

**भा. कृ. अनु. प. - राष्ट्रीयकेलाअनुसंधानकेंद्र**  
**ICAR - National Research Centre for Banana**  
तिरुचिरापल्ली, तामिलनाडु  
Tiruchirappalli, Tamil Nadu.

**Institute Technology Management Unit**

**ICAR - NRCB technologies available for Transfer of Technology (ToT)**

| S. No.     | Technology  | Licensing Cost<br>(In Rs)                        |
|------------|---|--|
| <b>I</b>   | <b>Crop Improvement</b>   |  |
| 1.         | Udhayam – A high yielding Pisang Awak type banana variety                       | 25000/- + Royalty of 1 % of the total sale value |
| 2.         | Kaveri Saba – Drought and saline tolerant cooking banana variety                | 25000/- + Royalty of 1 % of the total sale value |
| 3.         | Kaveri Haritha – Dual type banana (Cooking + Dessert) for backyard gardens      | 25000/- + Royalty of 1 % of the total sale value |
| 4.         | Kaveri Sugantham – A high yielding fragrant banana variety                      | 25000/- + Royalty of 1 % of the total sale value |
| 5.         | Kaveri Kalki – A dwarf pisang awak banana variety                               | 25000/- + Royalty of 1 % of the total sale value |
| 6.         | Kaveri Vaaman (TBM – 9)   | 25000/- + Royalty of 1 % of the total sale value |
| 7.         | Kaveri Kanchan – A Nendran type dessert banana                                  | 25000/- + Royalty of 1 % of the total sale value |
| 8.         | Inter-specific ornamental banana hybrids (Each)                                 | 25000/- + Royalty of 1 % of the total sale value |
| 9.         | New generation tissue culture system for banana propagation – SERV (Bioreactor) | 15,00,000/-                                      |
| 10.        | Bubble type bioreactor for upscaling of embryogenic cell suspension             | 1,00,000/-                                       |
| 11.        | Bioreactor technology (For ICAR Institutes)                                     | 4,00,000/-                                       |
| 11.        | Nursery technology for macro propagation of banana                              | 25,000/-   |
| 13.        | Variety specific tissue culture protocols for commercial banana varieties       | 50,000/-   |
| 14.        | Low cost tissue culture protocol for commercial banana varieties                | 50,000/-   |
| <b>II</b>  | <b>Crop Production</b>  |  |
| 1.         | Banana Sakthi - Micronutrient mixture   | 3,00,000/-                                       |
| <b>III</b> | <b>Crop Protection</b>  |  |
| 1.         | A simple, rapid and solvent free nucleic acid extraction protocol               | 25,000/-   |

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|   | for detection of banana bunchy top virus   |   |
| 2.                                      | Ready to use ELISA kit for simultaneous detection of BBrMV and CMV in banana samples   | 90,000/-  |
| 3.                                      | Ready to use Indirect ELISA kit for detection of cucumber mosaic virus in banana samples   | 50,000/-  |
| 4.                                      | Ready to use Indirect ELISA kit for detection of banana bract mosaic virus in banana samples   | 50,000/-  |
| 5.                                      | LAMP based diagnosis of Cucumber Mosaic Virus (CMV)  | 50,000/-  |
| 6.                                      | LAMP based diagnosis of banana streak MY virus (BSMYV)   | 50,000/-  |
| 7.                                      | Lateral Flow Immuno Assay (LFIA) strip or immuno strip kit for onsite detection of banana bract mosaic virus                                 | 90,000/-  |
| 8.                                      | PCR based technology for the detection of banana bunchy top virus (BBTV)   | 50,000/-  |
| 9.                                      | PCR based technology for the detection of banana streak MY virus (BSMYV)   | 50,000/-  |
| 10.                                     | RT-PCR based technologies for the detection of banana mosaic caused by cucumber mosaic virus (CMV)   | 50,000/-  |
| 11.                                     | RT-PCR based technologies for the detection of banana bract mosaic caused by banana bract mosaic virus (BBrMV)                               | 50,000/-  |
| 12.                                     | Triple antibody sandwich ELISA (TAS-ELISA) kit for detection of banana bract mosaic virus (BBrMV)<br>* Includes 1 TAS – ELISA kit for BBrMV. | 90,000/- + Royalty @ 1 % of the testing charges |
| 13.                                     | Triple antibody sandwich ELISA (TAS-ELISA) kit for detection of cucumber mosaic virus (CMV)<br>* Includes 1 TAS – ELISA kit for CMV          | 90,000/- + Royalty @ 1 % of the testing charges |
| 14.                                     | Consortia of microorganisms for the management of postharvest diseases in banana   | 50,000/-  |
| 15.                                     | Consortia of bioagents for the management of Fusarium wilt disease in banana   | 2,00,000/-                                      |
| 16.                                     | Consortia of native antagonistic microbes for the management of eumusae leaf spot disease in banana  | 1,00,000/-                                      |
| 17.                                     | Farm level production of biocontrol agents   | 25,000/-  |
| 18.                                     | Banana bio-stimulant for improved growth and yield   | 2,00,000/-                                      |
| 19.                                     | Kaveri Microbial Consortia (KMC)   | 50,000/-  |
| 20.                                     | Banana Weevil Killer   | 50,000/-  |
| <b>IV</b>                               | <b>Post-Harvest Technology - Option - 1</b>  |   |
| <b>Technologies for fresh produce</b>   |  |   |
| 1.                                      | Post-harvest handling, packing, storage and ripening of banana for Domestic and Export Markets   | 50,000/-  |
| 2.                                      | Technology for handling leaf for domestic and export markets   | 25,000/-  |
| <b>Technologies using unripe banana</b> |  |   |
| 1                                       | Minimal processing of banana slices, flower, central core stem and rhizome   | 30,000/-  |
| 2                                       | Low fat fortified & flavoured chips  | 25,000/-  |
| 3                                       | Process for making banana grits/ Suji and flakes   | 25,000/-  |

