Mapping a path for endless opportunities

The National Agricultural Innovation Project (NAIP) of Indian Council of Agricultural Research (ICAR) has initiated the setting up of 10 Business Planning and Development (BPD) units, which are funded by the World Bank, in its research institutes and State Agriculture Universities (SAU’s). BPD’s are essentially business incubation drivers designed for the agricultural sector to promote agricultural entrepreneurs or “agripreneurs” with the help of the vast R&D facilities and knowledge of Indian Council of Agricultural Research (ICAR). In order to make this initiative successful and self-sustainable, NAIP has entrusted the Agri-Business Incubator of ICRISAT with the responsibility to handhold and mentor these BPD’s through a project funded under component ICAR as the Catalyzing Agent for Management of Change in the Indian NARS. All the 10 BPD units and the Agri-Business Incubator (ABI) of ICRISAT, have joined hands to form a Network of Indian Agri-Business Incubators (NIABI).

MISSION
To enhance Agri-business Development and impacts on agriculture through co-business incubation

MESSAGE FROM THE DG, ICAR

The Indian agribusiness industry needs to see more start-up entrepreneurs for its development and we are exploring new ways to serve them through our technologies and services. To catalyze efforts in this direction, the Indian Council of Agricultural Research (ICAR) under the World Bank – aided National Agricultural Innovation Project (NAIP) has set up 10 Business Planning and Development (BPD) units in its five research institutes and five State Agricultural Universities (SAUs). The five units in ICAR are now identified as Zonal Technology Management & Business Planning and Development Units (ZTM & BPD), and will facilitate management of intellectual assets in the ICAR institutes falling in the catchment of each ZTM&BPD Unit. The five BPD Units in SAUs were identified based on their initiatives in business promotion management and technology transfer/commercialization. All the ten units are handhold and coordinated into a network by ICRISAT, Hyderabad whose agri-business incubator (ABI) had earlier taken a lead in these new dimensions. Accordingly, it is expected that the network of ten units of ICAR coordinated by ICRISAT will emerge as a single window to project the new initiatives and success stories towards outreach activities of ICAR in Public-Private Partnership mode.

Dr. S. Ayyappan
Director General (ICAR) & Secretary (DARE)

MESSAGE FROM THE DG, ICRISAT

Over the years, ICRISAT has realized the potential and importance of the involvement of the private sector in development, and it has enabled many initiatives towards encouraging innovators, mobilizing a pool of commercial technologies, with the objective of maximizing benefits to farmers. The Network of Indian Agri-Business incubators (NIABI) is a pioneering initiative in this direction. With the National Agriculture Innovation Project (NAIP) of the Indian Council of Agricultural Research (ICAR) initiating the setting up of 10 Business Planning and Development (BPD) units, ICRISAT’s Agri-Business Incubator (ABI) was entrusted with handholding and mentoring these BPDs.

The BPD units along with ABI, have joined hands to form NIABI, a network of Indian Agri-Business Incubators. NIABI will provide an excellent platform to exchange ideas, share successful experiences, identify R&D areas, and development of future partnerships.

Apart from creating a databank of indigenous agro-technologies for commercialization, identifying international agro-technologies, and creating a platform to facilitate funding to start up agri-businesses, NIABI will also be involved in capacity building of managers.

This newsletter will enhance the incubators initiative by helping nurture innovations and entrepreneurship in the field of agriculture. This will serve the larger interest of the farming community, provide them with endless opportunities and fulfil the mission of eliminating poverty and improving livelihoods in the developing countries.

Dr. William D Dar
Director General, ICRISAT
HOW WE DO IT - The Impact story

Infrastructure
• Creating a databank of indigenous agro-technologies for commercialization from ICAR and SAUs.
• Identification of international agro-technologies suitable to Indian context
• Creating a networking platform for agri-businessmen and mentors
• Creating a platform for facilitating funding to start up agri-businesses

Process
• Capacity building / training program of BI managers on new initiatives and approaches in agri-business incubation
• Promotion of agri-business incubation nationally through co-business incubation

Outcome
• Facilitate soft landing support
• Annual Incubator / Incubatee awards

• Creating a platform for facilitating funding to start up agri-businesses

Highlights of NIABI
• Faster diffusion from Labs to Land by involving all stakeholders
• More effective interventions through appropriate PPP model / systems by involving all stakeholders
• A fully vertically integrated and horizontally networked mechanism offering the total solution to entrepreneurs for agriculture development bringing together
• Technologies and research outputs as implementable projects
• Service providers and seekers to a platform for effective technology exchange
• Stakeholders for enabling them with capacity and resources
• Stakeholders to enhance their performance for creating measurable impacts on the beneficiaries.

