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Clusterization of Regional Agro Industrial Complex as an Effective Way to Attract Investments Into the Regional Economy

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Abstract

Cluster policy is one of the most important methods to manage economic development of the country. It secures manufacture's high profitability, increase of manufacture's competitive ability and expansion of sales of goods. Authors describe basic aspects of cluster's creation, its purposes and constituents, and also particular qualities and cluster's organization conditions in agro industrial cluster's development in Astrakhan region. Two subclusters of Astrakhan region's agro industrial clusters were chosen as an object for consideration – cotton-growing and seed-growing subclusters.

Keywords: cluster policy; innovation development; territorial cluster; subcluster; market's infrastructure.

Introduction

Nowadays one of the ways to develop a country and to advance regions' technological initiatives is cluster-oriented approach to the process of forming competitiveness and investment territory's appeal. To be sure, major influence on cluster's development have social, political and economic conditions of cluster's foundation.

Cluster is the union of companies, organizations and educational institutions, which works with the same theme and situated comfortably close to each other. It is also one of the most successful competitive solutions guaranteeing economic development and region's quality of life's improvement [2].

Materials and methods

The theoretic-methodological basis of this study is economic theory of Michael Porter, who is a founder of the term "cluster", and who gave the possibility to imagine economic system of the territory or a country as a whole as a unique structure with its own economical, organizational and

financial communications. In our investigation we used methods of analysis, comparison, forecasting, scientific abstraction, analogy and survey.

Michael Porter, the founder of the “cluster” term, broadens the category by increasing interactions between interconnected companies, specialized suppliers, service providers, firms of corresponding industry fields and connected to them competitive and available to cooperation institutions. These words are the basement of cluster initiative, including coordinated actions focused on rising of competitiveness and regional branch cluster’s upgrowth involving crucial cluster’s members’ immediate participation [3].

In our opinion, *escort* – matrix is very convenient to form cluster’s strategy. It is a model of cluster initiative’s description, presented by V.V. Tarasenko [1]:

E (Effects) – comparative analysis of expected cluster initiative’s realization effects;

S (Symptoms) – comparative analysis of symptoms, observable cluster’s and cluster initiative’s phenomena;

C (Cause) - comparative analysis of reasons of cluster’s development or degradation;

O (Out) - comparative analysis of program’s measures and actions of cluster initiative’s team;

R (Resources) - comparative analysis of resources, which are necessary to realize cluster initiative;

T (Threat) - comparative analysis of threats and risks, which could lead cluster’s program’s planned actions to failure.

Introduces *escort* – matrix complies with the principle of system and sequence of realization management’s decisions during the implantation process` approach in administration.

Accurate understanding the purpose of cluster’s creation by all members of cluster’s interaction is necessary to realize cluster initiative. One of the main purposes of cluster’s creation is initialization and development of web interaction of the cluster’s participants inside one technological line. It will lead to their business cooperation and cause cluster’s expansion in regional and perhaps nearest areas’ economy. So, the cluster policy aims are growth of competitiveness and cluster participants’ innovative potential, small- and medium-scale business in a region, which also assists national economy’s development.

To achieve declared purposes there is a need to hold public shares that serve popularization of cluster’s creation and development and to intensity cluster initiatives by attaining synergistic effect. In our opinion, the most important cluster’s creation technologies will become implantation of innovations and innovative technologies, teaching and training cluster participants and accomplishment of business-missions into the most successful and progressive in cluster development areas both in Russia and abroad.

All enumerated approaches have to be considered before forming and development of any branch clusters including agricultural cluster. It is especially necessary for agricultural products’ producers and consumers, representatives of processing facilities, professional educational and scientific institutions, business etc.

It is agricultural cluster as one of the strategic vectors Astrakhan region’s development based on it’s specialty and the implantation of innovative technologies that could become an effective driver of regional economy able to solve a wide spectrum of social and economic tasks.

Astrakhan region’s agricultural complex is the most effective and dynamic developing regional economy’s sector. It is proved by the fact of agricultural industry’s rates in 2013 are being higher than the average activities in Russia. In Astrakhan region the production of traditional cultivations like tomatoes, watermelons, potatoes and onions is increasing. In regional farms innovative technologies are being actively introduced. A lot of farms mastered the technology of getting 2 harvests of potatoes per year. 100 t/ha onion harvest doesn’t seem to be fantastic anymore. Everything declared became a basement of regional model of cluster’s management that includes 4 structural units with certain directions of development and responsibility.

