

Trends in the Livestock Sector of DPRK and Future Cooperation

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International trips made by Kim Jong-un



⌘ "Great Leader" Kim Il-sung,

- ☑ Grandfather
- ☑ First premier 1948-1994
- ☑ Born 1912; died 1994

⌘ "Dear Leader" Kim Jong-il

- ☑ Father
- ☑ Second premier 1994-2011
- ☑ Born 1942; died 2011

⌘ "The Great Successor" Kim Jong-un

- ☑ Premier since 2011
- ☑ Born 1983

2018. 4.27
 Inter-Korean summits



2019. 1.8
 Kim Jong-un visits China's Xi Jinping



2018. 6. 12
 North Korea–United States
 Singapore Summit



2019. 2.27~28
 The Hanoi US-North Korea Summit



2019. 4. 24-25.
 Kim Jong-un in Russia for Vladimir Putin
 summit

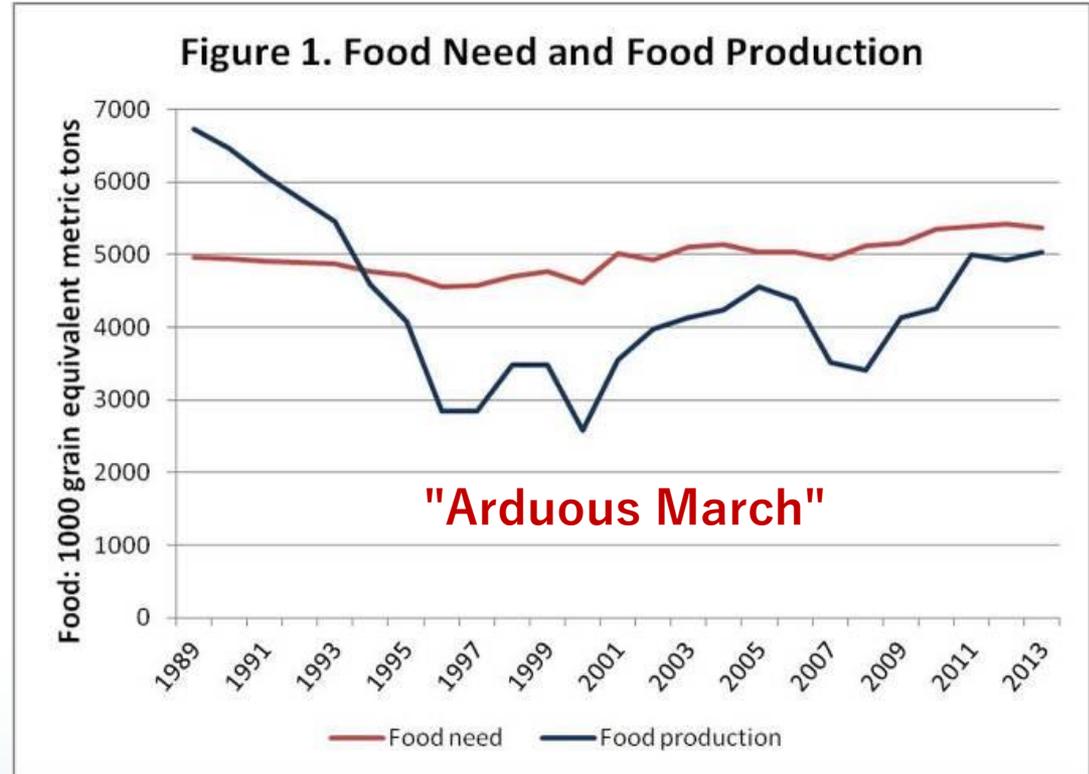


1. Livestock Status in North Korea

North Korea's food supply rate



Food Shortage vs Livestock Industry

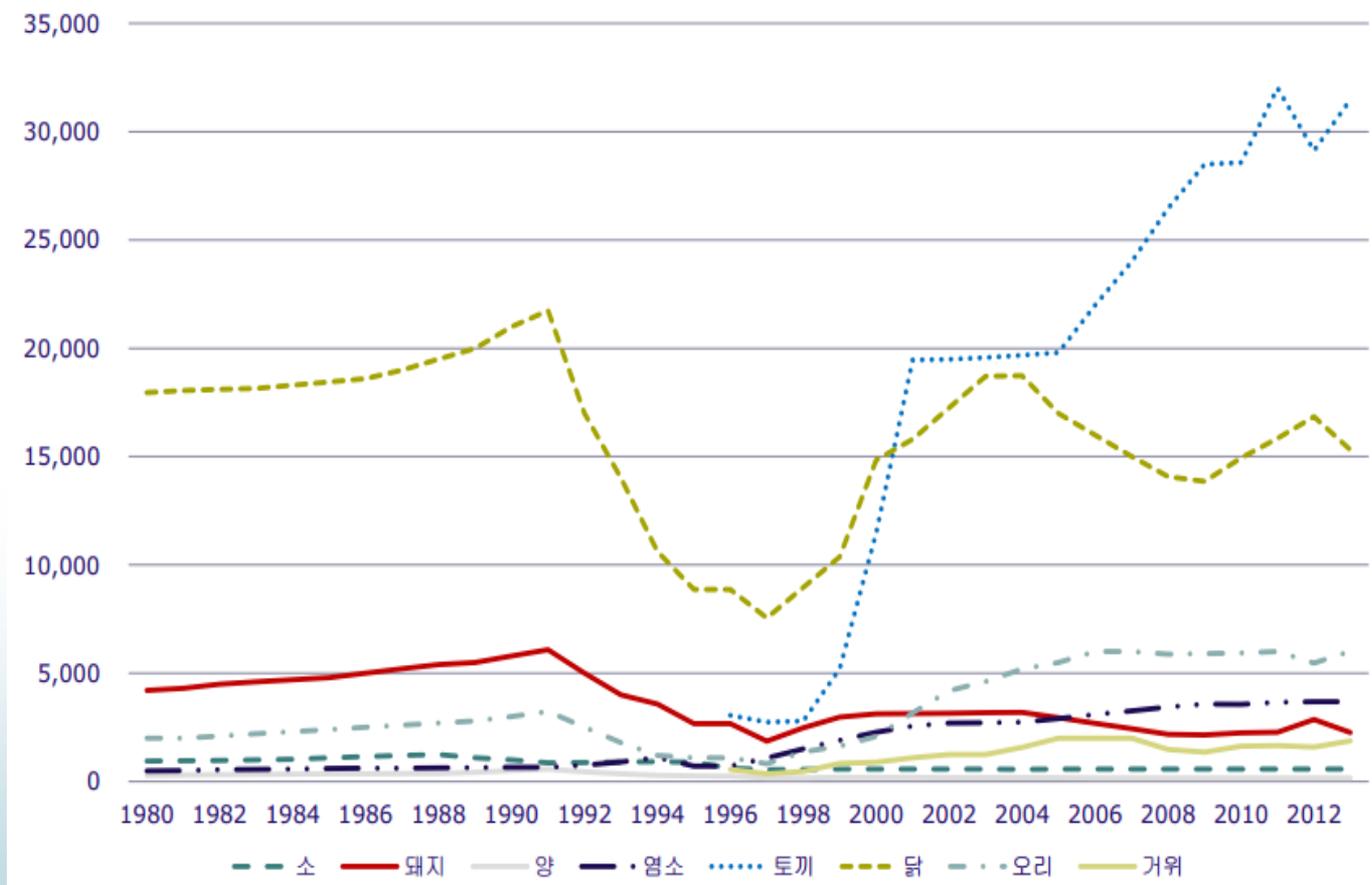


☞ The food problem is very serious and is expected to affect inter-Korean relations. Therefore, more active research on livestock production and consumption is needed.

Changes in the number of livestock

in North Korea

Changes in livestock headcount
 (1980-2012)



Data: Unification Ministry, North Korea Statistics, Rural Economic Institute (2014)

Cooperative farm scale

Annex Three - Summary Profile of Waeso and Samhun Cooperative Farms

	Waeso	Samhun
location	Kaechon county, South Pyongan province (150 km from Pyongyang)	Hwanju county, North Hwanghae province (60 km from Pyongyang)
total arable land area	782	672
paddy	372	71 (seed)
maize	185	300 (seed)
vegetables	34	200 (seed)
orchard	101	73
