

Family Farming in Russian Regions, Small-Scale Agriculture and Food Supporting Russia's Food Self-Sufficiency

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Abstract

In the paper is argued that the potential role of small-scale Russian agriculture and food is underestimated. Based on an overview of Russian agriculture the position of family farming is illustrated. The scope of small-scale-agriculture is broader than food production. It has opportunities also on employment, rural livelihoods, ethic, social and cultural diversity and ecological values. Illustrated by a number of examples it becomes clear that small-scale agriculture is a strong potential factor in local and regional development of Russia. The question how to stimulate small-scale agriculture and food is answered by elaborating five focal points: stimulating a chain and a network approach, modernization of small-scale agriculture and food, increasing regional capacities, and governance, both at a regional, national and international level. In the paper the results of a Case study in Krasnodar of a private organic/natural agriculture and food chain are presented. This shows that basic principles of working in local chains and networks are already practiced in Russia. Moreover it shows that there is a good breeding ground for application of the recommendations, presented in this paper.

Keywords: small-scale, agriculture, food, Russia

1. Introduction

A strong value of Russians, living in the largest country in the world, is to contribute to the worlds' need for food, food security, and healthy and safe food for everyone. Furthermore important for Russian people is making a certain contribution to sustainability, leaving a better world for their children.

Present day aim of Russian agriculture and food is twofold.

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The broad objective of Russia's agricultural policy is to increase food self-sufficiency, improved competitiveness and export of basic food products. Specific objectives are sustainable rural development (increased rural employment and improved rural living standards), and natural resource conservation.

Though in recent years both objectives received much policy attention, priority in real support was given to the broad objectives. As a consequence emphasis was put on the 'modern' sector of agriculture, including large-scale grain production, industrial crops and livestock operation, at the expense of the real support that was obtained by the small-scale producers and Dacha gardening. Perhaps the idea was that large-scale agriculture has more economic power to contribute to the broad goals mentioned above than small-scale agriculture. Large-scale agriculture indeed supports mainly the broad economic objective, but violates specific environmental and social objectives. Small-scale agriculture is supporting both aims. It will not only stimulate own Russian production of food, but it will also integrate production with the many needs of humans and ecosystems. We argue that the opportunities of small-scale farming in both objectives should not be underestimated.

Worldwide there are more than 570 mln. family farms. Almost a quarter of this amount is operating in Russia. These family farms manage the majority of the world's agricultural land and produce most of the world's food. FAO (2014) says that family farms are needed to ensure global food security, to care for and protect the natural environment and to end poverty, undernourishment and malnutrition. To achieve these goals, according to FAO, family farms deserve policy support to become more productive and sustainable and to improve rural livelihoods.

An exact definition of family farms is hard to be given. According to FAO family farms refer to the type of ownership, labour supply and management on the farm. Most family farms are small and very small and run by an individual or a family and rely on family labour. In Russia the households and private farms could be seen as family farms. Family farms differ from enterprise in diversity and complexity with regard to size, access to markets and household characteristics.

This paper is based on literature, experiences in various Russian projects, business orientations, case studies and participations at several conferences in Russia.

The observations and recommendations in this paper do not originate from just economic or financial values, but have roots in the theory of living systems (Donkers, 2013, 2013b, 2014). Attention is paid to meaning and multiple values of agriculture and food in Russian society.

In section 2 we present a survey of the Russian agricultural production structure. We distinguish between large-scale and small-scale agriculture, making clear the position of small-scale farming in Russia. We focus on the opportunities of family farming in section 3. Since Russian family farms mostly operate locally and regionally and Russian regions differ very much we focus on a regional approach in section 4. The question how to stimulate small-scale agriculture and food is answered in section 5. In section 6 we present a Case study of a natural chain operating in Krasnodar Krai. Finally, we provide some conclusions in section 7.

2. Production structure of Russian agriculture

2.1 Overview of Agricultural Production in Russia

Agriculture accounts for about 7% of Russia's GDP, less than the industrial sector (40%). Russia's agricultural sector, which employs about 12% of its labour force, has grown about 4% annually, which is somewhat slower than the industrial sector (Fomitcheva, 2006). The major field crops grown in Russia are grains, sugar beet, sunflower seeds, potatoes, vegetables, livestock, poultry, milk, eggs and wool. In Russia more than 25% of total consumption of meat and meat products and more than 20 % of milk and dairy products is imported.

In Russian agriculture we find a varied structure of farms that can be divided into three broad categories: Large-scale farms (agricultural enterprises), Households and other private, and Private (peasant) farms and individual enterprises.

A survey of agricultural production of the three producer categories is presented in Table 1.

Table 1: Agricultural Production in Russia by Types of Farm, 2011

	Crop growing		Animal breeding		Total	
	bln RUB	%	bln RUB	%	bln RUB	%
Agricultural enterprises	857,7	46	785,5	49	1643,2	48
Household farms	751,6	40	747,9	47	1499,5	43
Private (peasant) farms (incl. individual enterprises)	242,4	14	64,2	4	306,6	9
Total	1853,7	100	1597,6	100	3449,3	100

Source: Russian Federal State Statistics Service (www.gks.ru)

As we see from Table 1 households and private farms produce more than half of the agricultural production. The share of these farms in the production of separate agricultural products differs to a large extent, as we can see from table 2.

Table 2: Agricultural Production of Selected Products in Russia by Types of Farm, 2011

	Grains*)	Sugar beet	Sun-flower seeds	Pota-toes	Vege-tables	Live-Stock and Poultry **)	Milk	Eggs	Wood ***)
Agricultural enterprises	76.8	86.4	71.9	13.0	19.7	63.2	45.4	77.5	19.7
Household farms	1.1	0.5	0.4	79.6	66.6	33.8	49.7	21.7	54.4
Private (peasant) farms (incl. individual enterprises)	22.1	13.1	27.7	7.4	13.7	3.0	4.9	0.8	25.9
Total in %	100	100	100	100	100	100	100	100	100
Total in thousand tons	94149	47679	9704	32622	14759	7533	31571	40250	54

Source: Russian Federal State Statistics Service (www.gks.ru)

*) weight after processing

**) slaughter weight

***) 2010, physical weight

Grains, sugar beet, sunflower seeds, livestock, poultry and eggs are for the larger part produced in large-scale industrial type farms. The small-scale farmers (household and private) produce over 50% of the potatoes, vegetables, milk and wool. The large-scale enterprises are in favour of economic values because of economies-of-scale effects and using efficient methods. The households and private farms are more in favour of social and ecological values because of economies-of-scope effects.

