Biotechnological Cluster’s Strategy of Development in Kirov Region (Russia) for 2014-2015

Turulo V.N.

President of NCP “BTC”
Contents

3. Biotechnological Cluster
4. Mission of NCP “BTC”
5. The Aim of the Program of NCP “BTC” Development
6. Tasks of NCP “BTC” Development Program
7. The Main Partners of NCP “BTC”
8. NCP “BTC” Includes
9. In Order to Attract Additional Resources into NCP “BTC”
12. The Primary Directions of NCP “BTC” Activity
13. Strategic Directions of NCP “BTC” in 2014
15. NCP “BTC” Work on Realization of Projects
18. Organization Work of NCP “BTC”
19. Personnel Ensurance in Realizing NCP “BTC” Projects
22. “Milk Machines of Russkih” - the System of Constructing New Technique
23. “Milk Machines of Russkih” - Designing of Formula and Development of Technologies for Milk Functional Production
24. JSC “Marketing-Bureau”, JSC “Center of Ecological Initiatives “Press-Torf”
Biotechnological Cluster

NCP “BTC” was formed structurally in October 2008 and was registered officially in January 2009 as non-commercial partnership.

Biotechnological Cluster is a competitive interregional and interbranch group created on the initiative base including heterogeneous enterprises united by technological process in the frames of single economic strategy and using ciergetic effect by integration of materia and non-materia assets of its members.
Mission of NCP “BTC”

Creature of the system assisting to the transition from traditional economics to bioeconomics (i.e. economics based on knowledge) and guaranteeing:

- effective use organic restoring resources;
- ecological purity;
- solution of energetic and food problems;
- dynamic growing of real income of population.
The Aim of the Program of NCP “BTC” Development

Securing conditions for realizing and commercializing biotechnological projects with innovational character and promoting introduction of wasteless technologies based on the use of biomasses (resources).
1. To create information and marketing system to ensure the projects realizing in the sphere of technology;
2. To work out and introduce universal technologies ensuring completeness of conditions for realizing innovational projects;
3. To work out R&D (research and development) system meeting advanced tendencies of biotechnology development;
4. To form effective financial system to ensure realization and commercialization of projects;
5. To create system for training specialists taking into account peculiarities of realizing and commercializing projects;
6. To systematize management and organizational formation of “BTC” ensuring high efficiency of communications in the limits of realizing projects.
The Main Partners of NCP “BTC”
NCP “BTC” Includes:

- 5 State Universities;
- 3 Institutions of RASs;
- 2 Scientific-research and projective institutes;
- Engineering company;
- Laboratory of collective using;
- Consulting firm;
- 5 Scientific-industrial enterprises;
- 10 Commercial organizations.

Total: 28 organizations.
In Order to Attract Additional Resources into NCP “BTC”

A) The following associate members have joined:
- LLC “National Biotechnological Company”;
- LLC “Pharmbiomach” (t. Yoshkar-Ola);
- LLC “Thermovacuum systems” (t. Yoshkar-Ola);
- LLC “SelhozBioGaz”;
- LLC “Kostino-Agro”;
- LLC “Scientific Search”;
- RDI sovkhoz “North-East” named after Rudnitski;
- LLC “Deya”;
- LLC “Honeycarrier” (Medonos);
- LLC “Pencylight”;
- The Institute of Biology Comi ORAS (t. Syctyvkar);
- ARC kolkhoz “Zernovoy”.

In Order to Attract Additional Resources into NCP “BTC”

B) *Protocols of cooperation are signed with:*

- Pushchin scientific centre RAS;
- ANO “Belomor Biotechnological region centre” (t. Petrozavodsk);
- Business Council of Mid-Atlantic states of America (c. Philadelphia s. Pennsylvania);
- OAS “Tatpetrocheminvest-Holding” (r. Tatarstan);
- Vyatka Trade-Industrial Chamber;
- GC “ProBusiness Consulting” (t. Kirov);
- SUE RR “Rostov Regional Centre of innovational development” (t. Rostov-on-Don);
- FSUE “Vector” (c. Novosibirsk).
In Order to Attract Additional Resources into NCP “BTC”

C) A joint work is conducting with:

- TP bioenergetics and TP Biotech 2030;
- Biotechnologists company of Russia named after U.A. Ovchinikov;
- the government of Kirov region;
- the Legislative Meeting of Kirov region.
The Primary Directions of NCP “BTC” Activity

1. Bioenergetics.
2. Agriculture and forestry (the production of biomass, the health of animals and plants safety).
3. Ecology and man’s health (the purity of water, balanced food, the safety of living activity, the utilization of organic waste).
Strategic Directions of NCP “BTC” in 2014

1. Consolidation NCP “BTC” in RF and foreign social-political field, the forming of stable communications:
   - Work with foreign regional clusters;
   - Including NCP “BTC” projects into state programmes and strategy of techplatforms, working with techplatforms (biotech, bioenergetics, healthy food and others).
2. Creating the informative grounds to place publications in Media.
3. Holding the International Economic Forum “BioKirov” where the variants of realizing NCP “BTC” projects were studied.
4. Activizing the work with MinAgro, MinIndTrade RF, MinEnergo RF and MinEconomdevelopment RF.
5. Forming the propositions and structuralizing the work in the directions of creating bioeconomics.
Strategic Directions of NCP “BTC” in 2014