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| 4  | Banana flour-based weaning (Baby) food / health mix / drink/ Nutri-bar  | 25,000/- |
| 5  | Banana flour-based low glycemic prebiotic extruded snacks like noodles, pasta & prebiotic cookies.  | 25,000/- |
| 6  | Extraction of banana starch & starch modification / Resistant starch rich bakery and confectionary products like bread, pizza and cookies | 50,000/- |
| <b>Technologies using ripe banana</b>                                |   |          |
| 1.   | Dehydrated / fortified / flavoured ripe banana fig  | 25,000/- |
| 2.   | Banana sauce & sweet chutney  | 25,000/- |
| 3.   | Banana jam & fruit pickle & other IMF   | 25,000/- |
| 4.   | Ready to serve clarified banana juice / Fortified basil seed suspended banana juice / Sip-up / Syrup                                      | 40,000/- |
| 5.   | Cost effective ripe banana powder & products  | 25,000/- |
| 6.   | Banana wine & vinegar   | 40,000/- |
| 7.   | Banana based low fat flavoured yogurt, probiotic yogurt & desserts  | 25,000/- |
| <b>Technologies to use banana by- products like flower, stem etc</b> |   |          |
| 1.   | Low sodium banana flower, central core stem & peel pickle   | 30,000/- |
| 2.   | Banana flour and central core stem-based soup mix   | 25,000/- |
| 3.   | Central core stem Juice (Low Calorie / Fortified)   | 25,000/- |
| 4.   | Nutraceutical Banana flower-based health mix & ice cream mix  | 25,000/- |
| 5.   | Rhizome based hot extruded puffed snack   | 25,000/- |
| 6.   | Extraction of pectin, dietary fibre and cellulose   | 50,000/- |
| <b>Non-food applications</b>   |   |          |
| 1.   | Extraction and softening of banana fibre for handicrafts, making plates and bagasse products  | 50,000/- |
| <b>Post-harvest technology - Option - 2</b>                          |   |          |
| <b>Technologies using unripe banana</b>                              |   |          |
| 1.   | Extraction of banana starch & starch modification   | 25,000/- |
| 2.   | Banana Resistant starch rich bakery and confectionary products like bread, pizza and cookies  | 25,000/- |
| <b>Technologies using ripe banana</b>                                |   |          |
| 1.   | Ready to serve clarified banana juice   | 25,000/- |
| 2.   | Fortified basil seed suspended banana juice   | 30,000/- |
| 3.   | Banana clarified juice-based Sip-up / Syrup   | 30,000/- |
| 4.   | Banana wine   | 30,000/- |
| 5.   | Banana vinegar  | 30,000/- |
| <b>Technologies to use banana by- products like flower, stem etc</b> |   |          |
| 1.   | Minimal processing of banana flower   | 25,000/- |
| 2.   | Minimal processing of banana central core stem  | 25,000/- |
| 3.   | Minimal processing of banana rhizome  | 25,000/- |
| 4.   | Low sodium banana flower pickle   | 25,000/- |
| 5.   | Banana central core stem pickle   | 25,000/- |

