofia district, the number of lepidopteran families and their species diversity was the highest – 44 species belonging to 11 families during 2005, 40 species of 9 families during 2006 in this orchard. The leaf-eating lepidopteran larvae reached the economical threshold of damage during both years. Lower species diversity was established in the organic orchard – 17 species of 9 families during 2005 and 13 species of 6 families in 2006. In 2005 the density of leaf-eating larvae in this orchard was above the economical threshold of damage. The lepidopteran community in the conventionally managed orchard exhibited lowest species diversity. Only family *Noctuidae* was present with more than one species. Family *Tortricidae* was established in all orchards and during both years, with dominant species *Hedya nubiferana* Haw.