

# Stem borer incidence in maize

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## ABSTRACT

Field experiment was conducted at Maize Research Centre, Rajendranagar by undertaking sowings at monthly intervals from January to December during two years 2013 and 2014. Observations on stemborer incidence was recorded at 45 DAG and subjected to analysis after angular transformation. June sown crop had lowest infestation of 2.83 per cent followed by December (3.35%) and May (3.69%) sown crops and all were significantly on par. Dead hearts were low in April, May and December sown crops *i.e.*, 0.11 per cent, 0.15 per cent and 0.55 per cent, respectively and all were on par with each other. Highest per cent dead hearts were in Sep. sown crop (7.67%).

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## INTRODUCTION

Maize is one of the important cereal crops in world and cultivated for different purposes. IN India *Rabi* maize is grown over an area of 16.98lakh ha (Anonymous, 2020). Among the biotic stresses in maize, yield losses due to *Chilo partellus* and *Sesamia inferens* in different regions of India range from 26.7-80.4 per cent and 25.7-78.9 per cent, respectively. *Chilo partellus* is most dominant contributing 90-95 per cent of the total damage in *Kharif* season (Jalali and Singh, 2002) and *Sesamia inferens* is predominant in *Rabi* season. To develop models for predicting pest population based on weather parameters, continuous study on seasonal incidence of the pest is essential.

## MATERIAL AND METHODS

Field experiment on seasonal incidence of

stemborers in maize was conducted at Maize Research Centre, Rajendranagar by undertaking sowings at monthly intervals from January to December during two years 2013 and 2014 in an area of 150 sqm as a replicated trial. Maize hybrid DHM117 was sown in ridge and furrow method at 75x20 cm spacing. Observations on stemborer incidence was recorded at 45 DAG and subjected to analysis after angular transformation.

## RESULTS AND DISCUSSION

During 2013 significantly highest stem borer incidence was observed in September (34.93%) and February (32.22%) sown crop. Least incidence was noticed in December (1.39%) which was on par with June (2.53%), July (3.38%) and May (3.65%) sowings. Similarly, significantly highest dead hearts were recorded in September (13.13%) followed by October (6.32%),

**Table 1: Incidence of stemborer**

Sr. No.	Treatments	2013		2014		Pooled	
		Mean % infestation	Mean % dead hearts	Mean % infestation	Mean % dead hearts	Mean % infestation	Mean % dead hearts
1.	Jan.	8.64(16.81)	2.69(8.75)	11.78(20.04)	2.9(9.76)	10.21 (18.58)	2.8(9.51)
2.	Feb.	32.22(34.58)	4.32(11.86)	13.37(21.35)	3.5(10.77)	22.8 (28.48)	3.91(11.37)
3.	Mar.	8.74(16.98)	4.29(11.47)	20.6(27.02)	5.4(13.49)	14.67 (22.51)	4.85(12.64)
4.	Apr.	9.83(17.92)	0.12(1.15)	9.6(18.04)	0.1(1.59)	9.72 (18.06)	0.11(1.96)
5.	May	3.65(10.65)	0.2(1.48)	3.73(11.14)	0.1(1.59)	3.69 (10.99)	0.15(1.91)
6.	Jun.	2.53(8.67)	1.14(4.73)	3.12(10.16)	2.2(8.37)	2.83 (9.57)	1.67(7.29)
7.	Jul.	3.38(10.29)	0.79(5.08)	18.7(25.61)	12.1(20.37)	11.04 (19.39)	6.45(14.71)
8.	Aug.	10.64(19.03)	1.83(7.64)	16.6(24.05)	7.4(15.77)	13.62(21.66)	4.62(12.39)
9.	Sep.	34.93(36.22)	13.13(21.22)	40.8(39.67)	2.2(8.42)	37.87(37.96)	7.67(16.04)
10.	Oct.	17.11(24.12)	6.32(14.32)	16.8(24.23)	1.6(7.26)	16.96(24.27)	3.96(11.36)
11.	Nov.	9.23(17.66)	5.35(13.37)	14.0(21.95)	1.7(7.5)	11.62(19.92)	3.53(10.84)
12.	Dec.	1.39(6.77)	0.49(3.99)	5.3(13.34)	0.6(2.46)	3.35(10.57)	0.55(3.82)
C.D. (P=0.05)		5.36	4.7	1.15	2.55	2.59	2.41

November (5.35%) and February (4.32%) sowings. April to july and December sowings had significantly least number of dead hearts ranging between 0.12 to 1.14 per cent.

During 2014, highest borer incidence (40.8%) was observed in crop sown during sep 2014 followed by March sown crop (20.6%). Lowest incidence was seen in june and May sown crops *i.e.*, 3.12 per cent and 3.73 per cent, respectively. Dead hearts were least in April (0.1%), May (0.1%) and December (0.6%) sown crops.

Pooled data reveals that June sown crop had lowest infestation of 2.83 per cent followed by December (3.35%) and May (3.69%) sown crops and all were significantly on par. Dead hearts were low in April, May and December sown crops *i.e.*, 0.11 per cent, 0.15 per

cent and 0.55 per cent, respectively and all were on par with each other. Highest per cent dead hearts were in Sep. sown crop (7.67%) Divya *et al.* (2009) recorded maximum of 38 per cent stem borer infested plants in sorghum during 40<sup>th</sup> standard week.

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