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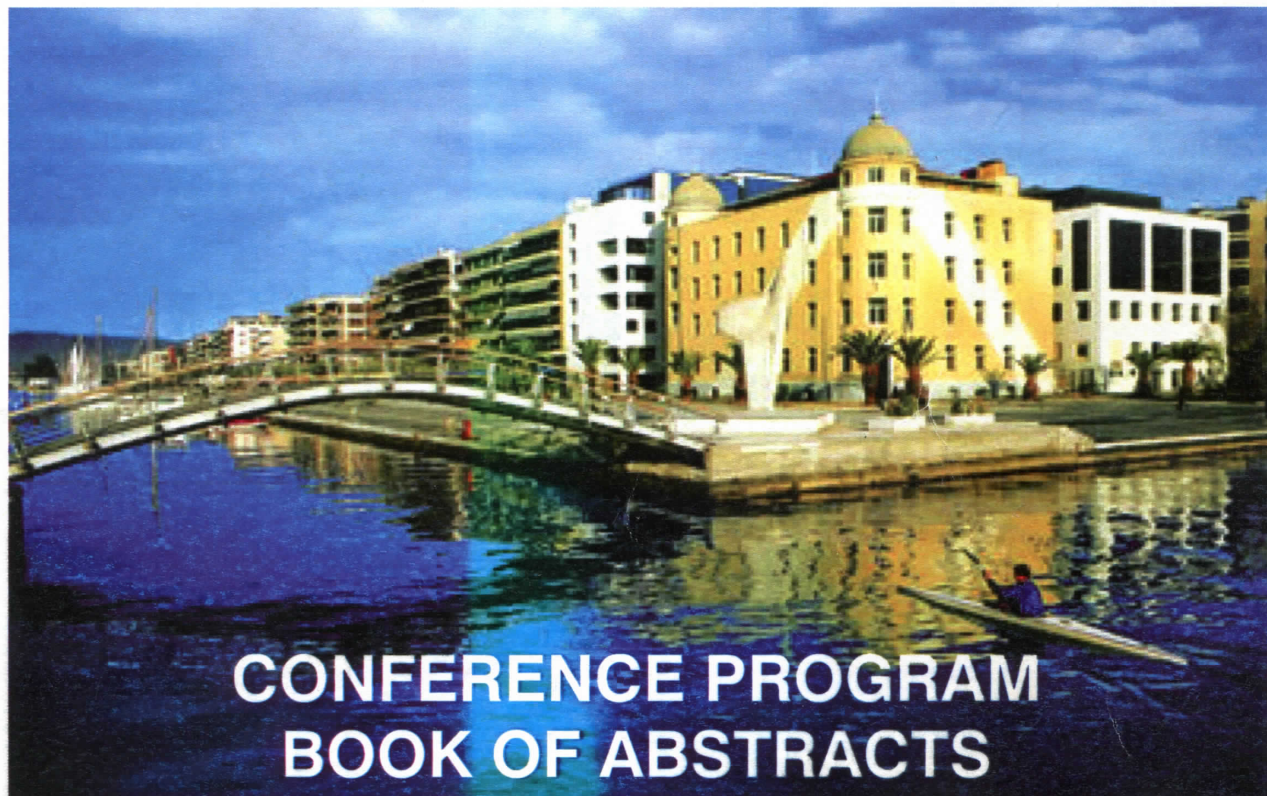


WPRS International Organisation for Biological and Integrated Control of Noxious
Animals and Plants: West Palaearctic Regional Section

SROP Organisation Internationale de Lutte Biologique et Intégrée contre les Animaux
et les Plantes Nuisibles: Section Régionale Ouest Paléarctique

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CONFERENCE PROGRAM BOOK OF ABSTRACTS

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Working Group**

INTEGRATED PROTECTION OF STORED PRODUCTS



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LONG TERM EFFECTIVENESS OF SEVERAL GRAIN PROTECTANTS ON WHEAT

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This study was initiated in order to determine how long several grain protectants will provide acceptable protection against the adults and the progeny of *Sitophilus oryzae* (L.), *Rhyzopertha dominica* (F.), and *Tribolium castaneum* (Herbst), when applied to clean eastern white winter wheat containing 13.6% moisture content. The following insecticides were in the experiment: mixture of diatomaceous earth (DE) and deltamethrin (DM) (DE/DM insecticide) applied at 100 ppm containing 90 ppm of DE and 0.1 ppm of deltamethrin active ingredient (a.i.); spinosad technical 92% powder applied at 1 ppm a.i.; mixture of chlorpyrifos methyl (CM) and deltamethrin (DM), formulation Storicide II applied at 3 ppm CM and 0.5 ppm DM a.i.; pirimiphos methyl, formulation Actellic 5 E applied at 10 ppm ai. In the USA, Actellic 5E is primary registered as a grain protectant on corn and Storicide II on wheat, however, in some European countries, Actellic is registered on wheat, as well. Bioassays were initiated immediately after treatment (zero day), 30, 120 and 180 days after the initial treatment and were conducted under the same conditions. The results demonstrate that, under the grain storage conditions and bioassays implementation, treatment of wheat with 100 ppm of DE/DM mixture and 3 ppm of CM and 0.5 ppm of DM (Storicide II) provided effective protection against the adults and the progeny of *S. oryzae*, *R. dominica* and *T. castaneum* during the investigating period of 6 months. However, 10 ppm of pirimiphos methyl (Actellic 5E) didn't control the adults of *R. dominica* and *T. castaneum*, and 1 ppm of spinosad didn't control the adults and the progeny of *S.oryzae* and *T. castaneum*, immediately after the treatment and 180 days after the grain treatment, as well.