

The Korean feed market

February, 2016
LNV office, Seoul

1. Size of the Korea livestock sector

Table 1. Number of animals and farms by year by animal

Yr	Beef (*Hanwoo) cattle		Dairy cattle		Swine		Chicken	
	Number of animals (1,000)	Number of farms (1,000)	Number of animals (1,000)	Number of farms (1,000)	Number of animals (1,000)	Number of farms (1,000)	Number of animals (1,000)	Number of farms (1,000)
70	1,286	1,120	24	3	1,126	884	23,633	1,338
75	1,556	1,277	86	9	1,247	654	29,939	1,094
80	1,361	948	180	18	1,784	503	40,130	692
85	2,553	1,048	390	44	2,853	251	51,081	303
90	1,622	620	504	33	4,528	133	74,463	161
95	2,594	519	553	24	6,461	46	85,800	203
00	1,590	290	544	13	8,214	24	102,547	210
01	1,406	235	548	13	8,720	20	102,393	218
02	1,410	212	544	12	8,974	17	101,693	201
03	1,480	188	519	11	9,231	15	99,019	144
04	1,666	189	497	10	8,908	13	106,736	131
05	1,819	192	479	9	8,962	12	109,628	136
06	2,020	190	464	8	9,382	11	119,181	3.6
07	2,201	184	453	8	9,606	10	119,365	3.4
08	2,430	181	446	7	9,087	8	119,784	3.2
09	2,635	175	445	7	9,585	8	138,768	3.5
10	2,922	172	430	6	9,881	7	149,200	3.6
11	2,950	163	404	6	8,171	6	149,511	3.4
12	3,059	147	420	6	9,916	6	146,836	3.1
13	2,918	124	424	6	9,912	6	151,337	3.1
14	2,759	104	431	6	10,090	5	156,410	3.0

* Hanwoo – Korean native cattle

The number of livestock animals has increased except for in the period of 2011~2012 when there was an outbreak of Foot and Mouth Disease in Korea. The number of farms is continuously decreasing.

2. Feed production in S. Korea

Korean Feed production is approx. 27 million ton per year. Korea is one of the largest feed markets in Asia.

Table 2. Feed production by year by kind (1,000 ton)

Yr	Total	Concentrated feed					Farms self-production	Roughage (Local)
		Total	Formula feed production			Self-sufficiency rate (%)		
			Total	Local	Import			
70	3,463	913	508	190	318	37	405	2,550
75	5,021	1,451	901	489	412	54	550	3,570
80	7,561	3,996	3,462	1,410	2,054	41	532	3,565
85	13,250	7,322	6,457	2,272	4,195	35	855	5,928
90	17,116	10,529	10,518	2,839	7,690	27	644	5,943
95	23,302	15,700	14,856	3,639	11,217	25	792	3,392
00	19,289	15,897	15,105	3,923	11,068	26	792	3,392
05	20,283	16,152	15,278	3,730	11,403	25	874	4,131
06	21,271	17,049	15,693	3,862	11,675	25	1,356	4,222
07	22,797	18,180	16,363	4,090	12,179	25	1,817	4,617
08	23,833	18,779	16,323	4,087	12,096	25	2,456	5,054
09	24,547	19,344	16,665	3,954	12,599	24	2,679	5,203
10	25,157	20,124	17,710	4,338	13,246	25	2,414	5,033
11	24,960	19,383	16,815	4,214	12,480	25	2,568	5,577
12	26,845	21,182	18,640	4,453	14,065	24	2,542	5,663
13	27,365	21,635	19,086	4,407	14,529	23	2,549	5,731
14	26,874	21,297	18,868	4,353	14,366	23	2,429	5,577

3. Formula feed

1) Production

Table 3. Formula feed production (Local+import) by animal in 2014

Animal	Cattle		Swine	Chicken	*Others	Total
	Beef	Dairy				
Volume (1,000 ton)	4,951	1,340	5,963	5,172	1,442	18,868
Share (%)	26.2	7.1	31.6	27.4	7.6	100.0

* Others: fish, dog, cat, horse, sheep, duck, etc.

