SCREENING OF LINSEED GENOTYPES AGAINST BUD FLY, DASYNEURA LINI (BARNES) IN SURGUJA OF CHHATTISGARH

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Received-13.10.2016, Revised-25.10.2016

Abstract: Fifty four linseed genotypes were screened among them one genotype ie RLC-133 was found resistant however other eighteen genotypes viz- R-4226, R-4231, R-4234, R-4236, R-4237, R-4239, R-4240, R-552, RLC-92, RLC-133, R-4230, R-4232, R-4226, R-4233,R-4237,-4238, RLC-92, RLC-133 were found moderately resistant and thirty fives genotypes R-4221, R-4229, R-4230, R-4232, R-4233, R-4235, R-4238, R-RLC-92, TA-32, R-4235, R-4236, R-4237, R-4238, R-4239, R-4240, R-552, IA-32, R-4226, R-4227, R-4229, R-4231, R-4233, R-4234, R-4227, R-4229, R-4230, R-4231, R-4232, R-4234, R-4235, R-4236, R-4239, R-4240, R-552, IA-32 were found susceptible.

Keywords: Linseed genotypes, Bud fly, Crop, Production

INTRODUCTION

Linseed is an important industrial oilseed crops of India. In India, linseed is cultivated in about 4.26 lakh hectares with a total linseed production of 1.67 lakh tonnes and 392 kg/ha productivity. Chhattisgarh is one of the important linseed growing states of India, which accounts for nearly 19.05 per cent area and 16.21 per cent production of the country. In Chhattisgarh, linseed is cultivated over 70 thousand hectare area with a production of 16.19 thousand tonnes and productivity of 231.31 kg/ha. Maximum area of this crop is grown as ‘utra’ during rabi season. The important linseed growing districts of Chhattisgarh are Rajnandgaon, Durg, Bilaspur, Kabirdham, Raipur, Dhamtari, Surguja, Kanker and Raigarh(Chhattisgarh). Linseed crop is attacked by a number of insect pests at various phases of its growth. Linseed bud fly Dasyneura lini Barnes with 88 per cent grain yield losses, is a key pests of this crop.

MATERIAL AND METHOD

The experiment was undertaken at Rajmohini Devi College of Agriculture & Research Station, Ambikapur of Indira Gandhi Krishi Vishwavidyalaya Raipur (C.G.) during 2015-16 to study the varietal screening for identify the resistance source against linseed bud fly. Fifty four linseed genotypes were screened under natural condition. Two lines of each genotypes were sown line to line 30 cm and plant to plant 15cm. On the basis of calculated data the bud fly infestation, the genotypes were categorized into five reactions viz. Resistant up to 10%, Moderately Resistant ( > 10-25%), Susceptible ( > 25-50 %), Moderately susceptible ( > 50-75 %) and Highly susceptible ( > 75 %). Individual plant was scored for budfly infection. In each plant buds infected by budfly (Dasyneura lini) were counted and percentage was taken from the total number of buds as follows (Reddy et al. 2013).

Budfly infestation (%) = 
\[
\text{Infested bud} \times 100 \\
\text{Total number of buds}
\]

RESULT AND DISCUSSION

Table 1 indicated that out of fifty four genotypes only one showed resistance ie RLC-133 however eighteen were showed moderately resistance R-4226, R-4231, R-4234, R-4236, R-4237, R-4239, R-4240, R-552, RLC-92, RLC-133, R-4230, R-4232, R-4226, R-4233,R-4237,-4238, RLC-92, RLC-133 and thirty fives genotypes ie R-4221, R-4229, R-4230, R-4232, R-4233, R-4235, R-4238, R-RLC-92, TA-32, R-4235, R-4236, R-4237, R-4238, R-4239, R-4240, R-552, IA-32, R-4226, R-4227, R-4229, R-4231, R-4233, R-4234, R-4227, R-4229, R-4230, R-4231, R-4232, R-4234, R-4235, R-4236, R-4239, R-4240, R-552, IA-32 showed susceptible against bud fly. However, moderately susceptible and highly susceptible were not found. Earlier worker Prasad et al. (2004), Pal and Singh (2004) reported similar results in linseed. Biradar et al (2016) reported in intercrop (Linseed + chick pea) less bud fly infestation and Reddy et al (2013) more or less similar result in screening of linseed against bud fly.

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Table 1. Reaction of different linseed genotypes against bud fly

<table>
<thead>
<tr>
<th>Reaction</th>
<th>Linseed genotypes</th>
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<tbody>
<tr>
<td>Resistant up to 10%</td>
<td>RLC-133</td>
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<tr>
<td>Moderately Resistant ( &gt; 10-25%)</td>
<td>R-4226, R-4231, R-4234, R-4236, R-4237, R-4239, R-4240, R-552, RLC-92, RLC-133, R-4230, R-4232, R-4226, R-4233, R-4237, R-4238, RLC-92, RLC-133</td>
</tr>
<tr>
<td>Susceptible ( &gt; 25-50 %)</td>
<td>R-4221, R-4229, R-4230, R-4232, R-4233, R-4235, R-4238, R-RLC-92, TA-32, R-4235, R-4236, R-4237, R-4238, R-4239, R-4240, R-552, IA-32, R-4226, R-4227, R-4229, R-4231, R-4233, R-4234, R-4227, R-4229, R-4230, R-4231, R-4232, R-4234, R-4235, R-4236, R-4239, R-4240, R-552, IA-32</td>
</tr>
<tr>
<td>Moderately susceptible ( &gt; 50-75 %)</td>
<td>-</td>
</tr>
<tr>
<td>Highly susceptible ( &gt; 75 %)</td>
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CONCLUSION

It is concluded that the some genotypes of linseed were screened and found resistance and moderately resistance may be used for further screening of varietal trail against bud fly.

REFERENCES