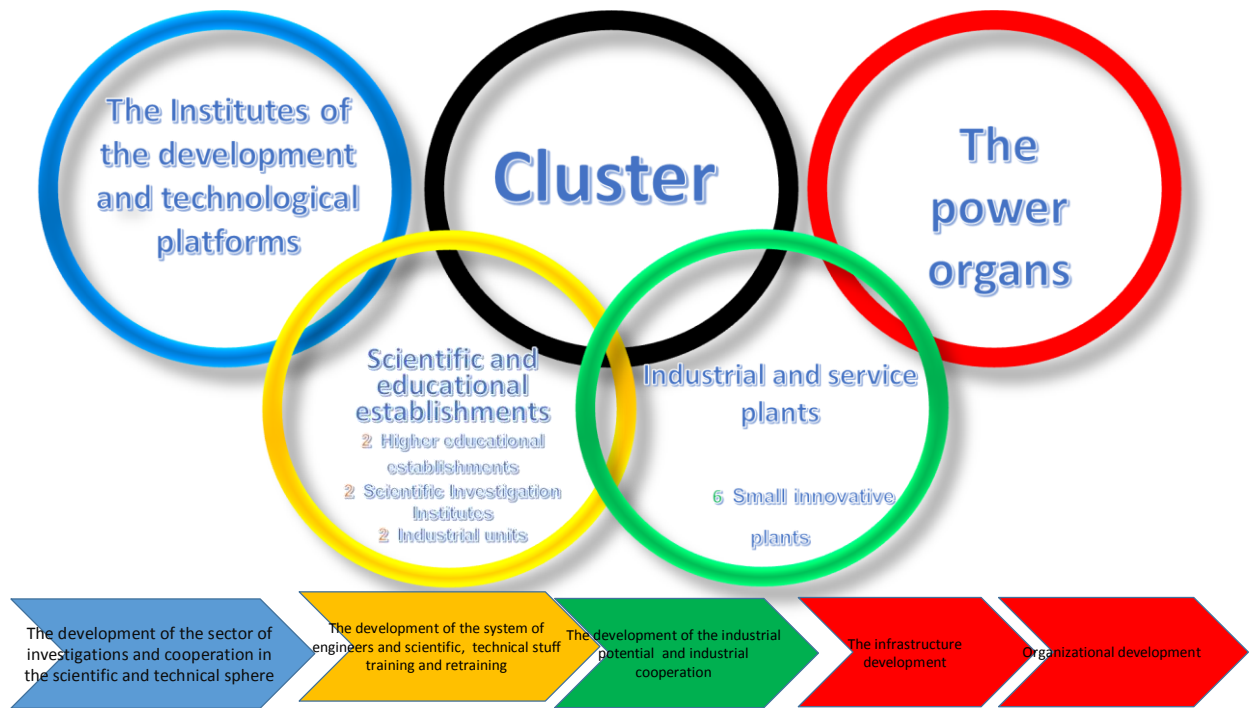


Figure 1. The Regional management model of farm cluster

In range of the regional management agricultural cluster's model functioning development institutions are responsible for the development of researches and production, including cooperation in scientific and technical sphere and co-operative of agricultural consumer.

Active relations between scientific (Russian Research Institute of Irrigated vegetable farm-out and melon-growing and Caspian Research Institute of Arid Agriculture) and educational organizations (Astrakhan State University and Astrakhan State Technical University), and Vocational schools gives us a great opportunity for providing sci-tech research and development, progress in preparation system and further training for engineering and technical and Managerial Human Resources.

Manufacturing and service companies (more than 200 subjects of small businesses and more than 10 large companies) – are directly involved in the development of production possibilities and industrial cooperation

One of the most complicated problems in the functioning of normal local governance model of agricultural cluster is devoted to government authority who is providing the infrastructure and organization development. It is obvious that using cluster approach in the development of regional agribusiness must not be a tribute to fashion, it is only possible while using system perspective by active participation of local government by dint state aid in Russian Federation state program «Development of agriculture and regulation of agricultural commodities market, roughage and provisions during 2013 – 2020» as well as special-purpose and departmental programmes.

Also it should be noticed that in the light of natural and climatic conditions, science and technology of work-in-process inventory for agricultural cluster of Astrakhan region may consist of several subcluster's structures. Thus Russian Research Institute of Irrigated vegetable farm-out and melon-growing recommended Economic Development Ministry of the Astrakhan Region to include seed farming and cotton farming subclusters in regional agricultural cluster. Their structure includes activity of small business's subjects which will not only partially solve the problem with raw materials base's formation but also will help with import replacing all over Southern Federal District.