Organic production in Russia is still low, but increasing. Certification is not well developed in Russia. In large cities, like Moscow, St. Petersburg, Ekaterinaburg and Novosibirsk, organic products are available. In most cases these products are imported and are very expensive. Various communities are active in organic production. So are organic producers in Kaliningrad involved in livestock farming, milk and dairy products, cultivating fruit trees and collecting wild berries. The milk of the native Chiorno-Piostrye breed cows is used for cheese, butter and ricotta. An ecological village is created producing good quality food. Wild and farmed fruit is used to make non-alcoholic beverages, spirits and ciders. An association of organic producers in Moscow helps farmers to obtain certifications and improving organization at a national level. There exists a firm association for EKO-products in City Novocybirk (www.products-eco.ru).

Weather and climatic conditions for agricultural production varies enormously, from fertile soils in the south, among with the famous black earth, to unfavourable soils, especially in the northern regions. In the North the climate is sub-arctic with long and cold winters and short mild summers. See also section 4.

2.2 Large-Scale Production

Large-scale farms (agricultural enterprises) are productive cooperatives, closed joint-stock companies, state enterprises, Co. Ltd, subsidiary farms of nonagricultural organizations (www.gks.ru).

The former collective farms have been broken into approximately 25,000 units. Russian businesses are making significant investments in many of the larger, profitable agricultural enterprises. Though still less efficient as industrialized agriculture in western countries, in Russia a strong economic growth is remarkable, with increasing profits.

FAO concludes that there has been modest progress in increasing efficiency at the farm level, both among former state farms and private farms. Factors favouring progress include a substantial land base, a sizeable number of highly educated and trained agricultural professionals, growing consumer demand and an influx of private and public investment.

Of course large-scale farming has the opportunity to contribute to food security and to export some agricultural products. However, large-scale production has some disadvantages. Large-scale farms and large processing farms, financed with foreign capital, often concentrate on one or some monocultures, with, like in western industrialized agriculture, less attention for social, human and ecological values. There is the danger of concentration on ever increasing production volumes, relying on the application of chemical fertilizers and pesticides. This large-scale farming is highly energy-intensive (energy not only used for the production of fertilizers and pesticides, but also for transportation of food across long distances). At the same time the industrial agriculture entails depopulation of rural areas, unhealthy diets, groundwater pollution and soil erosion.

We note a pitfall of using chemical fertilizers, which in Russia can be produced at low-cost, due to the vast oil and gas reserves. For a short period of time it is clear that these nitrogen fertilizers can boost yields. However by using high amounts of chemical fertilizers the soil is exhausted very soon with serious consequences for future cultivation. Remember that before the nineties of the former century in Russia hardly any chemical fertilizers were used. It is extremely important to watch sustainability in this respect and to keep the black soil fertile. The circumstance that the use of chemical fertilizers and pesticides in Russia is relatively low compared to e.g. EU-countries offers an opportunity to make the relative clean Russian products a characteristic value of Russian products.

Russia is still a net importer of agriculture and food. Russia joined WTO in 2012. This WTO membership opens opportunities for Russian exports. The World Bank estimates an annual 3% GDP increase due to increased trade. Russia's producers are likely to increase production of grains and oil seeds. If the availability of grains in the domestic market is sufficient, grain exports may rise. Products that are most sensitive to competition from imports are meat, dairy products and sugar.

The philosophy of trade liberalization contradicts to a certain extent with the right of people and nations to determine their own system of agriculture and food. This food sovereignty condition is extremely important for countries whose economic base is primarily agriculturally driven (De Schutter, 2012). All countries must be able to produce enough food for their own population. Russia's WTO commitments limit the use of export restrictions or prohibitions, however the food sovereignty condition may produce legitimate policy objectives that maintain certain tariffs and quantitative restrictions. A positive effect of entering the world market is that the supply of Russian players may mitigate the current monopolistic and oligopolistic conditions in world trade.

2.3 Small-Scale Production

Household farms relate to private subsidiary and other small private plots in rural and urban settlements, individual citizen's farms with land plot at horticultural, garden and dacha associations of citizens. Private household farming is a form of non-entrepreneurial activity to produce and process agricultural production carried out by personal labour of a citizen and members of his/her household at a land plot (provided in use or purchased) to meet their needs. Land for farming can consist of private and field holdings. Horticultural, garden and dacha non-commercial associations of citizens relate to non-commercial organizations established by citizens on voluntary basis to resolve common social and business tasks to maintain challenges of gardening and cottage industry (www.gks.ru).

Household production, both in rural and peri-urban areas, increases and strengthens. These farmers have a catalyst role in the Russian rural economy. An increasing percentage of food is grown on small private garden plots (dachas) and sold in urban markets (may be called: Dacha farming). The small private plots are made up of approximately 16 million owners of plots of about 0.43 hectares each. While these holdings are small, they account for a sizable portion of Russian agricultural output. So, there are approximately 150 000 dachas in the Leningrad Region. 2.5 million inhabitants of St Petersburg are involved in agricultural activities. 560 000 ha is the total area cultivated by city dwellers. Main reasons of these activities are self-sufficiency, additional income, access to 'healthy' food, leisure, productive use of 'free' (kitchen waste water, residues) resources.

Private (peasant) farms and individual enterprises represent a union of citizens, bound by relative relation and (or) by an attribute, having property in common ownership and performing jointly production or other business activity (production, processing, storage, transportation and sale of agricultural produce) on the basis of their personal participation. An individual entrepreneur of agricultural activity is a citizen (physical person), engaged in entrepreneurship and not registered as a legal entity but registered in accordance with the Citizen Code of the Russian Federation, and declared in the Certificate of state registration kinds of his/her activities related to agricultural activities according to the All-Russia classification of kinds of economic activity (OKVED) (www.gks.ru).

The group of private farms is made up of about a quarter of a million farmers, who account for about 5% of agricultural production in Russia. The average farm size in this group is approximately 70 hectares.

In developed market economies small and medium sized enterprises (SME's) play an important role. The number of SME's in Russia is growing, but Russia's government realizes that this level is still far from where it should be. SME's currently account for some 21 % - 22 % of in overall Russian GDP, whereas in the U.S. that figure is 50 %, and in China it is over 60 % (Interfax, 2012). That's why also the Russian government is supporting SME's, e.g. by supporting the entrepreneurial organization OPORA Russia. However, this support is restricted to formal enterprises. Not only formal enterprises should profit from these policies, but also households and dacha farmers.