WHAT’S INSIDE
NIABI Insights-p3
BPD Cache-p4
>Incubator in focus
>Technologies in pipeline
>Blooming business initiatives
>Events Directory
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Focus Sectors
• Agriculture
• Horticulture
• Veterinary
• Fisheries
• Dairy
• AgriEngineering
• Cotton and Jute technologies

OPPORTUNITIES IN STORE

For institutions
• Increased commercialization of technologies from the agri-institutes
• High net worthy deals of technology transfer, Exits by M&A through BPD/BI etc.
• Facilitate, commercialization of innovative agro-technologies through agri-business development benefiting the farmers
• Focused approach and strengthening of regional agri-entrepreneurial ecosystem
• Effective marketing of programs and services to clients
• Facilitate self-sustainability of BPD/BI
• Impact farm livelihoods through products and services of incubates
• Opportunity for entrepreneurs and innovators

For entrepreneurs and innovators
• One stop solution to entrepreneurial needs in agri-business
• Support services covering agriculture and allied sectors
• Regional presence as reach out strategy
• Pool of technologies that can be commercialized
• Interstate support available through Co-business incubation
• Mentoring, support, access to infrastructure and facilities
• Technology and consultancy
• Research and Development Labs and office space with built-in facilities
• Access to high-end equipment
• Conference and meeting rooms
• Facilitate funding
• Capacity building
• Agricultural land and greenhouses
INCUBATOR IN FOCUS

Anand Agricultural University (AAU)
AAU was formed out of erstwhile Gujarat Agricultural University at Anand with the support of the Government of Gujarat, to provide support to the farming community in three facets, namely, education, research and extension activities in Agriculture, Horticulture, Engineering, Product Processing and Home Science. AAU’s overall mission is to continuously promote development of sustainable growth and economic independence in rural society. AAU aims to do this through education, research and extension education.

AAU BPD launch
AAU’s business cell was launched in Delhi on 16 February 2010, to accelerate agri-business technology development for canvassing private organizations under Public Private Partnership (PPP) and creating an agribusiness environment. The BPD launch program was attended by the Directors of five ICAR units and Vice-Chancellors (VCs) of five State Agricultural Universities (SAUs). Principal Investigator BPD AAU unit, Director of Research and Vice- chancellor represented Anand Agricultural University, Anand. BPD Unit at AAU aims at-
• Providing services for R & D to potential and existing entrepreneurs for setting up their own units with services such as consulting, training and advice for contract farming.
• Promoting new technologies on the verge of completion, new varieties and hybrids of crops developed at AAU for commercialization

Technologies available for commercialization
• Continuous basundi making machine
• Anubhav liquid bio-fertilizers
• Date Palm tissue culture technology
• Biodiesel technology
• Anubhav seeds (brand name Anubhav has been registered, patented and commercialized since 2008)
• Pro-biotic cultures for dairy products
• Area specific mineral mixtures for livestock

Over 18,000 farmers have already been benefited across Gujarat by using Anubhav liquid bio-fertilizers in the year 2009-2010.

Success Stories
• Technology for manufacturing of “Probiotic Lassi” has been developed and sold to Malabar Regional Cooperative Federation, MILMA, Calicut, Kerala with the help of SASNET- Fermented Foods
• Sudha Herbal Ice cream and Sudha Calci Pro-biotic Dietetic Food technology transferred to Patna Dairy, Patna Bihar.
• IPR granted to maize varieties GM 2,3,4

Events at AAU
• A training program for potential entrepreneurs and corporates was organized by the CCPI Dr J A Patel, Research Scientist (Plant Breeding), on 22 August 2010
• A meeting was organized by the Principle Investigator Dr RV Vyas and the CCPI Mr Shabin from International Agri-business Management Institute (IABMI) for 27 participants from different countries as a part of the international trainers training on Entrepreneurship and Promotion of Income Generation Activities during 9-16 January 2010. The meeting was conducted at IABMI, AAU, Anand.
• A seminar on Protection of Plant Varieties and Farmers’ Rights (PPV & FR) was organized by the CCPI Dr J A Patel, Research Scientist (Seed Tech), in collaboration with PPV & FR authority, New Delhi on 7 April 2010 at Regional Research Station (RRS), AAU, Anand.

• BPD Unit-AAU has signed an MoU with Marshall Breeders, Nasik for the establishment of Biotechnology Research Centre at Nasik, Maharashtra, for molecular markers associated with digestibility and bio-availability of nutrients, diagnosis of various bacterial, fungal and viral diseases of poultry gut microbes.

A seminar on Protection of Plant Varieties and Farmers

Meeting organized by the Principle investigator and the CCPI Mr. Shabin
Central Institute for Research on Cotton Technology (CIRCOT), Mumbai

CIRCOT was established in the year 1924, at Mumbai, Maharashtra. CIRCOT is a unit under the Division of Agricultural Engineering of the Indian Council of Agricultural Research (ICAR). engaged in research and development activities on cotton technology. The Institute has been an acknowledged leader for over 85 years in the field of testing, standardization and development of test methods for different types of textile materials. ICAR, under the National Agricultural Innovation Project (NAIP), has set up a Zonal Technology Management and Business Planning & Development (BPD) unit at CIRCOT, Mumbai.

