

**RESEARCH PAPER****Performance of flocoumafen and difenacoum in combating coconut rat, *Rattus rattus* in coconut orchards**Ch. V. Narasimha Rao* and B. Anusha¹

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Abstract : Usage of rodenticides in the form of bait poison is the most preferred choice of rodent control in orchard crops and field crops. The coconut rat, *Rattus rattus* is the most important rodent species infesting coconut orchards. In order to manage the rat population, second generation anticoagulants, flocoumafen and difenacoum in the form of cake formulations were evaluated against *Rattus rattus* under field conditions. Both the rodenticides including bromadiolone has recorded significant per cent reduction of coconut rat @ 0.005% concentration after every pulse. Overall efficacy after analyzing pooled data of two pulses in the season, Flocoumafen has offered 80.53 per cent overall reduction of *Rattus rattus* incidence on tree basis and 84.23 per cent in terms of nut damage, where as it was 75.8 per cent and 74.44 per cent, respectively with difenacoum during second season field trials during Rabi, 2013-14. Flocoumafen cake formulation was found highly effective and significantly superior in containing the nut damage caused by *R. rattus* in coconut.

Key Words : Flocoumafen, Difenacoum, Bromadiolone, *Rattus rattus*, Coconut

View Point Article : Narasimha Rao, Ch. V. and Anusha, B. (2022). Performance of flocoumafen and difenacoum in combating coconut rat, *Rattus rattus* in coconut orchards. *Internat. J. agric. Sci.*, 18 (2) : 893-896, DOI:10.15740/HAS/IJAS/18.2/893-896. Copyright@2020: Hind Agri-Horticultural Society.

Article History : Received : 06.04.2022; Accepted : 18.05.2022

INTRODUCTION

Rodents create a great nuisance by causing extensive damage to field and horticultural crops and structural damage in residential premises, besides transmitting several dreaded zoonotic diseases among humans and their animals. In India, among the pest rodent species, Coconut rat, *Rattus rattus* is a predominant and more challenging in orchard crops like coconut. These rodents often inflict 10-15% nut damage in coconut,

which accounts to a yield loss of 10 nuts/tree in coconut growing areas, especially in Godavari delta of Andhra Pradesh (Srinivasa Rao and Nanda Kishore, 2009). Even though rodent trapping, installation of iron sheet banding are found effective in controlling the coconut rats, farmers and pest control operators rely mostly on rodenticides than these methods for their control, because rodenticides are cost effective and can cover larger area in a short period (Mohan Rao, 2003). Anticoagulants are the important group of rodenticides; they impair the blood

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