Urban agriculture is upcoming in Russia. Also rooftop Gardening has a large potential. In 1993 the 'Saint Petersburg Urban (Downtown) Gardening Club' was founded. Many activities are carried out, like a vegetable garden inside an overcrowded prison (producing food for 10 000 inmates combined with an educational activity), a therapeutic garden (for disabled and people with artificial limbs) and a rooftop garden on a primary school (www.growtheplanet.com). Other types of Urban Agriculture include: Sadovodstvo, Ogorod and various individual land plots (Moldakov, 1999). In St. Petersburg a growing number of institutions, including hospitals, orphanages, schools, prisons are planting rooftop gardens is ready to provide both therapy and agricultural training for their patients and students. See also the Russian language booklet on Rooftop Gardening: www.cityfarmer.org.

These categories of small-scale producers are to be typed as family farms (including plots, urban agriculture and communities). They create 'local food economies', direct exchanges between growers and consumers of agricultural produce and access by consumers to farms. These local food economies in general are equated with more environmentally sustainable farming practices and healthier food.

3. Opportunities of Small-Scale Agriculture and Food

We should bear in mind that also in present-day agriculture, as was the case in the past, the greatest contribution to the food economy of Russia has not been made by large modern industrial, corporate or state-run, market-oriented, commodity producers, but by the millions of small-scale traditional, family operated producers, growing primarily for subsistence. In 1999 35 million of small family plots produced 90 % of Russia's potatoes, 77 % of vegetables, 87 % of fruits, 59 % of meat and 49 % of milk. Apart from this potential in the production of food, small-scale agriculture has also advantages in the ecological and in the social aspects of agriculture (The Bovine, 2009). This potential of small-scale agriculture is a worldwide phenomenon.

Agriculture, concluded the United Nations-sponsored commission IAASTD (Latham and Wilson, 2011), should never be reduced merely to a question of production. It must necessarily be integrated with the many needs of humans and ecosystems. Things that provide meaning for Russian people to-day are (Donkers, 2013b):

- Increasing Russia's food self-sufficiency;
- Exports of basic products, improved competitiveness;
- Balancing prosperous urban development with backward rural development;
- Increasing rural employment and rural living standards;
- Sustainable rural development and natural resource conservation;
- Contribution to world's need of healthy food;
- Developing own type of Russian agriculture and food versus consumer preferences for Western style food products.

Apart from agriculture and food production, small-scale agriculture has the potential of realizing simultaneously economic, social, ethical, ecological values tied to agriculture and food, and linking these values to each other.

This is however not automatically realized, it means a comprehensive task for all persons and parties involved in agriculture and food. Intertwining all these values is a major challenge in the further development of the Russian agriculture and food system.

3.1 Food Production

It is often not recognized that small and private farms could substantially contribute to a higher grade of self-supporting in food. Recent literature (David Suzuki, www.davidsuzuki.org, Chappell and Lavallo, 2011) show that small farms may produce even higher output levels per unit area than larger farms. E.g. Chappell and Lavallo found studies demonstrating that small farms, using alternative agricultural techniques, could produce enough food to sustain human population, without increasing the agricultural land base. Also FAO (2014) says that in most countries SME-farms tend to have higher agricultural crop yields per hectare than larger farms. These are yields per hectare, not per worker, so labour productivity is lower. SME's manage resources and use labour more intensively. Moreover, research clearly shows that small-scale farming, especially using "organic" methods, has advantages in terms of environmental and biodiversity impact and small farms may be two to four times more energy efficient than large conventional farms. Also the FAO Report 'The State of Food and Agriculture' (FAO, 2014) acknowledges these observations. Tschardtke, Professor of Agroecology at Georg-August University in Göttingen, Germany says: even in Germany, "organic farming would easily feed the population if nutritional recommendations were followed.

3.2 Employment

Small-scale agriculture is more labour-intensive than large-scale agriculture. Especially in rural and peri-urban regions employment could increase through stimulating small-scale agriculture. This could also stimulate the creation of new SME's in agriculture and food and related activities, which is in accordance with the policy of the Russian Government to increase the share of SME in Russian GDP.

3.3 Livelihoods, Ethic, Social and Cultural Diversity

In rural Russian areas agriculture has long played an important role, not only in food production but also in the social structure of the areas.

This is not only the case in rural areas, but also in urban and peri-urban areas. The City authorities in St. Petersburg, for example, consider urban and peri-urban farming to be a major social factor.

Small-scale agriculture has not only the opportunity to contribute to increased food production and hence, food self-sufficiency, it has at the same time additional advantages. Small-scale agriculture is able to strengthen active vital rural regions and building new relationships between urban and rural areas. This also emphasizes ethical values. These relationships are important for stopping the migration from the countryside to the city. Tourism has undiscovered potentials, not only in cities, but also in rural areas.

3.4 Ecological Values

Small-scale farms and plots pay attention to ecological sound production and varied cultures, not using chemical fertilizers and pesticides. Ecological values can be gained, not only through abandonment of chemical fertilizers and herbicides, but also via co-operation with local organizations in the field of landscape, nature, water and ecosystem health (including carbon sequestration). Good co-operation could enhance both economic and ecological values. An appropriate example of a natural value stream is the special relationship between Russia and the Netherlands regarding geese. Some varieties of geese (brandgans and rotgans) brood in northern Russia and hibernate in the Netherlands, flying the 5000 kilometres of distance two times a year.

3.5 Food Choices and Food Culture Diversity

Small-scale agriculture and food is also able to make efforts for developing own type of Russian agriculture and food, so effectively competing the increasing consumer preferences for Western-style food products in Russia. Exploiting and developing Russian food culture has unprecedented possibilities. To mention but some traditions. Prussian dishes are made from local ingredients like milk, ricotta, fish, poultry and seasonal vegetables in Kaliningrad. Also bringing wild plants is a common tradition in many parts of Russia: mushrooms, ferns, berries, fruits and wild herbs are gathered and preserved with salt to be eaten during the winter.

In a research on perceptions regarding sustainable agriculture attitudes and towards local food of Russian agricultural students, Bagdonis and Bruening (2008) showed high levels of agreement with the statements: "Farmers should be educated to use sustainable practices" and "It is important to buy food from local farms", though there were contradictions in the perceptions and attitudes.

Russian consumers start looking out for products and restaurants that bear a label. Restaurant owners have seen a greater number of people coming into their establishments who are interested in knowing where their products come from and how they are grown. People say that they want to eat lighter and fresher, and organic food is perceived to meet this demand. In a city where higher prices are often believed to indicate higher quality, organic food is noticeably more expensive. There is a lot of produce in Russia that is organic, stuff that is grown on small subscale farms with no use of pesticides (Burrows, 2011).