mulberry	30	19
other cropland (incl tobacco)	20	11
pasture	40	120
forest	100	1555
fishponds	3	12 (reservoirs)
livestock		
cattle		55 (calves)
draught oxen	180	160
pigs	1680 (of which 1200 owned by HH)	969 (of which 769 owned by HH)
goats	520 (320 owned by HH)	820 (680 owned by HH)
chicken	3200 (2000 owned by HH)	3500 (3157 owned by HH)
ducks	1500 (1000 owned by HH)	1111 (861 owned by HH)
geese	400 (none owned by HH)	350 (307 owned by HH)
rabbits	3200 (2000 owned by HH)	4000 (3835 owned by HH)
mechanization		
tractors	26	25
transplanters	28	5
trucks	5	3
population	3120	3350
families	680	810
workers	1680	1190
workteams	12	18
sub-workteams	40	54
ag university graduates	40	12



Democratic People's Republic of Korea

Republic of Korea

Evaluation

of

Livestock Development and Vegetable Production - SP

GCP/DRK/002/ROK

Report of the Evaluation Mission

September 2000



6.28 Policy (2012) Introduction of Pojeondamdangje

- Reduced the size of the group from the existing 10-25 to 3-6 (collective management structure → change to individual management structures)
- 70% of the total output is paid to the state and the remaining 30% to the fractional members
- Any excess of the target amount (production plan) can be treated autonomously

5.30 Measures (2014) Introducing China's Production Liability System Reform Method

- Reorganization of the division into a family unit, the distribution of farmland
- Granting self-governing power over farms
- Distribution of output at the ratio of 4 : 6 (40% of country and 60% of peasant)
- Autonomous disposal in excess products



