Department of Biotechnology

(Ministry of Science & Technology, Government of India)

Mission Programme on Biotech-Krishi Innovation Science Application Network (Biotech-KISAN)

India's Farmers Partner with Indian and Global Best in Science for India's Future

1. INTRODUCTION:

Scientists work on problems that interest them. The world faces enormous challenges with large populations, diminishing resources and the consequences of climate change. Scientist are eager to address these problems and find implementable solutions but need to develop a close connect with society for the best solutions to emerge. One very difficult challenge is sustainable food security for all. Over the years, agriculture productivity of the country has been severely affected in both quality and quantity. The main reasons affecting productivity are:

1. **Water:** drought, flood, availability and poor quality are major issues.
2. **Soil**: poor soil health, lack of application of modern technologies in agriculture due to lack of knowledge and awareness, abiotic and biotic stress due to climate change,
3. **Seed:** lack of availability of quality agricultural planting material at affordable cost to small and marginal farmers,
4. **Market**: collapse of extension system for dissemination of new technologies among farmers, lack of use of available bio-resources at farm / village level for proper nutrient management and processing, packaging and marketing

The problems faced by the Indian farmer are special, small land holdings are the norm, a very small number of livestock which is often the primary source of livelihood and 15 different agro climatic zones. Solutions developed in the lab, primarily in the developed world do not necessarily address the problems faced by the Indian farmer.

There is a need for direct linkage between science laboratories and farms; it is now imperative that the Indian scientist understand the problems of the local farmer and provide solutions to those problems. Likewise, it is necessary to expose farmers to the scientific solutions available by bringing him to the scientific environment/laboratory. This close interaction and need based research will allow innovative solutions and technologies to be developed and applied at farm level.

2. OBJECTIVES:

"*Biotech-Krishi Innovation Science Application Network (Biotech-KISAN)*" will be implemented in 15 agro-climatic zones of India in phased manner with the objective:

- Linking available science and technology to the farm by first understanding the problem of the local farmer and provide solutions to those problems.
- The working together, in close conjunction, of scientists and farmers is the only way to improve the working conditions of small and marginal farmers.
- This programme aims to work with small and marginal farmers especially the woman farmer for better agriculture productivity through scientific intervention and evolving best farming practices in the Indian context.

3. COMPONENTS OF THE PROGRAMME

The Programme will provide support for following three components:

***A.* The Hub:** Establishment of Biotech-KISAN Hub in each of 15 agro-climatic zones of the country under the leadership of a champion, who will act as a Facilitator. Each Hub will create a network by developing strong linkages with top quality scientific institutions / State Agricultural Universities (SAUs) / Krishi Vigyan Kendras (KVKs) / existing state agriculture extension services / system and other Farmers' organizations in the region as well as linkages with leading international institutions / organizations. Biotech-KISAN Hub will have a tinkering laboratory. The core activities of the Hub will include:

- Understanding the problems of the local farmer;
- Scouting for available technologies and solutions to problems of farmers in the region;
- Demonstration and scale-up programmes for implementing the solutions to the problems of farmers – addressing water, soil, seed and marketing issues;
- Creation of strong Scientists-Farmers Interaction Platform and connectivity; training programmes for the farmer and immersion programmes for scientists;
- Communication set up through radio and TV and connectivity through social media;
- Individual thematic fellowship programmes for selected farmers in the zone at high-tech science laboratories;
- Special solution-driven thematic fellowships to women farmers (*Mahila Kisan Biotech Fellowship*) to develop them as leaders and grass root scientists.

The hub and its facilitator will partner with at least 3 institutions / KVKs etc. and should enter into agreement with each of the collaborating partner / institution with defined contribution for achieving the envisaged objectives. *For each partner Institute, it will be mandatory to participate with the hub and its activities and for this a separate budget would be provided for each of them.*

B. Partnering Institutes: The activities of the partnering institute will include:

i. Conduct training programmes for farmers in laboratories of scientific research institutions

- Expose farmers to leading science laboratories to develop them as scientific leaders at grass root level;
- Provide solution and support to agriculture problems related to water, soil, seed, diseases and marketing issues in respective areas;
- The subject and scope of training programme will include good agriculture practices;
- The duration of the training will be 5 to 10 days;
- The small and marginal farmers having qualification of high school / intermediate, preferably in science subjects will be eligible for training. The actual cost of the training programme will be decided based on the number of trainees and the subject areas.