4. Small-Scale Agriculture in Russian Regions

Russia could be divided by seven large regions: Central, Southern, Volga, North-western, Urals, Siberian and Far Eastern. Urals, Siberia and Far Eastern regions form a large part of Russia's surface. The population density however is much lower than in other regions of Russia. Combined with the North-western region these regions are often denoted as the Northern region. With the seaports of Kaliningrad, St. Petersburg, Murmansk, Archangelsk and Vladivostok the Northern region is connected to other parts of the world. The Southern region is connected to other parts of the world with the port Novorossiysk in Krasnodar at the Black Sea.

Figure 1: Map of Russia



Source: <http://www.worldatlas.com/>

Climate, soil and growth conditions differ to a large extent between these regions. The tundra (permafrost) of the Arctic Circle is too cold for trees. Mosses, lichens and low shrubs are the only natural vegetation. Russia's taiga (between tundra and temperate regions) graduates from needle-leaved trees in the north and broad-leaved trees in the south. The steppe (huge plains) has, with its black earth, the world's most productive soil. Apart from climate, soil and growth conditions regions also differ with respect to cultural aspects.

In the next sub-sections we present a number of examples of how people are active in local and regional agriculture and food. Most of the information is taken from the experiences of various Slow Food communities in Russia (Slow Food Editore, 2006). These communities can be seen as precursors of a large potential of local and regional small-scale farmers.

4.1 Central Region

Apart from the Federal city of Moscow, the Central region counts the following Oblasts: Bryansk, Ivanovo, Kaluga, Kostroma, Moscow, Oryol, Ryazan, Smolensk, Tula, Tver, Vladimir, Yaroslavl, Belgorod, Kursk, Lipetsk, Tambov and Voronezh.

The central region has fertile soils. Biodynamic agriculture was already developed in 1991 in Tula, a region about 130 km south of Moscow. Fresh milk, various dairy products, meat, vegetables, tubers, barley and wheat is sold to local markets and distributed nationally. Also attention is paid to educational seminars. Young people are stimulated to involve in the private agricultural sector. The fertile soils in this region have always been noted for horticulture. Cucumbers, which are one of the basic ingredients of the Russian diet, are grown in the Vladimir Oblast. In Suzdal horticulture is combined with tourism. For different products (cucumbers, geese, organic produce) people are working to setup co-operatives and associations, which will be responsible for the whole production chain, respecting traditional methods. Fish from the rivers and lakes of Smolensk are offered to Moscow markets. The fish is salted, dried and smoked according to traditional methods. In 2003 an association of organic producers (Moscow) was created with the aim of helping farmers to obtain certification and to improve organization and sales of everyday foods at a national level.

4.2 Volga Region

The Volga region consists of the Republic of Kalmykia, the Republic of Tatarstan, Chuvash Republic, Mari El Republic, Republic of Mordovia and the following Oblasts: Astrakhan, Penza, Samara, Saratov, Ulyanovsk, Volgograd, Kirov and Nizhny Novgorod.

The Volga region has many wheat fields. Communities are active in the whole production chain, from planting to grinding of the flour, and baking the bread. The bread is distributed through a network of shops. On the vast plains, crossed by the river Volga, farming companies are breeding goats, with the goal to restore goat breeding. Before 1927 this region was one of the areas with the highest concentration of goat farms. On the banks of the river Volga different kinds of watermelons are cultivated.

Combined with other vegetables local specialties (brined watermelon) and jams are produced and locally sold.

4.3 Southern Region

The Southern region can be divided into the following sub-regions: Republic of Adygea, Chechen Republic, Republic of Dagestan, Republic of Ingushetia, Kabardino-Balkaria Republic, Karachay–Cherkess Republic, Krasnodar Krai, Republic of North Ossetia–Alania, Rostov Oblast and Stavropol Krai.

In the (northern) Caucasus cattle, sheep and goats are raised. White and red-brown cows are popular breeds. The animals have acclimatized themselves to the harsh temperatures in the mountains. The animals are bred for milk, yoghurt, cheese and meat. Also a traditional, lightly alcoholic drink is made of fermented milk. Communities in the southern heights of the Stavropol plateau produce meat, cheeses, butter, wool, which are then sold to the capital of Ossetia. Aims are increasing cheese production and setting-up a dairy to process milk from nearby villages. Other communities manage the breeding of horses. The 'Karachaevo' horsemeat is eaten in large quantities. Many people live from sheep farming (meat, milk, wool) in the mountainous areas and from crops in the valleys. A typical sweet (Khalva) is made from flour, sugar, butter, honey, hazelnuts, dried apricots and raisins. The products are sold locally.

4.4 Northern Region

The Northern regions consist of the following parts: the Federal city of St. Petersburg, Kaliningrad, Republic of Karelia, Nenets Autonomous Okrug, Komi Republic, the Oblasts Leningrad, Novgorod, Pskov, Archangelsk, Murmansk and Vológdá, and Ural, Siberia and Far Eastern.

Archangelsk is an important timber and fishing centre of Russia. Typical in Vológdá is the production of linen and linen fibre processing, contributing to: 'Linen made in Russia'. Vológdá is famous for its tasty cheese and butter. Variegated black local cows, grazing herbs, provide a typical hazelnut flavour to the Vológdá butter. Potatoes are grown using special methods to reduce the use of fertilizers, plant protection products and chemicals in the preservation.

Fishing and agriculture are important in Kaliningrad, especially vegetables, grains and fruit. Fruit production consists of seedlings, blackcurrants, apples, cherries and plums and fruit growers experiment with new plant varieties. Moreover beer is produced using only natural ingredients. Cows, pigs and various farmyard animals are reared, providing typical products, like lard and smoked sausages. A beekeeper community is active in the forests of Krasnoznamensk area, producing honey (linden flower, clover or wildflower), wax and bee-glue. Fishing is carried out in the Baltic Sea. Also private agricultural farms breed and kill fish. Karelia is active in aquaculture and the number of fish-breeding farms increases. In Murmansk Oblast the indigenous population of Laplanders live in the Lapp district of Kola. The Kola Peninsula boasts reindeer pastures. Products of reindeer meat like sausages, heart, liver, smoked fillet, tongue and stroganina (frozen meat strips) are used following national recipes.

