

## **Heuksalim City Farming System and Native seed Preservation Movement**

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### **Author's Background**

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### **Summary**

*Heuksalim, a leading organization on organic agriculture in Korea, was established in 1991 and started city farming business in 2004.*

*Korean city farming was flourishing along with a boom in 2006, and related law was enacted in 2011. The ordinances to foster city farming were enacted by many local governments, too.*

*Heuksalim has been educating and training city farmers, counseling government as well as private organization especially for organic city farming, research and development of city farming technology and materials, networking with NGOs and local community including school, and suppling organic city farming materials and native seeds.*

*Heuksalim provide various programs that city farmers visit rural sites along with their family and experience the organic farming and rural custom as well as sightseeing.*

*We expect that city farmer will become a supporter of organic agriculture in the long run.*

### **Background**

Organic farming in city is very important because most of food consumers reside in city and they would buy organic foods if they know the properties of organic foods through organic farming by themselves. If they don't know the value of organic agriculture, they will rather prefer non-organic foods. It is effective to educate and train about food waste recycling in urban organic farming because each farming area is small enough to satisfy the compost amount to grow crops from each household food waste. They are interested in social value rather than economic value compared to farmers. Therefore, native seeds are readily adopted although their productivity is not satisfying. In the long run, native seeds will be expanded to rural farmers from city farmers. Heuksalim organic farming movement in city started in 1994 with Heuksalim recycling farming method. Since 2004, indigenous seeds and traditional agriculture was combined with city farming and we continue to find joining ring of traditional and organic agriculture altogether with citizens.

### **Main chapter**

## Introduction of Heuksalim

Heuksalim was established in 1991, with the goal of improving the soil condition suffered from chemical fertilizer as well as chemical pesticides. Heuksalim has pioneered a range of innovative strategies in environment-friendly agriculture.

Heuksalim developed and improved 'Heuksalim Food Waste Recycling System' in 1994.

Heuksalim was accredited as the first private organic produce certification body in Korea. The certification division was spun off into Korea Agricultural and Food Certification Institute Co., Ltd. in 2011 because of governmental new policy that material supplier can't become a certification body.

Organization	Start	Objective	Main Business
Heuksalim Institute Corp.	1991	Build Organic Agricultural Condition	Education and Training, Publishing, Native Seed Research, Networking with NGOs
Heuksalim Co.,Ltd.	1999	Supply Organic Agricultural Materials	Organic Fertilizer, Pest Control Materials and Probiotic Production, Soil, fertilizer and pesticide residue analysis
Heuksalim Food Co.,Ltd	2005	Distribute Organic Produces	Cultivation of Organic Crops, Collect and Deliver Organic Produce to Consumer directly and indirectly
KAFC	2002	Certification of Organic Food	Certification of Environment friendly Foods, Education and Training

We established Heuksalim Co., Ltd. in 1999 to develop and produce organic agricultural materials such as microbe inoculant, compost, organic fertilizer and natural pesticides, probiotics for animal feed. Heuksalim has a R&D center and lab to analyze fertilizer, soil, GMO seeds and pesticide residue of produces certified by government.

We also established Heuksalim Food Co., Ltd. to grow crops by himself and collect organic produces from farmers and supply them to consumers directly and/or indirectly. Heuksalim Food also produce some kinds of organic process foods.

Heuksalim is now regarded as a Korean leader in the fields: educating and training organic farmers over 20,000; the research and development of technology and agricultural materials over 100 items; analyzing soil, fertilizer, GMO seed, and pesticide residue in produces; directly delivering environment-friendly produces from farmers to consumers including school feed. Since 2004, our business field has been extended to city farming and native seed preservation.

### City farming in Korea

In 2006, Korean city farming was flourishing along with a boom particularly by organic pocket, leading to enacting a law [Act On Fostering and Supporting City Farming] in 2011. The ordinance of local government was enacted since 2009.

City farming is now a trend all over the country.

	2011	2012	2013	2014	2020
Kitchen garden (Places)	100	1,673	2,500	3,000	10,000
(ha)	29.1	84.2	115.5	200	990
The self-sufficiency rate of food energy (%)	0.9	1.8	3.0	5.0	21

City farming is generally aimed to foster eco-city, recover local community and improve the life quality of citizen through expanding kitchen garden by utilizing unused land and rooftop of downtown. Seoul has held an annual city farming fair since 2013 with Busan Metropolitan City since 2005.

Seoul Central City has a plan to install a average 3.3m<sup>2</sup> seeding plot per a household, with total area 990ha in 2020, targeting 21% of food energy self-sufficiency rate(Table 1).

Seoul is planning to foster 6,250 of city farming experts until 2015, too.