2) Producers

Table 4. Number and capacity of formula feed plants (as of January 2015)

Number of plants	KFA		NACF		Others		Total	
	Day capacity (ton)	Number of plants	Day capacity (ton)	Number of plants	Day capacity (ton)	Number of plants	Day capacity (ton)	Number of plants
65	20,865	28	9,080	10	431	103	20,376	

There are two big producer's organizations for formula feed: One is Korean Feed Association (KFA), the other is the National Agricultural Cooperative Federation (NACF). Most of private feed companies are the members of KFA. NACF is a giant agricultural cooperative working nationwide to support Korean farmers for finance and distribution of agricultural products, and operates its own formula feed plants.

Table 5. Market share of top 4 players of formula feed (as of May 2015)

Name	Share (%)	Number of plants
Harim group (Jeil Feed, Farmsco, Sunjin and Harim)	17.1	11
NACF	16.5	12
Easybio group (Seoul Feed, Farmstory/DodramB&F and Easy farms)	8.5	10
Cargill Agri Purina Korea	7.3	6
Others (CJ Cheiljedang, Daehan Feed, TS Corporation, Woosung Feed and so on)	50.6	64

Many feed companies have been merged into two big livestock companies in the course of horizontal and vertical integration of the Korean livestock sector over the last 15 years: Harim group and Easybio group.

Harim started a chicken farm in 1978 and has grown as the largest poultry meat maker. Since 2001, Harim has merged 3 feed companies (Jeil Feed, Farmsco and Sunjin) and has become the largest feed maker in South Korea.

Easybio was established in 1988 as a venture company for feed additives and has expanded the business to formula feed by merging Seoul Feed and Farmstory/DodramB&F. Easybio is now the 2nd largest feed company in South Korea (3rd largest including NACF).

Cargill Agri Purina from the US has been active in Korea for a long time and has played an important role in the development of the Korean feed industry.

CJ Cheiljedang, Daehan Feed, TS Corporation, Woosung Feed and other small-medium companies are sharing the rest market.

Table 6. Ranking of private formula feed companies (in KFA) by animal (in 2013)

a. Total

Ranking	Company	Production(1,000 Mt)
1	Cargill Agri Purina Korea	1,306
2	Jeil Feed (Harim group)	1,271
3	Farmsco (Harim group)	813
4	CJ Cheiljedang	742
5	Seoul Feed (Easybio group)	657
6	Daehan Feed	561
7	TS Corporation	550
8	Woosung Feed	538
9	Farmstory/DodramBnF (Easybio group)	500
10	Sunjin (Harim group)	413

b. Swine

Ranking	Company	Production(1,000 Mt)
1	Cargill Agri Purina Korea	656
2	Farmsco (Harim group)	431
3	Jeil Feed (Harim group)	363
4	Farmstory/DodramBnF (Easybio group)	347
5	CJ Cheiljedang	330
6	TS Corporation	271
7	Daehan Feed	260
8	Sunjin (Harim group)	254
9	Woosung Feed	252
10	Dongaone	158

c. Dairy cattle

Ranking	Company	Production(1,000 Mt)
1	Cargill Agri Purina Korea	160
2	Hanil Feed	113
3	Jeil Feed (Harim group)	106
4	CJ Cheiljedang	85
5	Sunjin (Harim group)	69
6	Woosung Feed	67
7	Daehan Feed	45
8	HS Feed	38
9	Dongwon Farms	33
10	TS Corporation	33

d. Beef (Hanwoo) cattle

Ranking	Company	Production(1,000 Mt)
1	Jeil Feed (Harim group)	217
2	Cargill Agri Purina Korea	212

