



**भारतीय चावल अनुसंधान संस्थान**

(भारतीय कृषि अनुसंधान परिषद)

राजेंद्रनगर, हैदराबाद-५०० ०३०

**ICAR-Indian Institute of Rice Research**

(formerly Directorate of Rice Research)

(Indian Council of Agricultural Research)

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**Dr V. Ravindra Babu**

Director

DO/PD/ PMEC 421/AICRIP/2014

24<sup>th</sup> November, 2015.

Dear Sir,

**Sub: "RTI information on hybrid rice DNA finger printing – Regarding."**

With reference to your mail dated 20<sup>th</sup> November, 2015 on the above cited subject, the requisite information is furnished for your consideration.

Yours sincerely

**P. Ananda Kumar**

Director I/c

To,

**Dr. I.S. Solanki,**

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# ICAR-Indian Institute of Rice Research

Rajendranagar, Hyderabad 500030

**Query 1:** How many hybrid rice DNA fingerprinting testing laboratories are in India with complete address?

**Answer:** To the best of our knowledge, there are only a few NABL accredited laboratories who can undertake DNA fingerprinting of samples on a commercial basis and have legal sanction for the same. They include

- 1) Centre for DNA fingerprinting and Diagnostics, Hyderabad (Web address: <http://www.cdfd.org.in>),
- 2) National Bureau of Plant genetic resources, New Delhi (Web address: <http://www.nbpg.ernet.in>),
- 3) Central Forensic Sciences Laboratory, New Delhi (Web address: <http://india.gov.in/official-website-central-forensic-science-laboratory>).
- 4) Centre for Cellular and Molecular Biology (Web address: <http://www.ccmb.res.in>).

*The address and contact details can be obtained from the respective websites.*

**Query 2:** How many SSR markers are required for Hybrid Rice DNA fingerprinting testing, list & name?

**Answer:** To the best of our knowledge, we may require at least 6 SSR markers or more for each chromosome of rice (i.e. 72 markers or more for the entire rice genome) for DNA fingerprinting in rice. However, for accurate fingerprinting we may need to use at least 10 markers per chromosome (i.e. 120 markers for the entire rice genome). The SSR markers suggested by generation challenge project (information available online at [http://archive.gramene.org/markers/microsat/50\\_ssr.html](http://archive.gramene.org/markers/microsat/50_ssr.html)) can be used for DNA fingerprinting experiments. The complete list of SSR markers available for use in rice is given in the website <http://archive.gramene.org/markers/microsat/>.

**Query 3:** Which laboratory is the most trusted in India for DNA fingerprinting results?

**Answer:** To the best of our knowledge, the Centre for DNA fingerprinting and diagnostics, Hyderabad and National Bureau of Plant Genetic Resources, New Delhi can be considered for getting accurate DNA fingerprinting results on a commercial basis.

**Query 4:** How much similarities is required to state that they are same genetically?

**Answer:** Similarity with respect to a minimum of 98% or more marker loci can be considered as ideal.