

TOWARDS EFFICIENT CONTROL OF LOCUSTS TO AVOID THEIR PLAGUES ON HUMANS: EVOLVING AND APPLYING ADVANCED CONTROL STRATEGIES

M. Arshad¹, G. Abbas^{2*}, S. Jaffery², A. H. Hashmi³, I. Hussain⁴, A. Mustafa⁵, M. Arshad¹, A. Rehman⁷, A. Iqbal², S. Aslam¹, R. Khan¹, M. Ashraf⁶, F. Mahmood¹², T. Mahmood¹³, S. Javed¹, R. O. Simon¹⁵, T. J. Shad⁶, M. A. Alvi¹, A. U. Haq¹, M. H. Ali¹, M. S. Rehman⁷, T. A. Iqbal⁸, S. Khan⁹, M. M. Saleem¹, S. E. Hassan¹, H. Munir¹, S. H. Qamar¹⁰, A. Mahmood¹⁰, U. Mehboub¹⁴ and R. A. M. Qureshi¹³

¹Riphah College of Veterinary Sciences, Riphah International University, Pakistan

²Faculty of Agriculture, University of Agriculture, Faisalabad, Pakistan

³Government college of Technology, Samanabad, Faisalabad, Pakistan

⁴Department of Animal Science, University of Sargodha, Pakistan

⁵Institute of Animal and Dairy Science, University of Agriculture, Faisalabad, Pakistan

⁶Department of Geography, University of Punjab Lahore

⁷Livestock and Dairy Development Department Punjab, Pakistan

⁸National College of Business Administration and Economics, Gulberg, Lahore, Pakistan.

⁹Faculty of Veterinary Sciences, Gomal University Dera Ismail Khan

¹⁰Institute of Animal Nutrition, Key Laboratory for Animal Disease-Resistance Nutrition of China, Ministry of Education, Sichuan Agricultural University, Chengdu, Sichuan, China, 611130

¹¹Department of Physiology, The Islamia University of Bahawalpur, Pakistan.

¹²Islamabad Diagnostic Center, IDC Faisalabad, Pakistan.

¹³Ropah Educational Services, Research and General Ventures, Abuja; Department of Languages and Linguistics, Ebonyi State University, Abakaliki, Nigeria.

¹⁴Virtual University Lahore.

¹⁵Department of Physics University of Lahore Pakistan

^{*}for equal contribution

Corresponding Author: ghulamabbas_hashmi@gmail.com

ABSTRACT: Locusts belong to the group family *Acrididae* which are short-horned grasshoppers that have a swarming phase. A rapid increase in human population, whereas agricultural land has been used for non-agricultural means as well as for housing and urbanization causes rapid shrinkage of food resources. Locusts produce five times more macronutrients, fats, and minerals per unit of fodder than cattle, and locusts' attack on farm crops dates back to when man began farming. So keeping in view the importance related to consumption and its effect on human life this study was conducted. Conventional and non-conventional strategies are used to control the locusts. Synthetic insecticides have historically been used to control grasshoppers and locusts, and this is unlikely to alter in an emergency. However, the need for biological control is rising as people become more aware of the environmental problems connected to acridid management as well as the high costs of emergency control. The financial and environmental costs of large-scale plague treatments will be decreased, in particular, by preventive, integrated control techniques with early interventions. Moreover, *Metarhizium anisopliae*, a fungus, and its spores are naturally present in the green muscles of locusts, and germinated on the locust's skin, could penetrate inside their body through exoskeletons. Ultimately, the tissues of the locust can be destroyed from the inside due to the presence of such fungus. So it is concluded that the overlooked situation of locusts' swarms may result in the deprivation of a huge population of humans from food and pose severe threats to food security soon. Therefore, it has become imperative to evolve efficient pragmatic strategies beyond the conventional ones to get rid of the locust by avoiding its attack on farm crops, which has lasting implications. Moreover, efforts should be made to exploit the locusts' swarms entering the food chain by using these in livestock, poultry, and aquaculture feed.

Key words: Locusts, *Acrididae*, control strategies, swarms, insecticide, biological control.

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