ii. Training programmes for scientists in agricultural farms

- The training programme or immersion of scientists in agricultural farms with a view to better understand the problems of farmers at ground level and address / implement solutions.
- The subject and scope of training programme will include study on the problems being faced by farmers in their farms related to water management, nutrient and pest / disease management, storage and marketing issues and their linkages

with already available possible solutions in science laboratories, on-farm innovative ideas and research being practiced by farmers for their agriculture problems at grass root level and their validation etc.

- The duration of the training may be 10 to 15 days.
- The scientists working in scientific institutions / State Agriculture Universities (SAUs) / KVKs will be eligible for training.

C. ***Research projects:*** If scientists during the course of these programmes identify a problem, which would require larger funding; it would be possible for them to submit the research project proposal to the Programme for additional funding. The proposal will be considered by the relevant Expert Committee / Task Force of the Programme and based on the genesis of the project and the solution hypothesised, additional funds may be provided.

D. ***International Training:***

- Short-term Training (STT) Programmes will be developed by DBT in partnership with international organisations / universities, where Farmers will be exposed to best global farm management and practices.
- Depending on the activities carried out by scientists/farmers in India; selected groups will be sponsored by DBT for international STT. The current collaborating universities are Cambridge University, UK; Wageningen University, Netherlands and others are likely to be added.

4. WHO CAN APPLY:

i) A recognized leader working in any public or private institution / university, foundation or society with a proven track record of leading the projects in the areas related to transfer and demonstration / dissemination of technologies at farmers' level and well versed with the problems of farmers at grass root level in the region in partnership with 5-8 research institution / universities.

ii) The Programme is intended for those institutions having substantial infrastructure and commitment to undertake farmers' oriented outreach programmes.

iii) The host institutions should have a functional laboratory, certificate of performance either by farmers / DSIR recognition / ICAR / Department of Agriculture and Cooperation / voluntary NGO status or recognition for service to farmers etc., successful financial and technical implementation of at least two projects funded by any government agencies related to dissemination of proposed technologies and training of large number of farmers, skill development etc. They should also have demonstrated linkages.

5. NATURE OF FINANCIAL ASSISTANCE:

A. The Hub will get financial assistance for initially 2 years of ₹ 60 lakhs per year and on the basis of a review for additional 3 years as detailed below

A. Non-recurring		
1. Minor equipment items / infrastructure	10.00	Only minor equipment items and essential infrastructure to be supported
B. Recurring		
1. Recurring cost of tinkering laboratory	10.00	Includes cost for manpower, consumables, plastic wares, etc.

2. Cost for implementing one activity at farmers' level @₹ 5.00 lakhs for each activity (minimum 4 activities in each year)	20.00	Includes cost for technology dissemination, demonstration trials,
3. Fellowship programmes for farmers (including special fellowships for women farmers)	6.00	Fellowship @₹ 10,000/- to be provided for a minimum 5 farmers including women farmers
4. Travel cost	2.00	Includes travel cost of manpower of laboratories for visit to farms
5. Farmers' Training / Workshop / Awareness Programme / Kisan Melas etc.	5.00	Includes cost for training of farmers, conducting Farmers' Workshop, Awareness Programmes, Kisan Melas etc.
6. Contingencies	2.00	Includes cost for stationary, publicity, printing etc.
7. Communication Cell	5.00	Includes cost for radio, TV communication, internet, laptop, mobile sets etc.

B. For each partnering institute: Budget for each collaborating institution / KVKs etc. ₹ 5.00 lakhs per year for each specific activity as defined in the application. In addition, the following will also be provided.