In Siberia, the Buryats, a large ethnic group indigenous to the Lake Baikal region, share with other Mongols many customs including nomadic herding and foodculture. Meat and milk, combined with berries and herbs that nomads collect during summer are ingredients for the traditional diet. Various communities are active in Siberia, producing pine, larch, resin, cedar pine nuts and other cedar products. Also farmers cultivate wheat, rye and forage crops and use the ingredients for meals and medical treatment. Farmers also raise sheep, cattle and horses. Some features of the sheep breed are able to subsist on snow-covered grasslands. Milk is considered sacred in Buryat life. In Tuva live nomadic herders and raise yaks and Tuvians breeding local sheep, cows and goats. In the mountain region of Altaj, in south-western Siberia, breeders and scientists of the Russian Academy of Sciences are active in raising the surviving grey cattle breed (the oldest livestock breed in the world), hardy animals which are resistant to disease and adapt well to extreme climates tolerating both high and low temperatures. Other communities in Altaj are involved in the production of salted fern and different types of vegetables such as tomatoes, cucumbers, celery, carrots, beetroots, potatoes, cabbage and peppers. Each kind of vegetables grows in varieties that adapt perfectly to cold winters and hot summers.

In Russian Far Eastern regions the climate in this immense area, with its rich and varied flora and fauna, ranges from tropical in the south to subarctic in the north. Thousands of species of wild herbs grow here and many are used in the traditional Russian cuisine. Producers of herbal tea harvest, dry and prepare aromatic herbs, making infusions, tisanes, spirits and extracts.

In Kamchatka, one of the regions of Russia with extreme climate, fishing is the most widespread activity with its production of delicious wild salmon, halibut, cod and caviar. The indigenous Evens gather aromatic wild herbs. Kamchadai indigenous people, engaged in fishing, in harvesting and drying of kelp (sea cabbage), keep and recreate the national culture and gastronomy educating and organizing cultural events.

5. How to Stimulate Small-Scale Agriculture and Food

5.1 Stimulating a Chain Approach

A chain approach facilitates the value stream from production and processing to sales in various outlets. A chain approach makes it possible to develop an effective and efficient agricultural and food system, using adequate logistics. For realizing a chain approach co-operation between the actors in the chain is crucial. In general co-operation in Russia is not easy. People are not used to co-operate.

Building agricultural chains with family farms as the main actors therefor in Russia is difficult. Moreover for family farms there is absence of a physical and marketing infrastructure, financial and risk management instruments and secure property rights.

Perhaps advantages can be gained by linking small-scale production with the large-scale international agricultural chains. Interactive exchange of capacities between large-scale farms on the one hand and small scale farms (household farms, plots, urban farming, dacha farming and communities) on the other hand offers opportunities. Developing types of local food economy can be tied up and interact with large-scale farming. This could result in the establishment of global supply chains, in which family farmers play certain a role. For this to happen support of participation of small and medium-sized enterprises in international trade is necessary. It asks for the development of effective non-discriminatory and market-oriented innovation policies.

Building agricultural chains with family farms as the main actors in Russia is difficult for another reason. Family farms have complex livelihoods, combining multiple natural-resource-based activities, such as raising crops and animals, fishing, and collective forest products, as well as off farm activities.

This means that a number of cross relationships between these different sectors are needed.

Though difficult, in Russia there are at present practical examples of small-scale agricultural and food chains that are successful. In section 5 we present an example in Krasnodar. When it is possible to develop more of such chains it will be possible to make large steps forward. Then it may come to reality that Russia again will serve as a food barn and may export typical Russian crops.

Sustainable (by reducing the use of chemical fertilizers and pesticides) and good quality products could become a characteristic and marketing value of Russian products on the world market. It will even be possible to make a value of clean Russian products, since the use of chemical fertilizers (NPK) in Russia is low (37 kg/ha) compared with the EU level (84% kg/ha). Becoming a world player has another favourable effect. The number of suppliers on the world market will increase and mitigate current oligopolistic power in the world market.

There is a growing interest in organic food in Russia (World Peace Culture Fund, International Federation of Organic Agriculture Movements). Demand is expected to grow in the next few years as the population becomes more prosperous (Uusimaa Centre for Economic Development). Large cities in Russia, like Moscow, St. Petersburg, Ekaterinaburg, Novosibirsk, have already several organic food shops. These products are most of the time imported and are very expensive. Dealing with such high prices is possible in these large cities, but not in smaller cities like Krasnodar. There is much effort needed in TV and Radio-advertisement to convince people of buying healthy food.

In order for organic food to really flourish in Russia, there needs to be proper certification. Developing an authentic certification standard for organic and fair-trade products in Russia could prove to be a boom for Russian farmers and producers as well as consumers (Burrows, 2011).

5.2 Stimulating a Network Approach

Currently, small and private farms produce half of the food in Russia, and could make a huge impact on rural agricultural development.

Increasing production means increasing rural employment and gaining better incomes for rural workers; consequently, rural living conditions are improved. Producing more volumes is not enough. Focus should be on sustainable production with an eye on the future. This means conserving, protecting and enhancing natural resources, and paying attention to improve the livelihoods and well-being of people and social groups. Environmental and social services networks are to be established to realize watershed protection, biodiversity conservation and carbon sequestration, and vital rural regions respectively.

This is not the responsibility of only farmers' actions. More actors should play a role: apart from the farmers also the public and private sector, civil society and their organizations are involved. These organizations must co-operate to create innovative systems that link these actors, foster the capacity of farmers and provide incentives for them to innovate.

For these - partly - public goods farmers need compensation from government, community based and other organizations. Also local collective actions could help. In any case solutions should be adapted to local and regional conditions.

In Russia there are a lot of initiatives oriented to support small-scale farmers and rural development. Despite lack of money for their execution, there are programs for small farms, both at the central level (e.g. The Russian Agency for Small and Medium Enterprises Support in Moscow) and at the regional level (e.g. Krasnodar's "regional portal of small businesses" www.mbkuban.ru). In the latter program special attention has been paid to the reconstruction of family farms on the basis of peasant holdings in the region of Krasnodar Krai. However, the systems are not structured.

Small farmers started 20 years ago, when the land of the former state farms was split up. Now the land again is redistributed. Many land pieces are used for supermarkets and large parks. Small farmers face difficulties, they do not want to struggle against large firms. Making efforts by attractive programs is necessary to keep the young professionals in the rural areas. Stimulating young people is needed to carry out urban agricultural activities.

5.3 Modernization of Small-Scale Agriculture and Food

In many small-scale farms old-fashioned production methods and technology are used and thereby they are not very profitable. For modernization of small-scale agriculture renewal is needed in technology, ways of production and farm management practices, processing and marketing, and combining traditional practices with new scientific knowledge.

5.3.1 Technology

The SME's labour productivity and yields can be increased by innovation in the field for better use of existing technologies and developing, adaptation and application of new technologies. Apart from improving the quality of machinery it is also very important to pay attention to the use of the machinery. Donkers (2003, 2004, Donkers and Kovaleva, 2003 and Donkers *et al*, 2004) present a number of arguments for this statement.