	2011	2012	2013	Cumulative
Rooftop garden	40 places	104 places	65places	209places
Growing pot	5,000pieces	20,200pieces	10,000pieces	35,200pieces

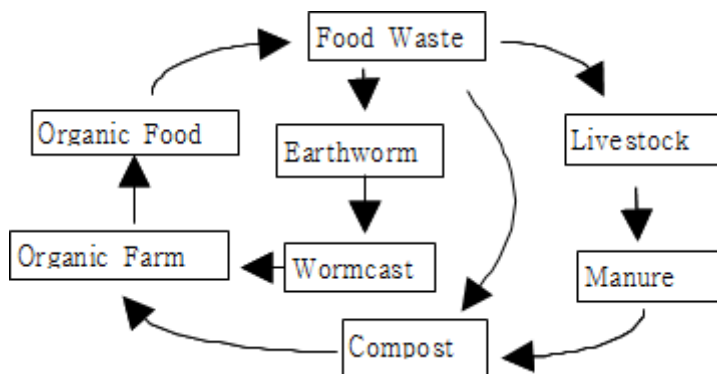
Besides kitchen garden, Seoul City has supported 209 rooftop gardens and 35,200 boxes of growing pots until 2013.(Table 2).

## Heuksalim City Farming System

Heuksalim support city farmers with various ways like technology, materials, and networking, etc.

Heuksalim food-waste-recycling system was developed for rural farmers at the first, but can also be easily adapted to the community gardeners. City farmers use their food waste for crops on their small field about 10~20m<sup>2</sup> principally through composting or breeding earthworm.

The process to go by way of livestock is now adopted mainly by industrial scale manufacturers rather than farmers.



In addition, we are providing city farmers with composting medium and composter. They can also use their own composter utilized from used Styrofoam or carton box, etc. Medium is mixture of good compost and soil and it takes 2 to 3 months to finish composting food waste during 3 weeks from a household in the case of 10 liter composter.



There are four categories of materials for gardening; growing bag and potting soil; plant nutrients; pest controlling materials like yellow sticky card and plant extracts; microbe inoculant for crops and domestic usage as detergent and cleanser.

We also provide education and training program about city organic farming, counseling about city farming local government and private organizations as well as school.

Heuksalim operates demonstration field where traditional and organic farming can be experienced by consumers together with their children as well as farmers. Heuksalim provide various programs that city farmers visit rural sites along with their family and experience the organic farming and rural custom as well as sightseeing.

We expect that city farmer will become a supporter of organic agriculture in the long run.

In order to preserve native seeds, Heuksalim also practices seed-gathering and characterization research, breeding and providing seeds and seedling to farmers including city farmers, delivering the produces from farmers to consumers.

Class of crops	Variety	Main species
Rice	413	paddy rice, upland rice
Cereal	5	wheat, barley
Legume	347	kidney bean, sword bean, cowpea, hyacinth bean, etc.
Miscellaneous grain	144	sorghum, corn, millet, adlay, etc.
Vegetable	279	cucumber, lettuce, chinese cabbage, red pepper, radish, spinach, etc.
Special crop	91	sesame, perilla, herb, etc.
Others	69	
Total	1,348	

We started R&D and distribution of indigenous seeds in 2005, currently having and possessing 1,348 varieties. We are trying to make the sustainable production base to reduce and resolve the bottleneck problem of organic farmers through cultivation technology training, newsletter publishing and on-site consulting.

**Recently, farming households avoid nurturing Korean native species which are important as genetic resources. This is due to the trend of breeding good new species, a trend that has spread both all over the world. This has caused the gradual disappearance of Korean native species, which have become difficult to find even in rural, agricultural areas.**

Therefore, our strategy is to connect indigenous seed with city farm and our associated product developments in these arenas have proven both potent and unique. For most of city farmers long for traditional method and native crops apart from economic interest. We are expecting for more and more farmers to accept native seeds before long.

We are helping schools to start and manage organic gardens for education. We are cooperating with many NGOs to help city farmers in learning the best and safest ways of recycling wastes and the best growing methods, and help them in persuading governments and local authorities to support their efforts rather than neglecting them, or even harassing them with regard to city farming..

### **Core messages and conclusions**

Starting with a pure mind to recover soil condition, then farmers want us to educate and train them. So we research leading farmers and experiment on th site, and distributed the results to farmers.

Then, we found out microbes imported from Japan and tried to domestically produce it. Many experts including professors participated in the project. Finally we discovered brewing method of microbes, and then supplied it to farmers.

Organic farmers wanted us to supply all kinds of organic agricultural materials, so we established Heuksalim Co.,Ltd.

According to expansion of organic agriculture, government felt to certify the organic produces, then we attended enacting project, and become accredited certification body.

When with organic farming technology and materials, the output of produces outrun the market demand, we were requested to distribute the produces. We, therefore, established Heuksalim Food Co.,Ltd.

These days city farming is booming and many organization require us to play a role in the field. And city farmers are much interested in the traditional method and native seeds whose research was begun 2005.

Heuksalim has been always prepared for new trend and new business chance. We will be endeavouring to make organic agriculture zone all over the Korean Peninsula.

### **References**

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