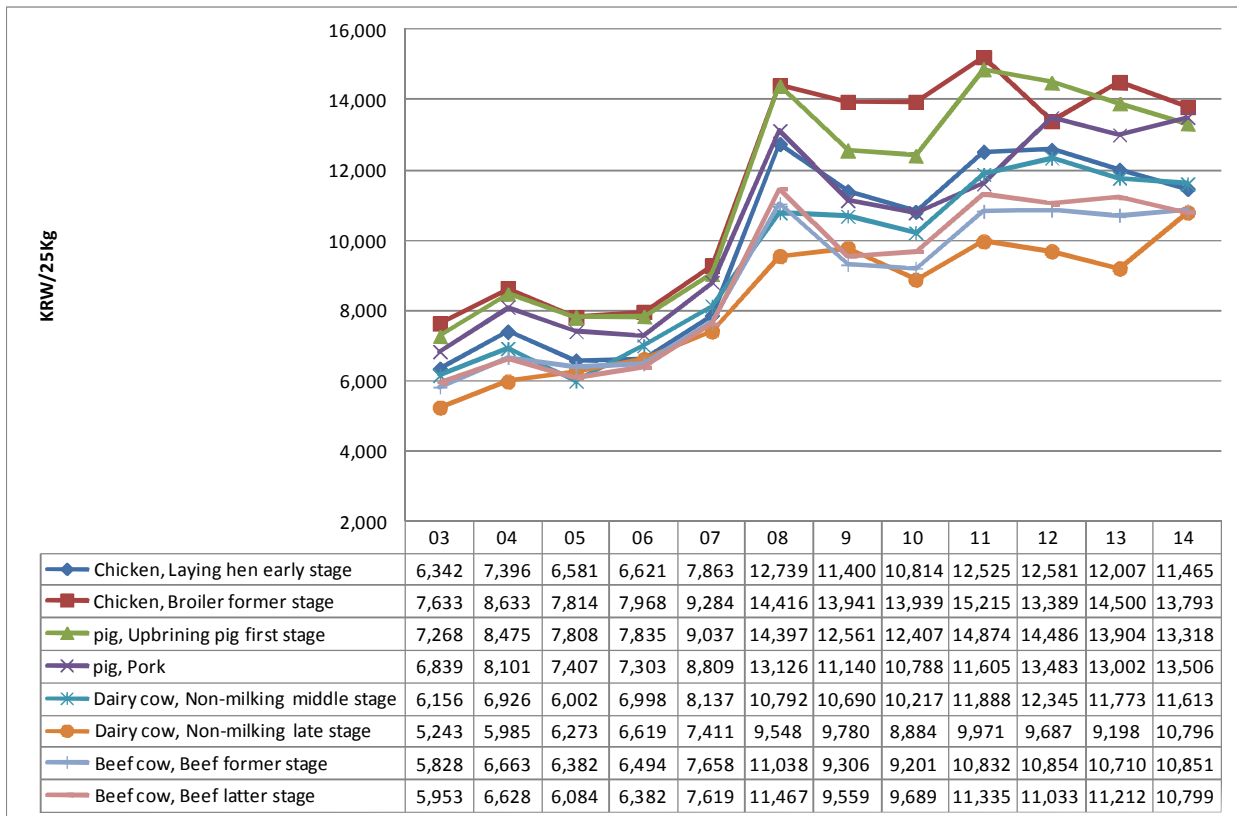
3	Easy Farms (Easybio group)	201
4	Woosung Feed	157
5	Farmsco (Harim group)	136
6	CJ Cheiljedang	134
7	TS Corporation	112
8	Sunjin (Harim group)	85
9	Daehan Feed	68
10	Doosan	59

e. Chicken

Ranking	Company	Production(1,000 Mt)
1	Seoul Feed (Easybio group)	549
2	Jeil Feed (Harim group)	487
3	Harim (Harim group)	382
4	Nanong	298
5	Cherrybro	250
6	HS Feed	186
7	SB Feed	185
8	CJ Cheiljedang	164
9	Farmstory/DodramBnF (Easybio group)	144
10	Cargill Agri Purina Korea	125

