On the occurrence of sugarcane diseases in Assam

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Sugarcane is affected by a number of diseases which causes 10-15 per cent loss under endemic condition(1). Although the occurrence of various sugarcane diseases has been reported from Assam, no systematic study on the incidence, severity and distribution of the diseases has been made so far. Hence the survey work has been undertaken during 1992-95 in four locations (Sugarcane Research Station, Buralikson, Adarsha Cooperative Farm, Gurugonia and Borpather) under Golaghat, two locations (Bokajan and Shillonijan) under Karbi Anglong district and two locations (Laloong Gaon Seed Farm, Kampur and Nanoi) under Nagaon district.

Disease incidence and severity were recorded at a regular interval from April to January. Three rows (two from the two sides and one from the middle) in each field were taken for ascertaining disease incidence (DI). For calculating disease severity (DS), five plants (four from four corners and one from the center) were selected and three leaves (top, middle and bottom) of each plant were taken.

The results of the survey showed that red rot was recorded in all the districts surveyed. The first visual symptoms were observed in last week of July and highest incidence (75 per cent) was recorded in the month of January at Gurjogania. The lowest incidence (2.5 per cent) was recorded in the variety Co 740.

Smut was not recorded in any cultivated variety except in a wild variety in Laloong Gaon Seed Farm, Kampur.

The incidence of wilt caused by Cephalosporium sacchari Butler was very low (<1 per cent) and was found in association with red rot.

Grassy shoot disease was not recorded in any area surveyed except at the Sugarcane Research Station, Buralikson. Negligible incidence was recorded in raatoon crop of varieties Co 740 and CoBLN 9102.

Pokkah boeng caused by Fusarium moniliformi Sheldon was newly recorded in the state and occurred in all the districts surveyed irrespective of variety. The highest incidence (26 per cent) was recorded at sugarcane Research Station, Buralikson.

Seedling blight caused by Drechslera sacchari (Butler) Subram and Jain was first observed at the Sugarcane Research Station, Buralikson in 1994. The fluff was collected from the Sugarcane Breeding Institute, Coimbatore under fluff exchange programme. The crosses were severely affected and 100 per cent incidence and total mortality were recorded in three crosses (viz., Co 740 X Co 356, Co 740 X Co 775 and Co 87270 X BO 91 ) in comparison to the General Collection.

Pineapple disease caused by Ceratocystis paradoxa (de Seynes) Moreau was newly recorded in the state. Negligible incidence (<1 per cent) was observed in the variety Co 8327 at germinating stage at Sugarcane Research Station, Buralikson. Among leaf spot diseases, ring spot (Leptosphaeria sacchari Breda de Haan), Curvularia leaf spot (Curvularia lunata (Wakker) Boedijn), eye spot (Drechslera sacchari) and banded sclerotial disease (Rhizoctonia solani f.sp. sasakii) were recorded at all the four locations. The severity of ring spot and Curvularia leaf spot was higher (upto 31.11 per cent) as compared to other diseases. It was generally present on lowermost leaves. Banded sclerotial disease was observed only in the early stage of growth. Negligible incidence of eye spots was recorded during the survey.

REFERENCES

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