

# International Training Program & Matchmaking

8th June 2023



















# Programme

Welcome & General Introduction. 090009.05 Food Trends in Korea by Dongmin Lee, Assistant Professor of Marketing for Food Industry Dept. of Marine Bio Food Science, Gangneung-Wonju National University. Introduction of South Korea Foodpolis and collaboration programs by Seonyoung 09.25 Park, Assistant Manager of Public Relations Team, Foodpolis. Introduction of Health Functional Kimchi by Jaehwan Kim, Senior researcher of 09.45 World institute of Kimchi 10.00 International Collaboration opportunities for the sustainable food industry by Ditte Veise, Executive Director of Innovation Center Denmark, The Embassy of Denmark in Korea 10.20 Doing business across cultures: Europe and Korea by Marina Aguareles, PhD. Intercultural Studies, San Jorge University. 10 40 0&A. 10.55 Wrap-up & Closing 11.00 Opportunity for matchmaking via the Global Foodture Community Platform



# Questions?



Do you have any questions to our speakers? Please raise them in the Q&A box in Zoom and we will address them during the session.

Please state the following in the Q&A-box: Your name, company name, speaker to address the question to & question itself.



# **Food Industry Trend in Korea**

#### 2023/06/01

Presenter: Prof. Dongmin Lee, Gangneung-Wonju National University Co-work with Prof. Junghoon Moon, Seoul National University 01

Ready meal

#Frozen
#Meal kits

02

Protein

#Tofu #Alternative milk 03

Beverages

#Decaf Coffee #Alternative sugar #Wine #Whiskey #Non-Alcohol

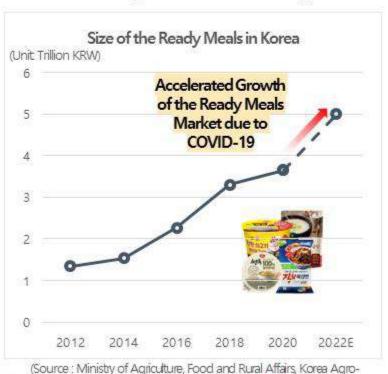
# 01 Ready meals



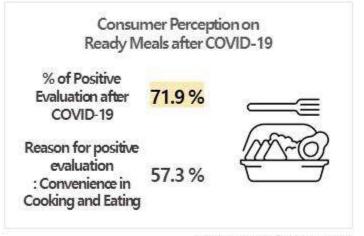
#### Ready meals market in Korea

#### The growth of the ready meals market after the COVID-19 pandemic

- The estimated size of the domestic ready meals market in South Korea was around 3 trillion KRW in '18, and it is projected to exceed 5 trillion KRW by '22 (Korea Agro-Fisheries & Food Trade Corporation, aT)
- Even amidst the ongoing COVID-19 pandemic (2021), the ready meals sales in Korea demonstrated growth with a 13% increase compared to 2020 (Korea Food and Drug Administration, KFDA)







(Source: CJ CheilJedang, 2021) \*Results of a survey on "Consumer perceptions for ready meals and meal preparation method" among 1,000 consumers nationwide

(Source: Korea Food and Drug Administration, 2021)

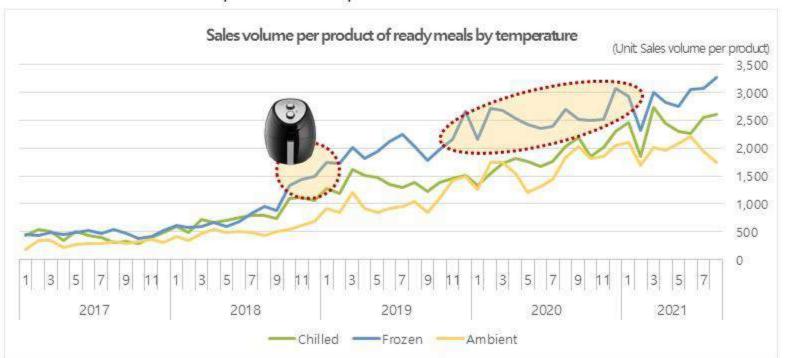


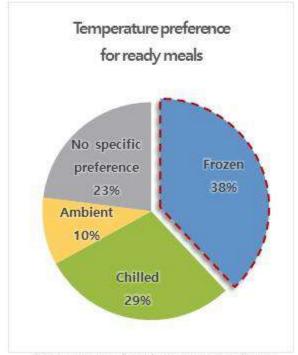
# 01 Ready meals



#### Keyword1: Frozen Ready meals

- The expansion and diversification of the frozen ready meals
  - Market Kurly sales data shows a significant increase in the sales volume per product of frozen ready meals products since September 2018,
  - The sales growth continued after the onset of the COVID-19 pandemic
    - ✓ The COVID-19 pandemic has increased the preference for frozen ready meals even among consumers who were not familiar with them → introduced to and purchased these products online

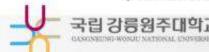




(Source: Sales data of Market Kurly)

(Source: Survey of Rural Consumer Panels by the Rural Development Administration of Korea)





# 01 Ready meals



#### Keyword2: Meal kits

#### Meal kits: Demonstrating Potential in the Post-COVID-19 Era

- Meal kits: Pre-cut packed Fresh & Processed Ingredients and Seasonings with Cooking Instructions for consumers to cook themselves
- In certain channels, a sustained growth of meal kits is observed, as exemplified (e.g. Market Kurly)
- The Transition to Frozen Meal Kits: (1)Decreased Packaging Waste, (2)Streamlined Recipes → Blurring Boundaries between Ready meal and Meal kits + Tendency to perceive meal kits as a premium form of Ready meal







(Reference: Market Kurly, Fresheasy, Mychef)

(Source: Sales data of Market Kurly from Jan 19 to June 22)



01

Ready meal

#Frozen #Meal kits 02

**Protein** 

#Tofu #Alternative milk 03

Beverages

#Decaf Coffee #Alternative sugar #Wine #Whiskey #Non-Alcohol

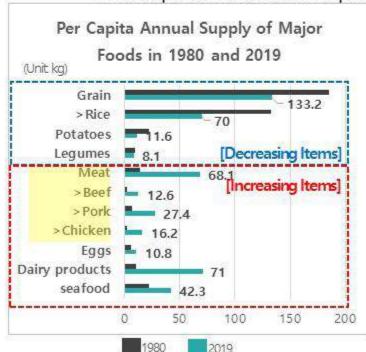


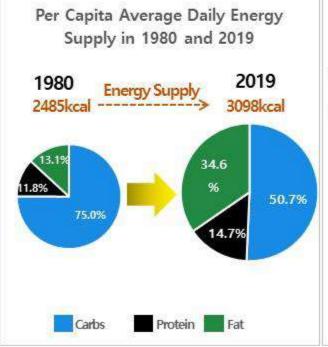
#### Lower Carb & Higher Protein

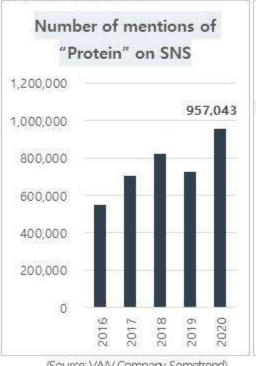
#### Change in Caloric Intake Sources: Protein as Replacements for Carbohydrates

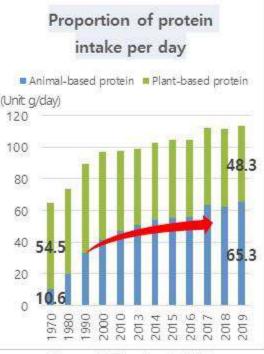
- Consumption of carbohydrates as a major source of calories per capita has decreased ( $75\% \rightarrow 50.7\%$ ), and the proportion of protein (11.8%→14.7%) and fat(13.1% → 34.6%) has increased
- Since the outbreak of COVID-19, there has been an increasing interest in health and weight management -> growing interest in protein

Consumption of animal-based protein has surpassed that of plant-based protein since the 2010s









(Source: KRB Food supply table, Korea Joongang Daily)

(Source: VAIV Company Sometrend)

(Source: KREI Food supply table)



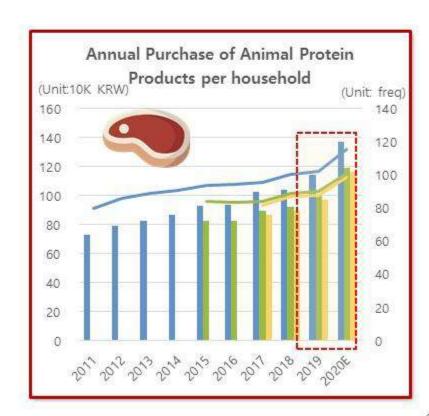


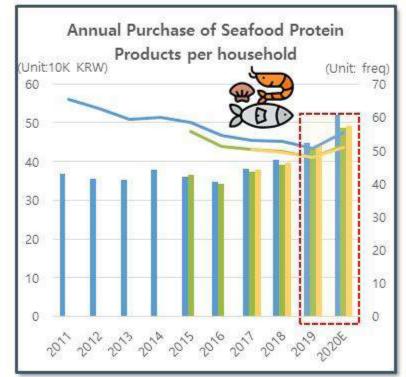
#### Purchase Status of Protein Products in Korea

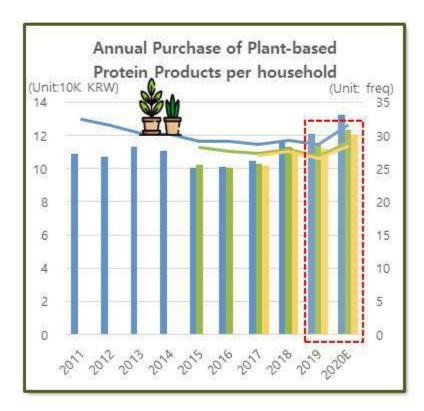


#### Steady Growth in Protein Product Consumption

- The purchase of animal, fish, and plant-based protein products have been increasing annually (incl. fresh + processing products)











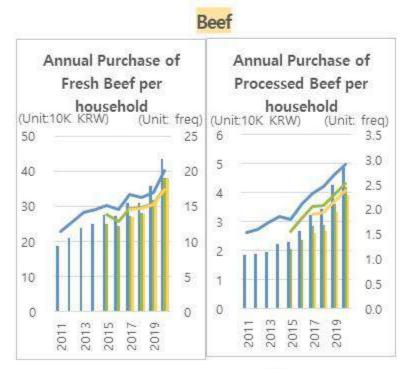


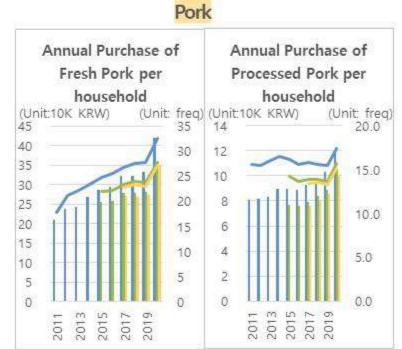
#### (1) Animal Protein Products

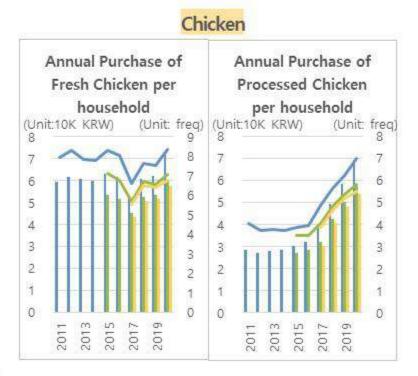


#### Fresh and Processed Meat in Different Categories

- The purchase of fresh and processed meat in all meat categories has shown an increasing trend since 2017.
  - ✓ Due to Covid19, especially fresh meat shows a significant increase in purchases in 2020 compared to the previous year
- While processed chicken purchase increases since 2016, fresh chicken decreased in 2017 due to the AI outbreak, and subsequently recovered











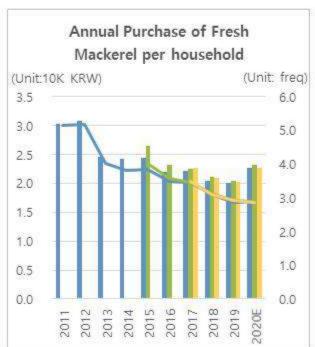


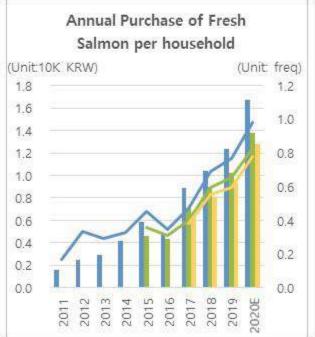
#### (2) Seafood Protein Products

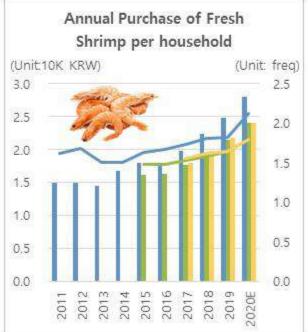


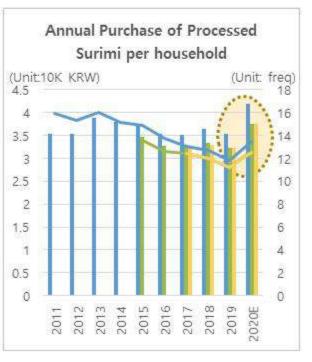
#### Fresh and Processed Seafood in Different Categories

- Fish: Decreased demand for mackerel, the primary fish for grilling, and increasing demand for fish species without off-flavors (e.g., salmon).
- Shellfish: Steady growth in the popularity of easily prepared shrimp
- Processed Seafood: Declined over years, surged after COVID-19 with increased cooking frequency and demand for affordable, shelf-stable protein options (e.g., fish cakes, imitation crab)













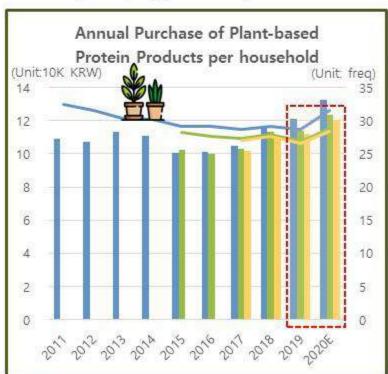


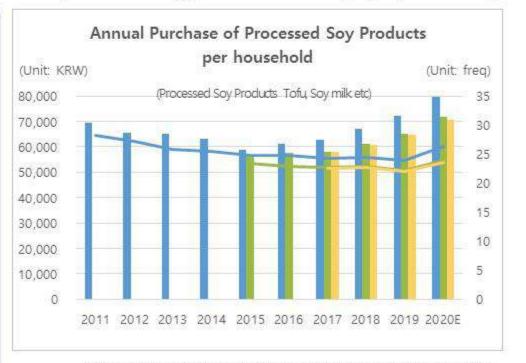
#### (3) Plant-based Protein Products



#### Growth of Plant-Based Protein through Value-Based Consumption

- Consumer interest in health has increased, and with the spread of value-based consumption trends such as environmental sustainability and animal welfare, there is a increasing trend in the purchase of plant-based protein.
- The purchase amount of plant-based protein has been steadily increasing since 2017
  - ✓ Among these, soy processed products such as tofu and soy milk have a biggest share in the category of plant-based protein products.







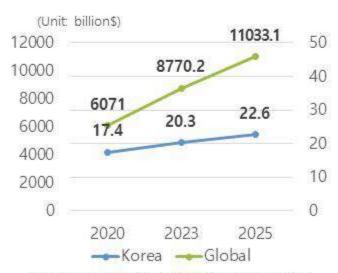


#### Keyword1: Alternative meat

#### Alternative meat market in Korea

- The plant-based meat market in Korea is currently not very large, but it is gradually showing signs of growth.
- Plant-based meat products available worldwide can be broadly classified into two categories
  - √ 1) products that emphasize the use of plant-based ingredients with a clean label approach.
  - √ 2) products that focus on creating a taste, texture, and appearance similar to conventional meat
- In the case of South Korea, (1) the majority of plant-based meat products are made with tofu, and (2) they are predominantly released in the form of meat-based convenience foods and for the foodservice sector rather than as raw ingredients

#### Plant-Based Meat Market Size



Clean Label Plant-based meat



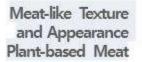
#### High Protein Tofu Bar

- Release Date: Apr 2021
- Company: Pulmuone
- Price: 2,200 KRW (60g)



#### Tofu Noodle

- Release Date: Apr 2020
- Company: Pulmuone
- Price: 2,700 KRW (100g)





#### **Plantable Dumplings**

- Release Date: Dec 2021
- Company: CJ Bibigo
- Price: 10,480 KRW (910a)



#### **Bulgogi Fried Rice**

- Release Date: Jul 2022
- Company: Pulmuone
- Price: 6,480 KRW (424g)

(Source: Korea Agro-Fisheries & Food Trade Corportation)



(Source: Pulmone, E-mart Website)

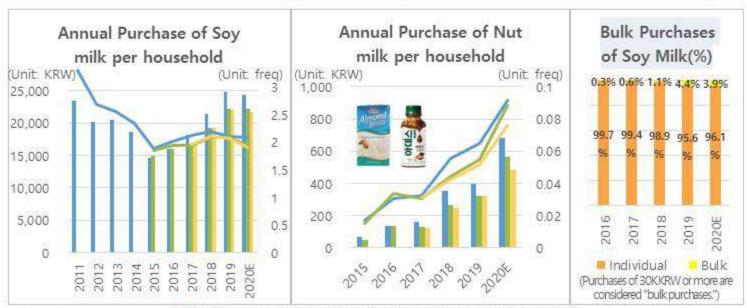


#### Keyword2: Alternative milk



#### Alternative Milk Market in Korea

- Alternative milk has become a popular choice among consumers embracing the vegan trend and those with lactose intolerance
  - ✓ Soy milk dominates the alternative milk market in Korea
- While the frequency of soy milk purchases has decreased since 2018, the price has seen a significant increase
  - ✓ Longer shelf life, increased bulk purchases with online shopping becoming more common
- While soy milk is consumed as a standalone product, it is also being used as a milk alternative in coffee beverages
  - ✓ Some franchise cafés are offering personalized options for consumers to choose their milk preferences







(Data: Rural Development Administration of Korea\_Consumer Panel Purchase Data)

(Source: Visual Dive's Naver Post)

01

Ready meal

#Frozen #Meal kits 02

Protein

#Tofu #Alternative milk 03

Beverages

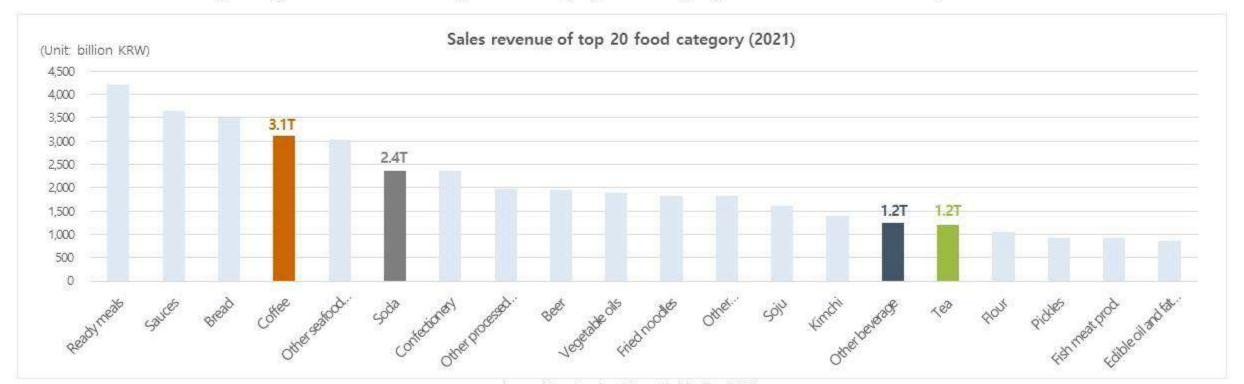
#Decaf Coffee #Alternative sugar #Wine #Whiskey #Non-Alcohol



#### Beverages Industry in Korea

- Changes after COVID-19 in Beverage Industry (excl. Alcohol Beverages)
  - Beverage market (excl. alcoholic beverages) represents approximately 14% of the F&B market in Korea and is experiencing steady growth

    ✓ Numerous new products were launched in anticipation of a shift in demand from cafe-like dining-out beverages to ready-to-drink (RTD) options
  - In the following slides, plans to examine changes in coffee (4th) and soda (6th), which are ranked at the top









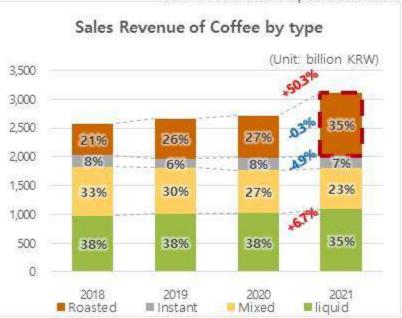


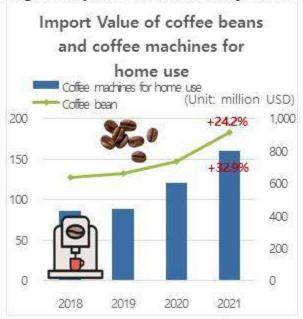
#### Keyword1: Decaffeinate Coffee

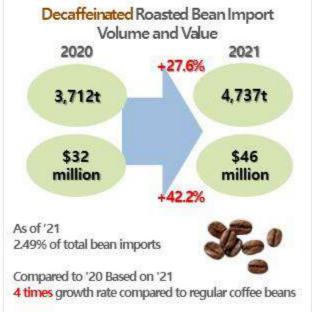
#### Roasted coffee & Decaffeinate coffee are growing in Korean coffee market

- Coffee sales revenue has been increasing at a CAGR(Compound Annual Growth Rate) of 6.6% from '18 to '21
  - ✓ instant coffee and mixed coffee decreased in '21 compared to '20, while roasted coffee (+50.3%) and liquid coffee (+6.7%) showed an increase.
  - ✓ The import value of coffee beans is positively correlated with the import of home coffee machines.
- Moreover, the import of decaffeinated coffee beans witnessed a significant surge of 42.3% in '21 compared to '20, reaching an all-time high

✓ RTD decaffeinated products are being actively introduced, and major cafes are also launching decaffeinated menus.







(Source: KBS News, 2022.01.31)

(Reference : Fair Trade Commission, '22; each cafe website)

Cafes offering

decaffeinated coffee

Brand

Ediya

Starbucks

A Twosome

Place

Mega

Coffee

Compose

Coffee

Number

of stores

(May '22)

2,825

1,633

1,218

1,184

725

(Source: Korea Customs Service)

(Source: Korea Customs Se





Releas

e date

Mar.'20

Aug.'17

May.'20

Jun.'21

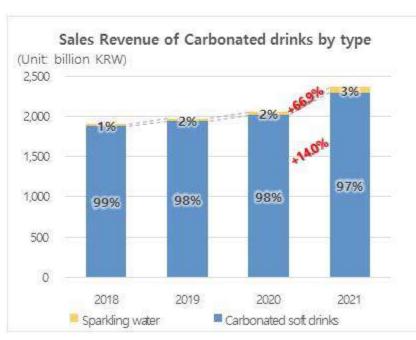
Feb. 22

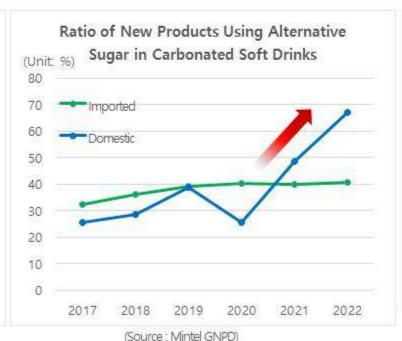


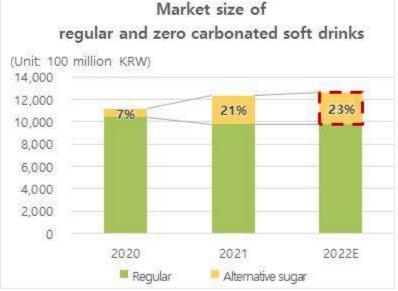
#### **Keyword2: Alternative Sugar**

#### Growth of the Carbonated Drinks Market with Alternative Sugar

- Carbonated drinks (incl. carbonated soft drinks and sparkling water) are showing rapid growth, increasing by about 14% and 67% in '21, respectively, compared to '20
- More than half of the new product launched in Korea since '21 use alternative sugars Korean carbonated soft drinks market is experiencing growth with a focus on zero-calorie products







(Source: Nielsen (20), POS data (21-'22), POS data is calculated by multiplying by a factor of 2 to reflect market coverage, 2022 is calculated by reflecting the change rate of Jan.-Jul, and Aug.-Dec. find by summing the estimates)

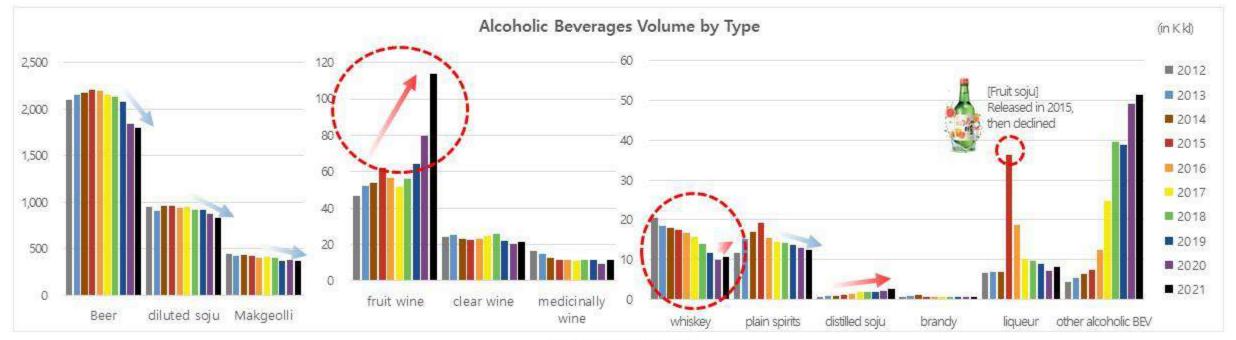
(Source: Ministry of Food and Drug Safety)





#### Alcoholic Beverages Industry in Korea

- · Decrease in the top three liquor types, accompanied by an increase in fruit liquor and whiskey
  - The top-selling alcoholic beverages(Beer, diluted soju, rice wine) have been declining, however fruit based liquor have shown a sharp increase
  - While regular distilled spirits have been declining since 2015, distilled soju has been steadily increasing
  - The shipment volume of whisky, which has been steadily declining for over a decade, saw an increase in 2021



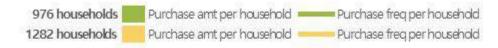
(Source: National Tax Service)





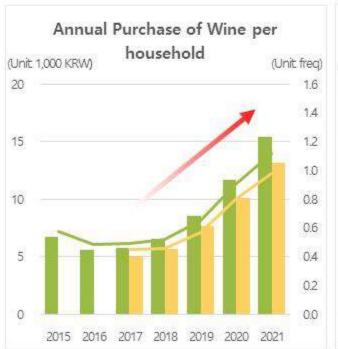


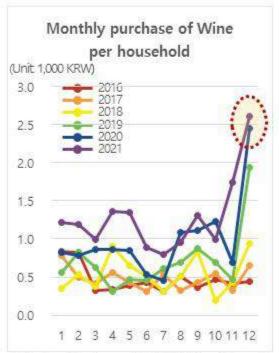
#### Keyword3: Wine

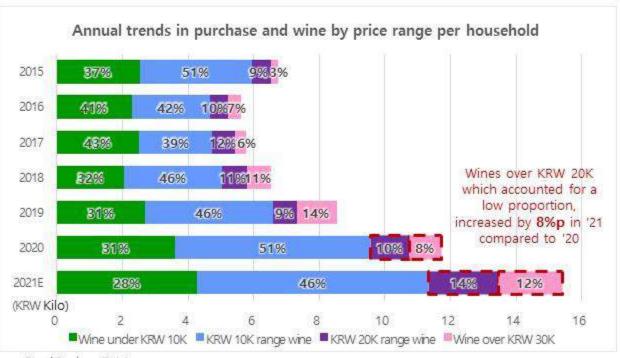


#### Increase in wine purchases and willingness-to-pay

- Wine purchases per household have been steadily increasing since '17, and they show a rapid increase through COVID-19
- The proportion of low-priced wines (around 10,000 KRW) decreased, and the proportion of medium-priced wines or more (priced at 20,000 to 30,000 KRW) increased from 12% in '15 to 26% in '21
- Wine purchases at home are the highest in December, and purchases are also high in September, the month of holiday season (Chuseok)









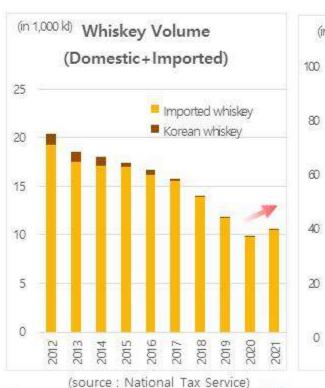


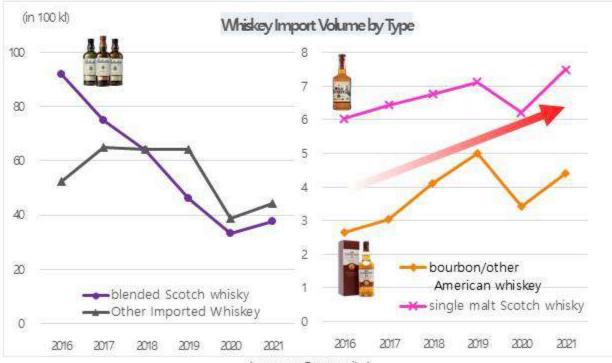


#### Keyword4: Whiskey

#### Whiskey market regaining growth momentum

- The whiskey market has been experiencing a steady decline, particularly in the case of blended Scotch whiskey, but there was a notable turnaround in 2021, with a significant 8% increase compared to the previous year
- The recent preference for premium single malt whiskies and the growth of highball culture utilizing affordable whiskies have led to the growth







1.1

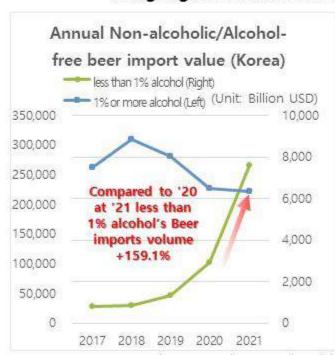
(source: Euromonitor)

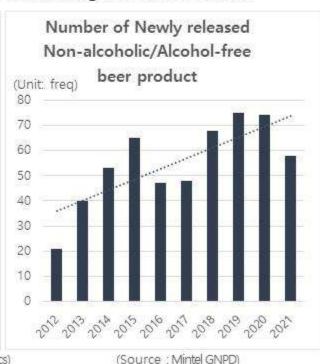


#### Keyword5: Non-Alcohol

#### The growth of 'alcohol-free' and 'non-alcoholic' beers

- Imports of beer with an alcohol content of 1% or less (non-alcoholic) have been rapidly increasing
- Many countries, including Korea, have seen a growing trend in the number of new beer products with an alcohol content of less than 1%
- This product category, classified as carbonated beverages, is experiencing rapid growth in Korean market based on its characteristics such as being eligible for online sales and having low calorie content





