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**PROGRAM and ABSTRACTS**

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**INTEGRATED PLANT PROTECTION IN FRUIT CROPS**

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# Strategies for the Integrated Management of Pest Insects in Peach Orchards in the South Region of Brazil

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Evaluate and implement new control alternatives for the management of the main peach pests in the South Region of Brazil, using strategies other than phosphate and pyrethroid insecticides

For the control of *G. molesta*, laboratory and field experiments were carried out to identify new insecticides to control the species and implement mating disruption technique. In the case of *A. fraterculus*, the use of new food lures for monitoring and toxic bait with hydrolyzed protein for population suppression were evaluated. Furthermore, an alert system was established based on insect monitoring at a pilot area located in the region of Pelotas. Neonicotinoid insecticides applied to the soil at the beginning of sprouting were evaluated for the control of *P. pentagona*.

Synthetic insecticides (chlorantraniliprole, etofenprox, lufenuron and novaluron), as well as formulations for mating disruption (Biolita<sup>®</sup>, Cetro<sup>®</sup> and Splat Grafo<sup>®</sup>) were developed for the integrated management of *Grapholita molesta*. Hydrolyzed protein-based feed attractants and torula yeast were evaluated and made available for the monitoring and population suppression of fruit fly. In this case, in situation of high infestation, the use of phosmet and deltamethrin is still necessary to avoid production losses, especially when the attack occurs during the harvest. It was observed that it is possible to control fruit flies with toxic bait and that the alert system helps the growers to adopt control measures. The white peach scale *Pseudaulacaspis pentagona* has been controlled with the use of thiamethoxam applied to the soil at the beginning of sprouting. The use of these technologies reduced in up to 50% the amount of active ingredient applied per hectare per year when compared to the use of phosphate and pyrethroid insecticides. The replacement of phosphate insecticides by lower toxicity products did not result in increased production losses.

In the South Region of Brazil it is possible to replace phosphate insecticides for the control of *Grapholita molesta* in peach orchards. The use of toxic baits reduces cover applications for the control of fruit fly *Anastrepha fraterculus*. Neonicotinoid insecticides applied in the soil are effective for the control of *Pseudaulacaspis pentagona*.

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