Characteristics of the Development of Livestock Industry

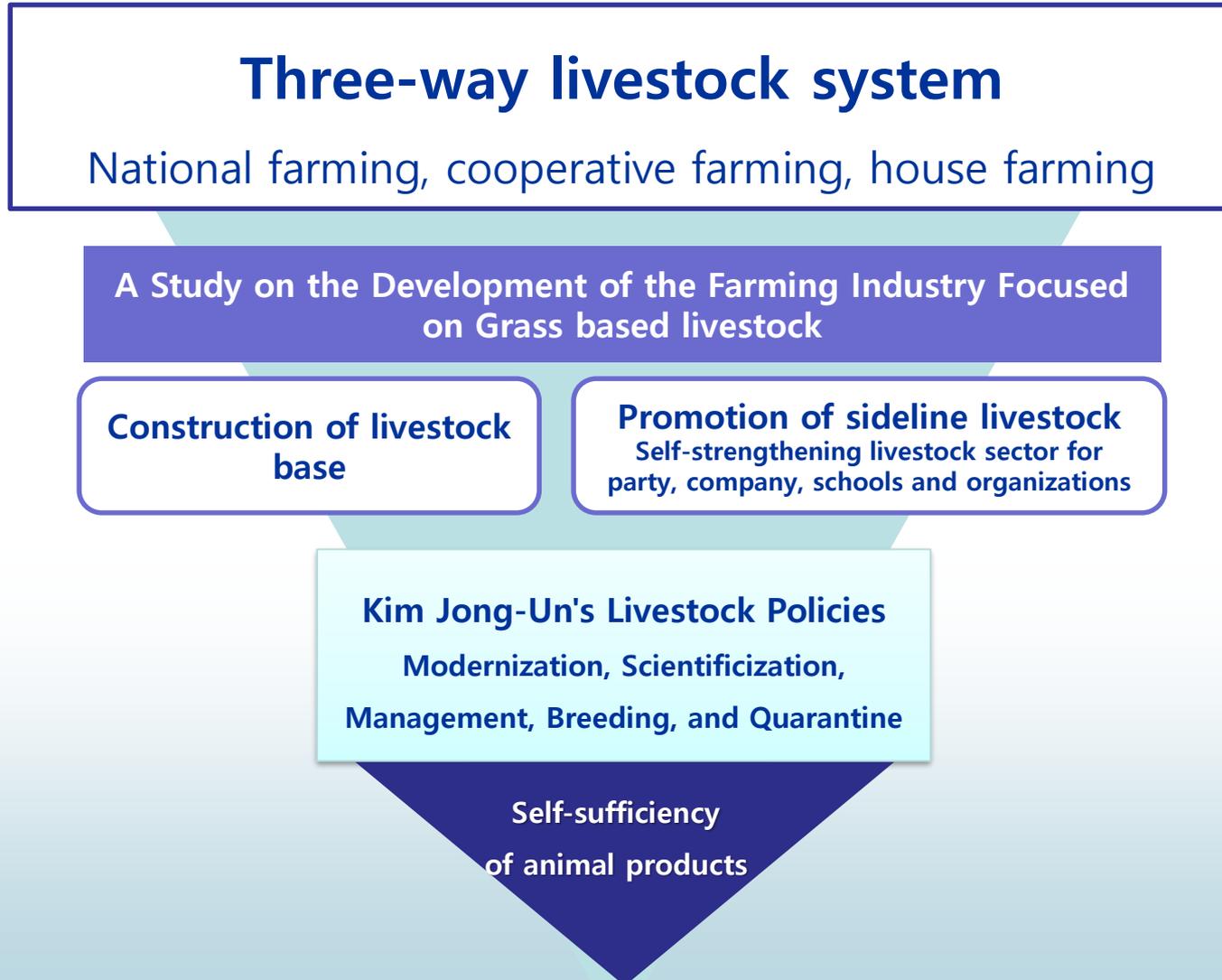
(North Korea)

- Since the 1960s, livestock development has been relatively limited, focusing on increasing grains production
- A lack of sense of proprietorship and motivation due to socialist agriculture in the cooperative farm
- In order to increase the number of livestock animals, the government promoted a sideline livestock farm

(South Korea)

- Transition from extensive farm to intensive farm system
- Scale up, professional form
- Environmental and livestock protection considerations (green livestock and welfare livestock)
- Smart Farm (smart animal husbandry)

Kim Jong Un's Livestock Policy



Four detailed policies

Goal	Livestock self-sufficiency production		
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Direction	Promotion of the livestock business centered on herbivores		
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Policy direction	Construction of livestock base	Parallel promotion of sideline livestock production	

Four detailed policies	① Scientific breeding management	② Efficient feed production and management	
	③ Strengthen breeding business	④ Strengthening of veterinary medicine and disease control	