3) Prices

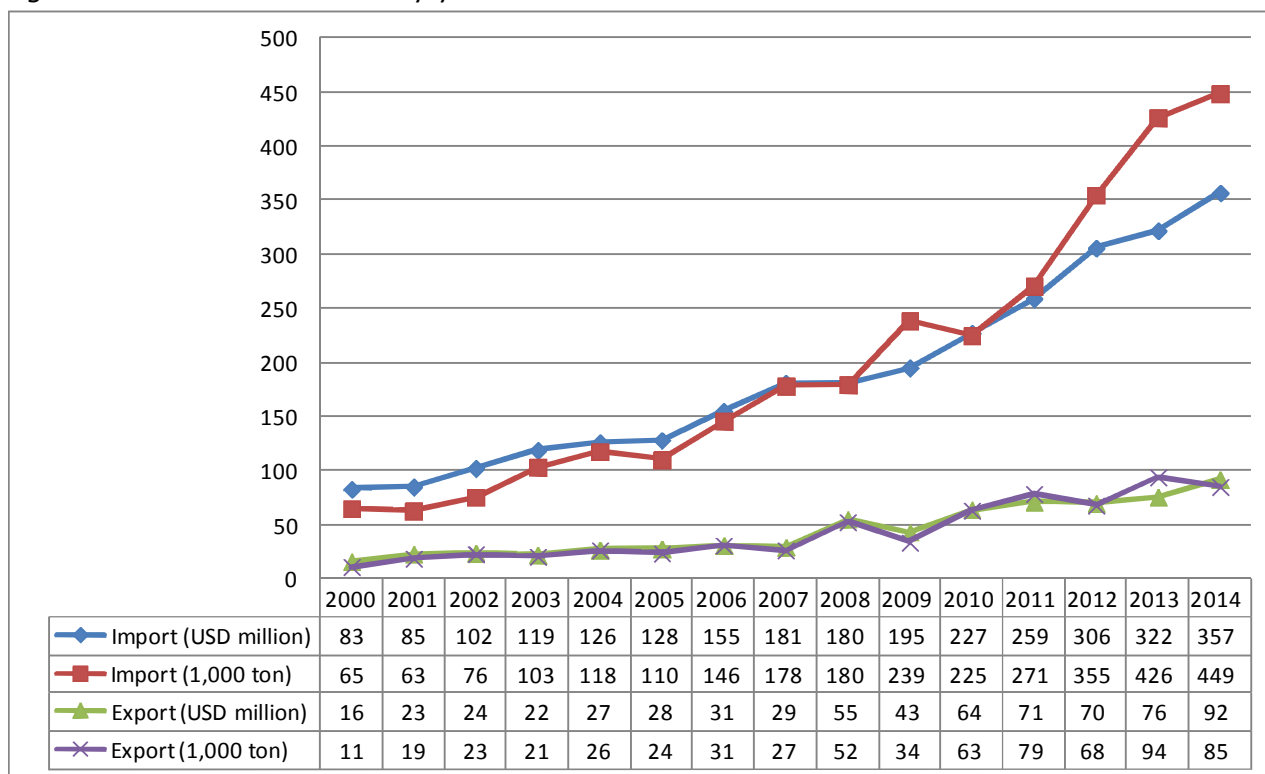
Figure 1. Formula feed price



The world wide inflation of grain prices between 2006 and 2007 made Korea's formula feed prices soar.

4) Trade

Figure 2. Formula feed trade by year



* HS Code 2309: including pet food, supplementary feed, feed additive and milk replacer

Table 7. Main formula feed trading partner nations (in 2014)

Ranking	Import from		Export to	
	Nation	Value (USD million)	Nation	Value (USD million)
1	China	99	Indonesia	24
2	US	80	Vietnam	18
3	France	34	Japan	15
4	Thailand	19	Thailand	7
5	Australia	18	Malaysia	6
6	Japan	17	China	4
7	The Netherlands	14	Philippines	3

Since 1990s, Korean Feed industry has faced the limits to growth due to limited size of the domestic market and tough competition among feed companies. Therefore, Korean feed companies have tried to advance abroad. Over the last 25 years, 8 companies have established more than 50 feed plants in China, Vietnam, Indonesia, Philippine, Turkey and India.

4. Feed ingredients

Imported feed ingredients have played an important role in the Korean feed industry because 76% of feed ingredients are from abroad. Feed ingredients are mainly imported from the US, China, Ukraine and Vietnam. Due to the rising global grain prices, Korean feed industry has had difficulty in making feed prices competitive. Korean Feed companies always look for cheaper feed ingredients.