6. Formation of norless than 6 enterprises to realizing projects.
7. Making new horizontal connections on level of region:
   - Formation interclusteral centres in the region,
   - Joinig the system of interclusteral coordination of biotechnical processes.
8. Working at suggestions in R&D on using SWL in Kirov region.
9. Preparing additional list of projects for consideration to include into the file of projects NCP “BTC” on the base of competition “Wiser” (“Umnic”).
1. Creating the strategic grounds on developing NCP “BTC”:
   a. **medical biotechnologics**:  
      - new forms of production, forming the centre on developing home-made pharm;  
      - The centre of apitherapy and working at complex methodic for treatment on the base of pharmpreparations and apiproducts.  
   b. **timber biotechnologics**:  
      - project “Effective using forests in Luza area”. The definition is necessary;  
      - The project on introduction of 2 and 3 level of technological alternation of organic materials. The represantation’s work on bioenergetic techplatform in Kirov;  
      - Introduction of space technologies into development of effective forestry and the forest technologies on this base.
c. *agricultural biotechnologies:*
   - introduction the system of ecological agriculture;
   - launching projects on healthy food;
   - scaling and circulating projects on biogas plant;
   - developing project on soil (grounds);
   - elaborating mechanism on forming agriclusters;
   - continuation the work on forming the sale-market system of organic production by local producers.

d. *bioenergetics:*
   - to form the conception of NCP “BTC” programme on development of bioenergetics in Kirov region;
   - to introduce the projects of small and alternative energetics on the regional territory;
   - to work out the conception on forming and developing the Institute of bioenergetics.

e. *building biotechnologies:*
   - introduction elements of ecosettlement through new building materials;
   - introduction innovated technologies in house-building, roadbuilding and so on.
2. To confirm the list of prior projects which are in the stage of:
   - realization (applied);
   - sowing (applied);
   - expectation (applied).

3. To support the programme of bee-keeping development in Kirov region, suggested by the section of innovators.

4. To make more active the work of laboratory of collective use.

5. On the base of agreements to activize the work of labour groups on accompaniment projects.

   To work at the (problem) question of possibility to found Kirov research centre (on the base of Zonal SRI (sovkhоз “North-East” named after Rudnitski)).
Organization Work of NCP “BTC”

1. To take part in preparing and holding such actions as:
   - Eurasia BIO - 2015 (April, Moscow);
   - VII Spb International Innovation Forum (September, St. Petersburg);
   - International economic forum “BioKirov-2014” (June, Kirov).

2. To introduce statute of order in realizing prior projects.
Personnel Ensurance in Realizing NCP “BTC” Projects

1. Study the possibilities to create educational centres:
   - the training centre for workers-specialists on the base of LLC “Agrovet” (v. Levintsy), milk-technical school, vocational technical school №5;
   - the training centre of highly skilled specialists on the base of HEI agreement.

2. Work at training managers:
   - on accompaniment the NCP “BTC” projects;
   - on managing scientific industrial enterprises on the stage of scaling.
Equipment for Processing of Organic Waste

For solution of ecological and energetic problems of the cattle breeding enterprises our company proposes biogas complexes of different productivity.

The basis of accelerated processing technology of organic waste is using the cultivated association of native microorganisms with the addition of lactobacilli and methanogens.
In the course of exploitation of the mountance the farm will get biogas and organic biofertilization which allow to improve the enterprise's indexes.

The use of biogas:
- Fuel for gas boiler-rooms
- Fuel for gaspiston stations
- Fuel for cogeneration mountances
- Fuel for cars

The use of fertilizations:
- Feeding plants
- Preparing soilgrounds
- Remediation of polluted soils
“Milk Machines of Russkih”
- the System of Constructing New Technique

-the development of innovational equipment;
-the designing of technological systems of processing milk;
-the designing of automated control systems.

CONCEPTION – the integration of local control system of every equipment’s unit into remote-control production.
“Milk Machines of Russkih”
- Designing of Formula and Development of Technologies for Milk Functional Production

Intentional production of products with pre-set properties in the places of realization -

- sanatorium
- prophylactorium
- hospital
- children’s institution
- designing and production ferments with pre-set properties

– healthy life style support – healthy food
JSC “Marketing-Bureau” and its daughter company JSC “Center of Ecological Initiatives “Press-Torf” works at the ecological technologies market and integrates, both in its own staff and on base of separate projects, the group of scientists and specialists, who carry out the applied researches in fields of:

- biotechnology,
- bioremediation of oil-polluted water and soil,
- elaboration of the technologies of industrial residues utilization.
The company has a production department allowing to produce up to 100 ton of the ready products per month.

For use of the biosorbent the unit for its directed dispersion on polluted soil and water surfaces in heavy-to-reach areas was designed and made.
Thank you for your attention!