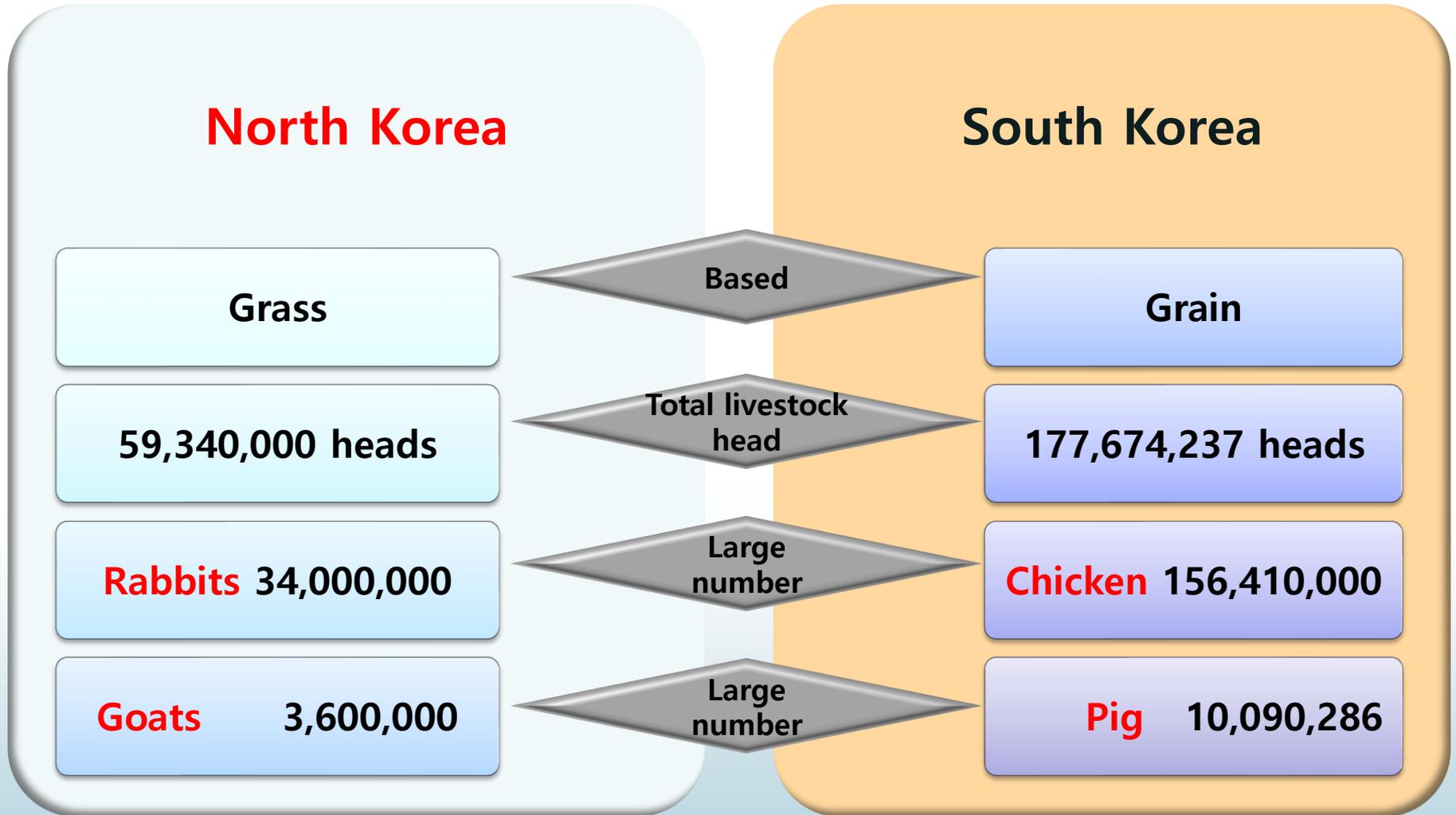
Three major livestock base	National animal husbandry	Cooperative farm	Farm household
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2. Comparison of Livestock in South and North Korea

Livestock Size in North and South Korea (2014)



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LIVESTOCK INDUSTRY OF NORTH KOREA



Comparison of Korean Livestock Industry in North and South Korea

가축사육 (Livestock Numbers)

단위: 천마리

In thousand heads

연도 Year	남한 South Korea						북한 ²⁾ North Korea					
	소 Cattle	돼지 Pig	양 ¹⁾ Sheep	토끼 Rabbit	닭 Chicken	오리 Duck	소 Cattle	돼지 Pig	양 Sheep	토끼 Rabbit	닭 Chicken	오리 Duck
2010	3,351	9,881	7	245	149,200	14,397	577	2,248	166	28,571	16,569	5,936
2011	3,353	8,171	3	206	149,511	12,735	577	2,269	168	32,010	17,500	6,000
2012	3,479	9,916	3	189	146,836	11,161	576	2,857	168	29,120	16,847	5,468
2013	3,342	9,912	3	137	151,337	10,899	576	2,265	168	31,480	15,309	6,012
2014	3,190	10,090	2	115	156,410	7,539	575	2,100	168	32,500	14,500	6,000
2015	3,088	10,187	...	...	164,131	9,772	...	...	...	...	...	...

주: 1) 남한은 면양 기준

2) 2014년 수치는 추정치

출처: (남)통계청 농어업통계과 「<http://kosis.kr>>가축동향조사」, 농림축산식품부 「기타가축통계」, (북)FAO 「<http://www.fao.org>」

Note: 1) Data for South Korea refer to sheep

2) 2014 figures are estimate

Source: Statistics Korea, Ministry of Agriculture, Food and Rural Affairs 「Other Livestock Statistics」, FAO.