5.3.2 Ways of Production and Farm Management Practices

Increasing productivity can be gained through using organic manure for creating and maintaining fertile soils, using better seeds and breeds, planting new crop varieties, applying new integrated production and post-harvesting practices. As an example of an innovative new way of production we mention linking crop production and dairy farming. E.g. dairy cows need feed from crop producers and produce manure (minerals that are needed by the crop producers. This makes it possible to diminish the use of chemical fertilizers and to get high quality output. Intelligent crop rotation and introducing cold-resistant crops.

5.3.3 Processing and Marketing At Farm Level

Small-scale processing demands specific production methods. It also demands for specific processing technologies and marketing at small-scale farms. Small-scale farmers should investigate in new more rewarding ways of marketing in co-operation with advisory services.

5.3.4 Research, Education and Training

Research is a long-term costly activity that is hardly needed but cannot be financed by family farms. Thereby it is important to consider carefully what research strategy is best suited to the specific local and regional needs and capacities. E.g. there is no need of research in large and heavy machinery that is abundantly available in international research. It is better to adapt of the results of international research to local and regional conditions and to develop research tailor-made for own local and regional conditions. In both cases it is necessary to deal with specific agro-ecological conditions and specific social conditions.

Sharing knowledge among family farmers, agri-extension and advisory services and government. This also could contain mutual learning from large scale (scale-effects) with small-scale (scope-effects) agriculture and food. E.g. farmer field schools for definition and implementation of agro-service stations supporting farmers in assuming responsibility for special tasks. These facilities could be developed in co-operation with government bodies and research centres, such as the Official Krasnodar Centre. Together education, training and knowledge programs could be developed to increase the share of qualified labour (specialists and young professionals). Moreover provision of agricultural extension services and integrating knowledge, setting up multidisciplinary programs that pay attention to technical, economic, managerial and social/cultural aspects are important.

In the agricultural sector there is a severe shortage of qualified labour, specialists and young professionals. The education system that Russia inherited from the Soviet era is characterized by an authoritarian style of teaching. This asks for strong education programs, with new styles of teaching, instead of simply providing information.

Rural areas could be education places, like students visiting e.g. Volóгда potato producers learning growing methods avoiding the use of chemical fertilizers and plant protection products. For the future growth and development of the Russian agricultural economy to be profitable and sustainable, Bagdonis and Bruening (2008) concluded that training and education programs should be interdisciplinary and should provide students with an adequate understanding of the environment, socio-cultural and political economic consequences of the food system.

5.4 Increasing Regional Capacities

Stimulating regional capacities is important to create and maintain vital rural areas, strengthening Oblasts and linking urban agriculture (urban farming, rooftop gardening, etc.) and rural agriculture (dacha farming, communities and household and other private farming). There is a need for overall rural development policies and effective social protection, engaging women and youth.

Increasing regional capacities may also contain linkages between large farm production and local food economies. Linking urban or metropolitan food processors with local farmers (small and large scale) could help to prevent large-scale food processors from sourcing raw materials in foreign countries.

5.5 Governance

The improvement of SME's capacities not only rely on on-farm capabilities, but also on the general enabling economic and institutional environment, both on a regional, national and international level (Donkers, 2013a). Support is needed at all levels.

Regional

At a regional level governance starts with structuring the co-operation between research centres, advisory services, producer organizations and co-operatives, and market institutions.

A possible regional approach could be executing the following steps. A first step could be facilitating lead-farms and developing and executing investment programs in some. These efforts could identify certain promotable conversions of transitions that have meaning and pay attention of the multiple values point of view. The role of the actors in the transition should be clarified and the necessary capabilities and competences of the actors should be developed. The next step could be making outlines of the transition paths and drawing activity plans and brings them in a timescale that can be executed together and in correspondence with all actors/stakeholders. After execution of the plans the results of the transition could be judged in relation to the original aims and the effects of it could be measured.

Then the actors can make decisions about the result of the measures and, if necessary, recommend new conversions. Finally necessary measures can be taken to embody the result of the conversion, lay down the agreements and fix what one has learned. Up-scaling to other Oblasts can then be undertaken with fewer risks and more changes for success.

At the Dutch-Russian Conference the government mentioned that it is necessary to develop, support and execute investments in agriculture in Kuban (Donkers, 2011). Krasnodar starts diversification of production in the 'peasant farm enterprise'. Special attention is paid for reconstruction at large of family farms of the 'peasant holdings' in the region. A project is developed about the modern small farm. More information about this and forms of government support for small and medium sized businesses in the Krasnodar region is to be found at the: 'regional portal of small businesses': www.mbkuban.ru.

Governance approaches should support and facilitate urban co-operation between local farmers, local governments, area partners, citizens, and consumers; as such, it is necessary for urban, peri-urban, and rural farmers to work together. In a co-operative setting they can complement their production and achieve higher volumes.

National

Government policy is oriented towards diversification. Within this context, Russia welcomes foreign knowledge, entrepreneurs, and investors to contribute to the establishment of global supply chains and support of small and medium-sized enterprises. This international integration is important (Donkers, 2000). Already from 1991 to 2001 the Russian government started a program to encourage small farmers. About 150,000 new small farms were established.

Russia attempts to diversify its economy and find ways to significantly raise the participation of SMEs. SMEs will continue to develop rapidly. The Russian government recently made a bold projection that Russia's SME's share of GDP would reach 50% in the next 5-7 years (about 11 per cent of GDP in 2009). The government is willing to support SMEs and would work to make the federal government support rather than obstruct their activities (Naoumova and Vatolin, 2011).

The employment growth rate in this sector is 8 times higher than in the rest of the Russian economy (Bolotinsky and Jiang, 2008).

According to a survey of Citibank and Russian Microfinance Centre (RMC), the SME owner's personal qualities, appropriate connections, the general condition of the business environment and access to financing played key roles in the success of the business. SMEs are one of the drivers of post-crisis economic and social growth. Moreover, SMEs can make a contribution to the innovative development of the economy. Owners of start-up businesses had the most difficulty obtaining loans from financial institutions (micro financing, leasing and governmental programs). Russian Microfinance Centre (RMC) facilitates formation of a favourable legal environment, renders professional services of training and consulting for microfinance organizations, as well as contributes to the establishment of national standards of leading a microfinance activity.

