

RELATIVE OCCURRENCE OF DISEASES OF MAIZE IN PLAINS AND HILLS OF WEST BENGAL AT DIFFERENT SEASONS

The maize disease situation in Kalimpong hills has already been reported (Kaiser and Sengupta, 1983). In the present note the relative occurrence of different diseases of maize in the plains and hills of West Bengal at different seasons (Kharif and Rabi) are recorded. The observations are based on 6 years' surveys during the years 1977 to 1982 at and around Kalyani in the district of Nadia (plains) and at and around Kalimpong in the district of Darjeeling (hills). The observations on the relative occurrence of different diseases of maize at different seasons are presented in Table 1.

It may be observed from Table 1 that maximum number of diseases occurred in the hills during the Kharif season. Some of the diseases, viz. Brown spot caused by *Physoderma maydis*, Rust caused by *Puccinia sorghi*, Downy mildew caused by *Sclerophthora rayssiae* var. *zeae*, Leaf spot caused by *Pithomyces maydis*, Smut caused by *Ustilago maydis*, Stalk rots caused by *Rhizoctonia zeae* and *Erwinia chrysanthemi* and Ear rots caused by *Rhizoctonia zeae* and *Cephalosporium acremonium* were observed only in the hills. Of these fungi *Sclerophthora rayssiae* var. *zeae* was sporadic in occurrence in Rabi season and *Diplodia macrospora*, *Pithomyces maydis*, *Ustilago maydis* and Ear rots caused by *Rhizoctonia zeae* and *Cephalosporium acremonium* only in the Kharif season. Diseases like, Leaf-blight caused by *Exerohilum tureicum* and *Helminthosporium maydis* and Stalk rots caused by *R. zeae* and *E. chrysanthemi* were moderately to widely prevalent only during the Kharif season. Other diseases were more prevalent during Kharif season than in the Rabi season.

Crazy top (downy mildew) of maize caused by *Perenosclerospora macrospora* (= *Sclerospora macrospora*) was recorded only once in two species of *Zea*, namely *Z. mexicana* and *Z. parennis* at Kalyani Farm in the month of November, 1978 (Kaiser and Sengupta, 1980).

Stalk rot caused by *Macrophomina phaseolina* was recorded only in the plains, the disease being more prevalent during the Kharif season than in the Rabi. *H. carbonum* was also recorded sporadically only in the plains. In general most of the diseases were, however, more prevalent in the hills than in the plains.

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TABLE 1. Relative occurrence of different diseases of maize in the plains and hills of West Bengal at different seasons

Diseases	Relative occur- ences in plains		Relative occur- ence in hills	
	Kharif	Rabi	Kharif	Rabi
1. Leaf blights				
a) <i>Exerohilum turcicum</i>	+	++	+++	-
b) <i>Helminthosporium maydis</i>	+	+	++	-
c) <i>H. carbonum</i>	+	+	-	-
2. Bron spot				
<i>Physoderma maydis</i>	+	+	++	+
3. Rust				
<i>Puccinia sorghi</i>	-	-	++	+
4. Downy mildews				
a) <i>Peronoclerospora philippinensis</i>	-	+	+	-
b) <i>Sclerophthora rayssiae var. zae</i>	-	-	++	+
c) <i>Perenosclerospora macrospora</i> *	+	-	-	-
5. Leaf spots				
a) <i>Diplodia macrospora</i>	+	-	+	-
b) <i>Pithomyces maydis</i>	-	-	+	-
6. Smut				
<i>Ustilago maydis</i>	-	-	+	-
7. Stalk rots				
a) <i>Rhizoctonia zae</i>	-	-	++	-
b) <i>Macrophomina phaseolina</i>	+++	++	-	-
c) <i>Erwinia chrysanthemi</i>	-	-	++	-
8. Ear rots				
a) <i>Rhizoctonia zae</i>	-	-	+	-
b) <i>Cephalosporium acremonium</i>	-	-	+	-

*Reported only once in 1978

+++ = abundant occurrence,
+ = sporadic occurrence,++ = moderate occurrence,
- = absent.

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