of condensed hyphae is visible in the region of apparent intermingling of the testing pair. In other cases the two reacting mycelia do not intermingle and leave a narrow somewhat wavy line separating the two mycelia at the point of contact.

Irrespective of the above visually recognizable types of reaction, the presence or absence of the clamp-connexions has been considered as the sole basis in determining the polarity and sex-groups present in *D. flavida*. No importance, has been laid on these reactions particularly on some neutral types which apparently seems to be 'antagonistic'. But this cannot be homologous with what Kaufer (1936) called 'antagonism', because the fungus (*Pleurotus coriarius* Fr.) he studied was a 'tetrapolar' species and the fungus under consideration is a 'bipolar' one according to the present compatibility test.

Dept. of Botany, SACHINDRANATH BANERJEE, Univ. of Calcutta. KANAK RANJAN SAMADDER, Calcutta. February 17, 1959.


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**A NOTE ON THE INHERITANCE OF HEIGHT IN SORGHUM**

Sorghum varieties range in height from 2 to 15 feet. The inheritance of this character was studied in India and U.S.A. to a great extent. In this paper, the experiences recorded on the inheritance of height in a cross between *Bonganilho* (*Sorghum caudatum*, Stapf AS. 4003) and *Pyru Jonna* (*S. durra*, Stapf, G. 2 Jonna) are reported.

Tallness was reported to be dominant by Karper (1932). Sieglinger (1932) also reported a single factor segregation of three tall to one dwarf in broom corn. Ayyangar et al. (1937) reported "short-early" as dominant over "tall-late". In this case segregation for internodes was reported and not for a gene that influences elongation of internodes. Quinby and Karper (1934) reported tallness as partially dominant.

At the Agricultural Research Station, Lam. crosses were made between G. 2 Jonna and AS. 4003. The behaviour of the progenies with reference to height is reported below.

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<table>
<thead>
<tr>
<th>Variety</th>
<th>Group</th>
<th>No. of Varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Height in cm.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.E.</td>
</tr>
<tr>
<td>G 2 Jonna</td>
<td>Tall</td>
<td>25</td>
</tr>
<tr>
<td>AS. 4003</td>
<td>Short</td>
<td>25</td>
</tr>
<tr>
<td>F.1 hybrid</td>
<td>Medium</td>
<td>18</td>
</tr>
</tbody>
</table>

It is seen from the above data that the F. 1 hybrids were of medium height. In the F. 2 generation, 160 plants of medium height and 58 short plants were obtained conforming to the 3 : 1 ratio.

---

<table>
<thead>
<tr>
<th>Variety</th>
<th>No. of medium height plants</th>
<th>Average height</th>
<th>No. of short plants</th>
<th>Average height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F.2 generation (observed)</td>
<td>160</td>
<td>130</td>
<td>58</td>
<td>101</td>
</tr>
<tr>
<td>Calculated on 3 : 1 ratio</td>
<td>163.5</td>
<td>54.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ X^2 = 0.29 ; P = 0.5 \]

The above data show that the character tallness is partially dominant.

As already pointed out, Ayyangar (1937) reported segregation for two types of internodal disposition. In the "short-early" plants there were on an average 10.6 internodes with *Unimodal* disposition and in the "tall-late" plants there were 16.7 internodes with bi-modal disposition. The "short-early" plants were reported to be dominant over "tall-late" plants. Int produces "short-early" plants with Unimodal disposition of internodes. In* gives rise to plants that are "tall-late" with a greater number of internodes and their bi-modal distribution.

Taking this into consideration the internodal lengths and disposition were examined in both G. 2 Jonna and AS. 4003 and the data are given in Table II.

Ayyangar et al. (1938) described three types of internodes in *Jonna*, viz., Uniform increase, Unimodal and bi-modal. According to this, the internodal disposition is of Uniform increase type in G. 2 Jonna and Unimodal in AS. 4003. The F.1 hybrids possessed plants with Uniform increase internodal disposition, revealing the dominant nature of this character over Unimodal type. In the F.2 generation, plants with longer and Uniform increase internodes produced tall plants while plants with short and Unimodal
internodes produced short plants. These preliminary studies on height and internodes reveal that (i) tallness is partially dominant, (ii) Uniform increase type of internodal disposition is dominant over Unimodal type, and (iii) the height in *Jonna* depends upon the length and number of internodes.

My thanks are due to Sri. S. Ramachandrarao, Millet Specialist, Andhra Pradesh, for the valuable suggestions offered in preparing this note.

Agricultural Research Station, C. Sreeramulu, Lam A.R.S., P.O., Guntur-2.

May 19, 1959.


LEAF-SPOT OF ROSE CAUSED BY CURVULARIA LUNATA (WAKKER) BOEDIJN

A leaf-spot disease of garden rose though not of very serious nature was commonly found at Sabour in the months of July to November in the last three years. Careful examination of the infected leaflets revealed isolated, irregular, light brown spots on the leaf surface. The spots increased in size, affected leaflets turned yellow, then started drying up and in some cases were finally shed off.

Microscopic examination of the scrapings of the spots revealed the presence of brown and mostly 4-celled conidia and cultural studies proved this to be those of *Curvularia*. Platings of the surface sterilized (in mercuric chloride, 1:1000) infected leaves of rose on potato-dextrose agar medium yielded the fungus with the colour of the mycelial colony changing from white to greenish dark. Copious conidial formation took place in 5-7 days. IntercaIary thick-walled Chlamydospores were found in many cultures.

Pathogenicity tests conducted with a single spore culture of the fungus gave positive results.

So far, in India, *Curvularia* has not been reported on rose. 1-3

The morphological and pathological characters of the fungus are described below:—

Mycelium septate, hyaline to greenish brown; Conidiophores rigid, straight or bent, 2-9-septa, olive brown, 123-205 × 4-1-6-15 μ broad. Conidia clavate, pear-shaped or elongate, straight or bent, thick-walled, 3-septate, olive-brown, third cell from base broader and darker and constriction at septa not prominent. Conidia from cultures were 24-3 × 10-7 (18-28 × 9-13) μ. Pathogenicity tests were attempted by the standard technique on rose, young and older leaves of bajra and on the male inflorescence of maize. Inoculations on rose only were successful.

The morphological and cultural characters indicate that the fungus isolated from rose is *Curvularia lunata*. 4-6

The authors are grateful to Dr. B. L. Chona, Systematic Mycologist, I.A.R.I., New Delhi, for his help in identification of the fungus and to Dr. R. H. Richhoria and Prof. N. B. Syamal for providing all facilities.

Bihar Agric. College, Sabour (Bhagalpur), A. K. DUTTA

S. M. HUSSAIN

February 2, 1959.


PARTHENOCARPY IN GUAVA INDUCED BY 'POLENN HORMONE'

Most of the naturally formed seedless or parthenocarpic fruits are produced either without pollination or pollination without fertilization. In the case of pollination without fertilization, it has been reported in some orchids, cucumber, solanaceous plants, etc., that