

RECORD OF GRASSY SHOOT DISEASE OF SUGARCANE IN WEST BENGAL

Grassy shoot disease (GSD) was first encountered in a few clumps of two selected advance lines (*viz.*, 7801/3 and 7903/47) from fluff at the Sugarcane Research Station, Bethuadahari, Nadia, West Bengal, in July 1980. Later its incidence has been recorded in a number of varieties and advance lines after a careful watch on all the varieties and advance lines at the research station during 1981-82 and 1982-83. The average incidence of the disease varied from 5-33% on clump basis.

Co. 8137, 7801/3, 7903/47 and the ratoon crop of Co.S. 770 and Co. 6311 were found to be affected in the early stages of growth (Primary infection), when the disease was characterized by the production of numerous small and thin tillers with small and narrow leaves giving a stunted, crowded and grass like appearance to the clump. The diseased leaves exhibited varying degrees of losses in chlorophyll ranging from total green to white (albinism). The root system of the affected clump was considerably reduced. Co. 8201, Co. 8230 and 7903/7, which were found to be infected by the disease in advance stages of growth (Secondary infection), showed chlorotic leaves developing at the crown and/or formation of numerous tillers at the base of the stool bearing chlorotic to pale green leaves. The buds of the lower portion of the affected canes were abnormally elongated while those of the apical portion were papery. The buds of the entire affected canes had a tendency towards premature sprouting giving out pale coloured leaves and leaf sheaths. The sprout from the affected buds tended to make an acute angle with the stem. Formation of aerial roots was also common in such affected canes. The effect of the disease was, however, more severe when the crop was infected in the early stages of its growth particularly in the ratoons. Most of such severely affected stools died after drying up of leaves completely.

All the above symptoms noted were similar to those recorded by early workers who described the disease under different names such as—'new chlorotic' (IISR, 1957), 'leafy tuft' (Sharma, 1957), 'albino' (Kirtikar and Singh, 1958), 'yellowing' (Kulkarni, 1962), and 'white leaf' (Ling, 1962), from time to time at different types of symptoms at various stages of growth. Rane and Dakshindas (1962) have shown clearly that the diseases referred above are one and the same disease and suggested that the name 'grassy shoot' should be adopted. Singh and Singh (1963), Hughes and Abbott (1964) and the present worker

also supported the view. Further work on this disease is in progress at Bethuadahari.

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