«Prospective development group» which was created in Russian Research Institute of Irrigated vegetable farm-out and melon-growing has made a great work in economic justification of «Russian cotton» project, from seed industry and cultivation technology to marketing researches of market outlet among seeds and cotton products.

Group scientist's diversified approach proved the necessity of creating «Seedage in the Southern part of Russia (seedage cluster)» where cotton seedage has its own place.

On the recommendation of Ministry of Agriculture of the Russian Federation the technological basis of cotton growth on 50, 250 and 900 hectare space was invented.

These researches provide the basis for a business plan of research and production company named «Development based on « Russian Research Institute of Irrigated vegetable farm-out and melon-growing », company is also working on seedage and improving cotton cultivating technology (project's total value is 145,9 mln. RUB). This business plan was brought out to the RF Ministry of Agriculture and achieved appreciation (letter dated 07.03.2014 № AB-19-27/2694).

Results

A lot of work was held by the order of Forestry and Consumer Goods Industry Departments and Russian Ministry for Industry and Trade according to OAO «Russian Textile Institute» (Innovative research and development center of textile and Consumer Goods Industry) contract (government contract № 12411, 0816900, 19,037-01/12, 2012) «Process development of the new sorts of cotton reduction grown in the southern regions of Russia».

In range of this work some cotton fiber tests were held. The cotton fiber was produced in the experimental fields of «Russian Research Institute of Irrigated vegetable farm-out and melon-growing» in order to determine its quality, the harsh carded single yarn open-end spinning, the fabric (cotton OT-1) produced from it, two reports were written and sent to the customer (successful result).

A scientific co-operation contact with the State Research and Development Institute of Chemical Goods was made in order to study the applicability of raw cotton Ac-1 grade from 2012 crop for the chemical industry (alkali-resistant cellulose content) produce results of the analysis are received, successful result.

The job was done by the order of Ministry of Education and Science of the Russian Federation (government contract № 32/75, 2013) «Manufacturing process of pedigree cotton seeds of promising varieties in the south of Russia» the report based on the results was written and sent to the client.

A scientific counseling named «implementing technology elements of cotton cultivation in the Astrakhan region» was held with JSC "Astrakhan cotton company". In Liman district in the Astrakhan region the 50 hectares of the fields of region owner- operated farm «Pushkinskaya» were seed by cotton seeds selected by «Russian Research Institute of Irrigated vegetable farm-out and melon-growing » the report based on the results was written, an analyzing of executed work was done.

Conclusion

A contract for a scientific research in growing cotton in the Astrakhan region (007-A/2013-1, 2013 г.), (test new polymeric drug "artofit") was made. «Russian Research Institute of Irrigated vegetable farm-out and melon-growing» along with university and research institute scientists are carrying out a multifaceted approach in using raw materials produced from cotton and working on research theme.

Science topics are interested in using raw cotton as an alternative fuel, in cosmetic medicine, food industry, BADs, animal agriculture and so on. So with the scientists of the Astrakhan State University and Astrakhan State Technical University made investigation of the study of soil microbiology and microbiologic soilborne community phytostimulant activity of cotton plants.

As far as we can see such approach represents an effort not only of the specific organization but of the whole subject to become a competitive by increasing the investment attractiveness, the demand for import substituting production and export volumes, which will automatically lead to the development of foreign trade.

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Кластеризация регионального агропромышленного комплекса как эффективный механизм привлечения инвестиций в региональную экономику

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Аннотация. Кластерная политика, обеспечивающая высокую рентабельность производства, увеличение конкурентоспособности производства и расширение рынков сбыта продукции, является важнейшим средством управления экономическим развитием страны. В статье авторы рассматривают основные положения процесса создания кластера, его цели и механизмы в целом, а также особенности и условия организации кластеров в агропромышленном секторе региональной экономики, в частности. Авторы выявляют и подчеркивают преимущества и направления развития агропромышленного кластера в Астраханской области. В качестве объекта рассмотрения приводятся два подкластера агропромышленного кластера Астраханского региона – хлопководческий и семеноводческий подкластеры.

Ключевые слова: кластерная политика; инновационное развитие; территориальный кластер; подкластер; инфраструктура рынка.