

# CIRCULATION AGRICULTURE CASE STUDY: LIVESTOCK FARM

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Dangneomeo is....

■ Dangneomeo is...

The name of the valley where I have settled down.

There is a hill next to the shrine in the back of a village. Dangneomeo is a valley over the hill. The valley is my cozy home where my grandfather, my father, and I have tilled the soil. My parents left me one patch of upland field and six paddies of unirrigated rice field (550 pyeong). The brook meandering through the valley used to have more crawfishes than pebbles and the water below the water peppers was teemed with loaches.

Dangneomeo Farm Overview

■ Relocated to the current location in 1987

■ As of 2010,

Hanu cattle: 260 heads (160 cows, 16 bulls, 84 oxen), breeding stock farm

Farm area: 7,000 pyeong

Cattle sheds: 7 pens (820 pyeong – including rain shelters), an eco-friendly barn

Sales facility: Hanu beef store (Gyeonggi Province Designation No. 10-86) 20 pyeong

Sell 29 cuts of only 1++ grade Hanu beef (oxen)

Restaurant: 60 pyeong

Use environment-friendly agricultural produces and pursue consistent and sophisticated service based on the farmers' conscience

Education facilities: 60 pyeong (including resting areas)

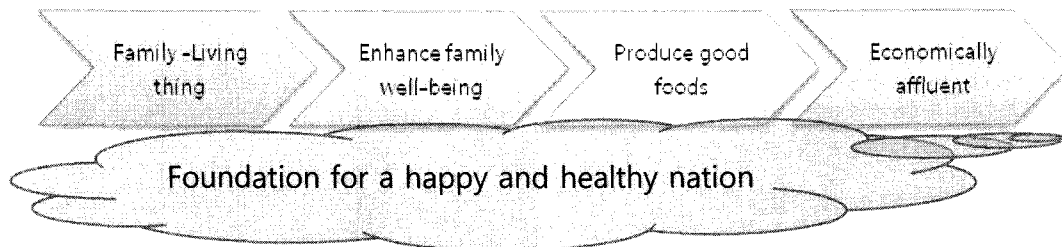
Planned to be used for family or company events and meetings and as a school for Hanu cattle and environmental education

Residence: 42 pyeong

Paddy field: 5,000 pyeong (cultivated organically), a place to learn about the circulation of genuine foods and the nature

Upland field: 1,300 pyeong (cultivated organically)

Desirable life as a farmer?



Livestock farming - dream vs. reality

■ Livestock farming dream?

Leisurely lounging cows and aspired farmers wearing blue jeans, checkered shirt, and suspenders in a picturesque landscape that can be found in advanced cattle farming countries like Australia and New Zealand?

■ Livestock farming in reality?

Dirty and smelly cattle feces, flies, mosquitoes, antibiotics, disinfectants, foot-and-mouth disease, mad cow disease, hog cholera, avian flu, additives, veterinarians, livestock farming equipment & materials

Cattle feces treatment

Quarantine

Cattle Manure Test Result 1 of Dangneomeo Farm (within buildings)

Testing entity: National Institute of Agricultural Science and Technology under the Rural Development Administration (August 2005)

Classification	Sample 1 (Bottom soil, inside)	Sample 2 (Bottom soil, surface)	Sample 3 (Concrete, inside)	Sample 4 (Concrete, surface)	Average
Nitrogen (%)	3.90	2.20	4.17	4.49	3.69
Phosphoric acid (%)	1.91	1.80	1.44	1.27	1.61
Potassium (%)	4.53	3.83	4.38	3.61	4.09
Lime (%)	2.14	2.28	2.17	2.03	2.15
Magnesium (%)	0.83	1.20	1.12	1.06	1.05
Organic matters (%)	60.93	74.29	65.45	70.43	67.78

Cattle Manure Test Result Evaluation of Dangneomeo Farm

※ Regulation of compost raw materials (within buildings)

- Organic matters: 60% or more
- Heavy metal contents: Zinc 900, copper 500, arsenic 50, lead 150, nickel 50, chrome 300, cadmium 5, mercury 2mg.kg or lower
- As all the tested samples are in compliance with the regulation of compost raw materials, the cattle manure of Dangneomeo Farm described above, regardless of its originating location, is appropriate to be used in the making of fertilizer.

Testing entity: National Institute of Agricultural Science and Technology under the Rural Development Administration (August 2005)

Changes in quality grade

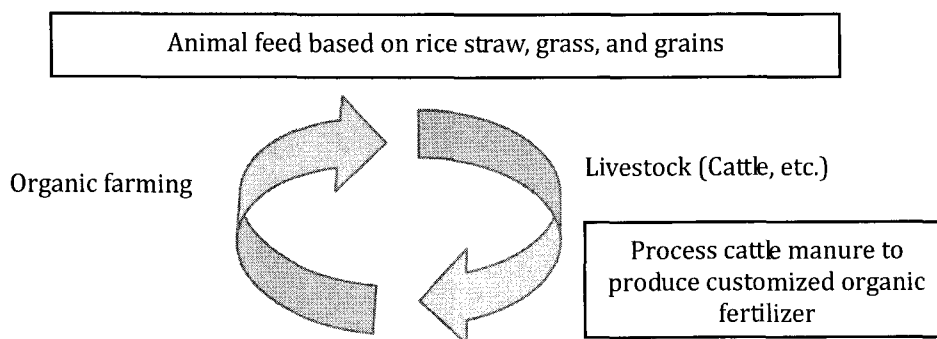
2008 | 2009 | 2010 (As of May)

Changes in live body weight

2008 | 2009 | 2010 (As of May)

800kg or more | 700-800kg | 600-700kg | 600kg or less

## Cattle manure circulation mechanism



### Agriculture...

- A biotechnology industry
- Farmers produce food that humans have to eat to survive and should not think only about profit.
- Agriculture produces things that cannot be foregone.

### Farmers

- Produce genuine foods (organic foods)
- Genuine food – Identifiable by examining whether eating the food is beneficial for our health
- Everyone wants to get healthy.

### Let's think together

- How farmers can pursue happiness and produce ideal foods?
- The solution is the enhancement of livestock well-being.

### Action Plan

- View livestock not as a source of income but as living things
- Improve the diet of livestock – Avoid a grain-based animal feeds only approach
- Liberate livestock from artificial interventions
- Build a beautiful and efficient barn
- Grow a garden near the barn
- Recognize the value of cattle feces as nutritious food for micro-organisms that revive the soil
- Organic grain farming and organic cattle farming should form a benign cycle
- Attach value to all foods only as an integral element for the functionality of humans and other living things
- Turn the current industrialized livestock farming to small-scale farming which would be either a full-scale or a side business for the farmer

### Conclusion

- A domestic animal is literally an animal that is raised at home. The soil of the field on which domestic animals are raised becomes fertile. As long as livestock is not raised at home and the livestock does not produce feces that can fertilize the soil, the well-being of livestock cannot be realized and genuine foods that can enhance our health cannot be produced.