Table 8. Trade of Feed ingredients in 2014 (1,000ton)

		Imports	Exports	Main trade countries
Grains	Corn for feed	8,153	-	Import: US (52%), Brazil (16%), Ukraine (15%)
	Wheat for feed	1,456	-	Import: Ukraine (29%), Canada (23%)
Forages	Plants (such as Alfalfa)	988	-	Import: US (79%)
	Straw and husks	44	1	Import: Vietnam (46%)
Cakes	Meat or fish materials	54	33	Import: Chile (44%) Export: Vietnam (39%) Indonesia (27%)
	Cereal bran and sharps	215	0.2	Import: Indonesia (75%)
	Starch residues	1,477	16	Import: US (48%) China (41%)
	Oil cake of soybean oil	1,780	177	Import: Brazil (56%)
	Other oil cakes	2,149	0.1	Import: India (46%) Indonesia (27%)
	Vegetable materials	167	-	Import: China (78%)

Table 9. Feed grains supply by year

Year	Total			Corn			Other grains		
	Sub-total	Domestic	Imports	Sub-total	Domestic	Imports	Sub-total	Domestic	Imports
80	2,077	69	2,008	2,028	49	1,979	49	20	29
85	4,095	346	3,749	2,421	56	2,365	1,674	190	1,384
90	5,634	154	5,480	4,777	67	4,710	857	87	770
95	8,510	140	8,370	7,007	13	6,994	1,503	127	1,376
00	8,425	259	8,166	6,517	2	6,515	1,908	257	1,651
05	8,368	185	8,183	6,629	13	6,616	1,739	172	1,567
06	8,443	202	8,241	6,617	20	6,597	1,826	182	1,644
07	8,556	227	8,329	7,017	10	7,007	1,539	217	1,322
08	8,188	284	7,904	6,892	-	6,892	1,296	284	1,012
09	8,749	186	8,563	6,239	-	6,239	2,510	186	2,324
10	9,355	223	9,132	6,549	-	6,549	2,806	223	2,583
11	8,622	252	8,370	5,721	1	5,720	2,901	251	2,650
12	9,890	285	9,605	5,853	-	5,853	4,037	285	3,752
13	10,063	267	9,796	6,776	-	6,776	3,287	267	3,020
14	10,050	269	9,781	7,895	-	7,895	2,155	269	1,896

Korea Feed Ingredients Association (KFIA) is an association comprised with importers of feed

ingredients and supplementary feed.

5. Feed additives

The largest local feed additive producers in South Korea are Easybio and CTCbio. They have developed different kinds of functional additives for feed. But most of key materials for feed additives such as antibiotics, vitamin and mineral are from abroad