North Korea

State-led livestock products such as rabbit and goat meats have the largest output

440,475 ton

Rabbit meat 149,500 ton

Duck meat 10,800 ton

South Korea

The largest output of products is based on consumer demand such as milk and pork

4,124,838 ton

Milk 2,093,000 ton

Goat meat 1,440 ton

Production

Total production

Largest products

Smallest product

Comparison of Korean Livestock Industry in North and South Korea



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소/돼지고기 생산량 (Production of Beef and Pork)

단위: M/T

구 분 Distribution			2009	2010	2011	2012	2013	2014	2015
소고기 Beef	남한 South Korea		198,000	186,000	216,000	234,000	260,000	261,000	255,000
	북한 North Korea		21,750	21,795	21,795	21,975	21,975	20,378	...
돼지고기 Pork	남한 South Korea		722,000	764,000	574,000	750,000	853,000	830,000	842,000
	북한 North Korea		110,000	110,000	110,000	112,500	112,500	101,854	...

출처: (남)농림축산식품부 「농림축산식품 주요통계」,
(북)FAO 「<http://www.fao.org>」

Source: Ministry of Agriculture, Food and Rural Affairs
「Food, Agriculture, Forestry and Fisheries Statistical Yearbook」,
FAO.

2016 통계청

Comparison of Korean Livestock Industry in North and South Korea



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계란 및 우유 생산량 (Production of Eggs and Milk)

단위: 톤

In ton

구 분 Distribution		2009	2010	2011	2012	2013	2014	2015
계란 Egg	남한 South Korea	579,276	577,521	573,079	604,525	604,464	657,363	...
	북한 North Korea	104,000	114,000	120,000	125,000	125,000	124,563	...
우유 Milk	남한 ¹⁾ South Korea	2,109,732	2,072,696	1,889,150	2,110,698	2,093,072	2,214,039	2,168,157
	북한 North Korea	97,000	92,993	96,000	98,000	98,000	97,728	...

주: 1) 남한의 우유생산량은 합격량 기준임

출처: (남)농협 축산정보센터 「<http://livestock.nonghyup.com>>축산물 수급 및 가격자료
농림축산식품부 「<http://kosis.kr>> 우유 및 유제품 생산소비상황」,
(북)FAO 「<http://www.fao.org>」

Note: 1) As for milk production, data for South Korea are based on milk passing a test

Source: National Agricultural Cooperatives Federation 「Materials on Price, Supply & Demand of Livestock Products」, Ministry of Agriculture, Food and Rural Affairs, FAO.

Per capita consumption of Animal derived food (2013)

Unit: Kg/per capita/year

Consumption		South Korea(A)	North Korea(B)	Ratio(B/A)
Meat	Beef	10.3	0.88	8.5
	Poultry (chicken, duck, etc.)	11.5	1.76	15.3
	Pork	20.9	4.7	22.5
	Sum	42.7	7.34	17.2
Milk		71.3	3.74	5.2
Egg(number)		242	78	32.2
Livestock consumption		128.5	15.78	12.3

3. Current Status of Veterinary Medicine in North Korea

North Korean bird flu stamp

Avian flu prevention



- North Korea issued a new postage stamp on the prevention of bird flu.
- In February 2005, bird flu outbreaks were reported in poultry farms near Pyongyang. Sources close to North Korea's affairs have said more than 210,000 chickens have been slaughtered to contain the disease.

Bird flu in the heart of Pyongyang



- **(2013-6-11)** North Korea has reported to the international agency on animal health that the country has seen no new bird flu cases

Other diseases :

Rabies, anthrax, tuberculosis, Leptospira, Q fever, foot-and-mouth disease, toxoplasmosis, brucellosis

African swine fever (ASF)

On 2018 November 16th, it was announced that the virus of African swine fever (ASF) was confirmed from the carcass of wild boars found in Hunjiang District, Baisan City, Jilin Province, bordering North Korea.



If South and North Korea fail to prevent veterinary diseases, they can spread the disease directly to the counterparts.

Agreement between the authorities on inter-Korean agricultural cooperation

- Agreed to cooperate with five inter-Korean agricultural cooperation committees in 2005
- Agreed to promote cooperation project fisheries inter-Korean cooperation joint committee in 2007



