A range of organic standard in the global market

IFOAM standard	The IFOAM Standard is an internationally applicable organic standard that can be used directly for certification. The IFOAM standards requirements, called the Common Objectives and Requirements of Organic Standards (COROS), which replaced the IFOAM Basic Standards (IBS). http://www.ifoam.bio/
USDA ORGANIC United States	The National Organic Program (NOP) was enacted as federal legislation and it restricts the use of the term "organic" to certified organic producers. Certification is handled by state, non-profit and private agencies that have been approved by the USDA https://www.usda.gov/topics/organic
European Union	The EU-wide label for organic food has been mandatory throughout the EU Countries since July 2010 and become compulsory after 2 years of transition in 2012. The regulation organic products are grown derive from the guidelines of IFOAM EU countries acquired comprehensive organic legislation with the implementation of the EU-Eco-regulation (1992). https://ec.europa.eu/agriculture/organic/index_en
Germany	The German national organic label was introduced in 2001. The "Bio label" has gained widespread popularity and its popularity extends to neighboring countries like Austria, Switzerland and France. https://www.oekolandbau.de/bio-siegel/
Agriculture France	The French organic certification was introduced in 1985 with "AB - agriculture biologique" mark, which is fulfills the EU regulation for organic food. The certification process is overseen a public institute "Agence française pour le développement et la promotion de l'agriculture biologique" (usually abbreviated "Agence bio"). The actual certification authorities include a number of different institutes. http://www.agencebio.org/
Canada	The Canadian certification (COR) was implemented at the federal level in 2009, which is a mandatory certification required for agricultural products represented as organic in import, export and inter-provincial trade, and those that carry the federal organic logo. The COR is a benchmark of NOP (USDA). http://www.inspection.gc.ca/food/organic-products/eng/1300139461200/1300140373901
VIDELANATE DE SAGATI AUSTRALIAN GERTIFIED ORGANIC Australia	The Australian Quarantine and Inspection Service (AQIS) is the controlling body for organic certification. The government only becomes involved with organic certification at export. There are several AQIS-approved certifying organizations who issue Organic Produce Certificates. http://austorganic.com/
Japan	The Japanese Agricultural Standard (JAS) was fully implemented in 2001 and revised in 2005. All JAS certifiers are required to be accredited by the Ministry of Agriculture. The term "organic" may be used only by certified producers. http://www.maff.go.jp/e/

Organic Standards in GMS countries.

China	The organic certification is administrating by government agency named CNCA and the implementation of certification according to China Organic Standard GB19630.1-4 - 2005 are perform by CQC ¹ . The certificate is valid for 1 year for the Organic mark, and the Conversion to Organic mark. http://www.ofcc.org.cn/en/
Cambodia	Cambodian Organic Agriculture Association (COrAA) is the only organization that is authorized to give certificate for organic agricultural products. It is a nationwide private organization working for the promotion of organic and sustainable agriculture in Cambodia. http://giz-cambodia.org , http://giz-cambodia.com/organic-food-certification-gives-consumers-confidence-to-go-organic/
Lao PDR	In Lao PDR the inspection and certification of organic agriculture is the inspection and certification of production, processing systems, NTFP harvest and group production systems. The certification unit, Department of Agriculture, Ministry of Agriculture and Forestry. Tel: 412350 Fax: 412349 http://www.laotradeportal.gov.la/index.php?r=site/display&id=167
Myanmar	The Myanmar Fruits and Vegetable Producers Association (MFVPA) set up the Myanmar Organic Agriculture Group (MOAG) as private sector association to support organic agriculture development in the country. http://www.greennet.or.th/en/article/1168

 $^{^{\}mathrm{1}}$ An agency of Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)



ACT Organic Agriculture Standards are prepared by ACT Standards Committee in line with IFOAM Basic Standards and approved by ACT General Assembly since 1999 and has amendment in several times. ACT Standards now cover crop production, handling and processing, wild production, input production, aquaculture production, organic menu in restaurant, livestock and bee keeping which enable ACT to give certification service for organic crops produced from farm up to organic processed products. https://www.actorganic-cert.or.th/en

Different organic certification schemes offered by the Certifying body operating in ASEAN Countries

	Different organic certification schemes								
Name of certifying body	IFOAM	EU	NOP (USDA)	AB AB	COR	Bio Suisse	JAS	Other standards	
Agriculture Certification of Thailand (ACT)	√	✓	equivalent of COR for crops production		√	~			
IMO Vietnam	√	1						- GMP - HACCP - GLOBALG.A.P	
HŮU CO ORGANIC PGS								National Basic Standards for Organic Products	
bio agri <i>cert</i> BioAgricert	√	√	~	√	√	~	√	Organic cosmetic standard	
Kiwa BCS Öko- Garantie		~	✓				~	BCS standard (an equivalent EU)	
Ecocert	√	✓	✓				√	- Demeter - Korean regulation	
Control Union		1	√				√	COFCC,Naturland, MAFRA	
CICC (Thailand) Co.,Ltd.								COFCC	

Source: http://www.actorganic-cert.or.th/, http://www.bioagricert-thai.org, http://www.kiwabcs.com

FOOD SAFETY ON THE FARM

GAP

GAP has been developed by food industries, producers' organizations, governments and NGOs to address the environment, economic and social sustainability on the farm and ensure the safe and quality food. GAP has been promoted by the government as guidance of the food safety on the farm, but it is not regulation. Each country developed their own GAP policy and guidance, such as USDA GAP, JGAP, LaoGAP, VietGAP, and ThaiGAP.

Figure 1: Different gap schemes













USA

Japan

Canada

Thailand

Vietnam

Lao PDR

The objective of these GAP codes is to ensure safety and quality of produce in the food chain and improve natural resources use, workers health and working conditions.



GLOBALG.A.P is a voluntary and private standard began in 1997 as EUREPGAP2, which is an initiative by EUREP, a large supermarket chains in Western Europe3⁻ The aim of GLOBALG.A.P is to increase consumers' confidence in food safety, environmental impact and the health, safety and welfare of workers and animals. GLOBALG.A.P standard consists of IFA Standard and General Rules, and CPCC. GLOBALG.A.P standard is modular-based consisting of: (i) All Farm Base Module: This is the foundation of all sub-scopes and defines all the requirements that all producers must first comply with to gain certification, (ii) Scope Module: This defines clear criteria based on the different food production sectors (Crops, Livestock and Aquaculture), (iii) Sub-scope Module: These CPCC cover all the requirements for a particular product or different aspect of the food production and supply chain. For example, a strawberry grower must comply with the All Farm Base, the Crops Standard, and the Fruit & Vegetables CPCC to receive a GLOBALG.A.P. fruit & vegetables standard certificate.

Certified producers and traders will receive a GGN, a unique 13-digit number identified each certified operator. GGN matches with GLN. More than 130,000 farms in over 120 countries are certified GLOBALG.A.P.

FOOD SAFETY STANDARD FROM PRIMARY PRODUCTION TO DISTRIBUTION

The several food safety systems can be used at all stages of a food chain, from primary production, process, packaging, and distribution. Some of them become a national guidance, such as GMP and HACCP. Some of them are highly recommended by the global supermarket chain, such as BRC, IFS, SQF2000 code, etc. Some food safety programme integrates the quality management system programme, such as ISO22000:2005 and FSSC22000.

 $^{^{\}rm 2}$ EUREPGAP changed its name to GLOBALG.A.P. in 2007.

³ EUREP members per country: in United Kingdom: Asda, Marks & Spencer, Wm Morrison Produce Ltd, Sainsbury's, Somerfield, Tesco and Waitrose; in Netherlands: Ahold, Albert Heijn, Laurus, Superunie, CBL, Schuitema and Trade Service Netherlands, in Sweden: Coop; in Suisse: Coop and Migros; in Belgium: Delhaize and DRC/Belgium Retail Association; in Germany: McDonald's, EDEKA Fruchtontor, Globus SB Warenhaus Holding, tegut...Gutberlet Stiftung & Co and METRO; Coop in Norway; Eroski in Albania; Kesko in Finland; Musgraves Supervalu Centra and Super Quinn in Ireland; Spar in Austria and Monoprix in France



GMP (good manufacturing practices), also known as pre-requisite programs, is considered as a first step to food safety as a series of principles to be fulfilled to ensure that products meet legal pre-requisites for safety and quality. GMP has seven principles:

- PRINCIPLE 1: Design and Facilities
- PRINCIPLE 2: Control of Operations
- PRINCIPLE 3: Maintenance and Sanitation
- PRINCIPLE 4: Personal Hygiene
- PRINCIPLE 5: Transportation
- PRINCIPLE 6: Product information and consumer awareness (Traceability)
- PRINCIPLE 7: Training

The compliance with GMP requirements entails minimum common sense sanitary and processing requirements applicable to all food processing establishments. Many food industry companies implemented the GMP certification scheme as a foundation and set up to other food safety management systems, such as HACCP, BRC, SQF2000 code and ISO 22000.



