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Short Communication

Occurrence of white Grubs in ground nut Growing area of Khed Taluka, part of Northern Western Ghats, MS, India

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Abstract

The white grubs are destructive and troublesome insect pest all over the world. White grubs are called "Chaffer beetle" or "May- June beetle". White grubs have been defined as larvae of Melolonthidae. White grubs found in Khed Taluka particularly Holotrichia serrata and Holotrichia fissa. Crop survey on farm research organized as per Tran Huy Tho, Pham Thi Vuong, Nguyen Thi Mao, Nguyen Chuc Quynh and Pham Chi Hoa during the past. Western region of Khed Taluka is major groundnut growing area. We find the occurrence of Holotrichia serrata in said area, in the commercial crop growing area we observed occurrence of Holotrichia serrata and. Holotrichia fissa. The attempt has been made to observed occurrence of white grub found in Southern region of Taluka. The southern regions occupy industries area. Around this region we observe the occurrence Holotrichia serrata is more as compared to Holotrichia fissa.

Keywords: Occurrence, white grubs, Northern Western Ghats.

Introduction

Khed Taluka (Rajgurunagar) is a part of Northen Western Ghats. The Scarabaeids causing damage to groundnut (Peanut) in the world, listing a total of 22 species from 9 genera associated with groundnut in India[1]. The many melolonthine genera found under the crop in India, the genus *Holotrachia* includes the most important pest species in groundnut[2,3]. They also recorded the *Holotrachia serrata* as a serious pest in many parts of western Maharashtra[2,3].

Adults of Indian *Holotrachia* species become active with the arrival of the monsoon showers; if the monsoon is late, the beetle's emergence is similarly delayed[2]. Because monsoon arrival also triggers groundnut planting, there is a close association between crop and pest phonologies.

Adults of *Holotrachia* for mating and feeding trees are known for some species in other parts of India. *Holotrachia serrata* occurs most commonly on neem (*Azadirachta indica*), *Butea monosperma* and babhul (*Acacia Arabica*)[2]. White grub damaging groundnut in the region includes[4,5,6]. Aggregation resulted from the clumping of eggs at oviposition, and randomness increased with dispersal of the larvae[7]. The maximum number occurs in the tropical areas of the world, particularly in African and Oriental regions. The fauna of Indian sub region is very rich and diverse, but it is yet to be fully explored[8,9].

Material and Methods

Adult surveys to determine species occurrence were conducted in the seven important groundnut- growing areas in Khed Taluka during at the time of first monsoon rainy season. Beetles were observed on host plant of Neem (*Azadirachta indica*), wild Ber (*Zizyphus* ssp.) and Babhul (*Acacia Arabica*). The population dynamics of white grubs in Taluka indicate or based on field. Beetles rest in the soil during the day, and so are not readily available for collection; they were handpicked from the host trees during their nightly activity period and preserved in 70% ethyl alcohol for identification. The observation on occurrence of white grub is mainly at dusk during early monsoon season.

The Scarabaeid adults were collected during the survey and identified to species level based on the key and characters lists given[10,11,12].

Results and Discussion

The second fortnight of June observed is the peak period of emergence of the June beetles and emergence continued until the fortnight of August[13]. The both species found in a May- June as compared North and South region of Khed Taluka. We get large number of adults of *Holotrichia serrata* from their population site (soil) the adult feed and mate at their feeding site. After feeding and mating the adults remain to their opposition site (groundnut or any other upland crops). The

members of the Scarabaeidae family vary greatly in size (about 0.5 mm up to 150 mm body length in the longest) and they show a great diversity in shape, coloration, and sculpture[14,15,16]. The young grubs are seen during August. The adults are dull brown in colour about 22 mm in length and 14 mm width in case of *Holotrichia serrata* while in case of *Holotrichia fissa* small in size with dark brown colour. *Holotrichia serrata* species observed on host plant Neem and *Holotrichia fissa* were observed on Ber.

Figure-1
Holotrichia serrata on host plant Neem

Figure-2
Holotrichia fissa on host plant Ber

Table-1
Regional observation of white grub found in region of Khed Taluka

Month	Region/ Sites	Species	
		H. Serrata	H. Fissa
April- May	W and C	√	x
May- June	E, W and C	√	√
June- July	W and C	√	x
July- August	Nil (N, E, S, W and C)	x	x

N- North region, E- East region, S- South region, W- West region and C- Central region, √- Species observe, x- Species not observed.

Conclusion

Crop survey and the on farm research concluded the white grubs occur in upland of Western region of Khed Taluka especially *Holotrichia serrata* infestation were highly observed[17]. White grubs beetles causes several host plants like Neem, Ber, Babhul, Khair etc. White grubs also damage the commercial crops like potato, sugarcane, pea, maize but especially groundnut damage occurrence was very large in area.

East, West and Central region have highly infestation was observed in May- June. Host plants Neem were infested by *Holotrichia serrata* and only on Ber *Holotrichia fissa* were observed. Most of Western and Central regions are highly infested regions observed in April to July in these months. No infestation was observed in Northern and southern part of Khed Taluka because there was no more cultivation of groundnut crop.

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