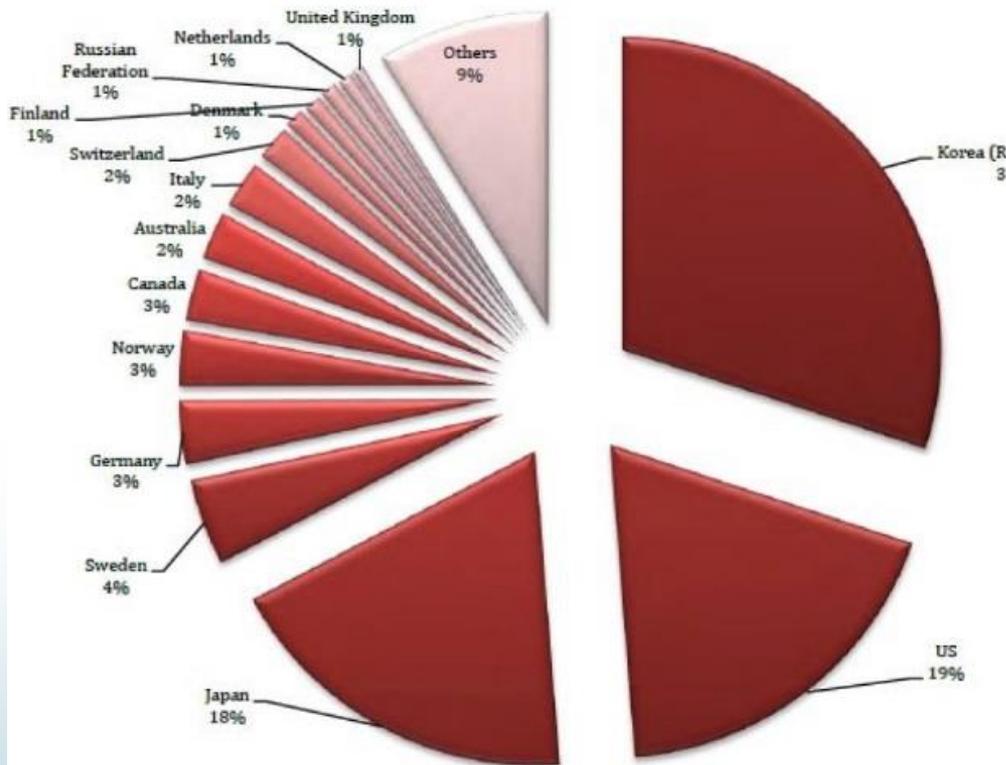
Separated	Main contents
Inter-Korean Agricultural Cooperation Committee(2005)	<ul style="list-style-type: none"> • Cooperative Farm Cooperation, Agricultural science and technology and workforce exchanges • Seed part cooperation, Forest Resource Protection cooperation • Livestock, Fruit tree, vegetables, sericulture, Cooperation agreement for special crops Field
Inter-Korean Economic Cooperation Committee Ministry of Agriculture and Fisheries(2007)	<ul style="list-style-type: none"> • Seed production and processing facilities, Supports the construction of genetic resource storage • Cooperation related to quarantine • Fruit tree, Vegetables, sericulture, Livestock, Cooperation agreement with agricultural science and technology sector

Domestic NGO : North Korea Agriculture cooperation business

Group name	Start Year	Main activities
International Corn Foundation	1998	• Corn sarcoma, related farming aid
Good Neighbors	1998	• Supporting the construction of Cow Farm, Yangjang plant and feed plant
North-South Gangwon Cooperation Association	1998	• Forest disease pest control, salmon fish stocked business
Inter-Korean sharing movement	2000	• Vegetable greenhouse, rural village housing construction
Inter-Korean Agricultural Development Cooperative Civilian Regiment	1999	• Seed potato support and tissue culture facility, low temperature reservoir support
Nonghyup JoongAng Sashimi	2003	• Special soybean seed support, Yangdonjang construction
North Goseong Agriculture Cooperation stage	2002	• Greenhouse farming materials and technical support
Saemaul Undong center	1998	• Support for agricultural and agricultural materials and cooperative farms
Helping each other in our nation movement	1997	• Milk goat ranch, farm equipment repair facility, vegetable growing, rural modernization support, rice farming, nursery, pig farm
Good people	1999	• Corn Seed; Fertilizer Support
South Jeolla ProvinceInter-Korean Exchange Council	2003	• Agricultural machinery repair factory, vinyl greenhouse support
World Vision	1998	• Seed potato production room, vegetable greenhouse, vegetable breeding, water production, rice nursery, soil research, agriculture technology training
Gyeongnam Unification Agriculture Cooperation Association	2005	• Rice, facility greenhouse, strawberry seedlings production
Catholic State Church National Reconciliation Committee	2000	• Support for agricultural machinery and agricultural materials, support for seed culture facility
Tongil Agriculture and Fisheries Corporation	2004	• Samyunpo cooperation farm support of Goseong-gun, rice farming, after crops business
Forest of Peace	1999	• Forestation and forest protection, nursery restoration
JTS Korea	1998	• Agricultural equipment support
Korean College student Mission	1999	• Support for goat and livestock equipment
Korean Welfare Foundation	2002	• Support for agricultural machinery and farming materials; disseminate rice farming technology

5. Cooperation of the international community for North Korea

Supported countries for North Korea and scale of support



BILATERAL DONORS	CUMULATED FUNDING (US\$)
Korea (Republic of)	403,844,901.0
US	250,340,852.0
Japan	247,247,491.0
Sweden	59,665,012.0
Germany	44,295,084.0
Norway	37,741,616.0
Canada	35,788,106.0
Australia	32,991,797.0
Italy	32,871,241.0
Switzerland	24,163,331.0
Denmark	13,174,061.0
Finland	12,038,004.0
Russian Federation	11,453,320.0
Netherlands	10,321,435.0
United Kingdom	7,946,450.0
Others	122,499,787.0
Total (Bilateral donors)	1,341,676,584.0
TOTAL HUMANITARIAN FUNDING 2000-2011	1,775,480,225.0