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| 6. | Banana peel pickle                                 | 25,000/- |
| 7. | Extraction of banana peel pectin                   | 25,000/- |
| 8. | Extraction of dietary fibre from central core stem | 25,000/- |
| 9. | Extraction of cellulose from banana fibre          | 25,000/- |

**Note**

1. The mentioned cost is exclusive of 18% GST.
2. 10% reduction will be given while taking any two technologies together. Beyond that additional 5% off will be given for the technology.
3. The licensing fee is exclusive of boarding & lodging expenses.
4. 2-3 three persons / representatives from the client is allowed
5. The clients need to submit proper supporting document to get the opt licensing fee

**Each ToT includes,**

1. The duration of the ToT is two days and it will vary based on the technology
2. Licensing agreement with the validity of three years
3. Training certificate
4. Technical support of NRCB scientists for one year as per the agreement terms
5. Technical manual with detailed process flow chart, business plan, machinery requirement etc
6. Permission to use ICAR-NRCB registered trademark as per the licensing agreement terms

**Please send the duly filled ToT application along with the transaction details to [director.nrcb@icar.gov.in](mailto:director.nrcb@icar.gov.in) with a copy to [itmu.nrcb@icar.gov.in](mailto:itmu.nrcb@icar.gov.in) / [hoa.nrcb@icar.gov.in](mailto:hoa.nrcb@icar.gov.in) to schedule the ToT.**

## **FEES PAYMENT METHODS**

### **1. DEMAND DRAFT (DD)**

The ToT fees pertaining to the selected/chosen technology/technologies may be remitted in the form of demand draft drawn in favor of “**ICAR Unit, NRCB, payable at Tiruchirappalli**”.

### **2. ONLINE PAYMENT**

#### **SBI A/c details of ICAR - NRCB (Net banking: RTGS/NEFT)**

|                               |   |   |
|-------------------------------|---|---|
| i) Name of the Account holder | : | ICAR UNIT-NRCB, Trichy  |
| ii) Bank Name                 | : | STATE BANK OF INDIA   |
| iii) Branch Name              | : | Tiruchirapalli  |
| iv) Complete Postal Address   | : | 21, 7, Mac donalds Road, Cantonment,<br>Tiruchirapalli - 620 001. |
| v) Telephone No               | : | 0431-2414525  |
| vi) Bank Account Number       | : | 10848468903   |
| vii) Type of Account          | : | Current Account   |
| viii) IFSC code               | : | SBIN0000930   |
| ix) 9 digit MICR code         | : | 620002002   |
| x) SWIFT Code                 | : | SBININBB467   |
| xi) GST No                    | : | 33CHEI10949B1DY   |

### **3. UPI PAYMENT**

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MERCHANT NAME: ICAR UNIT NRCB  
UPI ID: ICARUNITNRCB@SBI

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**SCAN & PAY**





# ICAR - National Research Centre for Banana

Tiruchirappalli - 620102, Tamil Nadu

## ToT Application Form

Name of the Technology :  
Medium of Instruction (option) :  
(Tamil/English/Hindi/Malayalam)  
Name of the Applicant/Sponsor :  
Occupation :  
Educational qualification :  
Address for the Correspondence :  
(Including mobile No. and E - mail id)  
Purpose for undertaking ToT :  
Experience in the field, if any :

### **Fees remitted details**

DD No. / Transaction ID / UPI..... Dated..... for Rs.....

**Place:**

**Date: Signature**

Please send the duly filled application along with the transaction details to [director.nrcb@icar.gov.in](mailto:director.nrcb@icar.gov.in) with a copy to [itmu.nrcb@icar.gov.in](mailto:itmu.nrcb@icar.gov.in) / [hoa.nrcb@icar.gov.in](mailto:hoa.nrcb@icar.gov.in) to schedule the ToT.

**For further details please contact the undersigned**

**The Director**  
ICAR - National Research Centre for Banana  
(Indian Council of Agricultural Research)  
Thayanur (P.O.), Thogamalai Road,  
Tiruchirappalli - 620 102, Tamil Nadu.