For Training Programmes:

Farmers' Training Programme: Budget for each Farmers' Training Programme will be as follows:

S. No.	Head	Amount (₹ in lakhs)
1.	Honorarium for each Scientist / Trainer @₹ 5,000/- per day for 5 days (a minimum of 2 Scientists / Trainers)	0.50
2.	Travel cost of farmers and trainers including exposure visits to demonstration farms (minimum 10 farmer trainees and 2 Scientists / Trainers)	0.50
3.	Training cost for each activity @₹ 50,000/- (minimum 4 activities to be included in the training programme)	2.00
4.	Contingencies (including stationaries, printing etc.)	0.50
Total:		**3.50**

Scientists' Training Programme: Budget for each Scientists' Training Programme will be as follows:

S. No.	Head	Amount (₹ in lakhs)
1.	Honorarium for each Scientist Trainee @₹ 1,000/- per day for 5 days	0.05
2.	Travel cost of one scientist trainee	0.20
3.	Training cost for each activity in farm @₹ 10,000/- (minimum 4 activities to be included in the training programme)	0.40
4.	Contingencies (including printing etc.)	0.10
Total:		**0.75**

6. HOW TO APPLY:

Eight copies of duly filled proforma forwarded through head of institute along with Declaration Certificate (*Annexure 'A'*) should be sent to DBT.

7. Mode of Selection:

Applications will be screened by a Programme Steering and Monitoring Committee (PSMC) constituted by DBT. The decision of PSMC will be final.

8. Parameters to Measure Successful application

Application will be judged on the following parameters:

- The Facilitator: competence as judged by track record.

- The expertise of partner institutes.
- Capacity and capability of the hub and the institutes to work together towards the proposed activities.

- Complete postal address with email ID and phone/mobile numbers of Principal and coordinator for the program should be mentioned in A5 & A11 column
- Consolidated proposal having details of Hub and partners should be submitted.
- The pages should be numbered and the proposal format should be in "Times New Roman", Font Size 12 with single spacing.
- There should be no colour photographs in the proposal. The proposals should be in spiral binding as hard bound proposal is not required. The proposal should be printed back to back to save paper.
- Eight hardcopies of duly filled proforma (*Annexure 'A'*), (printed on both side and should **not** be hard bound) along-with a soft copy (in MS Word format) should be sent to the following by the closing date (***31st May, 2018***):

Dr. Mohd. Aslam
Scientist 'G'
Bioresources & Environmental Biotechnology Division,
Department of Biotechnology,
Ministry of Science & Technology,
6-8th Floor, Block 2, CGO Complex,
Lodhi Road, New Delhi – 110003
Email: aslam@dbt.nic.in

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Annexure 'A'

Proforma for submission of Application for Biotech-KISAN

SECTION-A: GENERAL INFORMATION

A-1	Name of Agro-Climatic Zone:	
A-2	Name of the organization proposed as Hub:	
A-3	Nature of the organization (Government / private institution / NGOs etc.) proposed as Hub:	
A-4	Please enclose documentary evidence in case of private institution / NGOs etc.:	
A-5	Complete Postal Address with Pin-Code:	
A-6	Name of the **Facilitator** Telephone No. with STD Code Mobile number Fax No. E-mail Website (URL)	
A-7	Name(s) and address(es) of the Principal Investigators (PIs) and the partner Institutions:	1. 2. 3. 4 .. ..
A-8	Name of Hub Facilitator/ Coordinator:	a) Designation: b) Complete Address: c) Phone: d) Email: e) Mobile No:

SECTION-B: TECHNICAL DETAILS

B.1. Brief introduction to the Hub (not more than one page; relevant web links may be provided for more details, if needed)
B.2. Brief regarding the partnering Institute (one para, not more than 120 words, each with relevant web links for related activities to be provided)
B.3. Activities to be carried out with timelines (details of the year wise activity)
B.4. Activities proposed for each of the partnering institute with timelines
B.5. Training programme calendar (for farmers at the institutes)
B.6. Training programme calendar (for scientists at the farms)
B.7. Total number of farmers to be covered under the programme (women farmers / men farmers)
B.8. Total scientists involved
B.9. The detailed CVs of Facilitator and all the PIs of partner institutions associated with the programme should be annexed with the proposal.