Technologies Available for Commercialization

Technology for particle board and cotton stalks
- Wall panelling
- Window panelling insert
- Table top
- Doors and furniture
- False ceiling
- Industrial and domestic flooring

Technology for producing biogas from textile mill waste
- Cooking gas
- Low capital investment cost technique
- Eco-friendly bio-sourcing technology suitable for adoption by SMEs

Removal of non-cellulosic constituents in cotton
- Low energy and environment-friendly process
- Reduced residual alkali
- Less water consumption

Technology to produce ZnO Nano particles
- Low cost chemical process
- Enhanced anti-bacterial activity
- Used as fillers in composites

Technology to dye cotton yarn & fabric with natural dyes
- Enhances aesthetics of handloom goods
- Minimizing pollution load
- Reduced wrinkles & quick drying

Market sensitization programs
- Market survey was conducted by ZTM-BPD-CIRCOT Unit, Mumbai to prioritize and rank the technologies available at CIRCOT. A demand assessment form was prepared with 15 technologies. The questionnaire was sent to approximately one thousand respondents across India, associated with ginning, spinning, and cotton by-products, instrument, manufacturing industries & cotton traders, directly or indirectly involved in the cotton business
- Business Development programme for CIRCOT Technologies was organized at CAI, Mumbai in August 2009 and SIMA, Coimbatore in December 2009
- Business Planning & Development Unit awareness programme was organized at Central Institute on Cotton Research (CICR), Nagpur, National Research Centre for Grapes (NRCG) Pune, Directorate of Onion & Garlic, Pune and Central Institute of Fisheries Education (CIFE), Mumbai
- ZTM-BPD Unit and ICRISAT jointly put up a stall in Indian STEPS and Business Incubators Association (ISBA) conference at New Delhi, (February 8-10, 2010) for promotion of CIRCOT Technologies.

Achievements
- A Bankable Project Proposal was prepared for MIT-CON Consultancy Services, Pune, on “Particle Board manufacturing Plant from cotton stalks.” This proposal is meant for setting up a particle board unit at Wardha District under the cooperative system.
- A Research Paper titled “Demand Assessment of Agribusiness Technologies of Cotton and its By-Products was presented at the International Conference on Agri-preneurship & Rural Development, Banaras Hindu University, Varanasi
- An auto groover machine for making helical grooves on leather rollers used in roller ginning machines was developed by GTC Nagpur. The auto grooving machine helps in cutting the grooves automatically from one end of the roller to the other end. It reduces the manpower and increases the efficiency of the ginning process and is run by 0.5 to 1Hp motors
- 2 technologies- Auto Groover machine and GinERP software have been commercialized in association with the Technology Transfer Division of CIRCOT.

Business Development programme for CIRCOT Technologies was organized at CAI, Mumbai on August 2009 and Southern India Mills Association (SIMA), Coimbatore on December 2009
**TECHNOLOGIES IN PIPELINE**

1. **INDIAN AGRICULTURAL RESEARCH INSTITUTE, IARI, NEW DELHI**
   **Pusa Hydrogel**

Pusa Hydrogel is an indigenously developed natural polymer backbone based cross-linked PAM hydrogel that absorbs water 400 times in dry weight and gradually releases water when there is a continuous dry spell, thus maintaining the soil moisture. It exhibits maximum absorbency at temperatures of 40°C– 50°C, which is characteristic of semi-arid soils. Pusa Hydrogel is stable in the soil for a year as it is less affected by salts (regarding test reports). The soil application rates are also very low (2.5 Kg per hectare) compared to Jal Shakthi, a similar product in the market (6-8 Kg/ha).

5. **ANAND AGRICULTURAL UNIVERSITY, AAU, ANAND**
   **Date Palm Micro propagation**

Date palm is cultivated through suckers. Only few suckers are produced during the lifetime of a date palm tree, which makes its propagation slow. Micro propagation of the female date palm via somatic embryogenesis was established in Medjool and Khadrawi cultivars using shoot tip explants. The plants were successfully transferred to soil conditions where they flowered and produced fruits after three years.

2. **INDIAN VETERINARY RESEARCH INSTITUTE, IVRI, IZATNAGAR**
   **Monoclonal antibody based diagnostic kits for Peste des petits ruminants (PPR) virus infection**

Peste des Petits Ruminants (PPR) is a major disease of sheep and goats in several of the Asian and African countries. For the effective diagnosis of the disease in India and other countries, two ELISA based diagnostic kits namely, competitive-ELISA and sandwich-ELISA kits, have been developed. Intensive application of such diagnostics under field conditions depends on commercial viability and sustainability of production and supply under the specified conditions. These diagnostic kits have reasonably high market demand based on 200 million small ruminant populations and high disease endemicity in India and in other Asian and African countries.

8. **JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA, JNKVV, JABALPUR**
   **Medicinal Plant Products**

JNKVV, has developed not only the promising varieties of medicinal plants, but also standardized agro-techniques and analytical procedures to determine the active ingredient besides raising of quality planting material. Products developed from medicinal plants include Jawahar Aloevera Gel, Jawahar Herbal Dye, Jawahar Aloevera Powder, Jawahar Aloe Juice, Jawahar Herbal Balm, Jawahar Herbal Oil, Aswagandha root extract, kalmegh powder

7. **BIRSA AGRICULTURAL UNIVERSITY, BAU, RANCHI**
   **TxD Piggery**

The TxD breed of pigs developed by BAU grows up to 100 kg in one year, compared to the 40 kg weight of desi pigs. This breed was developed by crossing Desi pigs with Tamworth breed from UK, and subsequent selection was made for black colour through sib mating and selection. It breeds twice in a year as compared to thrice in two years in Desi pigs. It also produces 8-12 piglets as compared to 4 to 7 by Desi breed and is tolerant to skin diseases.

