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OCCURRENCE OF A NEW INSECT, SMALL BROWN PLANT HOPPER *LAODELPHAX STRIATELLUS* (FALLEN), IN INDIA

IN July 1978, some small brown plant hoppers were seen on rice nursery (variety 'Jaya') in the farmer's fields near Ludhiana (Punjab). These could be distinguished from white-backed plant hopper by coloured scutellum as against white. The scutellum was black/brownish black in males and pale yellow with greyish tinge in females. The adult specimens of this insect sent to the Commonwealth Institute of Entomology have been identified as *Laodelphax striatellus* (Fallen) (Delphacidae: Homoptera). From the published reports it appears that this insect is a new record from India¹⁻².

L. striatellus commonly occurs in Taiwan, Japan, Korea, China and the Palearctic regions. It causes considerable direct damage to the rice crop in these countries. It is also a vector of rice stripe, the most serious virus disease of the East Asian countries and also transmits the rice black-streaked dwarf virus¹.

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A SIMPLE METHOD FOR INDUCING SPORULATION IN *HELMINTHOSPORIUM GRAMINEUM* IN CULTURE

Helminthosporium gramineum Rabh. the incitant of stripe disease is known to parasitize barley wherever the crop is grown. The fungus sporulates abundantly on the host under natural conditions but it fails to sporulate when isolated in pure culture. A wide variety of artificial media at different temperatures, pH, carbon and nitrogen sources did not induce sporulation in all the seven isolates of *H. gramineum* collected from different places in India². Conidia could be produced in culture through the combined effect of light and temperature and none of the media was found superior to P.D.A. (Potato Dextrose Agar)¹.

In the present investigations, low temperature treatment induced sporulation in all the three isolates, collected from around Agra differing in morphology and nutrition, grown on Czapek's Dox Agar as well as on Potato Dextrose Agar. The fungus culture was first kept in the refrigerator at 6 (\pm 1)° C for 7 days and then was incubated in reversible incubator maintained at 28 (\pm 1)° C for 5 days. The sporulation was obtained throughout the year.

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LEVEL OF GLUCOSE AND FRUCTOSE IN HYPHAE OF TWO FRUIT ROT CAUSING FUNGI

CONCENTRATION of glucose and fructose present in the mycelium of two fruit rot causing fungi, *i.e.*, *Alternaria tenuis* Auct. and *Helminthosporium spiciferum* (Bain) Nicot as influenced by the amount of sugar present in the substratum was determined. Besides the carbon source, the basal medium comprised KNO₃, 3.5 g, KH₂PO₄, 1.75 g and MgSO₄ · 7H₂O, 0.75 g. The amount of hexose sugar (glucose/fructose) used was 10 or 20 g/litre. Estimation was carried out in 12 days old dry mycelium (Snell *et al.*⁶).

Results (Table I) indicate that in *A. tenuis*, with the increase in the level of hexose sugar in the medium, there was a rise in the amount of glucose/fructose utilized as well as dry weight of the mycelium. Although the mycelial output increased, yet it was

TABLE I

Showing the amount of sugars utilized, their level in the mycelium and percentage of utilization by *A. tenuis* and *H. spiciferum*

Organism	Sugars supplied	Amount of sugars supplied 25 ml (in mg)	Amount of sugars utilized by fungi 25 ml (in mg)	Residual sugars/ 25 ml (in mg)	Percentage of sugars utilized	Dry wt. of mycelial mat (in mg)	Wt. of glucose/ 100 mg of mycelium (in mg)	Wt. of fructose/ 100 mg of mycelium (in mg)
<i>A. tenuis</i>	Glucose	250	244.12	5.88	97.6	136.0	4.8	1.18
		500	455	45	91.0	189.0	2.2	1.73
	Fructose	250	230.875	19.125	92.35	125.0	4.688	11.72
		500	425.5	74.5	85.1	276.0	5.8	3.32
<i>H. spiciferum</i>	Glucose	250	244.12	5.88	97.6	94.0	2.83	0.38
		500	493.5	4.5	98.7	188.0	2.4	1.646
	Fructose	250	215.625	34.375	86.25	114.0	4.0	5.3
		500	440.0	60.0	88.0	265.0	2.688	6.68

not proportional to the amount of glucose utilised. In *H. spiciferum*, however, the mycelial dry weight was proportional to the amount of hexose supplied to the medium. Chauhan and Suryanarayan¹, Grover and Bansal² and Hasija³ made similar observations. The rate of utilization of glucose by *A. tenuis* and *H. spiciferum* was comparatively faster than fructose.

The hexose (glucose/fructose) which was used in the medium had a comparatively higher concentration in the mycelium. Hasija and Wolf⁴ while working with *Aspergillus niger* recorded similar results. However, an increase in the concentration of any particular hexose (glucose or fructose) in the medium although resulted in higher mycelial yield, yet its relative concentration in the mycelial composition declined. This may be attributed to the utilization of larger fraction of hexose sugars for metabolic activity during active phase of vegetative growth and as such their concentration in the mycelium is comparatively less.

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CHOLESTEROL ACTIVITY IN THE TESTES OF *PASSER DOMESTICUS* AND *STREPTOPELIA DECAOCTO*

The investigations have been done on two species of birds, the house sparrow, *Passer domesticus* and the common ring dove, *Streptopelia decaocto*. The testicular histology has been studied for a year and the presence or absence of interstitial cells have been noticed.

The birds were collected throughout the year and kept in the laboratory cages. Testes were fixed in Bouin's fluid for the histological studies. Tissue