Report on eels in Japan and South Korea

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1. Production, trade and price

The long-fin Japanese eel *Anguilla japonica* (Yoshinaga 2014) is traditionally farmed in the east Asian countries and regions such as Japan, South Korea, mainland China and Taiwan (FAO 2009).

The eel fry harvest season for 2019 is over after approximately first three or four months of the year. The east Asia suffered from poor harvest of eel fry this year. The total harvest quantity was only 21.6 tonnes, which was just slightly higher than 19.8 tonnes in 2013. This quantity in 2019 has been the second lowest in recent years. Japan harvested 3 500 kg, accounting for 16.2% of the total, and Korea harvested 1 721 kg, amounting to 8.0%, in comparison to mainland China's 13 650 kg (63.1%), and Taiwan's 2 750 kg (12.7%) (Chinaeel and Unaginews 2019). In 2019, the quantity of stocking fry in Japan was 14 990 kg, while that in South Korea was 3 131 kg.

Based on the latest figure, the annual adult eel production volume in Japan (WBS 2019) was 15 thousand tonnes, lower than 20 thousand tonnes in South Korea (Fisheco 2018).

In 2013-2017, globally Japan ranked the first in the value (1.393 billion USD) of live eel import, followed by South Korea (0.481 billion USD) (Chyxx 2018). In the same period, Australia exported approximately 340 thousand AUD worth of live eel to Japan, less than 2.5 million AUD worth of Australian live eel exported to South Korea (FRDC 2019).

In Japanese live adult eel market, the price of 7p (seven eels per kg) grew from 5 800 JPY in January to 5 900 JPY in August 2019 (See Table 1a). However, in South Korean market, that of 3p dropped from 36 000 KRW in January to 33 000 KRW in August 2019 (See Table 1b).

Table 1a: Live adult eel (produced in Japan) price in Tokyo: Japanese						
Yen JPY/k	Yen JPY/kg					
Date sour	ce links: <u>C</u>	ninaeel, <u>Un</u>	aginews			
Note: App	proximately	1 AUD = 7	2 JPY on 17	7 Aug 2019	•	
Date in	3P	4р	4.5p	5p	6р	7р
2019						
7 Jan	4800	5600	5700	5800	5800	5800
1 Feb	4800	5600	5700	5800	5800	5800
1 Mar	4800	5600	5700	5800	5800	5800
5 Apr	4800	5600	5700	5800	5800	5800
17 May	4800	5600	5700	5800	5800	5800
7 Jun	4800	5700	5800	5900	5900	5900
5 Jul	4800	5700	5800	5900	5900	5900
2 Aug	4800	5700	5800	5900	5900	5900

Table 1b: The live adult eel price in South Korea: South Korean Won KRW/kg				
Date source links	: Chinaeel, Unag	<u>ginews</u>		
Note: Approxima	tely 1 AUD = 81	9 KRW on 17 .	Aug 2019.	
Date in 2019	1P	2P	3P	4P
7 Jan	30000	33000	36000	38000
1 Feb	30000	33000	36000	38000
5 Apr	27000	30000	33000	—
17 May	27000	30000	33000	—
7 Jun	27000	30000	33000	—
5 July	27000	30000	33000	—
2 Aug	27000	30000	33000	_

2. Consumption culture

2.1 Japanese eel consumption culture

In Japan, there is a day in summer when people celebrate the eel consumption. This day fell on the 27th July this year, based on the traditional Japanese calendar. The celebration culture has lasted hundreds of years. In summer heat, people usually suffer from high temperature and appetite loss. At this time, the consumption of the aromatic and nutritional eel can improve human health and appetite (Unagi-chikutei 2019).

Japanese people consume eel with or without brown-colour sauce (See Table 2a), and eel byproducts such as eel liver and bone as delicacies and nourishments (See Table 2b).