SECTION-C: BUDGET REQUIREMENTS

C-1. Budget for the HUB:

Amount (₹ in lakhs)

Sl. No.	Year I	Year II	Total (I+II Years)	Year III	Year IV	Year V	Total (III to V Years)
Non-recurring:							
Minor equipment items / infrastructure							
Recurring:							
Recurring cost of tinkering laboratory							
Cost for implementing one activity at farmers' level @₹ 5.00 lakhs for each activity (minimum 4 activities in each year)							
Fellowship programmes for farmers (including special fellowships for women farmers)							
Travel cost							
Farmers' Training / Workshop / Awareness Programme / Kisan Melas etc.							
Contingencies							
Communication Cell							
Total							

C.2. Budget for Each Partnering Institute not more than ₹ 5 lakhs for each activity, breakup maybe provided for the following not exceeding ₹ 5 lakhs; if more than one please clearly defined in the proposal:

Amount (₹ in lakhs)

Sl. No.	Year I	Year II	Total (I+II Years)	Year III	Year IV	Year V	Total (III to V Years)
Recurring:							
Consumables							
Travel							
Contingencies							
Travel cost							
Total							

C.3. Budget for Training Programmes: Budget maybe calculated as per the participation number and as per the provision detailed in 5B

C.3.1. Budget for Farmers' Training Programme:

Amount (₹ in lakhs)

Head	Year I	Year II	Total (I+II Years)	Year III	Year IV	Year V	Total (III to V Years)
Honorarium for each Scientist / Trainer @₹ 5,000/- per day for 5 days (a minimum of 2 Scientists / Trainers) X *numbers**							

Amount (₹ in lakhs)

Head	Year I	Year II	Total (I+II Years)	Year III	Year IV	Year V	Total (III to V Years)
Travel cost of farmers and trainers including exposure visits to demonstration farms (minimum 10 farmer trainees and 2 Scientists / Trainers) X numbers*							
Training cost for each activity @₹ 50,000/- (minimum 4 activities to be included in the training programme) X numbers*							
Contingencies (including stationaries, printing etc.)							
Total							

* *Number of Farmers' Training Programmes to be organized in each year along with timelines should be indicated in the application.*

C.3.2. Budget for Scientists' Training Programme:

Amount (₹ in lakhs)

Head	Year I	Year II	Total (I+II Years)	Year III	Year IV	Year V	Total (III to V Years)
Honorarium for each Scientist Trainee @₹ 1,000/- per day for 5 days X numbers*							
Travel cost of one scientist trainee X Numbers*							
Training cost for each activity in farm @₹ 10,000/- (minimum 4 activities to be included in the training programme) X Numbers *							
Contingencies (including stationaries, printing etc.)							
Total:							
Grand Total A+B+C:							

* *Number of Scientists' Training Programmes to be organized in each year along with timelines should be indicated in the application.*

SECTION-D: Bank Account Details *(Interest bearing Saving bank account only)*

a) Name, Designation and full address of account holder
b) Name of Bank with full branch address
c) Full Account Number
d) IFSC Code of Bank Branch
e) MICR Code of Bank Branch

SECTION-E: Declaration / Certification

It is certified that:

a) The research work proposed in the scheme/project does not in any way duplicate the work already done or being carried out elsewhere on the subject.
b) The same project proposal has not been submitted to any other agency for financial support.

c) The emoluments for the manpower proposed are those admissible to persons of corresponding status employed in the institute / university or as per the Ministry of Science & Technology guidelines.

d) Necessary provision for the scheme/project will be made in the Institute / University / State budget in anticipation of the sanction of the scheme/project.

e) If the project involves the utilisation of genetically engineered organisms, we agree to submit an application through our Institutional Biosafety Committee. We also declare that while conducting experiments, the Biosafety Guidelines of the Department of Biotechnology would be followed in toto.

f) If the project involves pre-clinical/clinical trials/experiments/exchange of biological samples etc., we will ensure that ethical clearances and other clearances (as applicable on case by case basis) would be taken from concerned ethical Committees/Competent authorities and the same would be conveyed to the Department of Biotechnology before implementing the project.

g) It is agreed that any research outcome or intellectual property right(s) on the invention(s) will be joint property of the host institution and DBT, GOI.

h) We agree to accept all the terms and conditions of DBT to be attached at the time of sanctioning of project by DBT.

i) The institute/university agrees that the equipment, other basic facilities and such other administrative facilities as per terms and conditions of the grant will be extended to investigator(s) throughout the duration of the project.

j) The Institute assumes to undertake the financial and other management responsibilities of the project.

Signature and Seal of Executive Authority of the Institution / organization

Signature and Seal of Hub Facilitator

Place:

Date: