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## A New Record of Cereal Leaf Beetle from India

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**Abstract:** Cereal leaf beetle (*Oulema melanopus*) was recorded from Kashmir, which is one of the states of Indian Union during a survey conducted in rabi 2003-04 to know the pest complex on oat crop. Both the adults and larvae damage plants by chewing out long strips of tissues between the veins of leaves leaving only a thin membrane. When damage is extensive the leaves turn whitish and the plants take on the appearance of frost damage. The plant may be killed or the crop may be seriously reduced.

**Key words:** Cereal leaf beetle, pest complex, oat crop

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### Introduction

Oat being the dominant cereal of the colder regions of the world occupies an area of 20.9 m ha with a production of 1.6 million tons (Anonymous, 1991). The leading oat producing countries are USA, Russia, Canada, Poland, Germany and France. In India, this crop is grown both for grain and fodder purposes. Oat has to its credit several advantages like early forage availability, high dry matter content and grain seed production. Cereal leaf beetle is a pest of cereals, grains and various grasses. This pest does have the potential to cause 50% economic loss.

### Materials and Methods

A survey was conducted in rabi 2003-04 to know the pest complex on oats. Adults as well as immature stages were collected from Shalimar area in Jammu and Kashmir. Survey for *Oulema melanopus* are visual or use of a weep-net because there is no pheromone in the species and is not attracted to light. Spring survey should begin in succulent grain fields after a few days in which the temperature exceeds 9°C. Surveys for summer adults should focus on succulent growth of maize, sudden and other grasses.

### Hosts

All cereals; barley (*Hordeum* sp.), wheat (*Triticum* sp.), oats (*Avena* sp.), rye (*Secale* sp.), corn (*Zea mays*) and wild grasses.

### Distribution

#### Asia

Afghanistan, Azerbaijan, China, Cyprus, Georgia, Iran, Israel, Kazakhstan, Mongolia, Siberia, Syria, Turkey, Turkmenistan and Uzbekistan.

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*Europe*

Throughout.

*North Africa*

Algeria, Morocco and Tunisia.

*North America*

Canada and USA.

**Results and Discussion**

*Identification*

*Adult*

Adult has bluish black wing covers antenna and abdomen. The thorax and legs are light orange brown with the legs possessing some dark spots. Females are slightly larger than the males (Bati, 1989).

*Egg*

The egg is cylindrical, rounded. It is yellowish in colour darkening to black just before hatching.

*Larvae*

The larvae is eruciform with head. Spiracles and legs are moderately chitinized and brownish-black in colour. The rest of the body is yellowish. The larvae is usually covered by a globule of faecal matter that obscures its colouration. The faecal covers the thorax and abdomen and is beneficial as camouflage, as a repellent to predators (Venturi, 1942).

*Pupa*

Pupa is of exarate type and is enveloped in a silky transparent membrane. It is bright yellow when newly formed and darkens later on. Pupation occurs in cells constructed from soil.

*Biology*

Adults overwinter in clusters in protected places such as in the crevices of tree bark under field trash, inside rolled leaves, they have even been found in burls of the fields.

Cereal leaf beetle adults become active in the spring feeding on young oat plants. Egg laying begins 14 days after the emergence of the adults. The eggs are laid singly or in pairs. They are fixed by an adhesive to the upper surface of blades of oat plants. Each female lays about 100 to 400 eggs over a 50 day period. The larvae hatch in about 5 days and begin feeding, passing 4 instars. Each instar lasts 2-3 days. After feeding is completed, the full-grown larva enters the soil and pupates in earthen cells about 2.5 cm beneath the surface. The pupal stage lasts 2 to 3 weeks and the new adult emerges. The total time required to complete the life cycle is 40 days.

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