Table 2b: Eel by-products consumed as delicacies and nourishments in Japan			
Aromatic eel livers	Eel liver BBQ	Eel bone as	
		refreshments or	
		consumed with	
		alcoholic drinks	
Data source links: Unagiya, Chikutei,Cookpad			

2.2 Korean eel consumption culture

The eel consumption trend has been emerging in Korea for about three decades. However, until 1970s, eel had been farmed in Korea mainly for the purpose of export to Japan. The milestone of changes happened since the Seoul Olympic Games in 1988 when Korean people gradually increased income, developed the culture to eat outside their house and consumption preference of eels. Korea Maritime Institute conducted an online questionnaire survey of 690 people above the age of 20 in Seoul and six other Korean cities. The survey lasted 14 days from 13 to 27 September 2018 (Fisherco 2018). Below were major questions and answers.

On the experience, 93.8% people as survey samples consumed eel. On the attitude towards eel consumption, 66.2% chose with "strong preference", and 3.4% reacted with "dislike". With respect to gender, the male preference was higher than the female; The higher the age, the higher the preference. In regard to the reason for eel consumption, some responded "healthy" (48.8%), and some answered "good taste" (43.7%). In terms of consumption seasons, there were three main different responses: "Seasons make no difference" (38.0%), "Autumn" (27.2%), and "Summer" (22.3%).

Some dishes of Korean eel are barbecued in larger cut pieces than Japanese style. Eel may be cooked in soup and consumed with kimchi. They also consider eel bone and liver as delicacies (See Table 2c).

Table 2c: Eel by-products consumed as delicacies and nourishments in South Korea			
	이별나게(?) 맛있는 전라도식 장어당		
Some Korean dishes in larger cut pieces than Japanese style	Eel soup in South Korea	Dishes of eel bone and kimchi	
Data source link: Lucyskitchen	•		

3. Food standards

With respect to both mercury (total) and methylmercury, the ML in Japan (See Table 3a) is lower than South Korea (See Table 3b). In contrast, the ML of BCBs for fish in inland waters of Japan is higher than South Korea.

Table 3a: Japan environmental contaminants requirements for fishes including long-fin eel			
Data source (JETRO 2010)			
Reside/contaminants	ML		
Mercury (total) (mg/kg)	0.4		
Methylmercury	0.3		
(mg/kg)			
Polychlorinated	3.0, edible parts (Fish and shellfish in inland seas and bays		
biphenyl (PCBs)	including inland waters)		
Polychlorinated	Polychlorinated 0.3, edible parts, fish and shellfish in ocean and open sea (does		
biphenyl (PCBs) not apply to fish oils, gelatin or other fish by-products).			

Table 3b: Korea environmental contaminants requirements for fishes including long-fin eel Data source (MFDS 2019)			
Reside/contaminants	ML		
Lead (mg/kg)	Not more than 0.5		
Cadmium (mg/kg)	Not more than 0.1 (applicable only to freshwater and		
	pelagic fishes) Not more than 0.2 (applicable only to		
	marine fishes)		
Mercury (mg/kg)	Not more than 0.5 (Fishes specified in marine fishes)		
Methylmercury	Not more than 1.0 (applicable only to fishes specified in marine		
(mg/kg)	fishes)		
Polychlorinated	Not more than 0.3 mg/kg		
biphenyl (PCBs)			
Benzo(a)pyrene	Not more than 2.0 μg/kg		

4. Import tariffs

The Japan-Australia Economic Partnership Agreement (JAEPA) entered into force on 15 January 2015. The Korea–Australia Free Trade Agreement (KAFTA) came into force on 12 December 2014. The Australian eel fry and other live eel (including the long-fin adult eel) under relevant tariff codes are free of import tariff in Japan and South Korea (See Tables 4a and 4b).

Table 4a: Japan import tariff rate for major Australian live eel products			
Data source: DFAT 2015; Japan Customs 2019			
Tariff code	Description	Tariff rate (%)	
0301.92100	Eel fry for culture	0	
0301.92200	Other (including the live long-	0	
	fin adult eel)		

Table 4b: South Korea import tariff rate for major Australian live eel products				
Data source: DFAT 2014				
Tariff code	Description	Tariff rate (%)		
0301921000	Glass eel (for aquaculture)	0		
0301994090	Other eel (including the live long-fin adult eel); free of import tariff, based on text of the FTA as follows: customs duties on originating goods provided for in the items in staging category "5" shall be removed in five equal annual stages beginning on the date of entry into force of this Agreement, and such goods	0		
	effective 1 January of year five.			

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