
GENERAL INFORMATION AND FORMAT

*(FOR SUBMISSION OF PROJECT PROPOSALS
FOR FINANCIAL ASSISTANCE)*

SUSTAINABLE & INNOVATIVE TECHNOLOGIES IN AGRICULTURE (AGRO-TECH)

Under the Scheme

TECHNOLOGY DEVELOPMENT PROGRAMME



GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF SCIENCE & TECHNOLOGY
TECHNOLOGY BHAVAN, NEW MEHRAULI ROAD,
NEW DELHI – 110 016

(Last Date of online submission of Proposal - 15:03.2019)

GENERAL INFORMATION

The Department of Science & Technology (DST) under its Technology Development Programme (TDP) has been promoting and supporting activities related to indigenous development of selected technologies in the country. During recent past, DST has supported the development of many technologies at various R&D institutions. This has resulted in development of various technologies and subsequent transfer of know-how to various production agencies for their commercial production.

In line with Honorable Prime Minister's call for doubling the income of farmers, it has been decided to give a **Specific Call** for **Agro-Technology Development** related Projects with aim to generating knowledge, technologies, products or processes related to agriculture and allied sectors. These advanced technologies may enhance innovation of products, processes and practices across the agriculture. Project should help primary producers increase yields, reduce costs, manage risks, benchmark performance and/or exploit opportunities in the supply chain or markets to increase returns.

(Under this specific call for proposal, 70% focus will be on Agro-Tech projects and 30% focus will be on Generic Technology Development Projects)

IDENTIFIED AREAS FOR CALL FOR PROPOSAL:-

A. Agro-tech:-

Following areas have been identified and project proposals may be submitted for development of **Sustainable & Innovative Technologies in Agriculture** in the following areas: -

- ❖ Development of advanced production technology;
- ❖ Development of rural resource management strategies;
- ❖ Food Processing technologies or devices;
- ❖ Pre-processing technologies on land management
- ❖ Farm mechanization;
- ❖ Post harvest management, storage and processing
- ❖ Technology for Agribusiness and marketing of produces
- ❖ Development of Sensor based applications in agriculture/ irrigation.
- ❖ Technology in agriculture infrastructure
- ❖ Technologies for Pesticide Management
- ❖ Technologies for Prevention of lodging losses in crops
- ❖ Technologies for Agri-residue Management
- ❖ Technologies for reducing on-farm loss of pre Management
- ❖ Technologies for Agri-Product Transport
- ❖ Precision Farming Technologies
- ❖ Net house cultivation

B. Generic Technology Development Projects with specific applications:-

- ❖ Technology Development in association with an industry/ user agency.
- ❖ Laboratory scale demonstration of a process/ device
- ❖ Pilot plant demonstration for techno-economic analysis with industry
- ❖ Development of a technology of societal importance
- ❖ Field level demonstration of technology for social acceptance
- ❖ Development of a cutting-edge technology relevant to specific industrial sector

WHO CAN SUBMIT PROJECT PROPOSALS

The Project Proposal could be submitted for financial support by Scientist/Engineers/ Technologists working in Universities and other Academic institutions; R&D institutions/ laboratories having adequate infrastructure and facilities to carry out R&D work.

Financial support is provided only for temporary staff salaries, equipment (if necessary, and not available with PI's Institute), consumables, domestic travel and other miscellaneous items. No support is provided towards basic infrastructure, buildings and International travel. The investigators/ R&D Group must have adequate experience and expertise in the relevant area of proposal. The proposals should be based on innovative technologies/ ideas. Proposals should have specific, concrete, quantifiable objectives. Results of ongoing and completed projects of the PI must be reflected while the formulating new proposals.

PROCEDURE FOR SUBMISSION OF PROJECT PROPOSALS

Application will be accepted only through online mode of project submission (www.onlinedst.gov.in). Soft copy of the project proposal along with requisite/supporting documents should be submitted in the enclosed format. Please ensure that following documents have been completed and attached in the proposal.

- i. Certificate from the investigator; and
- ii. Endorsement from Head of the institution on Letter Head

Application received without above documents/with incomplete information will not be entertained.

NO HARD COPIES REQUIRED.

Any query/correspondence regarding the above Call for Proposal may be sent to the following address:

Dr. Neeraj Sharma

Advisor & Head

(Technology Development & Transfer Division & Policy Research Cell)

Department of Science & Technology

Ministry of Science & Technology

Room No. 1-B, Main Building

Technology Bhawan, New Mehrauli Road

New Delhi – 110 016

(Telefax: 011 -26862512)

Email: neerajs@nic.in

and

Dr. Akhilesh Mishra, Scientist D, (Technology Development & Transfer Division & Policy Research Cell) (Email: akhilesh.mishra@nic.in, Tel: 011-26590-254)

POINTS TO BE KEPT IN MIND WHILE SUBMITTING PROJECT PROPOSALS:

1. Involvements of industries

It is envisaged that the end product of development shall be transferred to industries for commercial production. Hence it is desirable that industry (s) may be associated with project right from the beginning with defined participation in technical terms.