Successful programs in one region could, after necessary adjustments, be executed in other regions in Russia. Up-scaling of these successful projects may be supported from the region itself by the Government, the regional Departments of Investments and Project Support and municipality services in the Oblasts. Nationwide support can come from the Russian Agency for Small and Medium Enterprises Support in Moscow (<http://www.euroinfocenter.ru>) and from the Russian Technology Transfer Network in Obninsk (<http://www.rttm.ru>). Also support can come from the Enterprise Europe Network (EEN) or from the EU, Russian Agency for Small and Medium Enterprises Support, Moscow, Russian Technology Transfer Network, Obninsk. Also Embassies of interested nations could assist.

International

Russia takes active part in international gremials (such as Asia-Pacific Cooperation, APEC) to discuss issues of regional economic integration, problems of the next generation of trade and investment questions. In the international discussion of the ministers of trade and the ministers responsible for small and medium sized businesses Russia approved some key directions of work:

Russian government noted the necessity of conducting deliberate policy, since trade liberalization may lead to discrimination of traditional products, and to green protectionism.

Russia pointed to the benefits of convergence of regulatory standards for international trade, stressing however the need for mandatory consideration of national interests of each of the economies.

Russia has allocated three key barriers to SME participation in international trade:

- Access of SMEs to financing;
- Access of SME's to information on conditions of activity in foreign markets;
- Reducing transport costs.

The government offered to consider the possibility of cooperation of associations of small and medium-sized enterprises of APEC member economies to create an extensive information network for SMEs across the region, which will reduce these barriers. Also questions of women's entrepreneurship were discussed.

The Enterprise Europe Network (EEN) of the European Commission helps small companies in making the most of the business opportunities in the European Union. The EEN helps looking for international business partners, source new technologies, receive EU funding or finance, finance businesses. EEN wants to make sure small and medium sized Enterprises benefit from the EU Single Market as much as the big players do. EEN can advise on issues so diverse as intellectual property, going international, or EU law and standards. The EEN brings together business support organisations from across 49 countries. They are connected through powerful databases and know Europe inside out. What's more, they have been working together for years, some even for decades. Several services support the work of EEN.

SME or multinationals, universities and research institutes, clusters or any European stakeholder can benefit from the services of the 'Agrofood Sector Group'. Services are to find innovative technological solutions to complement product development, find co-operation partners for products and processes, promote innovative technologies in databases of technology profiles, arrange one-on-one meetings with potential partners at AgroFood trade fairs and company missions to visit potential partners, communicate interests and concerns with regard to European Union policies to EU policy makers, inform about research programmes of the European Union; and Assist in applying for EU grants, find out about laws and regulations concerning the AgroFood Industry in other network countries.

6. Case study in Krasnodar Krai

In Krasnodar operates a private organic/natural chain that distinguishes itself through excellent quality products. In 2012 the chain consists of producers/farmers and processors of organic/natural products in the vicinity of Krasnodar city, an organic shop in the centre of the city of Krasnodar, a web shop, a catering business, a cafeteria and a restaurant. Table 3 present an overview of the chain and some examples are highlighted.

1. Producers/Farmers and Processors

The producers/farmers and processors produce organic/natural products like milk, meat, eggs, flour and vegetables. Some products are processed at the farms themselves. Small farmers, also in the region of Krasnodar, keep pigs and cattle. The farmers organize slaughtering by them and in co-operation with the butchers they produce pork meat and beef. The meat and beef is made from organic pigs that are animal friendly housed and fed with grain from the region. This special feed provides the meat and meat products with a specific and exclusive taste. It is not necessary to use any binders and other additions in the meat.

Table 3: Organic Food Chain in Krasnodar, 2012

Organic food chain in Krasnodar

Producers/farmers	Processing	Logistics	Turnover	Consumers/ customers	
Milk	Milk products	C O M B I N A T E	Shop	Public	
<div style="border: 1px solid black; padding: 2px; width: fit-content;"> Молочная Река www.dairyriver.siteedit.ru </div>			<div style="border: 1px solid black; padding: 2px; width: fit-content;"> Ваше Здоровье </div>	Catering	Нюса <div style="border: 1px solid black; padding: 2px; width: fit-content;"> Другое Место </div>
Cattle	Slaughtering /portioning/packaging		Банкет Сервис http://bancketservis.ru		<div style="border: 1px solid black; padding: 2px; width: fit-content;"> Кафетерий Ваше Здоровье </div>
Pigs					Firms
Chicken	Packaging				Schools
Eggs	Milling/baking				Hospitals
Grains				Homes	
Vegetables	Packaging		Internet	Government	
			<div style="border: 1px solid black; padding: 2px; width: fit-content;"> www.vashezdorovye.ru </div>	Public Firms	

We go further into the milk and milk products and tell the story of the dairy farmer and his wife. The family live in the small village Dinskiy, about 15 miles up north of the city of Krasnodar. The family has a farm of 5 ha's, named 'Молочная река' (milk river) after the milk stream that the family produces, where the cows are reared. The farmer got this 5 ha farm from a program for small farmers some 10 years ago. At the moment the family works with 3 cows. They graze at the meadow place, which consists of grass, combined with lucerne. During the whole year the cows can go outside to eat fresh grass and lucerne. The cows are most of the time outside, but they can always go free inside the barn. The cows have straw to lie in and they are fed with organic products: peas and barley. The cows profit from the clean water that is available in Dinskiy. Machine milking is usual.



Состав: только натуральное коровье молоко без добавок; без сухого молока; без консервантов.

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Полезная информация на сайте www.dairyriver.siteedit.ru

*«Наша пища должна быть легкой и средневолн...»
Тилковрам*

МОЛОКО
коровье нежирное
ВЫСШИЙ СОРТ
ЭКОЛОГИЧЕСКИ БЕЗОПАСНОЕ
НЕ ТРЕБУЕТ ПАСТЕРИЗАЦИИ

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Отличительной особенностью нашего хозяйства является высокий уровень здоровья молочных коров. Наши коровы никогда ничем не болеют благодаря постоянной пастбище, особому содержанию и запатентованной технологии приготовления кормов (патент РФ №2306719). В результате мы получаем живое молоко высочайшего качества, существенно повышающее иммунитет благодаря своим антигистаминным свойствам. Вся продукция экологически безопасна. Содержание наших животных и изготовление продукции соответствует требованиям Директивы Евросоюза №889/2008 «Общеввропейское соглашение по органическому (organic) производству сельскохозяйственной продукции». Молоко не подвергается никакой тепловой или механической обработке, сохраняя свой нежный природный вкус и витамины. Не нуждается в пастеризации в течение срока годности. Подходит как детям, так и взрослым, не вызывая аллергических реакций. Изготовлено и расфасовано вручную.

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Состав: сыворотка.

