

Development of Semiochemical Attractants for Monitoring and Controlling *Chlorophorus caragana*

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Chlorophorus caragana is an important wood-boring pest that infests *Caragana korshinskii*. The larvae bore into the stems to the point of hollowing them out, causing the whole tree to wither and even die. To control these infestations, volatile compounds were collected from *C. korshinskii* and used in electroantennography to ascertain which plant semiochemicals could be used to trap adult *C. caragana* in the field. Isophorone, *cis*-3-hexen-1-ol, 3-pentanone, dibutyl phthalate, and diisobutyl phthalate were the main volatile compounds produced by *C. korshinskii*. These compounds induced dose-dependent electrophysiological responses in the antennae of adult *C. caragana* to some degree. Accordingly, 58 different compound mixtures were tested in field trapping experiments over two consecutive years. Isophorone was most attractive to adult insects. In the field, the best traps were funnel-shaped ones hanging at a height of 1 m. The trapping efficiency was 63.8%. Adult beetles appear between mid June and late August, with an eclosion peak in mid July. The prototype trapping system developed could be used as a tool to monitor and control *C. caragana* adults.

Key words: *Caragana korshinskii*, *Chlorophorus caragana*, Volatile Compounds