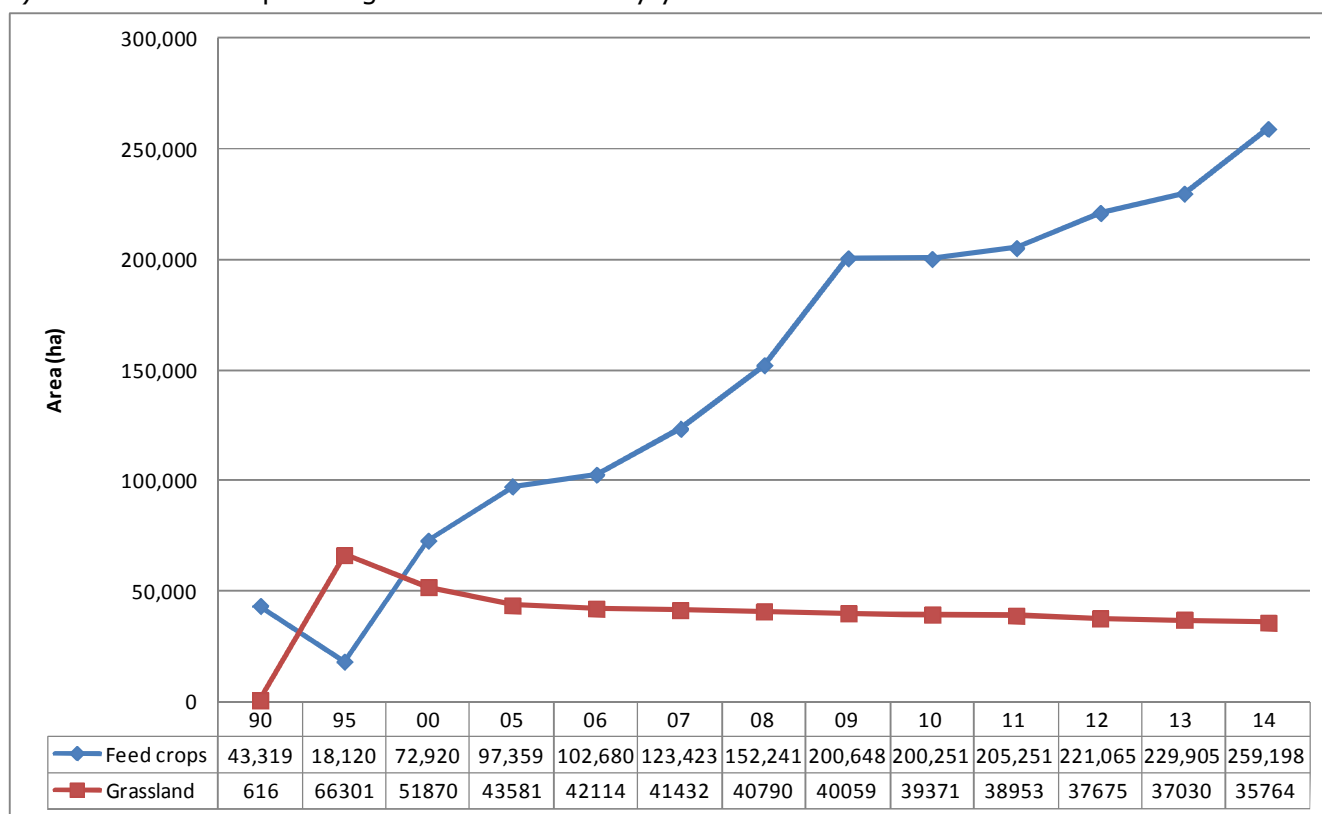
Table 8. Trade of Feed additives in 2014 (ton)

	Imports	Exports	Main trade countries
Antibiotics	798	60	Import: China (71%), Export: Philippines (43%)
Vitamin	604	432	Import: UK 67% Export: Pakistan 39%
Mineral	1,831	22	Import: UK (24%), US (23%) Export: Singapore (32%), Taiwan (22%)
Others	1,705	2,647	Import: US (40%), China (15%) Export: Japan (23%), China (14%)

The largest supplier of vitamin premix and mineral in Korea is DSM (the Netherlands) followed by Basf (Germany) and Adisseo (China). Korean companies such as Daone Chemical and Cheilbio produce premix products using imported vitamins and minerals.

6. Feed farming

1) Area of Feed crops and grassland in Korea by year



7. Contacts

* Association and cooperative

1) Korea Feed Association

Website (Eng): <http://www.kofeed.org/english/index.asp>

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2) Korea Feed ingredients Association

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3) National Agricultural Cooperative Federation (also called "Nonghyup" in KR language)

Website: <http://www.nonghyupsaryo.com/>

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*Companies

- Formula Feed

1) Cargill Agri Purina Korea

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2) Jeil feed

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3) Farmsco

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4) CJ Cheiljedang

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5) Seoul Feed

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6) Daehan feed

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7) TS Corporation

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8) Woosung Feed

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E-mail: <http://www.woosungfeed.co.kr/eng/board/qna.html>

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9) Farmstory/DodramBnF

Website: <http://www.dodrambnf.co.kr/>

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10) Sunjin

Website (Eng): http://www.sj.co.kr/eng/sunjin_eng/index.asp

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- Feed ingredients

1) Easy Bio (Producer and importer)

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2) CTC Bio (Producer and importer)

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3) DSM Nutrition Korea (vitamin premix producer)

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4) AToGM co.(Importer)

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5) Vixxol (Importer)

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6) Milae ML (Importer)

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7) Daone Chemical (Premix producer)

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8) Cheilbio

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