Pork is common in tribal and Christian population in Jharkhand. It is cheaper as compared to mutton and is in much demand in Ranchi and other towns of State viz., Dhanbad, Bokaro, Jamshedpur and Dumka.

In this project, TxD piglets will be given to pig farmers for rearing and income generation.
3. CENTRAL INSTITUTE FOR RESEARCH ON COTTON TECHNOLOGIES, CIRcot, MUMBAI

Technology to dye cotton yarn & fabric with Natural dyes

CIRcot has standardized the natural dye making process for Indigo, Manjith, Marigold, Safflower, Laque etc. and has equipment such as HPLC and Photo Spectrometer for checking purity and depth of colouring. Spray Drying techniques are available for efficiently extracting natural dyes from natural sources as also filtration processes, which have been established for filtering unwanted foreign matter.

4. NATIONAL INSTITUTE FOR RESEARCH IN JUTE AND ALLIED FIBERS, NIRJAF, KOLKATA

Redesigned Handloom and Jute Blended Decorative Fabrics

NIRJAF redesigned the traditional handloom so jute could also be processed. Thus, NIRJAF actually ensured that the updated handloom would be suited to work with jute as well as cotton and silk. Furthermore, the final product, the jute blended decorative fabrics, are both cost efficient and environmentally friendly, in India because jute is abundantly available in certain regions of India.

6. CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL UNIVERSITY, CCSHAU, HARYANA

Milk Urea detection kit

To cash in on the public demand for more milk, unscrupulous milkman invented “Synthetic milk” consisting of vegetable fat, detergent powder and urea mixed in water containing salt. Consumption of synthetic milk damages liver, heart and kidneys and also causes swelling of limbs and impaired vision. It has serious repercussions on the export of milk and dairy products from India. The Department of Veterinary Epidemiology and Preventive Medicine has developed a kit that can detect urea in the milk right in situ. The urea in milk reacts with the indicator to produce a colored end product, which can be seen within a minute. The kit is very easy to use, economical with a long shelf life, low cost and affordable by both big dairies and the common man/housewives.

9. CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY, CIFT, COCHIN

Ready to eat fish products in Retort Pouches

Fish products in ready to consume form in flexible retortable pouches have high demand in the market. It is a highly convenient product and can be stored at ambient conditions for about one year. CIFT has developed and standardized the process for the production of fish curry/cooked fish products in different styles using overpressure autoclave. Flexible pouches are now manufactured in India employing the composition developed by CIFT

10. TAMIL NADU AGRICULTURAL UNIVERSITY, TNAU, COIMBATORE

Four Rollers Sugarcane Crusher

There are four rollers provided in this crusher compared to the three rollers in conventional crushers. Through the shafts and gear wheels, power is transmitted to the rollers that crush the cane to extract juice.

Specification:
(a) Overall dimension: 1210 x 510 x 1100 mm
(b) Capacity: 250 kg/h
(c) Power required: 7.5 hp electric motor.
BLOOMING BUSINESS INITIATIVES

TAMIL NADU AGRICULTURAL UNIVERSITY (TNAU), COMBATORE

Commercialization of new Cry gene through Bio-seed Research
India Pvt Ltd (BRI): TNAU has laid a new pathway through its co-
incubation partner, ABI-ICRISAT to the process of commercialization
by effectively enabling the research partnership between TNAU and
B R I- Hyderabad, to take up the co-product development of
commercial crops using the new gene discovered by the scientists of
university.

BPD-TNAU facilitated
development and commissioning
of Banana Fibre Extraction Unit:

This innovative machine was
developed based on the need
analysis by one of the members of
the BPD unit, Mr. Rajkumar of M/s
Emral Tune Line Auto Tech Ind. In
a brief function held at the BPD unit
on 24 August 2010, Dr. R. Ganesan-
Director, Agri-Business Development
and PI, NAIP-BPD project has handed
over the machine to Mr. Murugesan
from Melakkal Village near Madurai
who is the manufacturer and exporter
of banana fibre based products.

CHAUDHARY CHARAN SINGH HARYANA
AGRICULTURAL UNIVERSITY- CCSHAU,
HISAR, HARYANA

Liquid biofertilizers: BPD has licensed this technology to M/s
MICRO BAC INDIA. The Director
of the licensee organization was
trained in great depth about mass
marketing of the product.

Various Biofertilizers available with CCS HAU are

• Rhizobium Biofertilizers
  (Rhizoteeka) for nitrogen fixation in
different pulses and other legumes
such as moong, urd, pigeonpea,
soybean, pea, chickpea, berseem
and groundnut.