※ Data: The United Nations, Overview of Needs and Assistance-DPRK, 2011, p 71

Reference: Im U.-C

Group name	Start Year	Main activities	Interests
UNDP	1998	<ul style="list-style-type: none"> • AREP(Agriculture and environment restoration business) Establishment and promotion • Continuous Rural Energy Development Project • Good seed production for sustainable agriculture • Strengthening food and agricultural information system • Crop loss reduction business after harvest • Training and training at home and abroad 	<ul style="list-style-type: none"> • Agriculture and environment restoration business • Ability to cultivate
WFP	1995	<ul style="list-style-type: none"> • Noodle factory and bakery factory operation support • Food aid for work business • Dietary support for children's education 	<ul style="list-style-type: none"> • Food security
FAO	1995	<ul style="list-style-type: none"> • Aftercrop blowup business • Supporting eco-friendly agricultural technology* • Efficient fertilizer use through soil inspection 	<ul style="list-style-type: none"> • Agricultural technology
WHO	1996	<ul style="list-style-type: none"> • Essential drug production facilities and materials support • Epidemic early warning system, strengthened control • Establishment and preventive activities of National Polio Research Institute • Overseas medical technician training 	<ul style="list-style-type: none"> • Health and sanitation
UNICEF	1995	<ul style="list-style-type: none"> • Child and maternity health support • Providing training materials and training • Support small-scale farming and livestock programs 	<ul style="list-style-type: none"> • Children's health and health hygiene • Child education
UNEP		<ul style="list-style-type: none"> • Cultivating capacity for environmental development center and environment department • Comprehensive management of water resources of the Daedong River basin • Promotion of eco-friendly houses and environmental education 	<ul style="list-style-type: none"> • Improving the environment
IFAD	1996	<ul style="list-style-type: none"> • Sleep business(1996-2002) • Crop and Livestock Restoration Project(1997-2003) • Field food security business(2000-) 	<ul style="list-style-type: none"> • Agricultural Repair • Income growth project for rural residents

Status of NGO Aid to North Korea: Europe

Group name	Beginning Year	Main activity	The field of interest
German Agro Action	1998	<ul style="list-style-type: none"> Solar greenhouse support (15 since 2009 in Pyongyang and Suncheon, South Pyongan) Construction of beekeeping and poultry farms in Pyongyang Health Ministry Tuberculosis Hospital Support for soy milk manufacturers and small tractors Support for small generators in nursing homes, etc. 	<ul style="list-style-type: none"> Health, medicine Agriculture
Save the Children	1998	<ul style="list-style-type: none"> Establishment of welfare facilities for infants and provision of necessary supplies Improvement of basic health care for children The supply of drinking water to the clinic 	<ul style="list-style-type: none"> Better welfare for children
Concern Worldwide	1997	<ul style="list-style-type: none"> Support project for facilities for vinyl, tractor tires, agricultural chemicals, dispensers, vegetable seeds, wheat seedlings, bean seeds and potato storage in cooperative farms Seed breeding business Sustainable Ecology and Environmental Protection Seeds and supplies to woolen plants 	<ul style="list-style-type: none"> Food Security business Environmental protection business
Premiere Urgence	2002	<ul style="list-style-type: none"> Training for water production personnel Support for local hospital water production, etc. 	<ul style="list-style-type: none"> Health and Medical work Ability reinforce
Triangle GH	2000	<ul style="list-style-type: none"> Design of Farming and Livestock Management System Restoration and improvement of drinking water and sanitary ware facilities Afforestation and woolen restoration; technician training 	<ul style="list-style-type: none"> Food security business Afforestation business
PMU Interlife	1995	<ul style="list-style-type: none"> Technical support for the development of germ-free and healthy seed potatoes Fertilizer, potato and vegetable seed support Agricultural equipment repair, etc 	<ul style="list-style-type: none"> Agriculture Technical support
Handicap International	2001	<ul style="list-style-type: none"> Technical support for the construction of a prosthetic production plant, restoration of the restoration of the medical equipment production system Support for the Joseon Disabled Persons Association 	<ul style="list-style-type: none"> Medical aid Welfare for the Disabled

Support for animal breeding facilities

Feed factory

It seems desirable to construct and expand the scientific production facilities in accordance with the demand.

Feed production facilities have been opened and restored since 2000 and are produced at 10 factories including Maram in Pyongyang.