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*«Наша пища должна быть легкой и средневолн...»
Тилковрам*

СЫВОРОТКА
молочная творожная

Изготовлено:
Годно до:

1 ЛНТР **0,1%** МАССОВАЯ ДОЛЯ ЖИРА

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The family produces a high Standard of milk, according the directives of eko, bio or organic, based on the European regulation: №2092/91 of June 24th, 1991 (new regulation 2009: 837/2007 and 889/2008).

The farmer owns a patent of the Russian Federation: "Health making method for the human organism' (Патента РФ «Способ оздоровления организма человека»). The family makes their own milk for consumption (3,7 and 1 % fat), pasteurized and non-pasteurized. It is very special that the family also produces non-pasteurized milk, which is possible by the high quality of the milk and hygienic production method. Immediately after the milk-donation, the milk is filtered and the litre-bottles are filled with the milk. Apart from the milk the family also produce: yoghurt, smetana (sour cream), curds, butter and en whey.

See www.dairyriver.siteedit.su. Through the way the cows are fed and housed, the way the milk is treated in the processing phase, the milk and the milk products have outstanding quality and exceptional taste. Especially the non-pasteurized milk has extraordinary taste. But also the yoghurt, smetana and curds have a fantastic structure and taste delicious. Most of the milk and milk products are sold to the organic shop in the centre of Krasnodar: *Ваше здоровье*.

2. Organic Shop

The products of the local farmers are sold in the organic shop '*Ваше здоровье*', the only one in the entire Krasnodar Krai. The shop sells natural and preferably organic products, meat, chicken, eggs, vegetables that are produced by small farmers from the Krasnodar region.



Магазин Ваше здоровье эко, био продукции, улица Красная

In the organic shop various organic products are presented to the public. Milk and milk products other fresh products are available in the shop, like fresh pork meat and beef, vegetables, jams etc. Apart from food people can also buy other products from the region, products from other Russian regions and from other cultures. There are also products from an organic cosmetic Institute in Novosibirsk. Another firm Pacific Ocean makes chocolate of sea products.

In Russia at the moment there is no uniform certification of organic products. Certification in Russia is not ruled as in Europe, there are various organizations, also from abroad, e.g. Italy, that issue certain certificates. The shop works with different organizations and certificates, e.g.: *ЧСТАЯ ЕДА*. At this moment it is not clear what policy in the future will be developed in Russia to tackle this problem.

3. Catering

The catering firm: "*Банкет-Сервис*" is also partner in the chain (<http://bancketservis.ru/>).



4. Internet Shop

The local products are also available in the Internet shop: '*Ваше здоровье*'.
<http://www.vashe3dorovyie.ru>



5. Cafeteria

Combined with the organic shop there is also a cafeteria where people can taste the fresh natural and organic products.



6. Restaurant

The local and regional products are also offered in restaurants, e.g. the restaurant '*Другое Место*'.



Другое Место, Ул. Новороссийская, Д.3К9, <http://drugoe-mesto.gurmangid.ru/#>

Concluding, it seems an interesting option to support small and private farmers, because this could bear a huge impact on agricultural development in Russia.

For the required modernization of the production methods small and medium sized farms need:

- Facilitate lead-farms with more land and possibilities to demonstrate their successes (in a chain perspective);
- Better knowledge and training in new sustainable production methods, also in processing activities at the farms;
- Development of example-small and private farms in various regions that can serve as a model for colleague farmers;
- Better mutual co-operation to be able to effectively deal with other chain partners, both in the domestic as well as in the international chains;
- Possibilities to invest in new small-scale production technologies (micro- credits).

7. Conclusions

In Russian agriculture large-scale farms (agricultural enterprises) and small-scale farms (households and other private, and private (peasant) farms and individual enterprises) produce about three quarters of national needs. More than 25 % of total consumption of meat and meat products and more than 20 % of milk and dairy products is imported. Small-scale farmers produce more than half of the agricultural production. Grains, sugar beet, sunflower seeds, poultry, livestock and eggs are for the larger part produced in large-scale farms. The small-scale farmers produce over 50% of the potatoes, vegetables, milk and wool.

The potential of small-scale farmers goes far beyond agricultural production and food and relate to realizing simultaneously economic, social, ethical and ecological values. Output levels per unit area of small-scale farms are higher than those of large-scale farms. Small-scale agriculture, however, is more labour-intensive than large-scale agriculture. Stimulating small-scale agriculture could therefore increase employment, strengthening active vital rural regions and building new relationships between urban and rural areas. This also could contribute to stopping the migration from the countryside to the city. Tourism has undiscovered potentials, not only in cities, but also in rural areas. Small-scale farms in general do not use chemical fertilizers and pesticides. Apart from this, ecological values can be gained via co-operation with local organizations in the field of landscape, nature, water and ecosystem health. Small-scale agriculture is best equipped for developing own type of Russian agriculture and food and Russian food culture.

Climate, soil and growth conditions differ to a large extent between Russian regions: Central, Volga, Southern and Northern regions. Many food communities play a role as precursors of the large potential of small-scale farmers, taking account of the specific conditions in the different regions.

To stimulate small-scale agriculture and food five recommendations are proposed:

- Stimulating a chain approach

For realizing a chain approach co-operation between the actors in the chain is crucial.

Advantages can be gained by linking small-scale production with the large-scale international agricultural chains.

Cross relationships between these different sectors are needed between raising crops and animals, fishing, and collective forest products, as well as off farm activities.

- Stimulating a network approach

Apart from agricultural and food, conserving, protecting and enhancing natural resources, and improving the livelihoods and well-being of people and social groups in the rural areas are important challenges for small-scale farmers. Therefore actors in the public and private sector, civil society and their organizations are involved in the networks.

- Modernization of small-scale agriculture and food

For modernization of small-scale agriculture renewal is needed in technology (both in adjusting existing technologies to Russian conditions as well as new technology), ways of production and farm management practices, processing and marketing, and combining traditional practices with new scientific knowledge.

- Increasing regional capacities

Stimulating regional capacities is needed to create and maintain vital rural areas, strengthening Oblasts and linking urban and rural agriculture.

- Governance

The improvements of SME's capacities rely not only on on-farm capabilities, but also on the general enabling economic and institutional environment, both on a regional, national and international level.

A Case study shows a private organic/natural chain operating in Krasnodar in 2012 that distinguishes itself through excellent quality products. The chain consists of producers/farmers and processors of organic/natural products in the vicinity of Krasnodar city, an organic shop in the centre of the city of Krasnodar, a web shop, a catering business, a cafeteria and a restaurant.

The experiences of this chain underline the recommendations that are made in this paper to support small and private farmers, because this could bear a huge impact on agricultural development in Russia.

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