• Azotobacter Biofertilizers
  (Azoteka) to promote nitrogen
fixation in different crop plants
including vegetables, flowers and
fruits

• PSB Biofertilizers (Phosphoteeka)
  for solubilization of insoluble/ fixed
  P in the soil for all crop plants

• Biocontrol Bioinoculants for
  nematode control - Azotobactor
  HT-54 for wheat and
  Gluconacetobactor for cotton.

AWARDS AND ACCOLADES

Congratulations to

AAI, an incubatee of Agri-
Business Incubator of IC-
RISAT, received the emerg-
ing enterprise Sankalp 2010
Award in the Agriculture,
Food & Rural Business cate-
gory. AAI received the award
for its seed business venture
initiative operated in partner-
ship with ABI-ICRISAT, sup-
porting 25 entrepreneurs in
seed production.

BR Cooking Sprays
nominated as one of the 75
startups you can bet on by
DARE Magazine

Registered in 2009, the BR
Cooking Sprays company is
being incubated in ICRISAT,
Hyderabad. It aims to pack-
age vegetable oils in aerosol
cans that consumers can
spray as a thin layer on to
their cooking utensils. This
reduces the consumption of
oil while cooking, leading to
a healthier diet. The compa-
y has developed the tech-
ology to convert cooking
oils into a sprayable suspen-
sion and is currently await-
ing patent registration and
FDA clearances. BR plans to
launch different cooking oils
as sprays once the requisite
approvals are in place.
EVENTS DIRECTORY

EVENTS JOINTLY PARTICIPATED BY OUR INCUBATORS

“ICAR Industry Meet 2010” from 28th - 29th July at New Delhi

ISBA 2010 from 8th - 10th February at New Delhi

Kisan 2009 at Pune on 14th and 18th Dec 2009

ABI-ICRISAT

1. Webcasting of live seminar on “Best Practices for Agri-Startups” 2010 was conducted on 29th March 2010 at ICRISAT, Patancheru. Dr. S. Ayyappan, DG ICAR, interacted with the participants. Twenty-five entrepreneurs and innovators participated and benefited.

3. Organized a seminar on “Challenges and Opportunities in Agri- Business”, on 28 September 2010 at ICRISAT, Patancheru. Honourable speaker for the session was, Mr. Muthu, M.D of Idhayam oils.

4. “Orientation of NIABI Mentors” Program also took place on 28 September at ICRISAT, Patancheru

5. Participated in the “Power of Ideas” workshop conducted by Economic Times in collaboration with IIM Ahmadabad, on 12 July at Hyderabad. Mr. Karuppanchetty-CEO ABI, was one of the jury members for the program

6. A seminar for Agri-Startups on “IPR & Business Management” was conducted on 26 March 2010 at ICRISAT, Patancheru

7. A mentoring and review program was held at ICRISAT on 24 November 2009. A Total of 10 BPDs and 60 others participated. The program contained 10 sessions on capacity building, mentoring and networking.

8. ABI-ICRISAT participated in the National Meet on Technological Innovations in Agriculture organized by Indian Council of Agricultural Research (ICAR)- National Agricultural Innovations Project (NAIP) on 21 and 22 May, 2010 at New Delhi and showcased its new initiative, the Network of Indian Agri Business Incubators – NIABI.
1. ICAR Zonal Technology Management Unit and Business Planning and Development conducted a Meeting-cum-Workshop (North Zone -1) on March 19-20, 2010 at IARI, New Delhi. The participants numbered 105 at the workshop.
2. ZTM BPD -IARI conducted 4 Entrepreneurship Development Programs and 3 workshops. Ninety-six entrepreneurs have been trained as a part of this initiative.
3. A seminar was conducted on “Quality Seed Production – PPP” on 13 – 14 April, 2010
4. An “Industry – Institute Interface” was organized on 14 June 2010, focusing on various technologies of the North zone.

IVRI

1. IVRI ZTM BPD conducted a workshop on March 26- 27 2010, at IVRI, Izatnagar for 97 participants. This workshop exhibited zonal technologies of
   • 11 institutes in Animal Sciences
   • in Crops and Horticulture
   • in Natural Resources
   • 2 in Fisheries Science
2. Business opportunity workshop for national and international corporate houses in the field of immunobiologics was conducted on 9 July, 2010 at IVRI, Izatnagar
3. Entrepreneurship development workshop was conducted on 8 July 2010 at IVRI Izatnagar. The main areas are:
   • Commercial dairy, poultry, piggery and goat farming
   • Value added meat/milk/horticulture products technologies
   • Feed technologies
   • Fisheries
   • Veterinary first aid and Artificial Insemination Services
4. A Sensitization program on activities of ZTM-BPD was organized on 3 July, 2010.
BAU

1. A workshop was held from 17 to 21 June, 2010. There was a total number of 20 participants at the workshop. They were trained on Agribusiness development in the areas of poultry, piggery, vaccination, feed, medication, castration etc. The General Manager, NABARD and General Manager, SIDBI attended the workshop and discussed various schemes on technology viability of agribusiness projects.

The University scientists led by Dr. S.K. Singh, Dean, Veterinary Science, and the Department of Animal Husbandry official Dr. Narendra Jha were present at the training.

NIRJAFT

1. BPD NIRJAFT organized sensitization programs in the following districts and received immense response

- North 24 Paragana District (Lake Town);
- Howrah District (Basheshree);
- South 24 Paragana District (Gangasagar);
- East Midnapore District (Nandakumar);

Sensitization programs gave the BPD NIRJAFT team an opportunity to interact with prospective entrepreneurs, existing entrepreneurs and self-help groups, and to display the different products.

BPD NIRJAFT is planning to organize similar sensitization program in some other districts like Bankura, Hoogly, etc. in the near future.

7. Technology Leaders Meet and Technology road show at IVRI was organized on December 29-30, 2009 for the promotion of technologies of ZTM BPD
2. Entrepreneurial Meet

An Entrepreneurs Meet was organised in the month of July, 2010 at NIRJAFT, where all the registered entrepreneurs and distinguished guests having experience in running incubation centers were invited.

During the meet, the business manager presented shortlisted technologies of NIRJAFT. This also gave representatives of other ICAR institutes such as CARI, CIFRI, and CRRIJAF an opportunity to present their technologies.

3. BPD NIRJAFT attended a workshop on 18 June, 2010. Four ICAR institutions, registered entrepreneur’s of BPD’s participated. The workshop focused on new technologies and aspects of their commercialization in main markets. Officials from NABARD and other commercial banks also participated. They enumerated on several schemes and loans available for entrepreneurs in agriculture and allied sectors.

4. Awareness Camp

A visit for creation of awareness at Jalangi, Mushidabad, West Bengal, was organized on 10 October, 2009.

TNAU

1. Workshop on Quality Seed Production in Paddy

Under the Seed Business Venture initiative, entrepreneurs were identified in the Cauvery delta region, Balamurugan, Professor (Seed Technology), TNAU, Nagapattinam district. A one-day workshop on Quality Seed Production in Paddy was conducted on 26 March, 2010 at the Tamil Nadu Rice Research Institute (TRRI), Aduthurai, Tanjore district to provide the required exposure on seed production and motivate the entrepreneurs to run seed business ventures. Seventy-five participants attended the workshop.

2. Launch of BPD Entrepreneur Hubs

Business Planning and Development Unit-TNAU has moved forward in promoting entrepreneurship across the southern region of Tamil Nadu by launching BPD-Entrepreneurial hubs at the Agricultural College and Research Institute (A & R I), Madurai on 9 July, 2010. Shri. K.P.T. Ganesan, Chairman, Agricultural Marketing Committee, Government of Tamil Nadu was the chief guest for the function. Nearly 25 entrepreneurs participated in the function. BPD TNAU reached another milestone in promoting entrepreneurship in agriculture and allied sectors by launching the second BPD-Entrepreneurial hub at the Tamil Nadu Rice Research Institute (TRRI), on 22 July, 2010. About 80 participants from various places in the district attended the launch program. The entrepreneurial hub at TRRI will cater to the needs of entrepreneurs in the central region of the state.

3. BPD-TNAU at Farmers Day

BPD Unit-TNAU participated in the farmers’ day held on 9 and 10 June, 2010 at TNAU. This event helped the members of BPD TNAU in networking and was a platform to promote their products and services. Members of the BPD-TNAU unit- M/s Coronet Food, M/s Emral Tuneline Autotech Ind, M/s IAC Agro Inputs, M/s Eco Green Unit, displayed their products. Many business leads were generated for the members during the event.

4. Financial assistance to small and medium enterprises

TNAU-BPD facilitated financial assistance to three Small and Medium farm entrepreneurs through its Co-Business Incubation partner, ABI-ICRISAT. The beneficiaries include three small enterprises in Coimbatore ie., IAC Agro Inputs, Emral Tuneline Autotech and the Kazhi Kadai Madai Farmers Federation (a farmers’ Federation in Nagapattinam district, TN). The financial assistance was provided (under the scheme “Seed Support for Start-ups in Incubators”) by the Technology Development Board, DST, GOI to ABI-ICRISAT. IAC Agro Inputs is
involved in the development of “India Specific Sugarcane Harvester”. Emrul Tuneline Autotech Ind, a small enterprise in Coimbatore owned by Mr. Rajkumar, is involved in “Mobile Based Irrigation Automation System”. Kazhi Kadai Madai Farmers Federation, operating in Thiruvengadu village, Nagapattinam district, TN is involved in the implementation of a unique program called the “Seed Business Incubation program”.

JNKVV

1. Agri Business Development Camp was conducted on 4 September, at Jabalpur to promote agripreneurship and facilitate technology commercialization
2. Jawaharlal Nehru Krishi Vishwa Vidyalaya (JNKVV), Jabalpur launched a Business Planning & Development (BPD) Unit on 10 May, 2010. A workshop was organized and objectives of the BPD unit were highlighted. Farmers, agribusiness organizations and university scientists attended the workshop. Prospective entrepreneurs took a keen interest in commercializing agricultural technologies. Focus sectors where JNKVV would be interested in development of entrepreneurship are Seeds, Biofertilizers and Medicinal and Aromatic plants.

(Clockwise from top) Selection of incubatee for Biofertiliser technology, Certificate of Registration handed over to incubatee by the Principal Investigator of BPD, JNKVV, Members of the Bussiness Incubator with BPD and ABD-ICRISAT

CIFT

1. CIFT successfully organized an “Innovations 4 Industry” meet at Visakhapatnam, Andhra Pradesh on 8 September 2010

CCSHAU

1. University Seed linkage program was conducted on 14 September at Hisar, Haryana
2. A Market Research and Sensitization Activity was conducted by the Business Planning and Development unit on 17 June 2010 in the Hisar Region.
3. Participated in the awareness workshop for the farmers on direct seed sowing method for rice cultivation at Kurukshetra on 19 June 2010. The awareness workshop invited participation of more than 250 affluent and progressive farmers, Entrepreneurs, Scientists and staff of KVK & University and Industry representatives
4. The Farmers training centre, Punjab national Bank, Sachca Khera was visited on 23rd June 2010 with Dr D K Sharma to create awareness about the Business Planning and Development Unit. The farmers were sensitized about the Liquid Biofertilizers and crop hybrids apart from other technologies available with the university.
5. A Market Research and Sensitization Activity was conducted by the Business Planning and Development unit on Thursday 1st July 2010 in the Hisar Region.
6. A visit was conducted to Cotton Research Station Sirsa on 8 July 2010. The participants were informed about the objectives of the BPD Unit and the latest developments at various fronts in the seed production segment were discussed pertaining to the establishment of BPD unit for commercialization of the university technologies at CCSHAU, Hisar.
7. Urea in Milk Sensitization and Awareness Program was organized at Urban Estate, Hisar on 24 July 2010, in collaboration with Dainik Jagran. The event saw overwhelming response from the masses. Around 75 milk samples were tested for the presence of urea in milk from 6.30 AM in the morning till 11.00 AM
8. Urea in Milk Detection kit Sensitization and Awareness Program was organized at Sector-14, Hisar on 31st July.

UPCOMING EVENTS

1. University Of Agricultural Sciences, Dharwad, Karnataka is conducting “Krishi Mela 2010”, from 02 - 05 October, 2010 at Main campus of University of Agricultural Sciences, Dharwad.
2. Krishi Kumbh Mela will be held from 8-11, October 2010 at Panitagar
3. Info Dev “Community of Practices (COP) for Agri- business”, kickoff meeting is scheduled for 26 – 28, October 2010 at ICRISAT
4. Kisan 2010 will take place from 15 – 19 December 2010 at Pune
5. ABI-ICRISAT is organising the NIABI 2011 - ‘GLOBAL AGRI-BUSINESS INCUBATION CONFERENCE’ from 2- 5 February 2011 at ICRISAT, Patancheru
6. Villgro opened applications for its yearly business plan competition - “Wantrapreneur 2010”, focusing on start up and early growth stage Social enterprises. The application can be accessed online at www.villgro.org/wantrapreneur
7. Business opportunity workshop for national and international corporate houses in the field of immunobiologicals will be continued till April 2011, at IVRI Iznagar, Bangalore, Mumabi- Pune, NCR
8. Entrepreneurship development workshop for Small and Medium enterprises on various aspects of live-stock and agri-allied areas followed by training program will be continued till April 2011, at IVRI Iznagar, CIRG Makhdoom, CISH Lucknow, NDRI Karnal, CSWRI Avikanagar, DCFR Bhimtal
9. IP asset management and awareness camps will be conducted in various institutes of ICAR North zone II- CISH Lucknow, IVRI Iznagar, CIRG Mathura till April 2011.
10. “BURSA AGRICULTURE 2010”, is scheduled to be held from 06-10
October 2010 at Tuyap Fair, Convention and Exhibition Centre, Istanbul, Turkey

11. Small Business Development Center (SBDC) at University of Central Florida (UCF), is organizing strategy workshops for growing businesses. The workshops are

a. Strategy planning for small business on 29 September, 2010
b. Sales Strategies for small business on 13 October 2010.
For more details please visit http://www.bus.ucf.edu/sbdc/strategy2010.html

12. FOR APIN MEMBERS - Shanghai Technology Innovation Centre (STIC) and Shanghai International Business Incubation Association (IBI) is organizing the 13th International Training Workshop on Business Incubation on the topic of Business Incubator & Innovation Clusters Effect from 17-24 October 2010 in Shanghai, China. For details please visit http://www.tic.stn.sh.cn/en/13th_IBI.asp.

13. NIABI “Best Incubator & Incubatee” national award is being planned at the NIABI Annual Conference. We request all the Incubators and Incubatees to apply for the same

**SPOTLIGHT ON AGRI-BUSINESS VENTURE**

Bharath Agro Products is a venture incubated at the Tiruchirappalli Regional Engineering College - Science & Technology Entrepreneurs Park (TREC-STEP), a member and grantee of infoDev’s Global Network of Business Incubators. Bharath Agro Products is involved in the manufacture of a tractor-mounted pulverizer for collecting waste from Julie Flora, a common crop in several Indian states.

