



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
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DISCUSSION PAPER ON DEVELOPMENT OF A REGIONAL STANDARD FOR *Natto*

(Prepared by Japan)

Introduction

1. Natto, a traditional fermented soybean food in Japan, is produced by fermenting steamed soybeans with the bacterium *Bacillus subtilis* var. *natto* and by maturing it in cold/freezing condition after fermenting. Natto contains a variety of nutrients such as high-quality protein, vitamins, minerals and dietary fiber in a balanced manner (see Table 1). It is widely recognized as a healthy food and distributed mainly in the Asian region.

Table 1 Composition of Natto (per 100g)

		Natto	Unit
Energy		200	kcal
Protein		16.5	g
Lipid		10	g
Carbohydrate		12.1	g
Minerals	Sodium	2	mg
	Potassium	660	mg
	Calcium	90	mg
	Iron	3.3	mg
Vitamins	K	600	µg
	B ₂	0.56	mg
	Niacin	1.1	mg
	Folate	120	µg
	Pantothenic acid	3.6	mg
Dietary fiber(water soluble)		2.3	g

Source: Standard Tables of Food Composition in Japan, 2010
Ministry of Education, Culture, Sports, Science and Technology, Japan

Necessity to develop the standard

2. As production volume increases, the total sales volume of the Natto industry in Japan also has been growing by 13% in 2013 compared to that in 2011 (see Table 2). Recently, besides the production in Japan, Natto manufacturing facilities also have been in operation in other regions, such as Republic of Korea, China and Taiwan, indicating Natto production is expanding (see Table 3).

Table 2 Natto production and total sales volume in Japan

Year	2011	2012	2013
Production volume (1000 tons)	220	221	225
Total sales volume (billion yen)	173	180	196

Sources: Production volume - The Ministry of Agriculture, Forestry, and Fisheries of Japan
Total sales volume - Japan Natto cooperative society federation

Table 3 Natto production in Republic of Korea and China in 2013

Unit: ton

Republic of Korea	China
631	568

Source: Japan Natto cooperative society federation

3. However, the absence of relevant criteria and standard has caused confusion for the distributors and consumers because the fermented soybean products which are similar to Natto in appearance and/or very low-quality Natto products are distributed and sold as Natto. Therefore, it would be necessary to develop a standard for Natto in order to secure the quality of the product and prevent confusion and misunderstanding in international trade as well as in domestic distribution.

4. In addition, main quality factors of Natto such as size and foreign matter ratio that directly affect the quality and safety of its products correspond with the scope of product standardisation. Development of the standards including appropriate product name, definition and quality factor would also contribute to protecting the health of the consumers and ensuring fair practices in the food trade.

Recommendation

5. Japan would like to provide the project document and invite the Asian member countries to provide some additional information such as volume of consumption and international trade volume.