As far as possible the proposed device/technology should have sufficient users in the country and there should be adequate demand for the product.

2. Project Duration

The projects should be time-bound normally for duration of 2-3 years depending upon the device/technology to be developed.

3. Monitoring of the Project

Implementation of the projects is monitored regularly through Progress Reports, Financial Statements and Committee of Experts in Group review meetings and onsite as well.

INSTRUCTION FOR FILLING UP THE PROFORMA

1. Please use papers of A-4 size (21 cms x 29 cms).
2. Please type as per the layout given in the format.
3. Please do not skip reproduction of any section even if the answer is “nil” or given elsewhere.
4. Project title should be precise and should not exceed normally 20 words within two lines.
5. Expected total duration of the project should normally be 18-24 months.
6. If project is to be executed by more than one institution /States and /or requires regular inputs from other scientists, names of collaborating institutions/scientists/State S&T Councils may be listed.
7. Use telegraphic language to the maximum extent possible for objectives, work plan, methodology, expected outcome etc.

PROJECT PROPOSAL
FOR CONSIDERATION UNDER
TECHNOLOGY DEVELOPMENT
PROGRAMME (TDP)

PROJECT TITLE: _____

Nature of Project:-

A. Agro-Tech

B. General Technology Development Program

SUBMITTED BY

(Name of Principal Investigator)

(Name and Address of the Organisation)

(Date of Submission)

**FORMAT FOR SUBMISSION OF PROPOSAL
FOR SUPPORT
UNDER
TECHNOLOGY DEVELOPMENT
PROGRAMME (TDP)**

CONTENTS

S.No	ITEMS	Page No(s)
1	Cover Letter	
2	Project Summary	
3	Detailed Project Proposal	
4	Bio-Data of the Principal Investigator/ Co-Principal Investigator	
5	Budget Estimates	
6	Undertaking from the Principal Investigator	
7	Endorsement from Head of the Organization	
8	Endorsement from Collaborating Industry/ Agency, if any.	

2. PROJECT SUMMARY

- 1. Project Title:**
- 2. Nature of project (refer 3.3):**
- 3. Principal Investigator: (Name, Designation and Affiliation)**
- 4. Collaborating Agencies/Industries (if any):**
- 5. Duration (max upto 2 years):-**
- 6. Total Budget:**
 - 5.1 DST Share:**
 - 5.2 Collaborators' Share:**
- 7. Objectives (*In bullet form*):**
- 8. Innovative Elements/Components of the Project:**
- 9. Outcome/ Deliverables and their Expected Impact (*In bullet form*):**
- 10. Target Beneficiaries:**
- 11. Brief Technical Details (*300 words*), giving Justifications for the Project, the underlying Scientific Basis and the Methodology:**
- 12. Cost Benefit (C-B) Analysis)/ Cost-Economic Analysis Report:**
- 13. Role of Industry:**
- 14. Technical specifications of the final deliverables:**

3. Detailed Project Proposal

1. Title of the Project:

“ _____ ”

2. Principal Investigators: (Name, Designation and Affiliation)

	PI	Co-PI
Name:		
Designation:		
Address:		
Mobile No:		
Telephone No:		
E-mail:		
Date of Birth:		
Age:		

3. Nature of the Project *(please mention the area):*

A. Agro-Tech
1. Development of advanced production technology
2. Development of rural resource management strategies
3. Food Processing technologies/devices
4. Pre-processing technologies on land management
5. Farm mechanization
6. Post harvest management, storage and processing
7. Technology for Agribusiness and marketing of produces
8. Sensor based applications in agriculture/ irrigation
9. Technology in agriculture infrastructure area
10. Technologies for quick composting of agri-residues
11. Technologies for agri-residue management
12. Any other (Please specify):

B. Technology Development
1. Technology Development in association with an industry/ user agency.
2. Laboratory scale demonstration of a process/ device
3. Pilot plant demonstration for techno-economic analysis with industry
4. Development of a technology of societal importance
5. Field level demonstration of technology for social acceptance
6. Development of a cutting-edge technology relevant to specific industrial sector
7. Any other (please specify):

4. Duration of the project:- (upto 24 months only)

5. Names of participating Organizations with their addresses

6. Objectives of the Proposal *(precise and preferably quantified process parameters/ product specification etc. in the bullet form):*

6.1 Overall Development Objectives

6.2 Intermediate Objectives *(corresponding to each milestone)*

7. Fulfillment of Technology Qualifiers' Criteria:-

Please mention if the proposal is

based on established R&D outcome/ results	
conforming to national/ international specifications	
potentially useful, demand driven and required by other agencies and users	
a development of technology for multiple applications	
an adaptation of existing technology for its applications other than originally intended	
meeting a critical national need (present/ future) and strengthening technological capabilities for the same	
an application of advanced science and technology with a promise of giving competitive solutions	

8. Cost Benefit (C-B) Analysis)/ Cost-Economic Analysis Report:-

9. Role of Industry (If any):-

10. Origin and Justification of the Proposal:-

a. *(Please justify based on the identified Qualifiers' criteria)*

11. Summary Outline of the Project *(with Schematics, where possible; Define the Problem and give technical details)*

12. Expected Outcome in Physical Terms:-

- a. New/ Upgraded Product
- b. New/ Upscaled Process
- c. New/ Upgraded System
- d. Services (excluding Software)
- e. Feasibility Analysis
- f. Any other

13. Targeted Specifications of the Expected Outcome:-

14. Deliverables of the Project *(precise and in bullet form):-*

15. Methodology

(Please highlight how success in the project execution will be ensured)

16. Milestones with Dates, Work Elements for each and the Organisation responsible for each Work Element

S. No.	Milestone	Target Date	Work Elements	Responsible Organisation
			1. 2.	
			1. 2.	
			1. 2.	

17. Work Plan

(Provide a bar chart giving project activities and milestones. Highlight milestones)

18. Bench Marks to be achieved (In quantitative terms):

19. Novelty/uniqueness of the proposal (not more than one page):

20. Gaps to be covered through proposed work with special reference to the proposal:

21. Critical Review of latest Status of the Technology (minimum 2 pages each & with complete references):

21.1. National Status Review

21.2. International Status Review

22. Justification with reference to current status (in terms of technical/economic/societal aspects):

23. Summary of the Project (with Schematics, where possible; Define the Problem and give technical details)

24. Deliverables (To be precise and quantified in bullet form)

25. Methodology to be adopted (Please include flow sheet if applicable)

26. Budget for the Project

(Amount in Lakhs Rupees)

S. No	ITEM	DST Share	Other Agencies' Share
Total			

27. List of Equipment with Cost. Requested from DST:-

28. List of the equipment available with the PI's Lab for utilization of the project activities (Furnish Project issue No. along with project sponsoring authority):

29. Techno-economic analysis of the project:

30. Bar Chart /PERT-Chart (Graphical representation of the above activities):

31. Items for Outsourcing (if any):

S. No.	Item	Justifications	Agency from which outsourcing to be made	
			First Year	Second Year
1.				
2.				
3.				

32. Names and addresses of 05-10 subject Area Experts(Indian/ regional basis with telephone no. and e-mail):-

33. Any other Information relevant to the Project Proposal and its Execution

34. Names and addresses of persons/institutions (10-15) interested in the outcome of the project:-

4. BIO-DATA OF THE PRINCIPAL INVESTIGATOR

(Note: Similar detailed bio data should also be filled up for Co-PI's)

1. Name:-

2. Gender:-

Male Female

3. Date of Birth:-

Age:-

4. Designation & Affiliation:-

5. Postal Address:-

6. Phone/ Mobile Numbers:-

7. E-mail ID:-

8. **Qualifications** (starting from University Level)

S.No.	Degree	Institution	Year

9. **Employment Experience**

S.No.	Position and Organisation	Nature of Job	Period

10. **List of Publications** (strictly for the last 5 years only with complete references)

10.1 Journal Publications

10.2 Conference Presentations

11. **Patents filed/granted with details** (strictly for the last 5 years only with complete references)

12. **Books published /Chapters contributed** (strictly for the last 5 years only with complete references)

13. **Awards/Recognition, if any:**

14. Sponsored Research Projects as PI (strictly for the last 5 years only with complete references)

S. No	Title	Sponsoring Agency	Period		Amount (Rupees in lakhs)	Achievements
			From	To		

15. Consultancy Projects (strictly for the last 5 years only with complete references)

S. No	Title	Sponsoring Agency	Period	Amount (Rupees in Lakhs)

15. Sponsored Research/ Consultancy Projects submitted for approval.

S. No	Title	Agency to whom submitted	Duration	Date of Submission	Amount (Rupees in Lakhs)

16. Experience of Technology Development and Transfer (patent filed/granted), if any (strictly for the last 5 years only with complete references).

(Amount in Rupees in Lakhs)

S.No	Item	1 st Year		2 nd Year		Total	
		DST	Collaborator*	DST	Collaborator*	DST	Collaborator*
1.	Manpower						
2.	Consumables						
3.	Contingency						
4.	Travel						
5.	Permanent Equipment						
6.	Overhead Charges						
	Total						

Grand Total:

DST SHARE:

COLLABORATORS' SHARE:

* Give Financial Contributions of each Collaborator separately.