The Julie Flora (known as Karu Velam in Tamil and Babool Tree in Hindi) is a firewood tree in dry lands across India. After collecting Julie Flora’s thicker branches and stems for firewood, farmers are left with waste, such as thorns and small branches that comprise approx. 1/3 of the total crop size, on their land. This waste is then burned on the farmlands and causes pollution.

Mr. Kannappan, a mechanical engineer, and Mr. Paneerselvam, a farmer, decided to join their knowledge and skills in agricultural production practices and technologies and start their own company. Rather than leaving Julie Flora waste to burn and cause pollution, they wanted to find an innovative way for collecting and making use of this waste. Mr. Kannappan and Mr. Paneerselvam designed and fabricated a tractor-mounted pulverizer that would efficiently collect the Julie Flora waste and turn it into a product that could be sold to biomass power plants, boiler manufacturers and even kitchens of major hotels.

This a unique product in the Indian market with no direct competition, which naturally offers tremendous market potential for Bharath Agro Products. The tractor-mounted pulverizer can collect up to 5 tons of Julie Flora cut waste per day, which translates into the collection of almost 2/3 of available waste.

As a result, the innovative pulverizer prevents the potentially enormous damage done by slash-and-burn systems to the fragile environments of India’s dry farmlands, besides providing an additional supply channel for energy producers. However, the use of tractor-mounted pulverizers across these Indian states is uneven and there is still much untapped potential due to the lack of investment in this product.

The innovators rightfully claim that in their resource-poor district alone these machines have the potential to reclaim wastes worth more than Rs 50 million [approx. US$ 1.1 million] every year. There are 604 districts in India and rough estimates say that more than 150 districts have Julie Flora waste. The wealth creation potential from harvesting this waste, due to the tractor-mounted pulverizer innovation alone, is more than US$ 150 million. In addition to this, it has the potential of creating 120,000 jobs when operating at this level. Other benefits such as Carbon Offsetting to reduce carbon emissions are also significant. TREC-STEP believes that it is only a matter of time before this innovation capitalizes on its potential, resulting in wealth creation, jobs and environmental protection in rural villages.

**Call for the gurus in Agri-Business**

Network of Indian Agri-Business Incubators (NIABI) is an initiative of ICAR-NIAP coordinated by Agri-Business Incubator at ICRISAT. NIABI invites applications from the experts in agri-business to mentor start-ups in the sector. Join the movement that could change the landscape of Indian agriculture.

**Who could be Mentors?**
- Successful entrepreneurs
- Industry experts
- Technocrats
- Professionals
- Retired person/housewives etc.

**Domain Areas:** Horticulture, Agri-processing, Agri-engineering, Fisheries, Forestry, Veterinary Science and Animal Husbandry, Dairy, Textile etc.

**Functional Areas:** Marketing, Finances including microfinance, legal, IPR, consultancy, entrepreneurship development, incubation etc.

**What mentors get?**
- Tangible and intangible benefits as per the agreement.
- Recognition through awards.
- Recognition by incubatee and public for creating successful ventures.
- Shortlisted mentors will be remunerated appropriately.

Send your resume and application form by email with prescribed format available at www.abicrisat.org; to s.aravazhi@cgiar.org, with the subjectline ‘I want to be a mentor’
Incubator Address

Indian Agricultural Research Institute (IARI)
Business Planning & Development Unit
Indian Agricultural Research Institute (IARI), Pusa Campus, New Delhi-110012

Indian Veterinary Research Institute (IVRI)
Business Planning & Development Unit
Indian Veterinary Research Institute (IVRI), Izatnagar-243 122, Uttar Pradesh

National Institute of Research on Jute & Allied Fibre Technology (NIRJAT)
Business Planning & Development Unit National Institute of Research on jute & allied fibre Technology 12, Regent Park, Kolkata-700 040, West Bengal

Central Institute for Research on Cotton Technology (CIRCOT)
Business Planning & Development Unit Central Institute for Research on Cotton Technology (CIRCOT), Adenwala Road, Matunga, Mumbai-400 019

Tamil Nadu Agricultural University (TNAU)
Business Planning & Development Unit Tamil Nadu Agricultural University (TNAU), Coimbatore-641003, Tamil Nadu

CCS Haryana Agricultural University (CCSHAU)
Business Planning & Development Unit CCS Haryana Agricultural University (CCSHAU), Hisar 125004, Haryana

Anand Agricultural University (AAU)
Business Planning & Development Unit Anand Agricultural University (AAU) Anand - 388 110, Gujarat

Birsanagar Agricultural University (BAU)
Business Planning & Development Unit Birsanagar Agricultural University (BAU) Kanke, Ranchi - 834006, Jharkhand

Central Institute of Fisheries Technology (CIFT)
Business Planning & Development Unit Central Institute of Fisheries Technology (CIFT), Willingdon Island, Matsuropuri, P.O., Cochin - 682 029 Kerala

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