Journey of plant DNA Fingerprinting Services (PDFS) at CDFD

Plant DNA Fingerprinting Services (PDFS) was established at DBT’s Centre for DNA Fingerprinting & Diagnostics (DBT-CDFD), Hyderabad in September, 2016. The objectives of this division are to:

1) Analyse the purity of *Basmati* samples received from Export Inspection Council, Ministry of Commerce, Govt. of India, *Basmati* rice exporters and *Basmati* importers from India and other countries,
2) Undertake DNA Fingerprinting of cultivars and hybrids of crop plants,
3) Perform purity testing of hybrids.

So far 1033 *Basmati* samples have been analysed. DNA fingerprinting of 4 rice cultivars and seven rice hybrids was undertaken and the revenue generated was around one crore. New SSR and SNP based marker panels for *Basmati* purity testing are being generated keeping in view of the identical profiles of new notified *Basmati* varieties with that of adulterants. A method to test the purity of CMS lines used in the production of rice hybrids has been standardised which is a simple, accurate and cost-effective method and can test 20 samples at a time within 2 days.

### Number of samples received and Revenue generated from 1st April 2016 to 31st March 2020

<table>
<thead>
<tr>
<th>Year (April to March)</th>
<th>Samples received</th>
<th>Total Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basmati</td>
<td>Cultivars/Hybrids</td>
</tr>
<tr>
<td>2016-2017</td>
<td>153</td>
<td>0</td>
</tr>
<tr>
<td>2017-2018</td>
<td>134</td>
<td>0</td>
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<tr>
<td>2018-2019</td>
<td>112</td>
<td>4</td>
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<tr>
<td>2019-2020</td>
<td>622</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>1033</td>
<td>11</td>
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