Opening and repairing with the latest equipment

Deficiency due to demand and increase of livestock



New (over 30) Established TMR feed mill for herbivorous cattle

Special feeds that require technology



Supply from South Korea

Korean Peninsula New Economy Map



Korean East Sea Rim Economic belt

- North Korea Geumgang Mt. – Wonsan– Dancheon– Naseon
East Sea Region of South Korea 남한의 동해지역
- **Energy and Resources Belt**
→ Promotion of industrial cooperation between the two countries

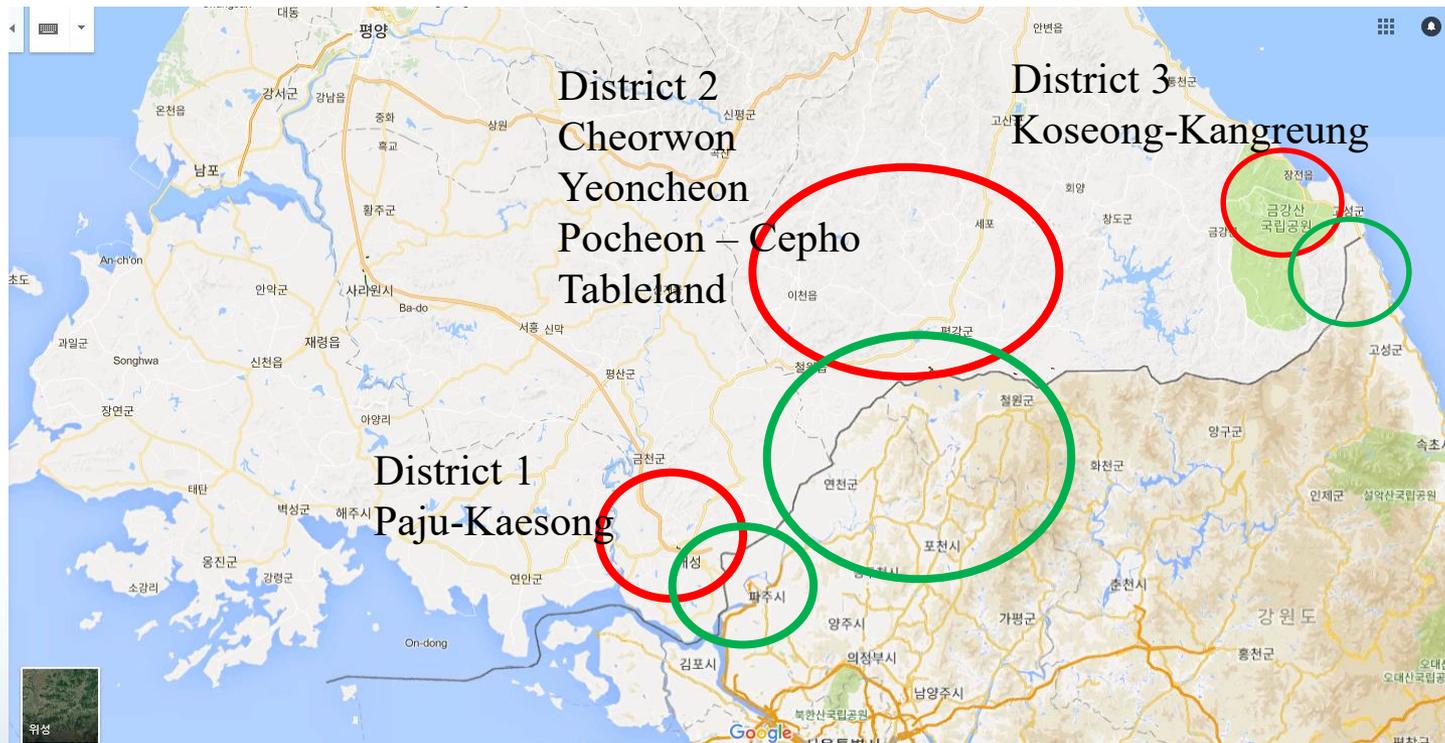
Border area Economic belt

- **DMZ Environment Tourism Belt**
→ Developed Han River estuary as an ecological peace and security sightseeing spot
- Realization of Green Korean Peninsula by restoring forests in North Korea

Korean West Sea Rim Economic belt

- North Korea Gaeseong–Pyeongyang– Nampo – Sinuiju
West Sea Region of South Korea
- **West Coast Industry, Logistics, Traffic Belt**
→ Promoting high-tech manufacturing and logistics-oriented economic cooperation

South-North livestock industry joint cooperation district (plan)



- Sepho, Icheon, pyeonggang
- Soldiers reclamation from the second half of 2012
- Total area 50,000 ha (Seoul city area: $605.25\text{km}^2 = 60525\text{ha}$)
- 200-1,000 m altitude
- Constructed with irrigation water of 230 km to the area where heavy rain falls
- 50,000 tons, manure compost
- Kim Young-Nam, Park Bong-Ju, Choi Ryong-Sun visiting
- Making of windbreak forest
- 4.2 million trees
- 40,000 number of livestock (cattle, sheep, goats, pigs, ducks)
- Livestock Research Institute
- 20,000 sheep and goats, 2,000 cows and deer ranches
- Construction of a large hotel for tourists, a sledding, a swimming pool, etc.

7. Conclusion

North Korea Livestock Rehabilitation Cooperation Plan

Increase agricultural products by improving livestock production technology

Systematic development through mutual exchange of animal field technicians

The development of small scale demonstration farm project

Assistance of breeding improvement system and veterinary medicine field

Raising the availability of forage by making grassland in the mountain area

Supporting North Korea through International Organizations: Building mutual trust

Thank you for the attention!



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