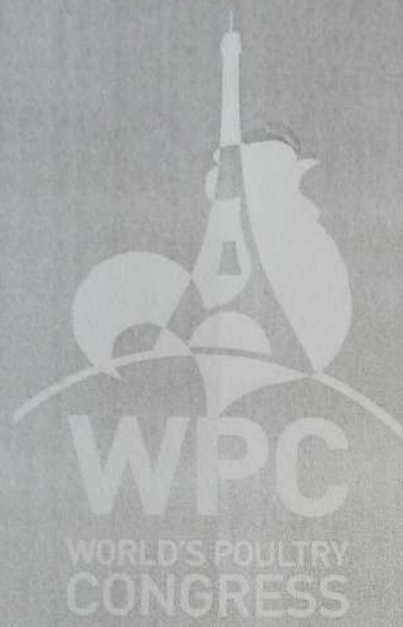


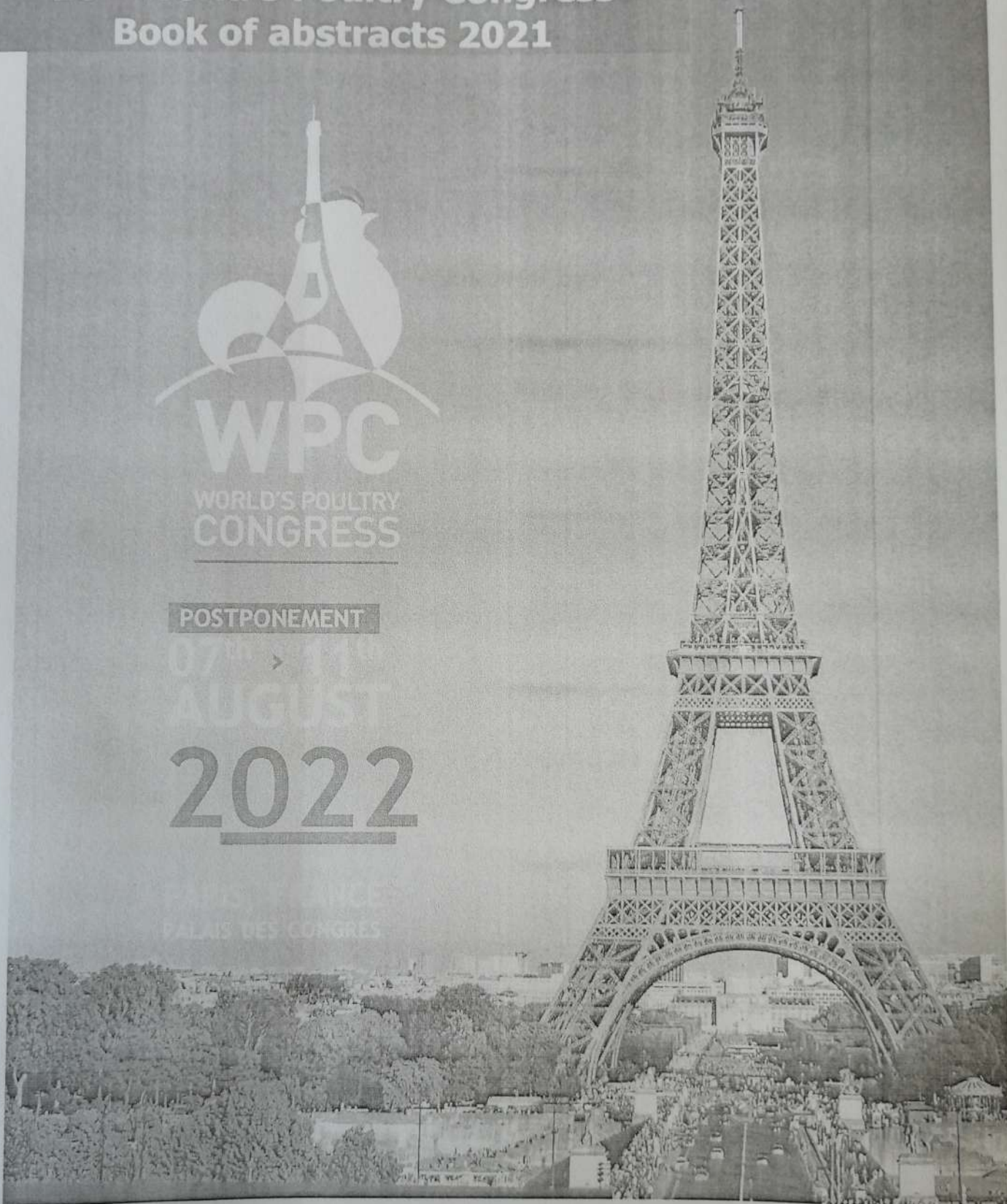
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APPLICATION OF INERT OILS IN THE CONTROL OF RED CHICKEN MITES *DERMANYSSUS GALLINAE*

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The use of inert oils in control of *Dermanyssus gallinae* (De Geer, 1778) is recommended due to: non-toxicity; effective, complex acaricidal action, which excludes the possibility of generating resistance; and multipurpose application (in prevention, curative and biosafety). The first dedicated formula of inert oils in control of red chicken mite is P 547/17. The new formula P 2020/0033, aims to increase economic accessibility to farmers and ease the conditions for more detailed application. The aim of this study is to consider the current arguments for the use of assigned inert oil formulations in the control of *D. gallinae*.

The study of 10% aqueous emulsion of formula P 2019/0033 was performed in a laboratory test, by the petri dish. By direct exposure of the adult *D. gallinae* to 1 min exposure, all of a 100% effect was found. With subsequent exposure on tin boxes with examination of prolonged action, after 1 month, we found the efficiency at an oblique position of 38%, inverted 81% and flat 98%.

Optimization of the clinical application of the formula P 547/17 was achieved by two treatments of detailed application using the spray method in an empty facility, at intervals of 5 or more days. Single application on cages and equipment with 20%, in repeated treatment at an absorbent surfaces (floor, walls) with 10% water emulsion and it proved the possibility of eradication of *D. gallinae* in parent breeding facilities (2 facilities with a capacity of 9,000 parents); in cage-laying for laying hens (8 facilities, capacity 18,000 chickens each); small farms for the exploitation of litters in a conventional cage system (capacity 2,500 and 4,000 stretchers). Project ID 1115 improves the application for large industrial cage-type facilities (conventional and enriched). In the first treatment, 20% excess water emulsion was applied. In the second treatment, a small dose of 50% water emulsion was used, which was applied only to the most important places of the cage, while for an absorbent surfaces 10% excess water emulsion was used. So far, eradication has been proved in two facilities with a capacity of 14,000 and 30,000 carriers. Eradication was observed after detailed and systematic examinations (early dust detection method, visual and tactile examinations, staff observations and surveillance of the flock's health status) for 12 months or more, and the established negative finding of *D. gallinae*.

It can be concluded that by the conditions and proper application of non-toxic formulations P 547/17 and P 2020/0033, we are able to effectively control *D. gallinae* and at the same time exclude the toxicological risk of acaricides.