Budget for Salaries (DST Component)

Designation	Qualification	Salary per month	Number of Persons	Amount (Rupees in Lakhs)	Justification

Budget for Salaries (Collaborator's Component)

Designation	Qualification	Salary per month	Number of Persons	Amount (Rupees in Lakhs)	Justification

2.2. Consumables

Budget for Consumable Materials (DST Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	Total	Justification including the basis of cost estimates/quotations

Budget for Consumable Materials (Collaborators' Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	Total	Justification including the basis of cost estimates/quotations

1 st Year	2 nd Year	Total	Justification including the basis of cost estimates

Budget for Contingencies (Collaborators' Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	Total	Justification including the basis of cost estimates

2.4. Domestic Travel*

Budget for Domestic Travel (DST Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	Total	Justification; indicating (journeys, mode and class of t transport)

(*) No foreign travel is permitted under DST grants. Class and mode of transportation should be as per the entitlement of the concerned staff in the Organisation. Travel component of visits of the Project Review Committee would be added by DST separately in the Project cost)

Budget for Domestic Travel (Collaborator's Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	Total	Justification; indicating (journeys, mode and class of t transport)

Description of Equipment	Foreign/Indigenous	Unit Landed Cost (CIF + Custom Duty+ others)	Number of Items	Total (Rupees in Lakhs)	Justification in relation to Project requirement

Budget for Permanent Equipment (Collaborator's Component)

Description of Equipment	Foreign/Indigenous	Unit Landed Cost (CIF + Custom Duty+ others)	Number of Items	Total (Rupees in Lakhs)	Justification in relation to project requirement

* A List of equipment and facilities available to the investigators and **relevant to the project** should be provided separately.

6. UNDERTAKING FROM THE PRINCIPAL INVESTIGATOR

Project Title: “ _____ ”

1. I have carefully read the terms and conditions of the Technology Systems Development Programme and I agree to abide by them.
2. I have not submitted this or a similar Project Proposal elsewhere for financial support.
3. I shall ensure that no item/equipment shown available in the Project Proposal from my Organisation, shall be purchased under the Project.
4. I undertake that idle capacity of the permanent equipment procured under the Project will be made available to other users.
5. I have enclosed the following:
 - a. Endorsement from the Head of the Organization *(on letter head)*
 - b. Endorsement from the Collaborating Industry/Agency
 - c. Project Proposal complete in all respect.

Principal Investigator:	Name
	Signature
	Date:
	Place:

7. ENDORSEMENT FROM HEAD OF ORGANISATION

(On the official letter-head)

Project Title: “ _____ ”

Cost:

Duration:

1. Affirmed that the Organisation welcomes the participation of Dr./Mr./Ms. as the PI and Dr./Mr./Ms. as the Co-PI for the Project and that in the unforeseen and legitimate event of discontinuation by the PI, the Co-PI will assume full responsibility for completion of the Project. Information to this effect, endorsed by me, will be promptly sent to DST
2. Affirmed that the equipment and basic as well as other administrative facilities as per the terms and conditions of the award of the Project, will be made available to the Investigator(s) throughout the duration of the Project
3. The Organisation shall ensure that the financial and purchase procedures are followed as per the prevailing norms of the Organisation, within the allocated budget.
4. The Organisation shall provide timely the Statement of Expenditure and the Utilization Certificate of the Funds under the Grant as required by DST in the prescribed format and all interests and other earnings against released Grant shall be remitted to Consolidated Fund of India (through Non-Tax Receipt Portal (NTRP), i.e. www.bharatkosh.gov.in), immediately after finalization of accounts, as it shall not be adjusted towards future release of Grant.

**(Head of Organisation)
Seal/Stamp**

Date:

Place:

8. Endorsement from collaborating Industry/ Agency

(On the official letter- head)

I have gone through the Project Proposal entitled..... submitted by *(Name of PI)* of *(Name of the Organisation)* for DST funding and noted the obligations and responsibilities indicated in our name as stated below:

Kindly be specific vis-à-vis your collaboration with the PI in terms of:

1. Contribution in financial terms *(Rupees in Lakhs)*
2. Contribution in kind *(List activities)*

I hereby affirm that my Organization/Industry is committed to participate in the Project to the full extent as indicated in the Project Proposal including the financial liabilities accruing there from as detailed above. A summary profile of my Organization is given below:

Name of Organization:

Nature of Business:

Number of Employees:

Annual Turn-over:

DSIR's In house R&D facility recognition No. (if any):

The Annual Report for the preceding financial year is enclosed.

(Head of the Industry/Agency)
Seal/Stamp

Date:

Place: