

Suggestion to Facilitate the Horticultural Crop Database of UN FAO

2018. 10.

YeongJo Lim

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1. FAO at a Glance

Food and Agriculture Organization of the United Nations – FIAT PANIS

- **194 Member Countries**, two associate members and one member Organization
- Headquarters in **Rome**, Italy
- Presence in more than **130 countries**
- FAO supports governments and their stakeholders in areas of **development**, in the design of adequate **policies, programmes and legal frameworks** to promote **food security and nutrition**



2. Brief History of FAO

- ❖ **1945:** First session of FAO Conference, Canada, establishes FAO as a specialized UN agency
- ❖ **1951:** FAO headquarters moved to Rome, Italy, from Washington, DC, the United States
- ❖ **1960:** Freedom from Hunger campaign launched to mobilize non-governmental support
- ❖ **1974:** UN World Food Conference recommends International Undertaking on World Food Security
- ❖ **1986:** AGROSTAT (now FAOSTAT) becomes operational
- ❖ **1992:** FAO and WHO convene the first global conference devoted solely to addressing the world's nutrition problems, the International Conference on Nutrition (ICN)
- ❖ **2008:** FAO holds a conference on the impact of climate change and the biofuel on food security and prices
- ❖ **2009:** FAO holds a World Summit on Food Security to inject new urgency into the fight against hunger
- ❖ **2014:** FAO members, parliamentarians, members from civil society and private sector endorsed the Rome Declaration on Nutrition and the Framework of Action

3. Organizational Structure

Category	Description
Conference	reviewing global governance policy issues and international frameworks, evaluating work carried out and approving the budget for the next biennium
Council	elected by Conference, serving three-year rotating terms to carry out executive oversight of programme and budgetary activities
Director General	a four year term of office, renewable once (José Graziano da Silva(2012 - 2019)
Department	Agriculture and Consumer Protection, Economic and Social Development, Fisheries and Aquaculture, Forestry, Corporate Services, Technical Cooperation and Programme Management
Worldwide Offices	five regional offices, nine subregional offices, 80 fully fledged country offices, 5 liaison offices, information offices in developed countries.

4. Mandate and Priorities

❖ Achieving **food security** for all is at the heart of FAO's efforts – to make sure people have **regular access to enough high-quality food** to lead active, healthy lives.

⇒ *Raise levels of nutrition, improve agricultural productivity, better the lives of rural populations and contribute to the growth of the world economy.*



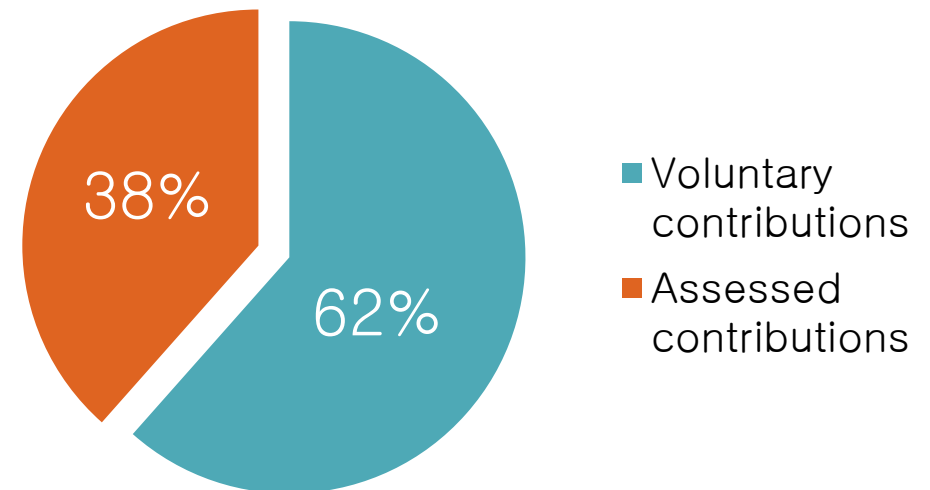
5. Funding and Expenditure

❖ Assessed and Voluntary contributions

The assessed contributions are member countries' contributions, set at the **biennial FAO Conference**. The voluntary contributions provided by Members and other partners support technical and emergency (including rehabilitation) assistance to governments for clearly defined purposes linked to the results framework, as well as direct support to FAO's core work.

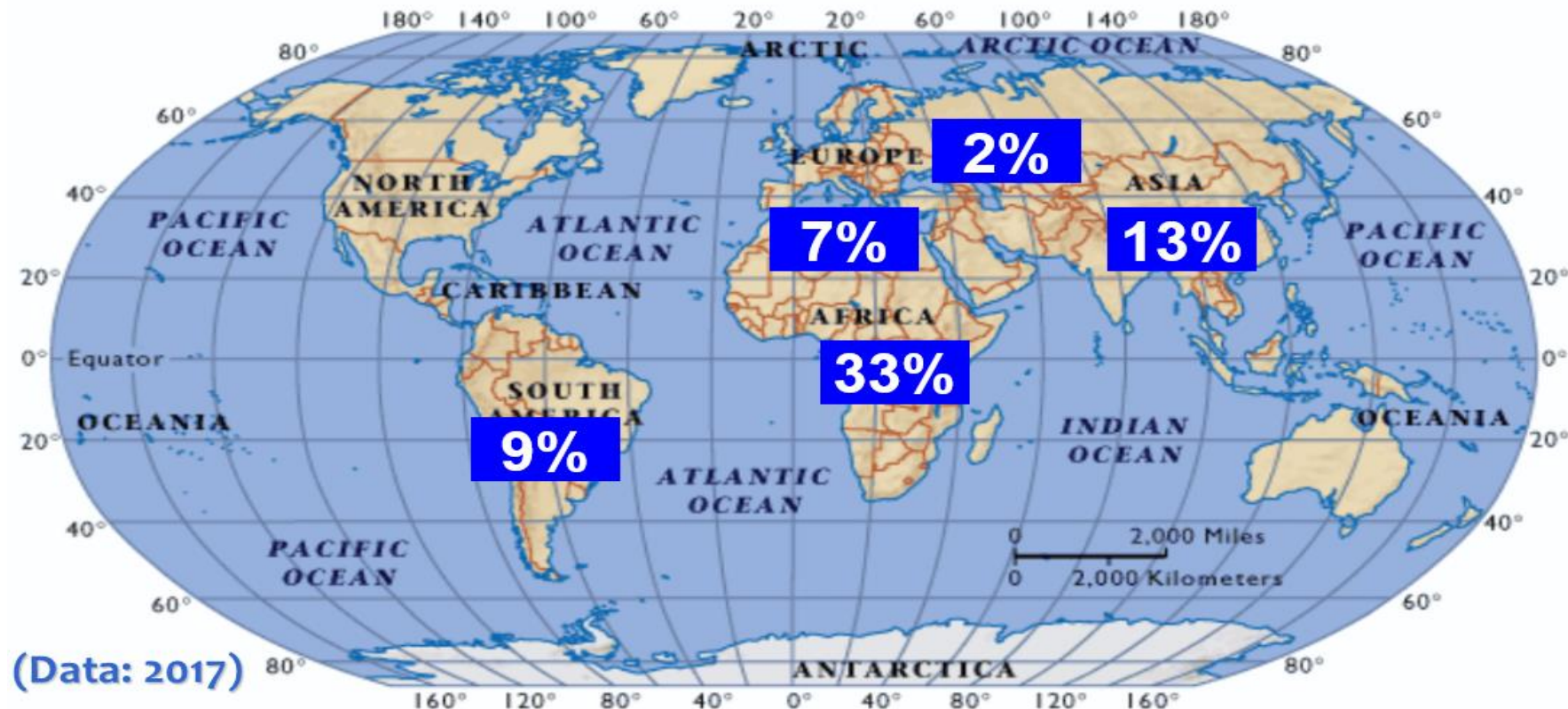
❖ Budget

The Budget planned for 2016-17 is USD 2.6 billion. Of this amount, 38% comes from assessed contributions paid by member countries, while 62% will be mobilized through voluntary contributions from Members and other partners.



6. Resource Allocation

❖ 40% of the total resource is allocated to African countries, the most important beneficiaries.

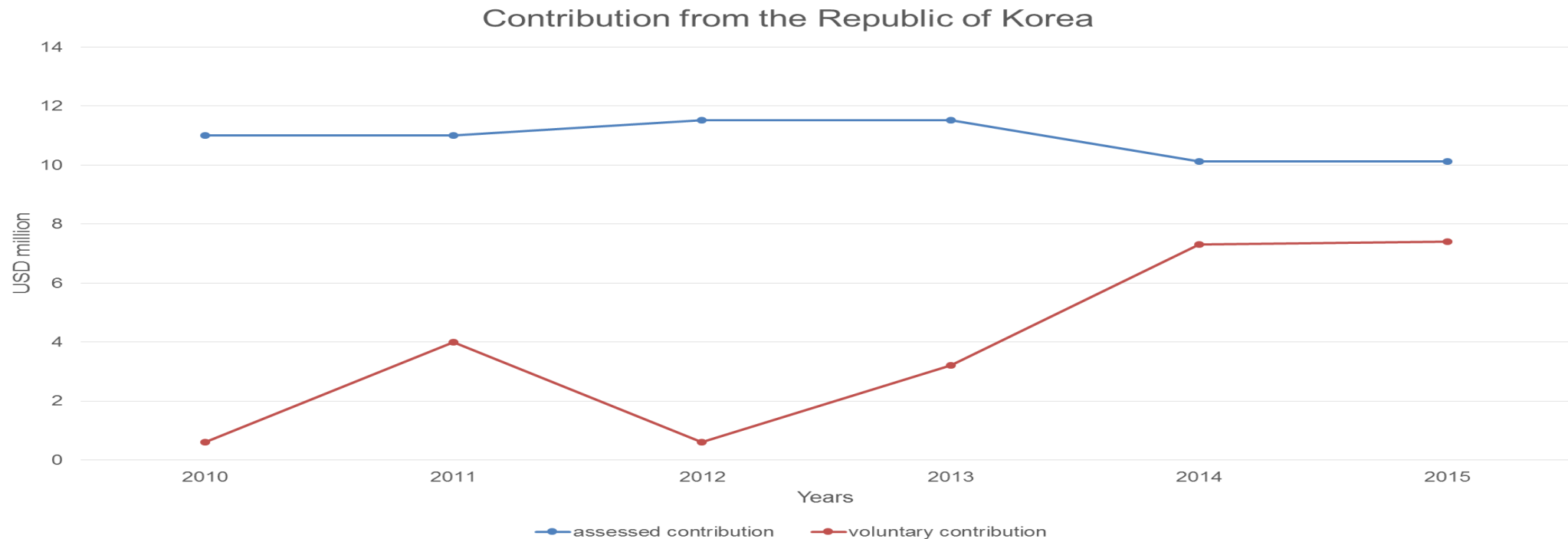


< 2017 Top 10 Resource Partners >

Biennial Rank	Resource Partners	Total Approvals (USD)
1	European Union	151,248,432
2	USA	129,217,329
3	GEF	96,747,626
4	UNOCHA	34,813,733
5	JAPAN	28,486,538
6	UNDP Administered Donor Joint Trust Fund	26,906,601
7	UK	23,985,678
8	Norway	22,546,159
9	Netherlands	13,105,653
10	Germany	12,136,287

7. Financial Contribution

❖ The total assessed contributions of the Republic of Korea for 2014 represent 1.99% of overall assessed contributions (**ranking 13th**). The voluntary contribution figures reflect the approvals' amount as shown on the contribution agreements between FAO and the Republic of Korea during a given year.



< Projects funded by Korea >

Project Title	Actual EOD	Actual NTE	Total Contribution (USD)
Support to address avian influenza and other high impact animal diseases in South Asia, Southeast Asia and Sub-Saharan Africa	01/12/2015	30/11/2019	2,495,838
Capacity Development and Experience Sharing for Sustainable Rice Value Chain Development in Africa through South-South Cooperation	01/11/2014	31/10/2017	1,897,533
Improvement of quinoa yields and capacity development of farmers in Bolivia	30/06/2014	29/06/2017	497,000
Support to Capacity Development in Implementation of Plant Pest Surveillance and Information Management in Southeast Asian Countries	01/09/2013	31/12/2016	1,796,642
Support for Horticulture Programme Development	14/04/2006	30/12/2017	2,015,138
Support to the Policy Assistance Branch (FAORAP)	04/01/2001	31/08/2017	2,421,815
<i>Development of Mariculture Sector in Zanzibar</i>	<i>30/11/2015</i>	<i>31/12/2018</i>	<i>3,228,103</i>
<i>Review on aquaculture seed material requirements in the Democratic People's Republic of Korea and project formulation for the establishment of selected production facilities including long-term training and capacity building</i>	<i>01/09/2015</i>	<i>30/11/2016</i>	<i>150,000</i>
<i>Feasibility study for the establishment of the FAO World Fisheries University (WFU) in the Republic of Korea</i>	<i>01/04/2015</i>	<i>31/10/2015</i>	<i>55,000</i>
<i>A basic design survey to set up a mariculture hatchery in Zanzibar</i>	<i>12/12/2014</i>	<i>15/11/2015</i>	<i>227,500</i>
<i>Promotion of Responsible Fisheries Management</i>	<i>01/01/2007</i>	<i>31/12/2016</i>	<i>1,948,710</i>
<i>Support for the development of international food standards and related texts by the Codex Alimentarius Commission, in particular recommendations relating to chemicals in food</i>	<i>01/02/2004</i>	<i>30/09/2016</i>	<i>2,255,700</i>
<i>Implementation of the Forest and Landscape Restoration (FLR) Mechanism</i>	<i>01/11/2014</i>	<i>30/11/2020</i>	<i>3,254,433</i>
<i>Strengthening Forest Resources Management and Enhancing its Contribution to Sustainable Development, Land use and Livelihoods</i>	<i>26/11/2007</i>	<i>31/12/2017</i>	<i>3,078,626</i>

8. Non-financial contribution

❖ Human resources (HQ)

- Seconded government official: ('16) 5명 → ('17) 6
- Personally recruited staff: ('16) 3명 → ('17) 9
- Two Associate Professional Officers (APO): ('16) 2명 → ('17) 4

❖ Policy support

- Monitoring and evaluation through periodic progress and financial reporting;
- Annual consultations with representatives from the Republic of Korea to review projects and discuss pipeline (**new project proposals**)
- Expert meetings, exchange of information, and etc. with delegations and visitors from Korea

9. Global leadership

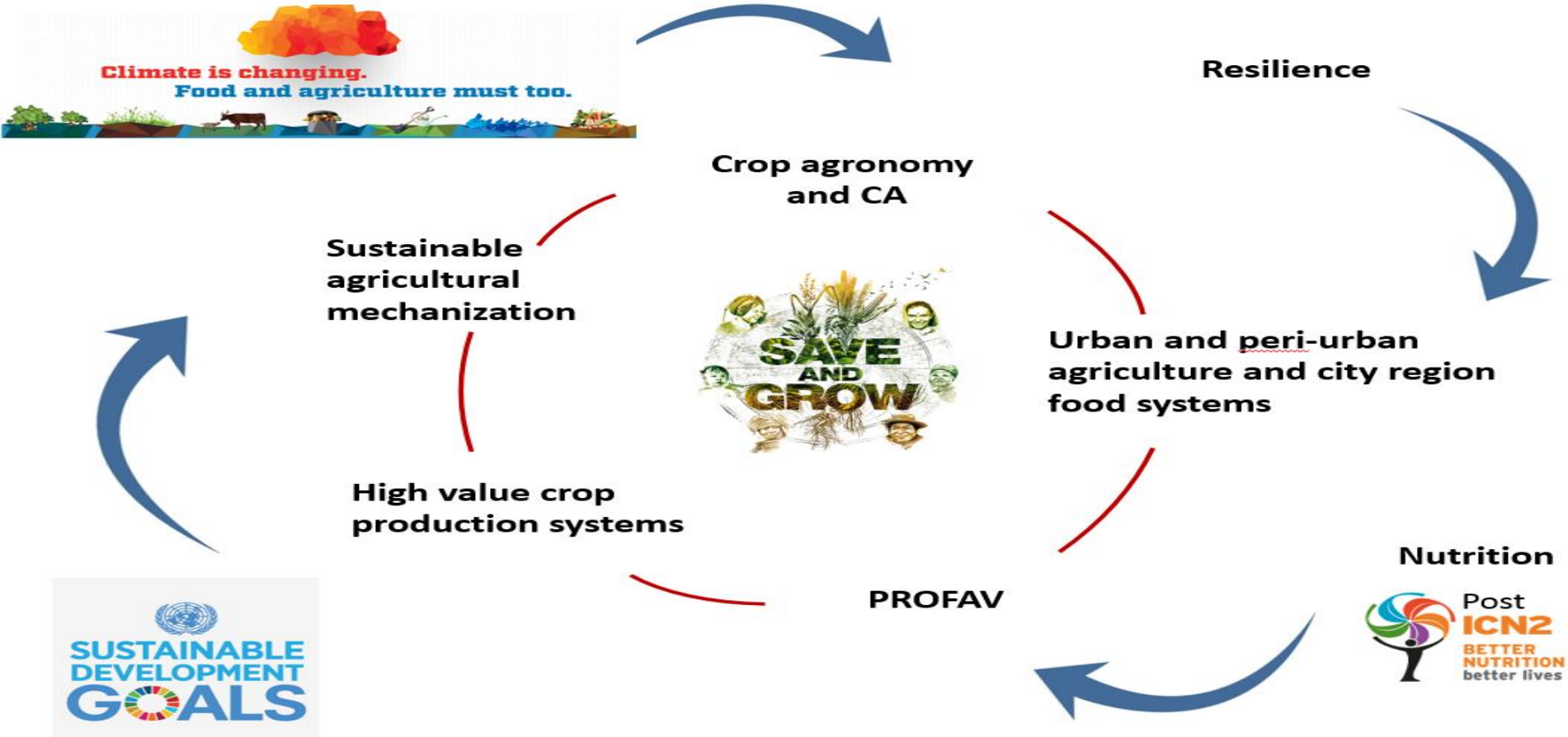
❖ 12th International Plant Protection Convention Congress, Incheon 2017



❖ 15th World Forestry Congress, 2021



10. Team Mission



11. Mission assigned

Objectives	Activities
Intensifying contribution of Korea to HORTIVAR	<ol style="list-style-type: none"> 1. Contacting potential organizations of Korea that produce or manage agricultural data 2. Acting as a contact point of FAO and potential partners of Korea 3. Setting up a project partnership to encourage contribution of Korea to HORTIVA system, e.g. providing data collected in Korea
Support for PROFAV initiative	<ol style="list-style-type: none"> 1. Raising awareness of fruit and vegetable production and consumption for health among member countries including the Republic of Korea 2. Support for activities to organize regional workshop for promotion of fruit and vegetable for health and other events 3. Managing the FAO website for fruit and vegetable production and consumption project
Support for mechanization of agriculture	<ol style="list-style-type: none"> 1. Contacting expert groups of agricultural machines and equipment of Korea to support agricultural mechanization of developing countries 2. Facilitating exchange of experts and information for agricultural mechanization
Organizing meetings for Korean Delegation to FAO	<ol style="list-style-type: none"> 1. Acting as a contact point of FAO communicating with Korean Delegations to find out mutual interests and discussion topics 2. Encourage and respond to follow up activities

< Delegations and Visitors from Korea >

일자	기관	방문단	방문목적
'16.4.28	한국농촌경제연구원	김창길 박사	기후 스마트 농업 전문가 회의
'16.6.6	FAO 한국협회	배종혁 외 8명	농업 전문기관 해외 연수
'16.9.6~7	한국농촌경제연구원	이대섭 박사	국제농업개발협력 추진전략 수립
'16.10.24	한국농촌경제연구원	김창길 원장 외 2명	세계 농업연구원 원장 회의
'16.11.14	FAO 한국협회	전종철 외 7명	국제농업협력 연수
'16.11.17	경상남도	25여명	지자체 공무원 해외 연수
'16.11.30	농진청	전승기 주무관 외 20여명	유럽 농업 기계화 정책 연수
'16.12.1	한경대학교	윤덕훈 교수	FAO-WHO 국제심포지움 농산물 안전 정책 주제 발표
'16.12.7	FAO 한국협회	김현정 외 1명	HORTIVAR 업무 협력 협의
'17.1.26	농식품부	배태현 사무관 외 1명	농식품부 ODA 추진전략 개선

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1. What is HORTIVAR

- ❖ HORTIVAR is a geo-referenced database on the performances of horticulture cultivars in different agro-climatic environments.
- ❖ Platform for horticulture knowledge management and exchange.
- ❖ Standard methodology for data collection and record keeping on the performances of horticulture cultivars
- ❖ Powerful search engine for easy retrieval and comparison of information, e.g.: crop, cultivar, country, planting season, organic, soilless, greenhouse production
- ❖ Standard template for educational purpose - “A” to “Z” of a crop cycle including all field practices
- ❖ Gateway to horticulture knowledge and statistics, e.g.:

2. Information available

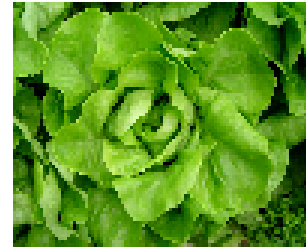
HORTIVAR relates to 6 groups of crops:

- **Vegetables**
- **Fruits**
- **Roots and tubers**
- **Mushrooms**
- **Herbs and condiments**
- **Ornamentals**



2. Information available

- ❖ production data
- ❖ seed sources
- ❖ standard cultivar descriptions
- ❖ photos of cultivars
- ❖ experts on specific crop, subject
- ❖ nutrient composition data
- ❖ climate data per location



White Boston



Bourlat

- Tomatoes, red, ripe, raw, year round average



Description	Units	Value (100gr)
Protein	g	0.88
Total lipid (fat)	g	0.20
Carbohydrate, by difference	g	3.92
Ash	g	0.50
Energy	kcal	18
Starch	g	0
Sucrose	g	0
Glucose (dextrose)	g	1.25
Fructose	g	1.37
Lactose	g	0
Maltose	g	0
Alcohol, ethyl	g	0
Water	g	94.50
Caffeine	mg	0
Theobromine	mg	0

Czech Republic, Liberec
Latitude=50.75, Longitude=15.05, Altitude=460 msal

Variables	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dec
Monthly average of daily MIN temperatures (deg C)	-9.83	-8.64	-4.60	-0.28	3.749	7.204	8.977	8.545	5.492	0.949	-2.95	-7.57
Monthly average of daily MAX temperatures (deg C)	3.062	4.582	10.55	15.73	19.66	23.08	24.66	24.57	21.58	15.90	9.134	5.001
Average temperature (deg C)	-2.90	-2.10	1.774	6.517	11.29	14.73	16.30	15.81	12.45	7.924	2.707	-0.92
PET (mm - liter/sqm)												
Precipitation (mm - liter/sqm)	78.96	64.46	65.94	87.88	115.5	110.9	98.74	96.61	56.91	46.74	54.27	76.38
Sunshine fraction (% of possible)												
Water vapor pressure (Hpa)	4.707	4.800	5.831	7.001	9.886	12.24	13.54	13.52	11.47	8.747	6.410	5.332
Wind speed (m/s)	3.528	3.293	3.550	3.279	3.062	2.810	2.867	2.707	2.863	3.117	3.442	3.702

3. How to use HORTIVAR (1)

<http://www.fao.org/hortivar>

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Search for information

Enter new data
Update and edit existing data
Standard cultivar descriptions

Database statistics
Hortivar maps
Download documentation
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IPP Card System
Good morning Hortivar

Available in:

- English
- French
- Portuguese
- Spanish

Search data by various parameters

3. How to use HORTIVAR

Vegetables Roots & Tubers Fruits
 Mushrooms Ornamentals Herbs & Condiments

Crop category

Common name (391)

Latin name (391)

Cultivar type Name

Pest resistance

Grafted cultivar Yes No

Country (62)

Location

Ecozone

Latitude degrees

Longitude degrees

Altitude masl

From / To

Production system

Production method

Culture media

Planting date

Target plant product

First harvest date

Peak harvest date

Last harvest date

Crop cycle (field occupation) From To days

Data entry code

FAO project

Host Institution

Data entered

in the last days

in the last months


in between

3. How to use HORTIVAR





New search Refine query **Search results**





HORTIVAR Horticulture Cultivars Performance Database


































Home page->Search page->[\[Search results\]](#)

[Searched criteria] 

Select one entry to see its information

Total found= 241
Total pages= 13, Current page= 4
(61 - 80) of 241    

Common name	Cultivar name ↓	Type	Country	Location	Options
Tomato	Huying 932	Hybrid seed	China	Shanghai	  
Tomato	Iker	Hybrid seed	Macedonia,The Fmr Yug Rp	Gevgelija	  
Tomato	Improving Jaxiya	Hybrid seed	China	Jinan	  
Tomato	Invincibility Pineer	Hybrid seed	China	Guangzhou	  
Tomato	Invincibility Pineer	Hybrid seed	China	Guangzhou	  
Tomato	Jade and Red	Hybrid seed	China	Xiamen	  
Tomato	Jaguar	Hybrid seed	Macedonia,The Fmr Yug Rp	Gevgelija	  
Tomato	Jenna	Hybrid seed	Macedonia,The Fmr Yug Rp	Gevgelija	  
Tomato	Jeremy	Hybrid seed	Macedonia,The Fmr Yug Rp	Gevgelija	  
Tomato	Jerry	Hybrid seed	China	Jinan	  
Tomato	Jingpin	Hybrid seed	China	Dalian	  

3. How to use HORTIVAR

HORTIVAR Horticulture Cultivars Performance Database

Entry code=7247, Species= Tom

Home page->Entry information->[General information]

General information | Cultivar | Basic cropping & yield | Source

Geo-reference values

Country: **Macedonia,The Fmr Yug Rp**
 Location: **Gevgelija**

Latitude: **North 41 8**
 Longitude: **East 22 30**
 Altitude: -
 Ecozone: **Mediterranean regime mountains**

Values previously recorded

Home | Search | Print | Back | Forward

Crop category: **Vegetables**

Location:
 Country: **Macedonia,The Fmr Yug Rp**
 Location (site,village,town): **Gevgelija** [Geo-reference] [Climate]

Species:
 Common name: **Tomato**
 Latin name: **Solanum lycopersicum**
 Cultivar type: **Hybrid seed** Name: **Jaguar**
 Grafted cultivar: **No**

If grafted then:
 Rootstock species name: -
 Rootstock cultivar type: - Name: -

Seed/Plant material:
 Producer country: **Netherlands**
 Producer company: **Royal Sluis/Siminis Vegetable Seeds** [Address]
 Local retailer country: **Macedonia,The Fmr Yug Rp**
 Local retailer company: **Agrohemija** [Address]

3. How to use HORTIVAR

General information | **Cultivar** | Basic cropping & yield | Source | Additional data | Photo


Entry code=7247, Species= Tomato, Cultivar= Jaguar, Country= Macedonia, The Fmr Yug Rp, Location= Gevgelija
Values previously recorded

HORTIVAR Horticulture Cultivars Performance Database

Home page->Entry information-> [Cu]


Standard Cultivar Description
Actual cultivar characteristics
Very early variety with Good

Tolerance / resistance
Abiotic disorder
1. Low temperature
2. -
Pest
1. Nematode - Meloidogyne
2. Virus - TMV - Tobacco Mosaic
3. Fungi - Verticillium spp.
4. Fungi - Fusarium oxysporum



<http://davesgarden.com/guides/pf/go/116528/>

Tomato - cultivar: Jaguar



Height: 6-8 ft. (1.8-2.4 m)
Sun Exposure: Full Sun
Danger: All parts of plant are poisonous if ingested
Seed Collecting: N/A: plant does not set seed, flowers are sterile, or plants will not come true from seed
Growing Habit: Indeterminate
Fruit Shape: Standard
Fruit Size: Medium (under one pound)
Days to Maturity: Early (55-68 days) - Mid (69-80 days)
Fruit Colors: Red
Seed Type: American hybrid - French hybrid
Usage: Fresh, salad; Fresh, slicing; Canning
Disease Resistance: Fusarium Wilt (F)
Verticillium Wilt (V)
Root Nematodes (N)
Tobacco Mosaic (T)
Leaf Type: Regular Leaf

3. How to use HORTIVAR

General information Cultivar **Basic cropping & yield** Source Additional data Photo

Entry code=7247, Species= Tomato, Cultivar= Jaguar, Country= Macedonia,The Fmr Yug Rp, Location= Gevgelija
 Horticulture Cultivars Performance Database Values previously recorded

HORTIVAR

Home page->Entry information->[Basic cropping & yield]

Target plant product	Fruits		
Production system	Low tunnel		
Culture media	Soil		
Data record environment	Farm field (small-scale)		
Planting/seeding system	Transplanting/potted		
Production method	Conventional		
Planting density (plants/ha)	48000	Total fresh yield	9.50 kg/m2
Planting date (dd/mm/yyyy)	28 / 2 / 2005	Amount at first harvest	0.20
First harvest date	5 / 5 / 2005	Amount at peak harvest	1.50
Peak harvest date	27 / 5 / 2005	Amount at last harvest	0.40
Last harvest date	10 / 6 / 2005		
Crop cycle (field occupation)	101 days		
Notes:	-		

3. How to use HORTIVAR

General information Cultivar Basic cropping & yield **Source** Additional data Photo

Entry code=7247, Species= Tomato, Cultivar= Jaguar, Country= Macedonia, The Fmr Yug Rp, Location= Gevgelija
Values previously recorded

HORTIVAR Horticulture Cultivars Performance Database

Home page->Entry information->[Source]

Data entry created on	15/01/2006 (dd/mm/yyyy)
Data entry last updated on	15/01/2006 (dd/mm/yyyy)
Field observation	Yes
Personal communication	Yes
Internal technical report	No
Publication	Year - Author(s) - Title - Internet -
Host Institution	Macedonia - Macedonian National Extension Agency Details
FAO project:	-
Queries:	
Data entered by	Details  Mr. Damjan SMILKOV
Species gatekeeper(s)	Details
Country gatekeeper(s)	-
Notes	-

3. How to use HORTIVAR

General information | Cultivar | Basic cropping & yield | Source | **Additional data** | Photo

Entry code=7247, Species= Tomato, Cultivar= Jaguar, Country= Macedonia, The Fmr Yug Rp, Location= Gevgelija
 Select one of the options to see its data

HORTIVAR Horticulture Cultivars Performance Database

Home page->Entry information->[Additional page]

✓ Climatic conditions	Field operations and practices
Product information ✓ Target product characteristics ✓ Target product storage and processing ✗ Secondary product ✓ USDA Nutrition database	✓ Cropping system ✓ Substrate ✓ Land preparation ✓ Seeding & planting ✓ Weeding ✓ Irrigation ✓ Organic fertilization

Growing medium (substrate)

Substrate type	Soil	ilization
Substrate treatment	Chemical	ulators
<u>If soil:</u>		tion
Texture class	Medium (sandy loam)	management practices
Organic matter content	4 %	corded
Depth class	Shallow (20-50cm)	
Drainage class	Very poor	
Waterlogging Inundation risk	Temporary/short (<2 d)	
Fertility level	Variable	
pH class	Neutral (6.5-7.5)	
Salinity class	Low (<4dS/m)	
Al toxicity level	None (<5% CEC)	

3. How to use HORTIVAR





The screenshot displays the HORTIVAR database interface. At the top, there are navigation tabs: "General information", "Cultivar", "Basic cropping & yield", "Source", "Additional data", and "Photo". The "Photo" tab is currently selected. Below the tabs, the entry details are shown: "Entry code=7247, Species= Tomato, Cultivar= Jaguar, Country= Macedonia, The Fmr Yug Rp, Location= Gevgelija". The HORTIVAR logo and "Horticulture Cultivars Performance Database" are visible on the left. A breadcrumb trail reads "Home page->Entry information->[Photo]". On the right, there are icons for home, search, document, back, and share, along with the text "Values previously recorded". A photograph of several red tomatoes in a basket is displayed in the center.

Up to 3 photos can be included with each data entry.

3. How to use HORTIVAR

<http://www.fao.org/hortivar>

Contact us Tell a friend Links  English 

Search for information

Enter new data

Update and edit existing data

Standard cultivar description

Database statistics

Hortivar maps

Download documentation

Hortivar partnership

News and resources

Photo gallery

IPP Card System

Good morning Hortivar

**Search, view and enter
standard cultivar descriptions
in pdf format**

3. How to use HORTIVAR

SCD can then be searched and viewed by all Hortivar partners and visitors

Home page | Search Standard Descriptors | New standard cultivar descriptor (SCD)

HORTIVAR Horticulture Cultivars Performance Database

Select criteria to search

Home page-> [Search Standard Descriptors]

Source/Origin (1)

Reports | Search Standard Descriptors

Standard descriptor results

Species common name	Name ↓	Type	Company name
Olive, European	Aitana	Clone	Dipartimento di Colture Arboree - U
Olive, European	Biancolilla di Caltabellotta	Clone	Dipartimento di Colture Arboree - U
Olive, European	Bottone di gallo	Clone	Dipartimento di Colture Arboree - U
Olive, European	Brandofino	Clone	Dipartimento di Colture Arboree - U
Olive, European	Calatina	Clone	Dipartimento di Colture Arboree - U
Olive, European	Cavalieri	Clone	Dipartimento di Colture Arboree - U
Olive, European	Crastu	Clone	Dipartimento di Colture Arboree - U
Olive, European	Erbano	Clone	Dipartimento di Colture Arboree - U
Olive, European	Giarraffa	Clone	Dipartimento di Colture Arboree - U
Olive, European	Lumiaru	Clone	Dipartimento di Colture Arboree - U
Olive, European	Minuta	Clone	Dipartimento di Colture Arboree - U



Brandofino

Informazioni generali

Piante della cultivar possono essere riscontrate presso oliveti del Messinese. Assume una certa consistenza in alcuni comuni dei Peloritani e dall'Etna. I frutti sono di grossa pezzatura.

Resa in olio **Bassa**

Rapporto polpa/nocciolo **Ottimo (8,7 ± 2,13)**

Albero

Vigore **Elevato**

Portamento **Assurgente**



Densità Chioma **Compatta**

Lunghezza internodi **Medi**



3. How to use HORTIVAR

<http://www.fao.org/hortivar>

Contact us Tell a friend Links  English 

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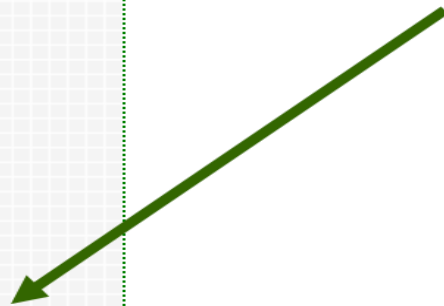
News and resources

Photo gallery

IPP Card System

Good morning Hortivar

Search cultivar photos



3. How to use HORTIVAR

Home page | Search photo gallery | Login

HORTIVAR Horticulture Cultivars Performance Database

Combine the criteria to search for pictures

Home page->[Search photo gallery]

Common name (243) []

Cultivar name []

Country (29) Italy

Originator (64) []

in the last [] days



in the last [] months

Filtered data based on existing entries
Pictures available =686

The screenshot displays the HORTIVAR search interface. At the top, there are navigation tabs for 'Home page', 'Search photo gallery', and 'Login'. The main header includes the site name 'HORTIVAR Horticulture Cultivars Performance Database' and a search prompt 'Combine the criteria to search for pictures'. A breadcrumb trail shows 'Home page->[Search photo gallery]'. The search filters are organized into a grid-like form with dashed borders. The filters include: 'Common name (243)' with a dropdown menu; 'Cultivar name' with a text input field; 'Country (29)' with a dropdown menu showing 'Italy'; 'Originator (64)' with a dropdown menu; and two radio button options for time-based filtering: 'in the last [] days' and 'in the last [] months'. Below the filters, a summary box states 'Filtered data based on existing entries' and 'Pictures available =686', with the latter highlighted in a green box. A green arrow points from this box towards a grid of 20 fruit cultivar images. Each image is accompanied by its name and a small icon. The cultivars shown are: Golden Orange, Netta, Red Earlib, Summerfree, Forlady, Superstayman, Prime red, Gold Chief - Gold Pink, Bora, Bona, Cora, Ninfa, Pieve, Ardenza, Kinzica, Maharani, Marietta Milady, Piera, Ischia, Procida, Boreale, Adria, Bisalta, and Salambo.

3. How to use HORTIVAR

<http://www.fao.org/hortivar>

Contact us Tell a friend Links  English 

Search for information
Enter new data
Update and edit existing data
Standard cultivar descriptions

Database statistics
Hortivar maps
Download documentation
Hortivar partnership
News and resources
Photo gallery

IPP Card System
Good morning Hortivar



Good morning Hortivar is a message board to share information on horticulture and its benefits for food, income and health.

New messages are published daily.

Feel free to search past messages and contribute with information in different formats:



text



text and photo/video






information on a new publication




information on upcoming conferences


3. How to use HORTIVAR


Home page **Good morning Hortivar** Search messages Login

GMH - Good Morning Hortivar Good morning Hortivar   

Welcome to Good morning Hortivar
A message board to share information on horticulture and its benefits for food, income and health. New messages are published daily. Feel free to search/view past messages but also contribute with interesting information in different formats (text, text and photo/video, information on a new publication and/or information on upcoming conferences and symposia).

 To submit a message for posting, go to the login tab.

 Click here if you wish to receive an e-mail notification each time a new message is posted.

 Make GMH your home page


OLIVE OIL - AN ITALIAN TREASURE


Long-life elixir: only good fats

It is not exaggerated to consider extra-virgin olive oil a long-life elixir. It does not contain any sugars or proteins only "good" fats. Its properties are confirmed by research and tests conducted in the main producer countries. "In short, olive oil fights chronic diseases, improves digestibility but, above all, it has the merit of preventing tumours, as its ability has been discovered to improve the effectiveness of chemotherapy", explains Giorgio Bartilucci, nutritionist.

Greece, Italy and Spain, where olive oil covers a substantial part of the fat supply, are countries where the elderly enjoy good health. "In addition, just because extra-virgin olive oil is rich in vitamin E", continues Bartilucci, "it has a high anti-oxidant power and is therefore recommended in low-calorie diets. It not to be neglected that it lowers triglycerides, increases the "good" cholesterol and decreases the "bad" one. The great quantity of monosaturated fatty acids has good effects the cholestrerol level".

Maurizio Bertera
Leggo, 3 March 2006

For more info  [Internet link]



3. How to use HORTIVAR

Good Morning HORTIVAR – Message from Korea

Korea's sweltering summer weather has taken a toll on the yields of some crops, including fruits and vegetable. The country's summer was unexceptionably hot and dry this year, with temperature above over 40 degrees Celsius in some regions. Korea's average summer temperature for the last ten years is 24.3 degrees Celsius.

According to the Prime Minister's Office, 2,909 hectares of crops and fruits failed as of mid-August. In the case of North Gyeongsang province, 1,143.5 hectares of crops were ruined by the heat wave this summer. Of them, 734.4 hectares were fruit orchards and fields, and of those 510.1 hectares were apple-growing orchards.

Price hikes are already visible on the market. According to the Statistics Korea, the wholesale price of agricultural products increased around 7% compared to this time last year. In particular, chili powder (44.2%), watermelon (31.1%), peach (29.0%), radish (24.4%) prices were the notable increases.

In efforts to relieve the damages, the central government established agricultural aid packages worth 7.8 billion won (700 million dollars) for watering crops; 2.4 billion won (215 million dollars) for tree care in orchards and vineyards; and 6.9 billion won (615 million dollars) for installing cooling devices for livestock.

In addition, with one of the biggest national holiday, Chuseok, coming up in a few weeks, the government has announced its plan to support supply of agricultural products with high demands with a view to stabilize the market prices.

Fire Blight Disease in Korea

Fire blight disease caused by *Erwinia amylovora* is spreading further within Korea, posing threat to the country's fruit industry.

First detected in Korea back in 2015, the disease is a contagious disease affecting apples, pears, and some other members of the family Rosaceae. The causal pathogen is *Erwinia amylovora*, a gram-negative bacterium in the family Enterobacteriaceae, believed to be indigenous to North America.

The bacterium is often transmitted by honeybees and other insects, birds, rain and wind to susceptible tissue of plants. The disease spreads most quickly during hot, wet weather and is dormant in the winter when temperatures drop. Infected plant tissue contains viable bacteria, however, and will resume production of exudate upon the return of warm weather in the following spring. Visible symptoms include shriveled and blackened tissues, darkened and water-soaked branches among many others.

In Korea, the disease was first detected in 2015, around Gyeonggi-do and Chungcheong-do regions where majority of fruits such as apples and pears are grown. In 2016, the number of affected orchards decreased from the previous year, from 43 to 17, but nearly doubled by 2017 to 33. According to the Ministry of Agriculture, Food and Rural Affairs, at least 37ha of orchards around four provinces located at the central part of the peninsula have fallen victim to the disease as of mid-July this year, over 50% increase from 22.6% in 2017.

Since the initial discovery of the disease, the government took various preventive and control measures and kept monitoring the situation. Once the infected trees are identified, they are buried to stop the disease from spreading further. Moreover, it is implementing awareness increasing campaigns and training programmes to farmers while conducting periodic pre-screening and chemical control. Farmers are strongly encouraged to report to relevant authorities immediately when they detect any suspicious symptoms.

4. Who is using HORTIVAR

- ❖ Growers & consumers
- ❖ Horticulture scientists, institutions and nutrition specialists
- ❖ Extension officers, consultants
- ❖ Seed/plant material producers, traders and marketing business men
- ❖ Teachers and students



5. Why HORTIVAR

- ❖ Safeguard information on performances of horticulture cultivars and answer questions relating to cultivars
- ❖ Monitor production data season by season
- ❖ Compare data between ecozones, production systems and locations
- ❖ Use as a lively interface between scientists, growers and institutions – search pool of experts in horticulture
- ❖ Facilitate access to useful and selective links to sites and other horticulture related databases and expert systems

6. Global HORTIVAR Status

- ❖ HORTIVAR classifies horticultural products into six categories, vegetables, fruits, roots and tubers, mushrooms, herbs and condiments, and ornamentals.
 - The total number of data entries is 91,761 which is translated into 1,024 species and 28,473 cultivars as of September 2017.
 - These data have been collected in 119 member countries by 3,326 registered individual partners and 76 partner institutions.
 - The data collected by partners are recommended to be reviewed by gatekeepers before they are uploaded in the database. HORTIVAR has now 15 country gatekeepers and 44 species gatekeepers.
- gatekeeper: registered person or institute that has an authority to check data entered into HORTIVAR, to assist in finding solutions to questions raised by users, and to make HORTIVAR known to public

7. HORTIVAR Now in Korea

- ❖ Taking a close look at the data collected in Korea, the total number of data entries is 26 for 5 species or 26 cultivars in just one location.
 - The five species are hot pepper, sweet pepper, peach, pear, and apple. There is no data about the other ones including garlic, onion, persimmon, and etc.
 - The last year when a data reported has corresponding identified harvested year was 2001 and there has been no data provided since then.
 - HORTIVAR has neither partners nor gatekeepers in Korea.
- ❖ However, Korea has great potential to become an outstanding contributor to HORTIVAR.
 - It produces not only fruits, vegetables but also other categories like mushrooms, herbs and condiments, especially traditional ones such as ginseng, green tea and etc.
 - It also has reliable and comprehensive data collecting systems covering government agencies, academic institutes, and producers associations.

< HORTIVAR Statistics >

Country	Data Entries	Species	Cultivars	Locations	Partners	Gatekeepers	Last Year Reported
Thailand	173	3	3	3	0	0	2003
Indonesia	15	3	3	3	1	0	2008
Philippines	2,102	500	1,517	118	7	0	2008
Vietnam	4,920	447	2,284	287	125	5	2013
China	5,599	44	3,177	104	54	0	2008
Republic of Korea	26	5	26	1	1	0	2001
World	91,761	1,024	28,473	-	3,402	59	-

8. The Challenges

- ❖ One of the problems to take note of is that it has been highly dependent on data providers. HORTIVAR data collection has been done by partners on the voluntary basis.
 - Now it needs to collect data proactively not by waiting for data to come to the system but by going out to the place where horticultural products are produced and by building partnership with the people there.
- ❖ It is realized that more efforts have to be invested to create visibility of HORTIVAR so that it can be used by more countries and institutions worldwide.
 - Belgium has been the traditional donor, who has helped FAO to develop this powerful database . It has recommended to attract multiple donors to consolidate HORTIVAR for use by FAO member countries and keep the data base up to date with new and more performant software applications.
 - Recently, the Republic of Korea has shown interest in providing funding for HORTIVAR. It proposed to provide assistance to build a sustainable system to conduct data collecting, screening and uploading for HORTIVAR in Korea. And proposed to collect and share more data from the Asia Pacific region.

9. The Way Forward

- ❖ HORTIVAR needs to set target products and their priority in order to obtain strong support and new resources by accommodating the information demand requested by stakeholders.
- ❖ HORTIVAR activities in Korea have already started since the 1st quarter of this year.
 - Information meeting with government officials
 - Advocacy meeting with horticultural producers
 - Training workshops for researchers, university students
 - Field trip to obtain data: Sejong city (Peach), Hadong county (Green Tea)
 - Identify potential partners: Korea FAO Association, Seoul National University, and etc.
 - Fund raising activities: Ministry of Agriculture, Food and Rural Affairs, Ministry of Finance
 - Building gatekeeper system: Ministry of Agriculture, National Statistics, National Seed

9. The Way Forward

- ❖ Now, HORTIVAR needs to expand its activities to other areas.
- ❖ There is a need to hold advocacy meetings with government officials and scientific staff in Thailand in order to promote HORTIVAR knowledge and use in Thailand and in the Asia Pacific Region.
 - As the first step, a consultation meeting between the HORTIVAR officer and FAORAP staff, in charge of plant production and protection, natural resources, statistics, etc., should take place.
 - The objective would be to discuss an activity plan to promote HORTIVAR in Thailand and other Asia Pacific countries including Indonesia, Malaysia, Viet Nam etc.
 - After building common understanding, HORTIVAR advocacy meetings with government officials and horticultural experts of Thailand are needed to move forward.
 - Relevant government officials from the Ministry of Agriculture and Cooperatives (MOAC) and horticultural experts from universities and research institutes should be invited to the meeting.

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I. Introduction

II. HORTIVAR

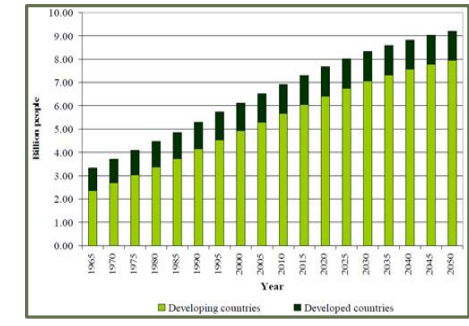
III. New Project

Smart Farming for the Next Generation

Gateway to the 4th Industrial Revolution in Agriculture



Horticulture is unique



Biodiversity

Nutrition

Income

Job creation

Efficient land / water / nutrient use

Sustainable intensification – rural / peri-urban / urban

High value fresh and processed products

Technology intervention



Efficient and sustainable production

Adapted varieties

(including seedling systems, tissue culture and grafting)

Natural resource management

(including soil-free and fertigation systems)

Pest/disease management

(including diagnostics and biocontrol)

Climate control

(Protected cultivation, extended seasons)

ICT - remote sensing – apps - drones

Outputs:

Smart Greenhouses established

Functional laboratory created

Training centers developed

Crop management modules created

Participatory feedback mechanisms active

Capacity of emerging farmers increased



Post-harvest, food safety and market access

Washing, grading, packing, storage, transport
(cold chain, modified atmosphere)

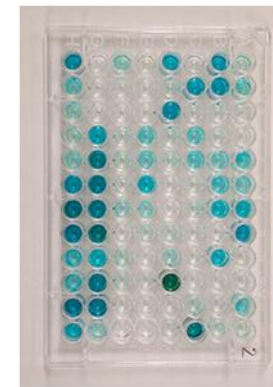
Drying and processing
(value added juices/soups/sauces/pickles)

Food safety
(detection of pesticides and human diseases)

Marketing systems
(Quality standards and traceability schemes)

Outputs:

- Functional laboratory created
- Training programs developed
- Guide book for best practices / policy recommendations developed
- International workshops held
- Capacity of agro-processors increased



Big data to optimize value chain profitability

ICT value chain connectivity

(Mobile phone, internet, bar codes, apps, production sensor data)

Production efficiency (inputs and labour)

Market efficiency (products and access)

Big data management and analysis

System recommendations

Outputs:

Input supply systems refined

Market information systems established

Price estimation models and algorithms created

Recommendation on stable value chain calendars

Capacity of ICT companies increased

Business skills of value chain actors increased



Implementation structure

for cooperative and long term prospective development

Where: South East Asia; Vietnam
Central Asia; Uzbekistan

How: **FAO** provides coordination and government linkages, technical assistance and monitoring with **Specialized agencies** invited to provide advanced, innovative, scalable and affordable technologies and services. **Target countries** adapt and adopt smart farming options through creating public / private partnerships.

Cost: 4.5 million US \$ for 4 years

Thank you
for your attention