#### Alcohol-free Beer Add yeast to the wort in fermented beer Manufactured by isolating only alcohol (e.g. vacuum distillation, reverse osmosis) (0% ABV) CAS 0.0 hite ZERO Company: OB ABV:0% ABV: Less than 1% Price: KRW 1,190 Type: Carbonated Beverages

Non-alcoholic Beer Features and **Benefits** Yeast during the manufacturing Products made by Possible adding synthetic to sell online flavors without as a beverage fermentation according to product classification Relatively Hite Zero low in calories Company: Hite Jinro as alcohol has been Price: KRW 1,180 removed Type: Carbonated

(Source: Ntoday, 2022; Marketkurly)

(Source: Korea Customs Service Import and Export Trade Statistics)



국립강릉원주대학교

Wide choice

for drivers

or pregnant

women

low price

s liquor tax



# The Food Industry Promotional Agency of Korea

한국식품산업클러스터진흥원



# CONTENTS



- **Solution** Korea National Food Cluster
- Support Facilities
- **Foodpolis Future Plan**





# Korea National Food Cluster



#### **Industrial Complex**

A concentration of similar industries in a limited geographical area

Less connection between 'tenants'

For reducing cost and company growth



#### $\bigcirc$

#### Cluster

Critical masses in one place of linked industries and institutions—from suppliers to universities to government agencies—that enjoy unusual competitive success in a particular field (Michael Porter, 2000)

#### Other clusters in South Korea

· Osong

Daegu

Medical innovation Foundation Korea Water Cluster

Gumi

Gwangju

Defence, Digital Cluster

Photonics cluster

• Ulsan

Wonju







An advanced form of Food industrial complex linked with industries and institutions

To bring up the nation's food industry and value of Korean agriculture

Creating new values by networking, interacting and sharing knowledge

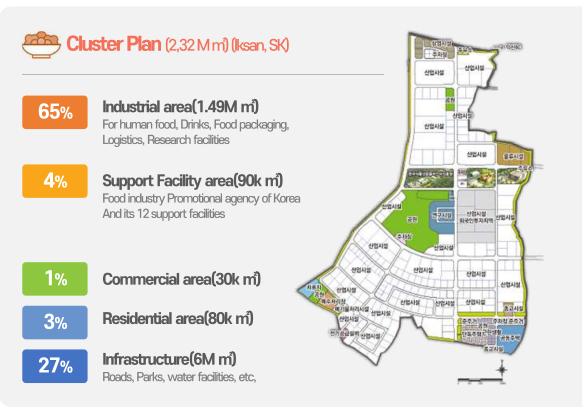
#### Overview

Startup incubation



- Agency established in 2011, Publicized in (2019), New title(2020, cluster support center → Food industry promotional agency)
- 12 business support facilities, 841 research, manufacturing equipment operating on site for the growth of Korean Food companies
- National Food Cluster is established in 2017, under the 'Food Industry Promotion Act' Article 12-2





## 1-4 Integrated Support for Optimal business growth



# National Food Cluster is a 'Platform' of Business growth by collaborating with related public organizations 99



## 1-5 Foodpolis in Numbers



ዖዖጓ

Our staff 110

126 on one

Partners in the cluster

Startups in the cluster

36

19Teams for support

12 Support facilities



Equipment on site 841

Cluster occupation Rate

72.4%

Support project categories for 2023

17

8

19,000

Followers on SNS

246 Billion Won

Total profit of partners on 2021

24.6

Average employment per partners of 2021

### 1-6 Product from partners/project



#### **Exporting products**









#### **Health Functional**









#### "The Future Food"













# **Support Facilities**

### Facilities of Food industry promotional agency



facilities

One-Stop Support system of Food Technology, Manufacturing, Startups, ingredient supply and More

-841 types, 52 Billion won invested for Lab and Manufacturing Equipment

#### 12 support facilities

#### Technology



















Startup









**Business** 



## 2-2 The Food industry promotional agency of Korea (Main Building)







In charge of National Food Cluster

**Marketing support** 

**HR** support(Hiring/Education)

**Cluster Visitor Center** 

**FOODPOLIS Market** 

**Business consulting Center** 

### 2-2 The Food industry promotional agency of Korea (Main Building)





Foodpolis Market

**Visitor Center** 

**Business Consulting center** 

Online & offline

Shopping area specialized on products from our partners

For Exhibition, promotion and marketing support

Model miniature of Foodpolis, Infographics,
videos, VR centers to
Boost your knowledge of Food Cluster and
the Agency

Provides consultation and solutions on business obstacles such as Tax and labor,

Laws, regulations, and certifications

### 2-3 Food Packaging Center





**Overview** 

• The first "food packaging" specialized lab of Korea





KOLAS

Korea laboratory
accreditation scheme



ISTA
International safe transit association

✓ Main tasks



**Customized package improvements** 

Product development/consulting for the latest package trends
Package material/structure design



Package Material analyzing

Evaluation for hazard safety Biodegrade ability for green packaging



**Environmental experiments** 

Transit Environment Simulation lab For Package Safety and Durability

### 2-3 Food Packaging Center - Best Practices



### Package improvement: Crispy rice snacks

### **⊘** Overview

Solved product damage-chocolate sanded rice snacks during transit by package renewal











[Improved Sealing]



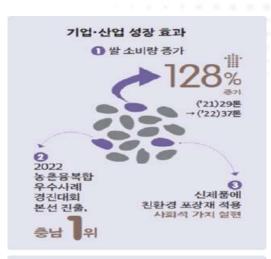
loading pattern]



[Improvement of primary packaging | Improvement of secondary packaging | loading pattern)

### **⊘** Result

- 1. 128% increase on Domestic rice consume
- 2. Awarded 'good practice' of agri-food business of 2022
- 3. Company profit boost by export to Taiwan and domestic sales increase
- 4. will use environmently friendly material in 2023





### Food Packaging Center - Best Practices



# Package improvement: material improvement of exported ramyun boxes

### **⊘** Overview

### **Obstacles**

 Ramyun boxes for export gets multiple claims on being destroyed during transit



[Examples of damage]



[types of damages]

### **⊘** Improvements

### Result

- Improvement of box structure by material/environment testing
- Expected to save 1.2 billion won saved by 85% improvement of faulty packaging



[Test manufacturing and evaluation]

### 2-4 Food Quality and Safety Center





### 

- -Product planning> development> launching> monitoring
- -Human sensory evaluation
- -Machine operated sensory tests
- -Safety analysis lab tests

### **⊘** Overview

- Evaluation tests for the safety of ingredients, product development/improvement
- Main facilities: Consumer behavior lab, sensory lab, analysis lab, microbiology labs

### **Certifications**

식품 등 시험·검사 기관 지정번호 : 제142호



designated experiment & inspection labs by Korea MDFS



KOLAS
Korea laboratory accreditation scheme







Sensory quality examination



Food safety Analyzing

### 2-4 Food Quality and Safety Center - Best Practices



### **Food technology support: Creating Products based on consumer needs**

### Consumer evaluation cases

### New Low sugar products for people with higher health awareness

→ Research on sugar substitutes + taste evaluation > new consumer pool(high blood pressure, diabetic)





[ taste evaluation]

[ new product]

### **Quality comparing evaluation** for Home meal replacements

→ profit increase to 5 billion won







[ Consumer tests ]



[ Profit growth]

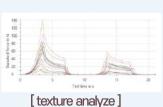
### **⊘** Texture optimizing cases

### Plant based protein texture improvements

Chewiness, cohesion, elasticity

→ product development w texture evaluation













[Better texture]

### **Quality evaluation cases Quality improvement**

### Electric Nose: Flavor analyzing

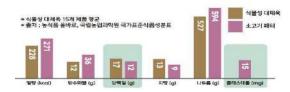
→ Develop products that consumers prefer



[ Electric Nose ]

### Safety of plant based protein

Nutrients and safety analyzing of alternative proteins



[Nutrition compare chart - Plant based vs Beef patties]

### 2-5 Functional Evaluation Center





### **⊘** Overview

- One-stop technology support to valorize health functional ingredients and functional labeling on foods
- Standardize / validation / safety evaluation

### **Certifications**







GLP (Good Lab Practice)

AAALAC-I (International Lab Animal Care) KELAF (Excellence of Lab Animal Facility)

### ✓ Main Tasks

### Developing new functional ingredients

Discover and register

Domestic functional ingredients

Special functional ingredient

per life cycle/ diseases

### Product development support of functional ingredient

Adapting functional ingredients to normal food maximizing functional ingredient content

### Testifying Safety on new functional ingredients

Temporary enlistment support on new ingredients Safety ensuring on new technologies and methods

### 2-5 Functional Evaluation Center – Best Practices



### New manufacture technologies applied: Domestic soybeans as functional food

### **⊘** Overview

[ Company ] Discovered new functional ingredient(sprouted, fermented soya)with their newest technologies

Platform technology for Bio-conversion



[ MDFS ] Required proof of safety documents for enlistment due to new applied technologies

[ Foodpolis ] Support on enlistment safety assurance

Toxic evaluation complete



Labeled to support ladies health post menopause

### **Improvements**

Product development complete & Market release



Benefits local farmers by direct contract

Cases of enlistment:
Domestic agri-functional ingredients
[Blood pressure control] Black raspberry
[Ladies post menopause] Fermented-sprouted soya
[Anti-aqinq] Rubus coreanus powder

### -2-6 Pilot Plant





### **⊘** Overview

Provides cutting edge technologies on prototype manufacturing for SMEs

### **Certifications**







GMP (Good Manufacturing Practice)



Organic processing facility

### ✓ Main Tasks



Fermentation Tanks

### Raw material processing

Fermentation/purification Extract/concentrate Drying/powdering

### Solid type processing



Capsulating Machine

Tableting Encapsulating Granulating

### Special procedures



Powder Sterilizing

High Pressure Processing Powder sterilizing

### 2-6 Pilot Plant – Best Practices



# **Support commercialization of Health Functional food**

### **Procedures of support system**















Commercialize

Find obstacles

Set process standard

Prototype manufacture

### **⊘** Collaboration cases

### **Probionic**

Kimchi Probiotics US, JP, CN export 24% Annual growth



### Uniquebiotech

Granulated Propolis Launched in Costco US, AU, VN export





### Atozen

probiotics for blood sugar product development With authorized "Lactobacilus P HAC01"



### Webiom

Probiotics product development 30 million won investments by E-mart 10 million won profit on 2022





### **2-7** Food Venture Center





### **Overview**

- Rental offices, factories for Startups and Small enterprise
- 49 total slots, 36 companies joined
- Venture Partners: cheaper, easier access to projects

### ✓ Main Tasks

Providing Rental office and factories	Incubation of partner startups	Monitoring of partners
HACCP, GMP, ISO22000 qualified area Water, gas, electricity, wastewater, storage provided	Partner candidates are evaluated by Item, technology and management abilities  Total 49 slots(36 occupied),  3 slots of common area	Partners are evaluated each year feedback and more support provided as they grow

### 2-7 Food Venture Center – Best Practices



### **StartupLab Projects: How its done and best cases**

### **⊘** Procedure

















Investor's networking Result sharing

Orientation

Education/Finding strengths

Prototype evaluation

### **Collaboration cases**

### Medipresso

### 2022 StartupLab Participant

### High Pressure Tea capsules with IoT machine

Tea recommendation solutions Based on DNA health checkup

- 8 new products launched
- 2 patents and 300 million won invested Entered market
- 40 megamarts, 250 Nobrands 10 department stores

















### LocalWorks

### 2019 StartupLab Participant Honey Drink Base from Mt. Jiri

- · Joined as a partner at Food venture center
- New products: propolis spray(2022)
- Honey rice pudding in development (2023)















### 2-8 Sauce Industrialization Center





### **Overview**

- Bringing Korean traditional sauce globally by development support
- Recipe development/prototype manufacture/commercialize

### **Certifications**





HACCP

Smart HACCP (automated management of HACCP)

### **⊘** Main Tasks

### Sauce development and manufacturing support

Recipe and process plan development Prototype manufacturing

### Innovative-traditional sauce support

Consulting, manufacturing and marketing support Support programs specialized on traditional foods

Sharing sauce information and work-education connection

Sauce info Database website
Seminars and sauce industrialize communities
On site education for sauce manufacture

### -2-8 Sauce Industrialization Center – Best Practices



# **Utilizing infrastructures: commercialization of 'GreenBio' Food**

### *⊙* Collaboration cases

Huenic: obstacles of reducing odor on plant based meat



We have technologies
For Plant based meat,
But its so hard to get rid of
its odor.

### **Results**

 GreenBio Food: Biotechnology applied to food and agriculture area (new term by Ministry of Agriculture and Food Rural Affairs, 2023)



New product: Plant based chicken with BBQ Gochujang sauce (Korean chili paste)

### Product(sauce) development



Basic recipe

Recipe design for plant based meat



Set final ratio

Sensory tests and Adding flavors



Make larger batches

Develop manufacture procedures

### Online market release

- Naver, Coupang
- · Currently promoting at food fairs and events





### 2-9 HMR Technology Support Center





### **⊘** Overview

- · Commercializing of Home meal replacements
- \* meal kits, easy cooking products at home
- 73 types, 171 pcs of equipment on site









**Equipment for Plant based meat(Extruder)** 

### **⊘** Main Tasks





Collaborating with local areas and launching new products

Technical support and consulting on obstacles

### Support on future innovative technologies



Alternative Meat(currently plant based)

Nonthermal sterilization

Smart packaging

(shelf life, environmentally-friendly)

### Open equipment support

For prototype manufacturing and lab tests
Extruder/ Retort sterilizer/ Roasting/ texture analyzer/
biodegrade evaluator

### 2-9 HMR Technology Support Center – Best Practices



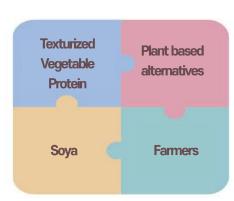
### **Technical support:**

Plant based protein for vegan food

[ISP, TVP, Vegan Food]

### **⊘** Value Chain

- Future foods
- Value-adding
- · Alternative of rice
- · Easier to grow
- Nourishes soil



- · Reduces Carbon footprints
- For vegetarians
- · Healthy food
- · Additional income stream
- Better compensation

### **©** Current technologies

### **Isolated Soy Protein**

Contains 90% and more protein

### **Texturized Vegetable Protein**

Processed Vegetable protein, such as ISP which has a similar texture to meat protein

### **Extrusion Process**

Processing vegetable protein in a spiral machine with high heat and pressure to produce a meat-like texture



















Soya

ISP

Extrusion

TVP

Plant based meat

### 2-9 HMR Technology Support Center – Best Practices



# Technical support: Commercializing HMR for small business

### **⊘** Overview

### Obstacles of small businesses

- · Hard to keep sanitary and even quality
- · Lack of technology, equipment to make new products
- · OEM Minimal order quantity could be too big

### **HMR** commercializing support

- Special Local product for Traditional markets
- Support on Creating recipes, handling logistic claims
- · Product planning and test manufacturing

### **⊘** Result

# Gwangyang Market special: Ready To Cook BBQ roast chicken & beef

- · Recipe made with local methods and ingredients
- 500 ->1000, 200% sold in 2022~2023







### 2 - 10 Functional Food Styling Center





### **⊘** Overview

Manufacturing/ technology support for Various types of functional food

### ✓ Main Tasks

### ONE-STOP facility for Functional food styles

- · Developing styles, recipes and commercializing
- · Specialized in liquid form manufacturing
- Networking for commercializing

### **Certifications**







HACCP

### -2-10 Functional Food Styling Center – Main Technologies









Specialized in "Liquid type"

**5G** network running on site

### Auto robot production line

- Various production lines for PET, stick pack, ampoule, jelly form
- More to customize than traditional solid types: Absorbment, design for preference
- 5G speed internet running to optimize automated production
- Current Fastest speed of internet
- · Live monitoring of facility with less lagging

- A glimpse of future food factories: automated robot lines
- Latest equipment such as automated forklifts, and pallet stackers

### —2-11 Agri-Food Distribution Center





### **Overview**

 Year-round stable ingredient supply for partners by providing storage areas and Farm-factory connection

### ✓ Main Tasks

### **Providing Agri-food ingredient storage**

Storage area with multiple temperature control (freeze, cool, room temp)

### **Agri-food connection support**

Provide information for ingredient sourcing

### Sharing valuable information

Collects/shares product information Local source, price info, customer trend, harvesting flow

### -2-11 Main Service





Temperature storage

- •Room temperature, cooler, freezer storage in operation
- Rent out storage space for partners
- •Resolve lack of storage space

- Farm-to-factory connection
- •Connect farmers to companies such as contract farming and bulk purchases
- •More income for local farmers, less stock concerns for partners
- Creating Farmers/companies info Database

### 2-12 Youth Startup Square

Completes in 2024





### **Overview**

 Provides product development, education, office rentals for people who are preparing their own food business

### **⊘** Main Tasks

### **Prototype manufacture**

Equipped for Smaller scales(pilot, lab) Scaling up Ideas to a new product

### Step-by step business assistance

One stop support for all stages of new business 3 stage education: Pre-beginning-Jump Mentors from/outside Foodpolis

### Building Planning

















### **⊘** Overview

 to label more normal foods "functional" by sourcing/evaluating/storing domestic agri-food ingredients

### 



### ✓ Main Tasks

### **Sourcing Agri-food ingredients**

Health functional ingredients Agriculture produce Foreign alternatives

### **Supplying ingredients**

For university/company research
Product development
Functional labeled food

### Standardizing ingredients

Sourcing/searching Structure analysis Functional labeled food verify

### **Production support**

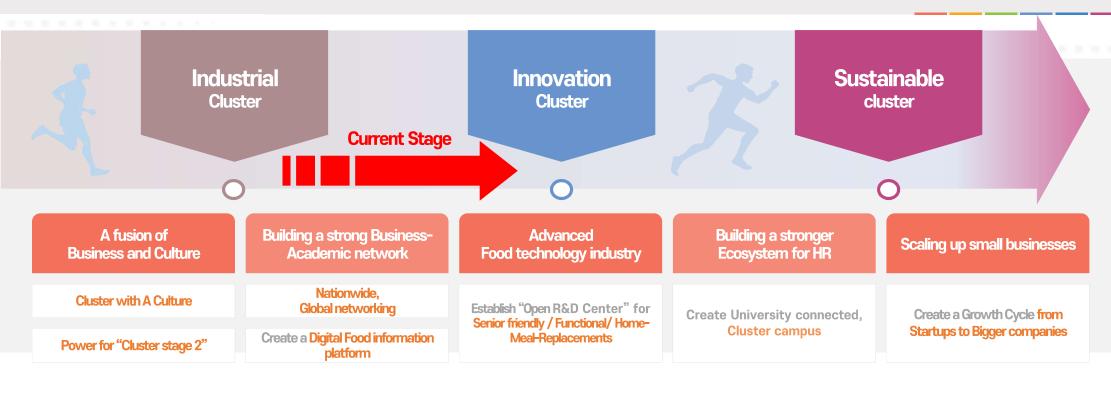
Optimizing scaleup Extracting/drying/powdering



# Foodpolis Future Plan

### 3 - 1 Future road plan





### Business, Academic, Government connected network



**Companies** 



Universities



F.I.P.A



Research Facilities



Government

### **3-2** Adding Technologies and Culture



From an industrial complex, we prepare



### **A Digital Transition**

Needed to start/become a good model
To bring a Digital change in the Food industry

### **Related Projects and investments**

### For FIPA Facility

5G Smart Factory · Logistic system
6.5 Billion Won

### For Partners

Smart HACCP System 3.3 Billion Won

Digital Factory Model



(21) Smart HACCP
Test bed

(22) 4 companies
Applied Smart HACCP

### **Cluster with A "Food Culture"**

- Legal obstacles stunting Partner's diversity growth
- Needed to "Lift Regulations" for Cluster Development

### STEP1. Search for Obstacles

**CEO Meetings** 

**Direct connection with Partners** 



### STEP2. Efforts to Lift Regulations

Task Force team

"Prime Minister Talk" sessions

### STEP3. Regulations Lifted





### 3-3 Spreading our network



### **Building a strong Business-Academic network**

Creating Synergy For Company Support



- **ு Bigger Mission:** Projects Not only for the Cluster, But nationwide
- Growth of Cluster: To be the nation's main Food Cluster



**Activate networking and connection**For the Growth of Food Industry

### Nationwide Connections

Cooperating Regional Organizations

Seven Provinces

Company Obstacles
Found **101** Solved **73** 

205 Participants



### **Global Connections**







### -3-4 Open R&D Center: Plant based, Senior Friendly



### Food tech for alternative meat and senior-friendly food development

- Optimizing Textures of Plant based Meat
  - Confirming the ratio of ingredient for a better texture that consumers like
- Product Analyze for Senior Friendly food: easy chewing and swallowing
  - Measure hardness and viscosity to match the criteria / support development and certification of senior-friendly food

### Physical property analysis technical support use case

### [Realization of substitute meat texture]

Evaluation of texture; hardness, cohesion, elasticity, chewiness







Texture Measuring Instrument

### [Development of senior-friendly food]

Analyzing hardness and viscosity for senior-friendly foods



Rheometer

Senior-friendly food Certification mark

### 3-4 Open R&D Center: Functional ingredients

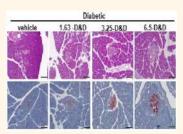


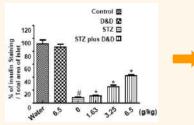
### Development of future food 'functional insect food'

### [Demonstrate scientific sufficiency of evidence for efficacy]

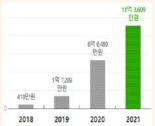
Diabetics improvement functional material development using paired crickets











### Sourcing Functional ingredients in by-products

### [Valorizing agricultural side streams]

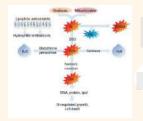
Experiments to identify functionality on agriculture side streams: rice bran, onion peels

















### 3-5 Creating More Jobs and More Food-HR



### New RIS Project, Graduate Programs

### **Career growth Cycle throughout the Cluster 99**

### **Regional Career Network collaboration**

WHY

- Needed Stronger Connections for Career Growth
- Curriculum shift required for Stronger Job Match



Foodpolis Leads Stronger Connection with Related Organizations

Training Curriculum Matching Company's Required Skills

### **On-Site HR Training**

- Program Upgrade for trainees\* Updated Curriculum
- More Career-related Programs
  \* Career classes, Fairs, Exhibitions



Funds for Job stability

► Switched to Direct Matching

"Cluster Career network"



\* Jobs /candidates Sourced Monthly

26 Alumnies Connected to Jobs

Pulmuone, Maeil Dairy, Orion ···

17 Companies -70 Candidates matched

Job matching opportunities

**Exceeded Initial Goal by 40%** 

### 3-6 Startup Programs for Successful growth



Advanced support system for Food business to

### Stimulate a Successful Startup growth

WHY

Needed support programs for startups to overcome the "Death Valley" in each stages

# Curated support systems for each stage of business Succeed rate 62.5% (23.4% ↑ from 2021) 2 stage system Pre stage Renovated into 3 stages Pre stage Regimer stage Pre Begimer Restart More investment attractions Agri-Food Business Investment committee IR Demo events, Connections to Food Funds 14 companies, 18ilion KRW Investments funded





# Thank you

For additional inquires/connections, please message on

B2match or email sparky@foodpolis.kr















### Introduction of Health Claims Kimchi

**Collaboration** Cases between Foodpolis and Companies

2023.06.08.



Senior Researcher Kim Jae hwan

# **CONTENTS**

<b> </b> .	What is Health Claims Kimchi	•••••
II.	Status and problems	1
III.	How to Collaborate with Kimchi Companies	1
IV.	Challenge	2





As of May 2023, in Korea, Six companies are offering four Health Claims in a total of fourteen Kimchi products made with 1 types of lactic acid bacteria and 5 functional ingredients.

We focuses on health claims Kimchi development using domestically produced functional ingredients such as garlic from Namhae-gun, plum from Gwangyang-si, red ginseng from Geumsan-gun.

And Based on a last year survey of female consumers in their 20s-50s in Tokyo, We will also work hard to develop Green Pepper (Capsicum annuum L. cv. DangZo) Kimchi for Japanese Kimchi Market.





# T | What is Health Claims Kimchi





# **Overview of Health Claims Food**

What is Health Claims?

Display general enhancing effects on the body in the product label



Health Claims is possible when food meets 4 requirements in Korea from December, 2020.



#### **Ingredients**

made from Good Manufacturing Practice(GMP)



#### Food

made with Hazard Analysis Critical Control Points(HACCP)



#### **limitation**

29 permitted functional ingredients have limited use



#### **Proof**

Test Report Within 6 month



# 29 permitted functional ingredients

	순 번	기능성 원재료 또는 성분	기능성	1일 섭취기준량
	1	인삼	면역력 중잔피로 개선에 도 움을 줄 수 있음	● 진세노사이드 Rg1과 Rb1의 함계로 서 3~80 mg
	_ ^	Sam(	Ginseng)	● 진세노사이드 Rg1과 Rb1의 함계로 서 25 mg
		·	면역력 중진·피로개선에 도움을 줄 수 있음	● 진세노사이드 Rgl, Rbl 및 Rg3의 함계로서 3~80 mg
	2	홍삼	혈소판 응집억제를 통한 혈액흐름·항산화에 도움을 줄 수 있음	● 전세노사이드 Rg1, Rb1 및 Rg3의 함계로서 2.4~80 mg
H	on	igSam	Ked (5111 88 2 4 98	<b>Seng</b> Rgl, Rbl 및 Rg3의 합계로서 25~80 mg
	3	클로렛라	피부건강·항산화에 도움을 줄 수 있음	● 총 엽록소로서 8~150 mg
	2	근도된다	면역력 증진·혈증 콜레스테롤 개선에 도움을 줄 수 있음	●총 엽록소로서 125~150 mg
	4	스피루리나	피부건강·항산화에 도움을 줄 수 있음	● 총 엽록소로서 8~150 mg
	7		혈중 콜레스테롤 개선에 도움 을 줄 수 있음	● 총 엽록소로서 40~150 mg
	55	프로폴리스 추출물	항산화·구강에서의 항균작 용에 도움을 줄 수 있음 寒구강 항균작용은 구강에 직접 접촉할 수 있는 형태 에 한하며, 심취랑을 적용하 지 않음	• 총 플리보노이드로서 16~17 mg
	6	구아 바잎 추출물	식후 혈당상승 억제에 도 움을 줄 수 있음	• 총 폴리페놀로서 120 mg
	7	바나바잎 추출물	식후 혈당상승 억제에 도 음을 줄 수 있음	● 코로솔산으로서 0.45~1.3 mg
	8	EPA 및 DHA	혈중 중성지질 개선·혈행 개선에 도움을 줄 수 있음	● EPA와 DHA의 합으로서 0.5~2 g
		함유 유지	건조한 눈을 개선하여 눈 건강에 도움을 줄 수 있음	● EPA와 DHA의 합으로서 0.6~1 g

순 번	기능성 원재료 또는 성분	기능성	1일 섭취기준량
9	매실추출물	피로 개선에 도움을 줄 수 있음	● 구연산으로서 1~1.3 g
<b>DIU</b>	<b> </b>	★ 60 비를 개선・식후 혈당상승 억제・배변활동 원활에 도움을 줄 수 있음	●구아검/구아검가수분해물 식이섬유 로서 9.9~27 g
	7116418	장내 유익균 증식에 도움 을 줄 수 있음	● 구아검/구아검가수분해물 식이섬유 로서 4.6~27 g
		식후 혈당상승 억제에 도 움을 줄 수 있음	• 난소화성말토덱스트린 식이섬유로서 11.9~30 g(액상원료는 11.6~44 g)
11	난소화성말토텍 스트린	혈중 중성지질 개선에 도 움을 줄 수 있음	<ul> <li>난소화성말토텍스트린 식이섬유로서 12.7~30 g(액상원료는 12.7~44 g)</li> </ul>
		배변활동 원활에 도움을 줄 수 있음	• 난소화성말토덱스트린 식이섬유로서 2.5~30 g(액상원료는 2.3~44 g)
12	대두식이섬유	혈중 콜레스테롤 개선·배변 활동 원활에 도움을 줄 수 있음	■ 대두 식이섬유로서 20~60 g
		식후 현당상승 억제에 도 움을 줄 수 있음	<ul> <li>대두 식이섬유로서 10∼60 g</li> </ul>
13	목이 버섯 식이 섬유	배변활동 원활에 도움을 줄 수 있음	• 목이버섯식이섬유로서 12 g
14	밀식이섬유	식후 혈당상승 억제에 도 움을 줄 수 있음	● 밀 식이섬유로서 6~36 g
14	할적이심규	배변활동 원활에 도움을 줄 수 있음	• 밀 식이섬유로서 36 g
15	보리식이섬유	배변활동 원활에 도움을 줄 수 있음	• 보리 식이섬유로서 20~25 g
16	옥수수겨 식이섬유	혈중 콜레스테롤 개선·식후 혈당상승 억제에 도움을 줄 수 있음	• 옥수수겨식이섬유로서 10 g
17	이눌린/ 치커리추출물	혈중 콜레스테롤 개선, 식 후 혈당상승 억제에 도움 을 줄 수 있음	• 이눌린/치커리추출물 식이섬유로서 7.2~20 g
	नागाना गांच स	배변활동 원활에 도움을 줄 수 있음	<ul> <li>이눌린/치커리추출물식이섬유로서</li> <li>6.4~20 g</li> </ul>
18	차전자피 식이섬유	혈중 콜레스테롤 개선에 도 움을 줄 수 있음	• 차전자피 식이섬유로서 5.5 g 이상

### Name of Ingredients

순 번	기능성 원재료 또는 성분	기능성	1일 섭취기준량
		배변활동 원활에 도움을 줄 수 있음	• 차전자피 식이섬유로서 3.9 g 이상
19	호로파종자 식이섬유	식후 혈당상승 억제에 도 움을 줄 수 있음	• 호로파종자 식이섬유로서 12~50 g
20	알로에 곌	피부건강·장건강·면역력 증진 에 도움을 줄 수 있음	• 총다당체 함량으로서 100~420 mg
21	프락토 올리고당	장내 유익균 증식 및 배변 활동 원활에 도움을 줄 수 있음	● 프락토올리고당으로서 3~8 g
22	프로바이오틱스	유산균 증식 및 유해균 억 제·배변활동 원활·장건강 에 도움을 줄 수 있음.	• 100,000,000 CFU
23	홍국	혈중 콜레스테롤 개선에 도 움을 줄 수 있음	• 총 모나콜린 K로서 4~8 mg
24	대두단백	혈증 콜레스테롤 개선에 도움을 줄 수 있음	• 대두단백으로서 15 g 이상
25	폴리감마 글루탐산	체내 칼슘흡수 촉진에 도 움을 줄 수 있음	• 폴리감마글루탐산으로서 60~70 mg
26	마늘	혈증 콜레스테롤 개선에 도움 을 줄 수 있음	• 마늘 분말로서 0.6~1.0 g
27	Jarii (	장내 유익균의 증식과 유 해균의 역제 도움을 줄 수 있음, 배변활동을 원활히 하는데 도움을 줄 수 있음	• 라피노스로서 3~5 g
28	분말한천	배변활동에 도움을 줄 수 있음	● 분말한천으로서 2~5 g (총 식이섬유로서 1.6~4.0 g)
29	유단백가수 분해물	스트레스로 인한 긴장 완 화에 도움을 줄 수 있음	• 유단백가수분해물로서 150 mg (알과에스1카제인(q <sub>2</sub> -casin) <sub>(191-100)</sub> 으로서 2.7~4.1 mg)
			2.7~4.1 mg)

**Quantitative Requirement of Analytical Marker** 

Heath Claims

# **New Food in market from 2022**







**Yogurt** 



Non Alcoholic drink

#### **Natto**



Name of Ingredients

1 Day Quantitative Requirement of Analytical Marker

> 1팩당 총 모나콜린 K로서 2.75 mg, 총내용량(6팩)당 총 모나콜린 K로서 16.5 mg 총모나콜린 K로서 4~8 mg 섭취시 주의사항 균형 잡힌 식생활을 권장합니다. · 이상사례가 있는 경우 섭취를 중단하고

**Quantitative Content of Analytical Marker** 

**Caution** 

# 1st Health Claims Kimchi in Korea

# **Original**



제품명:프릭도움리고방에추리치 ·용량: 480g ·보편방법: 냉장 보관 (0-6°C) · 석품의유형: 가타 김치(비실군 제품 ·포장 제집 : 플리 에틸린 폴리프로필린 ·품목보고 번호: 20120219305101

•반품 및 교환:구입적 -제조원: (취또의 찬)왕주광역시 경산구 평동산단 7번로 82 ·원제로명및함량: 배추68.5%, 뜨레찬감치전용물 7%, 고춧기루, 무각 4% 프레찬다시마육수 3.5%, 영화2.5%, 이늘2%, 프레찬 열차 1.7%, 사우젓1.6%, 열차 액럿 1.5%, 뜨러진 누룩방호소금, 파각1%, 사과 베, 프락토 올리고당 (J.225%, 생경 0.2% \*모든재료국내산







프락토올리고당 0.225%

본 제품에는 장내유익균 증식 및 배변활동 원활에 도움을 줄 수 있다고 알려진 프락토올리고당이 함유 되어 있습니다.





#### 프락토올리고당섭취시주의사항

·섭취시기스참 트림, 복통,복부땡만감동이발생할수있음 ·이상사례 발생 시섭취를 중단하고 전문가와 상담할 것

되지고기 호두 토마토 닭고기 쇠고기 오징어 조개류 글 전복 드시지는마십시오 가스 흡수제가 불어 있는 제품은 세워서 보관 하여야 합니다. 사용 후 빈 포장은 반드시 분리 배출하여 주십시오 -부정불량식품신고는 국번 없어1399

- \*본 제품은 건강기능식품이 아닙니다.
- \*본제품은 질병의 예방치료를 위한 제품이 아닙니다.
- \* 균형잡힌 식생활을 권장합니다.
- \*이상사례가 있는 경우 섭취를 중지하고 전문가와 상의하세요
- 기능성성분함량: 프락토올리고당으로서 2.25q(100q당) \*1일 섭취기준량: 프락토올리고당으로서 3~8g



### 프락토올리고당섭취시주의사항

- ·섭취시가스참,트림, 복통, 복부팽만감동이 발생할 수 있음
- ·이상사례 발생 시 섭취를 중단하고 전문기와 생담할 것

Caution

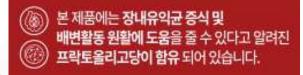
- \* 기능성 성분 함량: 프락토올리고당으로서 2.25g(100g당)
- \* 1일 섭취기준량: 프락토올리고당으로서 3~8g

**Quantitative Content of Analytical Marker** 

1 Day Quantitative Requirement of Analytical Marker

480g 프락토올리고당 0.225%

Name of Ingredients



**Heath Claims** 

# 1st Health Claims Kimchi in Korea

Now



### 프락토올리고당섭취시주의사항

- ·섭취시가스참, 트림, 복통, 복부팽만감 등이 발생할 수 있음
- · 이상사례 발생시 섭취를 중단하고 전문가와 상담할 것

Caution

\*기능성성분함량: 프락토올리고당으로서 2.25g(40g당) \*1일 섭취기준량: 프락토올리고당으로서 3~8g

**Quantitative Content of Analytical Marker** 

1 Day Quantitative Requirement of Analytical Marker



본 제품에는 장내유익균 증식 및 배변활동 원활에 도움을 줄 수 있다고 알려진 프락토올리고당이 함유되어 있습니다.

480a

**Heath Claims** 

Name of Ingredients

Gut health Kimchi by fructooligosaccharides In Korea. 2022

# 1st Health Claims Korean Kimchi in Japan



●摂取の方法:そのま まで、又はお料理素材な 、お好みに応じてお召し上がり ください。●一日当たりの摂取目安 はありません。●本品は、疾病に罹患している 者、未成年者、妊産婦(妊娠を計画している方を 含む 及び授乳中の方を対象に開発された食品で はありません。●疾病に罹患している場合は医師 に、医薬品を服用している場合は医師、薬剤師に相 談してください。●体調に異変を感じた際は、速やか に摂取を中止し、医師に相談してください。●食生活 は、主食、主菜、副菜を基本に食事のバラ、 ■摂取する上での注意事項:本品は多量摂取により 疾病が治癒したり、より健康が増進するものではあり ません。食べ過ぎは塩分の摂り過ぎにつながります。 ■明封時は容器の種で指を切らないようにご注意ください。キム チは、乳酸酸による発酵食品ですので、資味解除に近づきますと 酸味が増してきます。開封後は早めにお召し上がりください。 栄養成分表示

79:PET PEM 容器: PP

(100g当たり) エネルギー・94.9kcal たんぱく質 ......3.1g ····5.9g 食塩相当量 ---- 2.698 機能性関与成分:フラ

#### ⑦ 연합뉴스

### 국내 기능성 표시 김치, 일본 소비자청 첫 등록...하 반기 판매

송고시간 | 2022-03-31 09:56



숙성발효 김치왕

[세계김치연구소 제공. 재판매 및 DB 금지]

(광주=연합뉴스) 손상원 기자 = 장 건강 기능성 표시 김치가 일본에 진출한다.

세계김치연구소는 한국농수산식품유통공사와 협력해 기능성 표시 김치인 '숙성발효 김치왕'을 일본 소비자청에 등록했다고 31일 밝혔다.

하반기부터 일본에서 본격적으로 판매될 숙성발효 김치왕은 뜨레찬이 제조하는 김치로 비피두 스균을 늘려 장내 환경을 양호한 상태로 유지해주는 프럭토올리고당이 함유됐다.

일본 소비자청에 등록된 기능성 표시 식품은 지난해 10월 기준 4천598건이다.



☐ Status and problems



# The History of Health Claims Kimchi





 Beginning of Health Claim of general food in Korea (Ministry of Food and Drug Safety)

• First Health Claims general food Pulmuone PGA Calcium Tofu



 First Health Claims Kimchi Trechan fructooligosaccharides Cabbage Kimchi



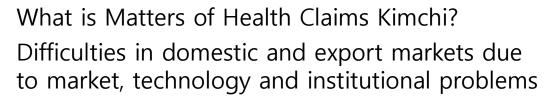
• First Korean Health Claims Kimchi in Japan Trechan Kimchi King



· Collaborate with Kimchi Companies

## **Problems of Kimchi Health Claims Development**





Health Claims Regulation of General Food is a unique system that exists only in Korea and Japan.



#### **Customer & Market**

The irony of Kimchi Health Claims Barrier to entry, Immature market and limited market size



### **Technical & Regulation difficulties**

Residual amount of Analytical Marker Limitation of Labelling



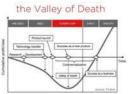
### Competition

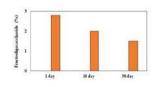
Japanese Health Claims Kimchi



#### **False advertisements**

Illegal labeling of Kimchi product











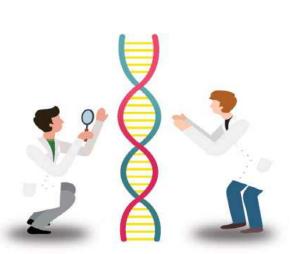






Ш

How to Collaborate with Kimchi Companies



# Health Claims Kimchi Collaboration



# ONE-STOP Service for Health Claims Kimchi Development and Popularization

Korean functional Ingredients Tradional Background Institutional support

Export & popularization

Use Geographical indication In 29 permitted functional ingredients

- Garlic from Namhae-gun
- Plum from Gwangyang-si
- ▶ Red ginseng from Geumsan-gun

# Creating a new market based on tradition

- Jeolla-do Health Claims Kimchi
- Consumer-friendly product development
- Sensory Test

# Collaboration between regulation and technology

- ▶ GMP & HACCP guideline
- Test of residual amount of Analytical Marker Within 6 month

### Coordination Dealer & Export chance

- Promotion by tasting, Exhibition and symposium
- Support Export
- Provide Information





South Coast Area Collaboration Group 2022 Jeolla-do Kimchi Export Collaboration Group 2023

### **Korean Functional Ingredients 2022**





What is the Best Functional Ingredients For Health Claims Kimchi for Korean customer? Choose the Korean traditional ingredients.



#### **Plum Citric acid**

매실

**Garlic Aliin** 

매실의 유기산은 신진대사를 활발히 하고 피로를 회 복하는 효과를 가지고 있다. 특히, 피로취복 기능성 표시가 가능하며, 국산매실 GMP원로를 활용한다.



PER PERSONAL PROPERTY AND SERVICE STATES.

우리나라의 4대 채소 중 하나로 중요한 삭제료이다. 알싸한 맛과 향뿐 아니라 알리안 을 포함해 여러 유 용한 성분들을 참유하고 있다. 특히, 콜레스테롤 저감 기능성표시가 가능하며, 남





**South Coast Area Collaboration Group** focus on fostering Functional Ingredient in Jeollanam-do & Gyeongsangnam-do. This Area is main producting area of garlic & plum. It's Protected Geographical Indication.



#### Garlic

Jeollanam-do 70,437 ton Gyeongsangnam-do 97,511 ton



#### Plum

Jeollanam-do 19,882 ton Gyeongsangnam-do 10,108 ton



## Korean Functional Ingredients 2022



What is the Best Functional Ingredients For Health Claims Kimchi for Korean customer? Choose the Korean traditional ingredients.



**South Coast Area Collaboration Group** consisted 5 promising small and medium-sized Kimchi manufacturers located in Korea.



Taebak Hansung Gyeonggi-do

Dongho Gangwon-do

Trechan Gwangju Metropolitan City

Daekwang Gyeongsangnam-do



## The History of Collaboration 2022



2022. 3 2022. 4 2022. 5-2022.10 2022.11

 Beginning of South Coast Area Collaboration Group

• The Empowerment of Health Claims Kimchi Development Ability: Workshop, Seminar…





• 10 Health Claims Kimchi Development, Test and Registration in Korea Food Industry
Association
한국식품산업협회



 Promotion & Dealer Meeting in Gwangju Food Exhibition



Kindaejung Convention Cente



 Promotion & Tasting in The Korean Society of Food and Nutrition Symposium



김대중컨벤션센터

## The Promotion of Health Claims Kimchi 2022

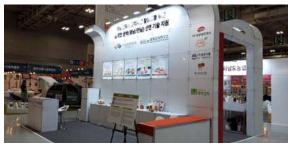


**Workshop for South Coast Area Collaboration Group** (2022.04.28.-29.)





**Seminar of Expert in Health Claims Food Registration** (2022.06.02.)





**Meeting with the Dealer** (2022.10.14.)

**Promotion in Gwangju Food** Exhibition(2022.10.13.-16.)





**Promotion & Tasting in The Korean Society of Food and Nutrition** Symposium(2022.11.11.)

# **Test & Technical Support For Development**



#### 1)알린(alliin) 함량

### Garlic Aliin

						(mg/100 g
저장 일자	시료명 시료명	한성	뜨레찬	대광	동호	태백
	대조구	ND	ND	ND	ND	2.15±0.04
0일차	저농도	1.51±0.22	0.26±0.17	5.93±0.14	11.84±0.14	7.69±0.74
	고농도	41.33±0.49	3.01±0.12	34.64±0.18	36.90±0.23	85.39±1.07
	대조구	ND	ND	ND	ND	/
30일차	저농도	ND	2.63±0.12	5.22±0.03	11.70±0.85	
	고농도	35.32±0.18	6.84±1.12	28.77±1.2	28.05±0.97	

Values are mean±SD (n=3). ND: limit of detection = 0.1 mg/kg





#### 1)구연산 함량

						(mg/100 g
저장 일자	입체명 시료명	한성	뜨레찬	대광	동호	태백
	대조구	137.2±7.9	121.7±0.8	179.7±4.5	194.9±6.2	135.2±9.3
0일차	저농도	781.0±2.6	572.8±3.4	504.7±5.6	489.2±0.3	135.9±20.1
	고농도	2783.3±107.6	850.6±8.4	1098.8±7.2	609.4±9.4	1140.2±20.9
	대조구	99.9±8.6	43.2±2.0	157.6±7.2	32.1±0.9	
15일차	저농도	818.8±8.2	25.6±1.0	467.0±17.4	365.5±4.9	
	고농도	2363.4±19.0	926.4±18.4	1093.9±40.3	767.4±20.8	/
	대조구	50.0±0.0	35.7±2.2	131.2±19.1	13.3±0.8	
30일차	저농도	869.1±5.5	754.4±11.0	451.6±35.9	225.1±34.0	1
	고농도	2562.2±30.2	1036.2±6.5	1265.0±6.8	880.9±6.5	/

Values are mean±SD (n=3).





(ma/100 a)

Plum

Citric acid



### **Test of residual amount of Analytical Marker**

Aliin 18~100mg/Kimchi 40g (Garlic 0.18~1.0g/Kimchi 40g) Citric acid 0.3~1.3g/Kimchi 40g



### **Technical Guidenace**

Invitation each companies & Teach Manufacturing Guidance of Health Claims Kimchi

# Health Claims Kimchi developed in 2022

































# Health Claims Kimchi developed in 2022









河谷堡 黑水 传管 黑水 唯三 功養原司 選件 華麗州

ABPR	2010/06	集化 专案申申	G-838.9	244 44
414	+++++++++++	424	1041	श्रम्
***	*******	1004	1048-04	antition.

÷ė.	1111
-4	
**	- 4994 ECCE (\$E.1) BY EVE PERS SIZEROS FOR 46-4

1184	41-	10	MB	110
		=	R.	7
644	#2	i w	Ş	18
			串	341

	30998			-
644	+99102-51094201	484	640	설의제
***	92446484	****	日日本 30 元 三日本 日日本 30 元 三日本	diffe.
***		+849		

24	11.11
••	-: # #88 COMBINE (Agun - 80 HE 88
=+	- 0994 8110 188 D \$1.550 4518 8 88518 784 60 4 8164 81
	EIRO



£15.8	Distres.	美寸 电复电电	を根据や	444.44
444	*******	48.6	844	1000
***	******	4000	994 Strage /045/68	The state of

经利用税制 三进行

žž.	4.4.4
++	C 8 466 5319 (81 0g/n . 87 65 65
11	- 1809 E-100 (EE I) \$4 E24 6E46 E EEE48 784 60 1

da.	a H		n	20
7.7			ъ.	æa
	**	4#24	48248	48241

	기항성 표시 식품			
***	Distan	K-1-92.44	19300	646 44
444	**********	444	245	실의세
484	*****	****	1位を表示される (4年 英子 工作を	aurar.
***		+415		

24	1141
+=	o a waa coreses south . en en en
8±	· · · · · · · · · · · · · · · · · · ·

466	JOHNSON DOWNS	<b>84 9244</b>	5400	医明整升率		
COM.	1918/19	484	224	4111		
***	\$9845744 \$985758	****	19850498 1018161	2011 N 10		
410		92		100		

-

**	6.4.4
+1	
24	
44	



4TE	14 14/100	84 2344	74 (KI)	
시험	李祖也不明知道大	1881	2160	A1 91 91
.,	ele dés	4869	424 ND 014 1041-01	MIL III. III.
150		+551		100

71/	8.84.1
П	전 개위를 위한 보이면 이렇면 결사를 받는 소수가를 보았다면 본자 는 연하고 하는
-1	이 [이번] 소리시험 등 살아 소리시킨 유리 그는 지원은 소설이는 생각이 되었다고 그
46	्र किस्ता प्रधान करण अग्रेगर गाँग इत ाह सम्बद्ध होता कर है।
**	이 되어도 보고 되면 본 등이 보기되면 보기 기존 자른 다른 등을 통해 기계를 가입해 수 보는 본 수 있다고 있다면 있는데 있는데 이 안 되었다.



企世	제품명	심의번호	업소명	기능성분과 합량	기능성 표시내용	@xjoin	상태조회
Ť	프락토용리고당 배 추장치	2116F021	주식회사 뜨려찬	基本基础证据(2.160.9-8g)	본 체풍에는 장내 유익군 중식 및 배변활동 원활 에 도움을 줄 수 있다고 알라진 프라보율리고당 이 들어 있습니다.	출시여정	2.8
2	홍국 바추감지	2119F027	주식회사 뜨레찬	홍국(모나물린 K)( 5.4.4~8evg)	본 제품에는 혈증 클래스터를 개선에 도움을 줄 수 있다고 달려진 홍국이 들어있습니다.	출시예정	2.0
3	프락토율리고당 배 쇼핑치	2214F012	주식회사 모려진	프락트 올리고당(프락토용리고당므로서 2.25 g)	본 제품에는 광내유의근 중의 및 베면활동 원활 에 도움을 줄 수 있다고 일러한 프라오울리고당 이 합유되어있습니다.	출시여건	J.m.
46	한성매실보기감치	2215F024	(革)許성公告	애실추출물(구연산으로서 0.3 g)	본 체용에는 피로개선에 도움을 줄 수 있다고 알 려진 매일 추출물이 합유되어 있습니다.	출시여경	Est
5	한성마늘모기갑자	2215F025	(學)한성식者	마늘(마늘 분말로서 0.18 g)	전 제품에는 혈중 클래스터를 개선에 도움을 출 수 있다고 알려진 마늘이 힘유되어 있습니다	출시여건	24
6	도착한 홍아리의	2215F035	주식회사 드려찬	마늄(마늄 문달로서 0.6 g)	본 제품에는 항충클릭스터를 개선에 도움을 끌 수 있다고 알려진 마늘이 함은 되어 있습니다.	출시여강	2.8
7	매달 흥어감치	2215F034	쿠식회사 뜨레진	매실추출물(구연산으로서 † g)	본 제품에는 피로개선에 도움을 줄 수 있다고 말 려진 매실 추출물이 참유 되어있습니다.	출시에겐	24
8	gHI미늘바추길치	2215F006	응업회사법인 주식 회사 동호식품	발일(0.18 G;6-1.0g)	본 제문에는 혈증 클래스터를 개선에 도움을 줄 수 있다고 알려진 마늘이 항유되어 있습니다.	출시여전	28;
9	명태매실배추김치	2215F005	농업회사법인 주식 회사 동호식품	구면상(0.3 1-1.3g)	본 제품에는 피로개선에 도움을 볼 수 있다고 알 러진 매일 추출물이 합유되어 있습니다.	출시여경	2.80
10	여러 막두기	2218F002	주식회사 대백립치	D(被( 0.45 g)	본 제품에는 혈충콜레스터를 개선에 도움을 줄 수 있다고 알려진 마늘이 합유되어 있습니다.	출시예정	2.61
11	진선미 매실맞감치	2215F031	등업회사합인 (수) 다양에트엔지	매일추출됨(구연산으로서 0.3 g)	존 제품에는 피로 개선에 노성을 울수 있다고 말 라진 매살이 힘유되어 있습니다.	출시적건	3.6
12	진선이 마늘맛감치	2215F030	용업회사법인 (주) 다장에프앤지	마늘(마늘 운광도서 0.18 g)	본 제품에는 혈충 콜레스타를 개선에 도움을 중 수 있다고 열려진 마늘이 항무되어 있습니다.	출시여건	210

1, 영업자가 등록한 과회에 대한 모든 책임은 취당 영업과에게 있으며, 한국시출산업합회에는 관련 책임이 없습니다. 이용자 문출에서는 자료 취연 서 유의 하시기 바랍니다.

#### **Announcement List of Health Claims Kimchi**

2. 본 게시판에 게시된 자료는 소비자에게 가능성 표시식품에 대한 정보를 제공하기 위하여 공개된 자료입니다.

In Korea Food Industry Association homepage 2022

단순 열람 외에 무단 변경, 복제-배포, 개작 등의 이용을 급기하며, 이를 위반할 경우 관련법률에 의거 법적 처벌을 받을 수 있음을 알려드립니다.

### Popularize & Export 2023



How to Collaborate Kimchi tradition & Health Claims?

Popularize & Export Jeolla-do Health Claims Kimchi to Domestic & Japanese Kimchi Market.

**Jeolla-do Kimchi Export Collaboration Group** focus on popularizing Jeolla-do Health Claims Kimchi with Consumer Preferred Functionality (Strengthen immunity, Metabolic syndrome improvement and or so)



#### Jeolla-do Kimchi

Korea's most representative traditional Kimchi made with various local ingredients and seafood from Jeolla-do.



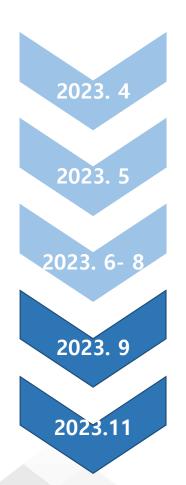
# Jeolla-do Kimchi Export Collaboration Group

consists of 10 promising small and medium-sized kimchi manufacturers located in Jeollanam-do, Jeollabuk-do and Gwangju Metropolitan City.



## The History & Schedule of Colaboration 2023





 Beginning of Jeolla-do Kimchi Export Collaboration Group

• The Empowerment of Health Claims Kimchi Development Ability: Workshop, Catalogue...





 Health Claims Kimchi Development, Test and Registration in Korea Food Industry Association

• Promotion, Export & Dealer Meeting in Japan

 Popularization of Jeolla-do Health Claims Kimchi

# The Empowerment of Health Claims Kimchi Development Ability of Group





Workshop & Seminar for Jeolla-do Kimchi Export Collaboration Group (2023.05.18.)

Technical Support Korea Food Industry Association Registration Direction aT Case Study of Japan Health Claim food market Introduction of related technology and Project

















## The Promotion of Health Claims Kimchi 2023



#### **Introduction of Regulation** of Health Claims Food

**Health Claims Kimchi** 

developed in 2022

#### 일반식품 기능성표시 제도와 김치 一般食品機能性表示制度とキムチ

김지는 항암, 항비만 등 수많은 건강 기능성이 괴학적으로 밝혀졌음에도 불구하고, 식품에 대한 기능성 포시는 건강기능식품에만 적용할 수 있다는 제도적 한계로 인해 김지에 대한 기능성 표시에 제약이 있었다. 그렇지만 202년 12월부터 김치와 같은 일반식품에 대한 기능성 표시 제도가 교시 제정되어, 과학적 근거가 갖 추어진 경우 일반식품에도 가능성 표시가 가능하게 됐다.

キムチは抗がん。抗肥満など、数多くの健康機能性を有することが科学的に 明らかにされているにも関わらず、食品に関する機能性表示は健康機能食品 にのみ適用できるという制度的な展界によりキムチの機能性表示には割飲が あった。ところが、2021年12月からキムチのような一般食品に関する機能 性表示別席が告示判定され、科学的な権能がある場合。一般食品にも機能性

#### 일반식품 기능성 표시제도

般食品機能性表示制度

#### 도입배경 導入の背景

인노시품인 것처럼 인시할 우려가 있어 부당한표시광고로 금지되 어왔으나, 신체조직과 기능의일반적인 등단호객들 표시할수있도록일반스뿐기능 성표시제가도입됨예따라일반시품에도일정요건을 갖춘경우기등등교수의 기능

般の食品が健康機能食品として認識される恐れがあるために不当な表示法 告として禁止されてきたが、体の組織と機能の一般的な増進効果が表示でき るように一般食品機能性表示制度が導入されたことによって、一般食品にお いても一定の要件を満たしている場合、機能性表示が可能となった。

#### 정의 定義

제품에 함유된 영양성분이나원재료가 산베조지과 가능의 증진에도움을 불수 있다는 내 용으로서 식품으위품인전(자전이 지점하여 고사하는 나용을 표시 광고하는 식품이다.

製品に含まれた栄養成分や原材料が身体の組織と機能の増進に役立つという 内室であって、食品医薬品や全肌長が損党して集元する内容を実元広告する。

#### 기능성 표시 機能性表示

기능성 위로를 사용하여 기능성을 보자하는 양양성취라만큼 성취하도록하고 기주고 격에 맞게 제조한건강기능시품은 기능성원로와동일한 기능성을표시 할수있다.

(식품인전LP)-식품안전정보 - 건강기능식품정보학교)

機能性原料を使用して機能性を保証する一口機取量に合わせて構取するよう にし、規格基準に従って製造された健康機能負品は機能性原料と同じ機能性 を実元することができる

"食品安全ナラ・食品安全情報・健康機能食品情報を参照)

#### 2022년도 개발 기능성표시 김치 2022年度に開発された 機能性表示キムチ

한국식포산업물러스터진흡원 [2022년도 권약별 산학연 기술지원사업]의 지원 으로 세계감치연구소와 유망 선도 감치제조업제는 남태마늘연구소의 남해마늘 (지리적표시제 제 28호)과 국산 매실을 활용해 기능성포시 김지 (0종) 혈충필리 스테볼 개선에 도움을 줄 수 있다고 일려진 마늘 함유 김치 5종과 피로개선에 도 움을 줄 수 있다고 알려진 매실추출물을 함유한 김치5종(을 선보였다.

韓国食品産業クラスター振興院[2022年度勝城別産学研技術支援事業]の支 接で、世界KIMCN研究所と有望な先導キムチ製造業者は南海にんにく研究 別の南面にんにく(地理的表示制第28号)と韓国座の梅を使って機能性表示さ ムチ10種(血中コレステロール値の改善に役立つと知られているにんにく入 りキムチ5種と皮外回復に役立っと知られている権助エキス入りキムチ5種



(주)뜨레찬 Trechan 株式会社 トレチャン

매실종아김치/종이김치(마늘) 数分・出てくまりま ガンギエイキムチ(にんにく入り) www.trection.co.kr.

동업회사업인 (주)대평예프인지 機聯会社法人(株)DAEKWANG F&G

진선미 배실맛감지 / 진선미 마늘맛감지 真機美術味キムチ 真菌学 にんにく味キムチ

www.dktoc.com





조시하시 테베킨치 株式会社 テベクキムテ R착작도기(마늘) / 에치까드기 (마실

子供用カクトッギ(にんにく入り) 子供用カクトゥギ(編入り) me.cafe24.com

#### 노어하나바이 (조) 모습시프 農業会社法人(株)トンホ会品

スケトウダラ・にんにく・白菜キムチ スケトウグラ・梅・白葉キムチ





# In Korea

대한민국 최초 기능성표시 김치

韓国初の機能性表示キムチ

드레인은 (변경교) 성장자의의 구름한 선생들으로는 비슷성 시민화자의 구함 살로보고 자매개발한 발표가면 중군을 사용하여 난선한 맛을 오해 구시나가 규유한 발표 늘었다. 교리 승수는 기능성에 우리 작품을 제발하여 발표가를 당해 생성되는 기 노르인한 포함에 아디오로 현상을 받지만으로를 만가 안방하네도 도움을 주나

개념 자문화복에 급치성인근데스트 화우수상 수상을 시작으로 18번 한국음시판당 박당희 한국음시간시강연부모 전통음시합 대상 20년 제근 대한민국단부로부터 해 9년에서 한국교리이엄말조김치의 프리미인시장을 개최한 공로로 대한민국 산업조

着国初の機能性表示キムチは、トレチャンの「フラクトオリゴ歌日楽キ」 2、包装容器には「陽内の善五曲の撤離や陽の活動をよくする」という 文書が表記されている。トレチャンは韓国の公前的公製造力法で完解キムチ を生産しており、「公配」内公製造力当に現代的公科学を融合させたキムチ を生産している発酵キムチ専門の製造企業だ。

2年以上制成させたカタウチイワシの塩平、塩麹、白出研究の丸神運起製菌を 平用することで、野様な様年長く早たせて富様問題を延ばした。また、ガス あ遺体の高い機能性パウチ豆类を開発し、辛齢過程で生じるガスによる気等 の戦裂を防ぐと可隔に、キムチの発揮でも設立つ、毎期は、ナトリウムは離 らして智味を足す天然原味料だ、思想Inchiff究所の資料によると、無理を 世ったもようなが譲渡は18-1.3%で、市販のキム学の2.1%は13%は3 8くなっている。このようなトレチィンのような1307下東で加速到で 大七条りでのチムチる人コンフスト展記者質の実質を表切りに、2018年韓国 は韓国政府から海外で韓国プレミアム発酵デムチのプレミアム市場をの いたか分が初められて大韓日国下美術賞を受賞した。

본 소비자청 등록 우리나라 능성표시 김치 1호 日本の消費者庁に登録された

韓国機能性表示キムチ第1号



1st Health Claim Kimchi

우리니라최창일부기능성표시김치

韓国初、日本の機能性表示が認められたキムチ



일보 간치시점은 지나 2015년부터 기누 성표시식품계도를 시행 지국기안에서 생 산되는 김치는 장 기능 개선 및 피부 미용 효과를 표시해 판매하고 있다. 이에 반혀 한국기업이 제조·생산하는 김지는 건강 가능성이 탁월함에도 일본내 과학적 근거 마던이 어려워 기능성 표시가 불가했지만

세계김치연구소의 중)뜨레친은 비때더스균을 늘려 장내 환경을 양호한 상태로 유지혜주는 '프라토움과 고당' 함유 김치인 '숙성받효 긴치망'을 개발하고 김치 로는 최초로 일본 소비자창기 등복하였다.

드레찬과 세계김치연구소가 함께 개봉하 [숙생발표 김지왕]은 한국농수산식품 유통공사의 관여성분 분석, 현지 바이어와 생정절차 준비 등의 전폭적인 지원을 통해 일본 소비자성에 프라토홀리고당 함유 민국산 김치의 기능성을 표시할 수

日本のキムチ市場は2015年から機能性表示食品制度を支充し、自国の企 **業で生産されたキムチには腸機能の改善や美肌効果を表示し、88売してい** る。一方、韓国の企業が製造生産するキムチは、健康機能性が優している にも関わらず、日本で認められる科学的な根拠を揃えることが難しく、 能性表示ができない状況だったが、世界kimchi研究所と(株)トレチャンは、 ピフィズス菌を増やして腸内環境を整える「フラクトオリゴ糖」を配合し たキムチ「乳成発酵キムチ王」を開発し、キムチとしては初めて日本の治

トレチャンと世界kimchi研究所が共同開発した「熱成発酵キムチ王」は、 韓国農水産食品流通公社による関与成分の分析、規地のバイヤーと行成手 続きの準備など、主面的なサポートによって日本の消費者庁からフラク St Korean Health オリゴ葡配合の韓国座中ムチの機能性を表示することが認められた。料理 新州修覧会で韓国料理展示鏡裏部門の伝統料理チーム大賞を、2021年 Laim Kimchi 新光博覧会で韓国中理展示版画的「アイロルイマスト は韓国政府から海外で韓国プレミアム発酵キムチのプレミアム市場を切り In Japan

26

## The Promotion of Health Claims Kimchi 2023





#### **Excellence of Korea functional Ingredient**

Garlic Plum Ginseng **Green Pepper** (Capsicum annuum L. cv. DangZo)

#### 한국의 기능성 원료의 우수성 韓国の機能性原料の優秀性

#### の悔 にんにく

우리나라의 4대 채소중 하나보중요한 식재료이다. 일사한 맛과항문 아니라 '멀리인 를 포함해 여러유 용한 성분들을 합유하고 있다.

특히, 클레스터를 저갑 가능성표시가 가능하여, 남 해마늘연구소의 남해마늘 GMP원로를활용한다.

韓国の4大製造の一つで、東亜な合材が、ビリッとするはと多りだけでなく 「アリイン」をほじめ様々な有用成分が含まれている。 特に、コレステロール低下の機能性表示が可能で、意識にんにく研究所の南 商にんにくGMP原料を使用する。

매실의 유기산은 신전대사를 활발히 하고 피로를 회 복하는 요과를 가지고 있다. 특히 피로의복기능성 표시가가능하며 국산매실 GMP원료를 활용한다.

の有機酸は新陳代謝を促し、疲労を回復させ る効果がある。特に、疲労回復の機能性表示が 可能で、韓国産物GMP原料を使用する。

#### 密삼 紅參

호시오 수사용 여전하여 전집을 반기지 않으셨던데 장시간 증기로 짜서 건조시킨 안상이다 특히 면역 덕중진 피로가선, 혈소판 응합약에 경난기 여성건 강등의 기능성표시가 가능하며 국산호삼 GMP원

紅参は、新選した水参(進業人参)の辺をむかずに、 長時間蒸して乾燥させたものである。特に 免疫力の向上、疲労回復、血小 板海集の抑制、更年期女性の健康などの機能性表示が可能で、韓国産紅帝 GMP原对在使用する。

#### 日本日本 **統計所辛子**

할당 관리에 도움이 되는 가능성 고추로 연구개발한 당조고추는 폴리페늄 루테폴린 바타만(C 등 향전화 성분이 풍부하게 한유되어 있다. 특히 일본 소비자청 인증으로일본시장에서현당강하기능성표시가가능 하며 국산농부의 꿈당조고추를 활용한다.

血糖管理に役立つ機能性層卒子として研究開発された賠償謄卒子はポリフェ ノール、ルテオリン、ピタミンCなどの抗酸化成分が養富に含まれている。 特に、日本の消費者庁配証による日本市場での血精降下の機能性表示が可能 で、韓国座の意夫の参養調査至子を使用する。

#### 2023년도 개발예정 가능성표시 김치 : 월당강학 클레스터를 제강 등 대사중후군과 면역에 강화에 조점을 맞추어 개발 2023年度に開発予定の機能性表示キムチ 「面制等下、コレステロール低下など、 代謝症候群と免疫力育上に焦点を当てて開発

우석하라 트레션 #stest TRECHAN www.trechot.co.kr	遊か取像 日本日本 <b>被用自</b> 由7	540 @	영역학급회 免疫力向上 행당강하 止機等下	型月企業生 パク・ギスン フード longgs@have.com	<b>せる3本製業<del>物学子</del></b>	•		<b>登録の本価格下</b>
を対すが他が本人可り当立の平に 最新会社法人 年式会社 イエローフード www.yeksefoods.co.itr	特別エゴマの数 別様な人 ブンコース(アルロー	• • -2.)	を表記 日の知識 質ながら、たけらに 血剤を下、アイエット	ちせ前小田の(そ)小司な 重要会社正人 (他)セピョケファーム www.soobyeokfarm.com	音音 <b>モウ</b> 刊名工学 <b>株長房学</b> 子	) •		世中可引擎 免疫力可止 物分裂 血糖硷下
ラロリイ信で セエハロ 名誉的リ 食物会は洗しナムドジラウ 有限会社 www.jcycomok.com		×	양의의강하 東京九위 는 영당강자 소행하다	各位向外物門 中共同外 発門共青 最高的社主人 株式会会 ワンイン会会 www.wonginfcod.com	中性 にんにく 1998年ム プシコース (アルロース		•	香山の種用を 3.250円値で 管台部の COPIE 血糖等で、タイエット
방경 등업지사업인 주시지사 イルギョン <b>國際会社法人 株式会社</b> 당 19@down.net	中物をAにく 保在記を機関機等す	×:	● 新年公園 XII ユステロール医子 甘豆砂丸 血糖を下	주식회사 기選学三 教式会社 コブンフード www.freshrotcom	192.10 <b>MARS</b> 7	•		物質容別 血糖降下
ad Curtol Status er 188年 高齢 他は、智能化フリカレニコンフード www.dangacrub.ir	A STATE OF THE PARTY OF THE PAR	340 340	● 新年2号無可能 3LAFD-MET 哲学可能的 光度が高上	泉田県県社会内保険本部開発 オックア発味しいそムア製業組合改大 www.tostylemetricaets	FIE KAKS	×	•	最中に対象内容 34.47G-A値7

#### FOODPOUS 한국식품산업클러스터진흥원 韓国食品産業クラスター振興院

한국소문산업을라스타주흥위의 대통산업 전투법 제한국인 2세 따라 교기소문을라스타인 목 신-관리와 참여기법 및 기관들의 활동을 효율적으로 지원하기 위하여 실당된 논화혹산되품부

植国会品産業クラスケー協興院は、「食品産業研究法」第12条の2に基づいて国の食 品クラスクーの西戍管理と参加企業機関の活動を効果的に支援するために設立された 農林高度食品部金下の公共機関です。

#### Willia Hallagera 세계김치연구소 世界Kimchi研究所

세계되지연구소는 김지산인진 종합 제3조 세계되지연구소 및 과학기술 본대 정부출연연구기 반했다실립-유명 및 육성이 관한 업물 제8조. 연구기관의 설립에 따라 설립된 과학가 출범보 봉선부 신하국기과학기술인구학 소속 정부들인연구기관입니다.

世界Kinich研究所は、中山が資金都築世第13条世界Kinich研究所に科学技術分 野政府出掲研究機関等の設立連繫及び考成に関する法律第B条(研究機関の設立)に基 づいて設立された科学技術情報通信部傘下傷房科学技術研究会所属の政府出揚研究

한국의 기능성표시 전치 관련 문의는 문양택임자 경제한 선양연구원((winn/4@wikin.relia)

「韓国の機能性表示キムチ」に関する利用い合わせは、通言責任者であるキムジェファン 先任研究員[j-kimī] 4Gwkim: no.ior までお願いいたします。。

세계집 차면 구소는 관약별 산학인 기술지원사업의 전념관의 운영기관입니다.

世界Cim-hi研究所は開議共享学研る物支援事業の全員開議事業機関です

#### 기능성표시 김치는 한국식품산업물리스터전용원호 세계감치연구소가 중소감치제조업체들과 함께 개발하고 있습니다. 機能性表示すムチは韓国参議単第クラスター製機除る。世界Kindta研究所が中小キムチ製造業者と能力して開発しています。

권력적 선적인기술지원시던 중앙

**発売の減学研技術支援事業の選業** 

可能不从为自由比较

#### 권역별 신학인 가슴지원사업이만?

4품산업의 균형 있는 설만을 위해 우리나라 작권약본(경기, 강원 전리, 경상당) 신축연합의 채를 구성하여 식품기업과 애로사장을 산속히 해결하는 물맛품을 구축하고, 지속적인 해당된 역 시즌 가장을 지원하는 나업이 나다.

#### 展域別産学研技術支援基準とは?

毎年厚華の内側ある分類のために韓国の名機域(京義、江県、全層、便日など)に「孝字財経 議件」を構成して、魚瓜企業の田崎を正認に解決するブラットフォームを講覧し、持続的に 公司機械の食品企業を支援する事業です。

#### 과어법 산학인 지원사인은 통해 지원되는 나온

1 에로도축 권이번 사용사업 전반에 건축 기술수요 못 에로나하 도축

2 자보지와 취직적 사람의 현업체으로 관용하여 기숙하다 지도 및 지구 고용-취업원들은 통해 지원하던 검색적 강했지만 3.연기자원 한국식물산업급러스터전통원 면제를통해 가슴(기업지원센터), 비즈니스 본드비즈은 예로자형 하신

4. 네트워크 권막병 혐의에 간네트워크 교부 및 소통물통에 가입 때로 해소 및 심대 공유 활성화변기법 (회)

#### 層域別産学研支援事業の支援内容

関係対象品序第分数にわたる技術需要などの困難に対する解決策を提出 







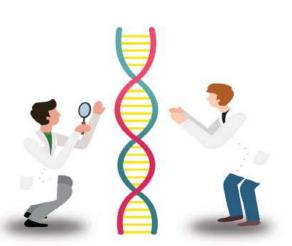






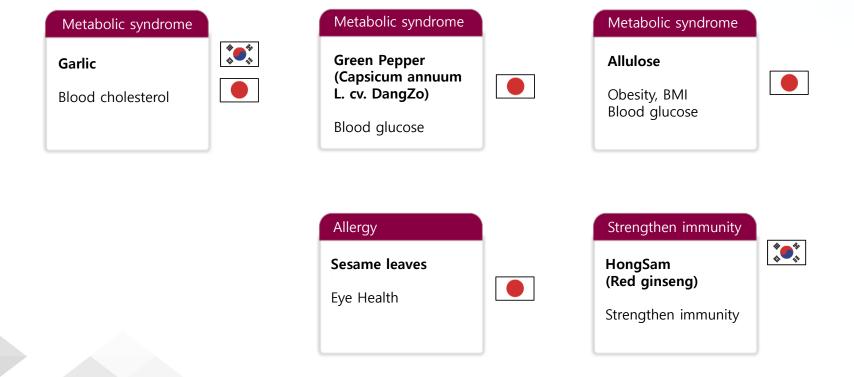


# IV | Challenge



# Challenge 2023:

Popularize Korean Health Claim Kimchi Market & Export to Japanese Health Claim Kimchi Market





# Thank You







# SUSTAINABLE FOOD INNOVATION WITH SOUTH KOREA

06.08.2023 Global Foodture - Ditte Veise, Innovation Centre Denmark





# ABOUT INNOVATION CENTRE DENMARK

**Mission**: To elevate Danish science and innovation through collaboration with **world-leading** innovation ecosystems







# **TODAY'S MENU: SEAWEED**

Why and how we collaborate with South Korea in the area of seaweed





# TOMORROW'S MENU: ALSO SEAWEED

# Seaweed is part of a future fit food system globally



- Blue bioeconomy
- Biosolutions
- Plantbased diet
- Ingredients
- Land/ water use
- ...



On a global scale, the commercial seaweed market is projected to grow from \$15.01 billion in 2021 to \$24.92 billion in 2028 at a CAGR of 7.51%, making it one of the most promising products in the seafood industry.

# A STAPLE FOOD FOR ALL?

# Seaweed gastronomy is regional – and generational

Koreans consume 20 lbs/ person year



Picture source: Hungry Viki

Seaweed gastronomy "2.0"



Picture source: Dutch Weed Burger

Korea has the highest consumption of seaweed per capita and a rich traditional gastronomy using seaweed. The global uptake of seaweed "2.0" is closely aligned with plantbased food trend and development, requiring new techniques and innovation.



# RECIPE FOR '2.0' SEAWEED BURGER

# Seaweed is an emerging area with broad innovation scope

- Which seaweed species will work?
  - Nutrition, safety etc.
- How to procure it?
  - o Growing, supply etc.
- How to mix it?
  - Seonsoric profile, processing
- How to sell it?
  - Consumer preference, price etc.



Picture source: Dutch Weed Burger

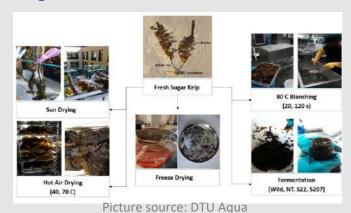
It is acknowledged that there are big research and innovation gaps to fill to make seaweed a staple food that is widely accessible and useful to food industry. Europe imports most of its seaweed and Asia produces 97% of seaweed globally.



# CHALLENGES AND INTEREST

## The road to commercial innovation

- Concerns on mineral levels and food safety
- How to remove unwanted flavor
- Growing systems cost/ quality
- Legal framework and standards





Picture source: Pure Algae

There is a growing interest in food industry to use seaweed in products (bread, beer, meat alternative, snacks etc.) but gaps in supply and know-how. No seaweed 'killerapp' yet.



# **HOW CAN WE COLLABORATE?**

# Korea is a world leading seaweed producer

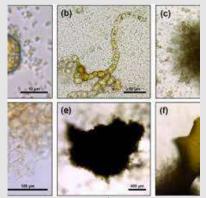
### **Korean strength:**

- Industrial production
- Evolved gastronomy and market
- Strong R&D



Picture source: WandoBonga

DENMARK



Picture source: Chosun University

#### Interest:

New markets, food innovation, sustainability, R&D collaboration





Picture sources: Daesang, CJ

As a leading producer of some seaweed species Korea has built industrial knowhow and excellence. The current production is causing environmental concerns due to i.e. use of fertilizer and intense growing along some coastal areas, spurring interest in sustainable growing. Large food companies like CJ and Daesang are explicitly interested in international markets and investing overseas.

# **ONGOING COLLABORATION**

# **Danish Korean Blue Bioeconomy Alliance 2021-**

- Connecting leading researchers and companies around themes:
  - · Seaweed as nutraceutical/ bioactive ingredient
  - Seaweed as food innovation and gastronomy
  - Seaweed as feed additive/ climate solution
- Finding the mutual interest and added value of partnership
- Facilitate to overcome the challenges of distance and difference





Working with seaweed as an emerging area of collaboration, we have tested the interest and compatibility of several themes. "Connecting ecosystems" is a longer term effort where network and relations are built at several levels, but with a clear pathway to commercial innovation value.

# **WHAT'S IN KOREA?**

# **Seeing the opportunity**

- Korea is the 10th largest economy in the world and R&D powerhouse
- Food import dependency and high density impetus for action
- Urban modern lifestyle with advanced convenience and uptake of food trends
- Value to food safety and quality
- Emerging sustainability focus
- R&D opportunities both bilateral and through e.g.
   EU





#### WHAT'S ALSO KOREA?

#### **Reality check**

- Far away (...)
- Main food import from USA and Asian countries
- Mainly larger food companies with a brand and who can invest
- Less evolved sustaianbility awareness and framework
- Korea is not "Asia"



Picture source: Centerforchange



#### Get in contact



**DITTE RØNDE VEISE** 

Executive Director +82263634826 ditvei@um.dk



**INIE NØR MADSEN** 

Science and Innovation Attaché +82263634842 inimad@um.dk



**SUNGYOU BAE** 

Innovation Officer for Tech and Energy Sector +82263634840 sunbae@um.dk



**MIHONG KIM** 

Science, Technology and Innovation Officer +820263634816 mihkim@um.dk



MINJUN SUNG

Junior Innovation Program Officer +8226363 4839 minsun@um.dk



**NATALI WARDA** 

Innovation Associate +82263634846 natwar@um.dk



YOONJI CHEONG

Innovation Associate +82263634826 yooche@um.dk

# DOING BUSINESS ACROSS CULTURES: EUROPE AND SOUTH KOREA

PROFESSOR M. AGUARELES SAN JORGE UNIVERSITY, SPAIN



# WHAT IS INTERCULTURAL COMMUNICATION?



It refers to the <u>effective</u>
communication between people,
workers and people of different
cultural backgrounds.



It refers to communication between people whose cultural perceptions and symbol systems are distinct enough to alter the communication event.



14(0) 04/14/ 00 éjaco res







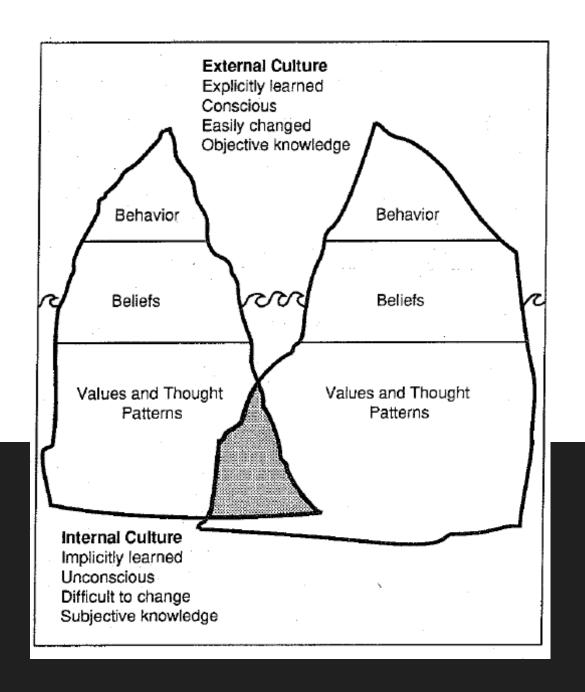
## WHAT IS CULTURE?

#### A group of ...

Values, beliefs, behaviors, preferences, traditions, ways of learning, communicative models and their interpretation, art, literature ...

CREATED, SHARED AND TRANSMITED BY A GROUP OF PEOPLE







## CULTURE ANALOGIES





People from <u>peach cultures</u> seem friendly on the outside, but difficult to know on the inside.

People from <u>coconut cultures</u> may seem cold and unapproachable on the outside, but once you get to know them, you can build a deep, personal relationship with them really fast.

### **CULTURE ANALOGIES**



#### Rational:

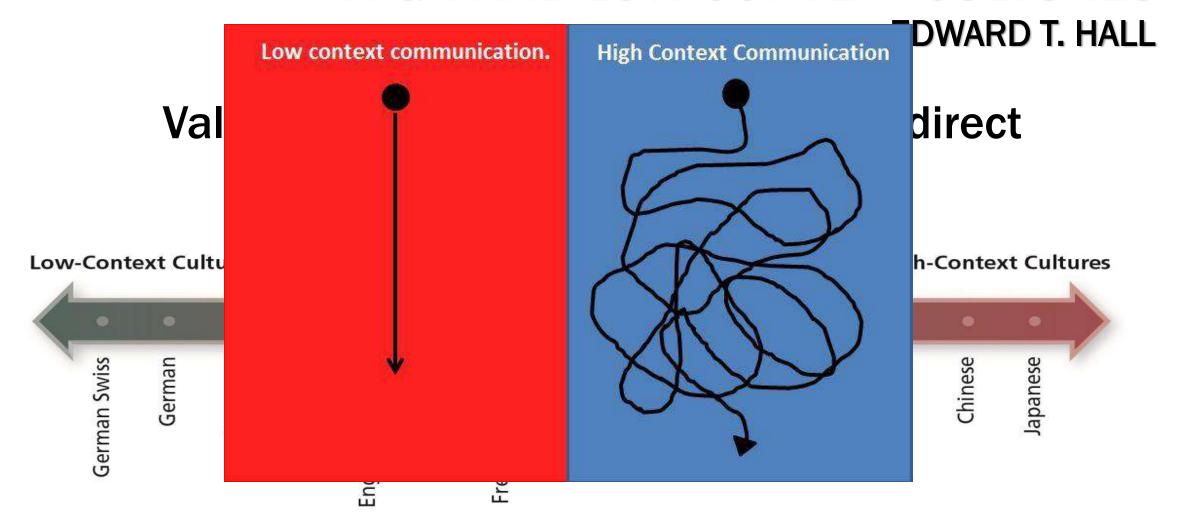
- > Individualist
- > Universalist
- > Monochronic
- > Compartments



#### Relationship:

- > Collectivist
- > Particularist
- > Polychronic
- > Holistic

#### HIGH AND LOW CONTEXT CULTURES



#### **High Context Culture**

Nonverbal & implicit communication

Nuanced and often indirect communication

Group over individual

Relatively informal, less task-oriented

#### **Low Context Culture**

Explicit statements

Straightforward communication, direct tone

Individual over group

Slightly formal, more task-oriented

## HIGH & LOW CONTEXT CULTURES



High-context cultures include cultures such as Korea, where people have widespread networks with family, friends, and organizations.

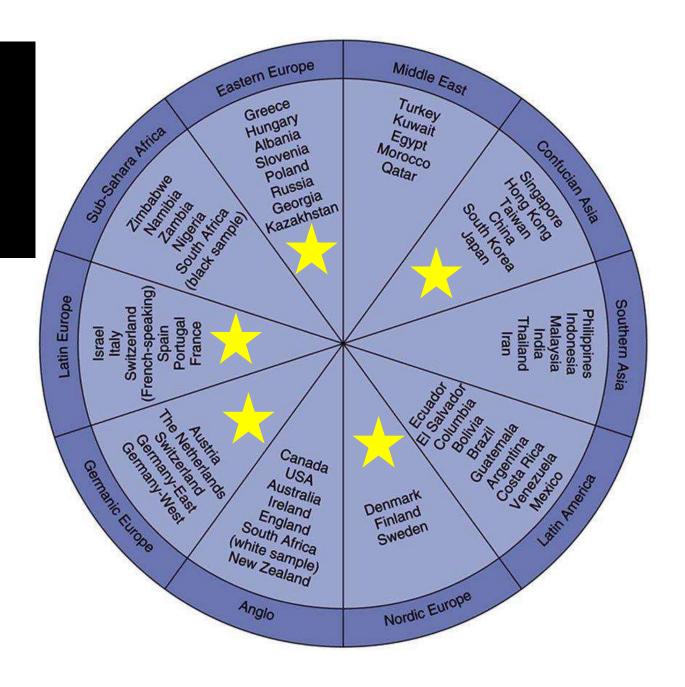
Low-context cultures include the US, Germany, and other northern European individualistic cultures (Hall & Hall 1990; Irwin, 1996).





## CULTURAL CLUSTERS FROM PROJECT GLOBE

- 1. Anglo
- 2. Latin Europe
- 3. Nordic Europe
- 4. Germanic Europe
- 5. Eastern Europe
- 6. Latin America
- 7. Middle East
- 8. Sub-Saharan Africa
- 9. Southern Asia
- 10. Confucian Asia.



#### THE 6 DIMENSIONS OF NATIONAL CULTURE

(HOFSTEDE, HOFSTEDE & MINKOW)







CULTURE: COLLECTIVE MENTAL PROGRAMMING



6 DIMENSIONS: PREFERENCES THAT DISTINGUISH COUNTRIES (NOT INDIVIDUALS)



#### 2. INDIVIDUALISM VS. COLLECTIVISM



Self-image: I or We?

INDIVIDUALISM	COLLECTIVISM
Loose-fitting relations	Tight-fitting relations
Expected to take care of yourself (and your immediate relatives)	In-group loyalty



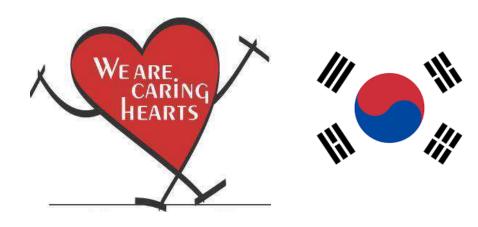


## 3. MASCULINITY VS. FEMININITY Tough vs. Tender

MASCULINITY	FEMININITY
Preference for	Preference for
ACHIEVEMENT, HEROISM,	COOPERATION, MODESTY,
ASSERTIVENESS, MATERIAL	CARING FOR THE WEAK
REWARDS FOR SUCCESS	More consensus-oriented society







#### 4. UNCERTAINTY AVOIDANCE (UAI)

(Un)Comfortable with uncertainty and ambiguity? Should we try to control the future or just let it happen?



STRONG UAI	WEAK UAI
Rigid codes of belief and behaviour	Relaxed attitude towards uncertainties
Intolerant with 'out of the rules' behaviours and ideas	Practice counts more than principles

## 5. LONG TERM ORIENTATION VS SHORT TERM ORIENTATION

Past or Present & Future?

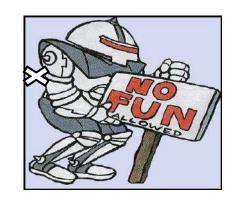
LONG TERM	SHORT TERM
Save, save and save!	Time-honoured traditions and norms
Prepare yourself for the future!	No changes, please!
PRAGMATIC	NORMATIVE
	KEEP

**FOLLOW** 

THE NORMS

#### 6. IINDULGENCE VS. RESTRAINT

To Have Fun or Not To Have Fun... That's the question!



INDULGENCE	RESTRAINT
Free gratification of basic and natural human drives	Suppression of gratification of needs
Enjoy life!	Society regulated by strict social norms

## COUNTRY COMPARISON TOOL

https://www.hofstede-insights.com/product/compare-countries









# **USEFULTIPS TO DO** BUSINESS IN...

Europe & South Korea

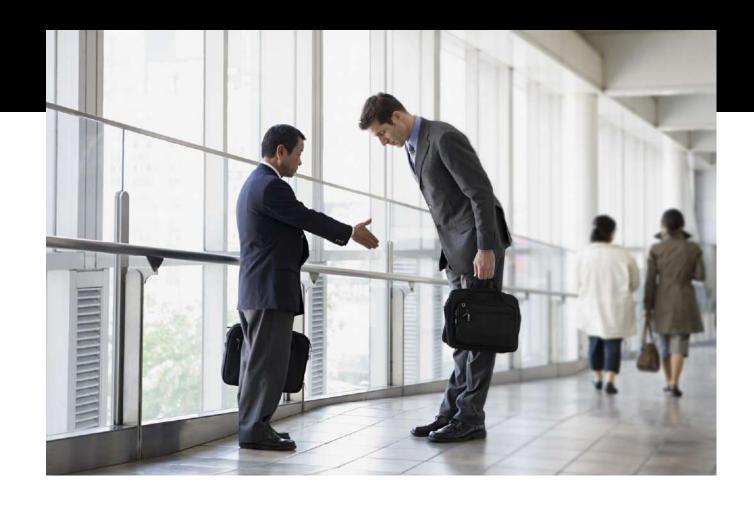
## GREETINGS

In South Korea these days it's more common to shake hands when you meet someone for the first time. However, that hasn't entirely taken the place of bowing, which might still take place before or during the handshake.

As a European, you don't need to worry about bowing for the most part. However, the gesture is always appreciated.

It is not unusual for South Korean women to offer a bow instead of a handshake. For formal and business situations, the normal custom is for South Korean women to maintain a certain distance from men.

European businesswomen have the option of just bowing instead of shaking hands.



## EXCHANGING BUSINESS CARDS





## GIFT-GIVING

In Korea, the importance of a relationship can be expressed through gift giving.

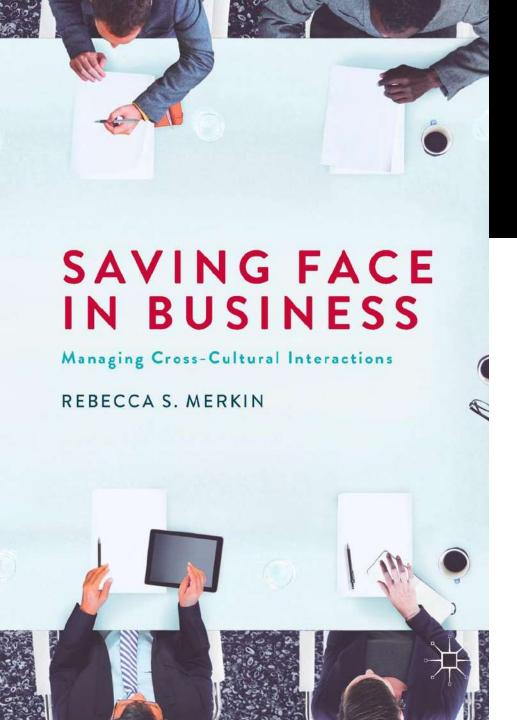
Gifts should always be wrapped nicely in bright colours, such as red, yellow or pink.

Gifts are offered and given with both hands. Wrapped gifts are never opened in the presence of the giver.

Never sign a card in red ink, nor use green, white or black wrapping paper.







## SAVING FACE

As in other Asian societies, maintaining face is central to the way business and social relationships work.

Through their social etiquette and behavior, South Koreans aim to preserve a harmonious environment in which a person's *kibun* (their mood or feelings) can remain balanced.

The best way to handle *kibun* is not to demand yes or no answers and to accept the need for slow consensual decision-making.

Contradicting someone openly, criticizing them in front of someone else or patronizing them are sure ways to lose business. It is more advisable to give sincere compliments, show respect or do something that raises self-esteem.



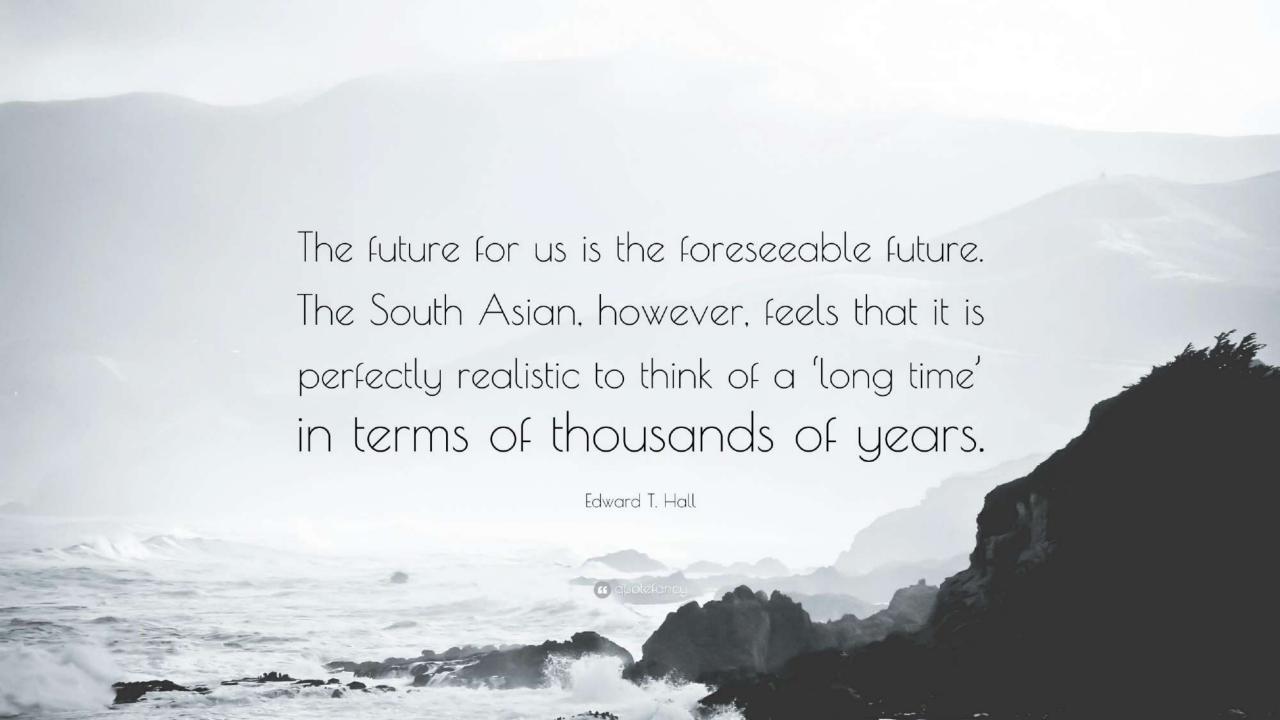
## CONTRACTS

South Koreans prefer contracts to have some room for flexibility with room for adjustments.

From your South Korean's perspective, the relationship between the companies is often viewed as more important than the contract itself.

Be aware of this and communicate clearly with whomever you'll be signing a contract with respect to your expectations and theirs.





## 감사합니다

thank

**ANY QUESTIONS?** 

#### **Next activities**

#### **Online Activities**

- 15 June Workshop 9: Fermentation a cuttingedge technology?
- 6 July
   Workshop 10: Packaged food. Food waste reduction solutions in food packaging for take-away and retail



### **Matchmaking Events**

- Prepare for the event by improving your profile
- Fill in the Marketplace
- Browse through the Participants and/or Marketplace
- Find relevant meeting partners
- Request meetings or be booked for meetings
- Wait for acceptance sometimes also no thank you
- Have the meeting on the day





# Thank you and see you around For more events, visit the Global Foodture community platform