HACCP is a food safety tool focusing on the prevention of hazards rather than relying on endproduct testing. HACCP is an internationally recognised as a monitoring and control system to prevent potential hazards during food processing. The USA requires mandatory HACCP program as an effective approach to food safety. The regulation EC No 852/2004 states that "all food business operators should establish and operate food safety program and procedures based on HACCP principles". HACCP system consists of seven principles, but before applying HACCP, the food operator shall have a documented pre-requisite programme (GMP).

- PRINCIPLE 1: Conduct a hazard analysis
- PRINCIPLE 2: Determine the Critical Control Points (CCPs)
- PRINCIPLE 3: Establish critical limit(s)
- PRINCIPLE 4: Establish a system to monitor control of the CCP.
- PRINCIPLE 5: Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control
- PRINCIPLE 6: Establish procedures to confirm that the system is working effectively
- PRINCIPLE 7: Establish documentation concerning all procedures and records appropriate to these principles and their application

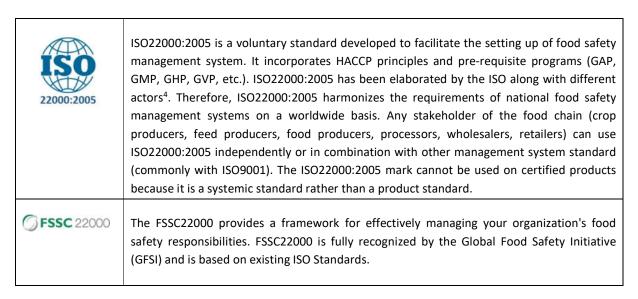
B. Food safety standard developed by the private sectors



BRC standard is a private voluntary standard developed by British Retail Consortium. The standard has been set up in order to protect consumers' health and to enable British retailers to comply with the UK Food Safety Act. The compliance with this standard requires the adoption and implementation of HACCP principles, and the setting up of a documented and effective

BRC Global Standard	quality management system. BRC standard also cover factory environment standard and process control. Certified products carry the BRC logo.
(Issue 7)	
SQF SQF1000 and SQF2000	SQF codes are designed for use by all sectors of the food industry to reduce the incidence of unsafe food reaching the marketplace. SQF program was launched in 1994 in Australia and has been administered by SQF Institute since 2004, a division of the FMI. SQF Code is an application of HACCP principles and Australia food safety guidelines. SQF code has programs: (i) SQF1000 code for primary producers and growers, and (ii) SQF2000 code for the manufacturer, processor, and distributor. SQF certifications have been issued to thousands of companies operating in Asia-Pacific, Europe, Middle East and North and South America.
IFS Version 6	IFS is a private voluntary standard developed by EU Retail Federation launched in 2003. IFS is designed for companies, who undertake the following activities: (i) processing, (ii) handling of loose food products and / or (iii) primary packing activities.

C. Food safetey standard combined the quality management system



PGI AND GI



Three European Union schemes of **geographical indications** and traditional specialties, known as **protected** designation of origin (PDO), **protected geographical indication** (PGI), and traditional specialities guaranteed (TSG), promote

⁴ the Codex Alimentarius Commission, the Confederation of the Food & Drink Industries of the European Union (CIAA), the International Hotel and Restaurant Association (IH&RA), the Global Food Safety Initiative (GFSI) and the World Food Safety Organization (WFSO)

and protect names of quality agricultural products and foodstuffs. https://en.wikipedia.org//Geographical_indications_and_traditional_specialities_in _the
A complete Law on Geographical Indications is currently being drafted in order to meet Cambodia's WTO obligations. The draft would allow for the registration of foreign GIs and establish a GI Board to administer the new system. http://www.cambodiaip.gov.kh/DocResources/6ebdd963-ba4d-42db-933d-d7e52f99018a_c786a043-b88d-4f64-9429-60a330efdc5f-en.pdf
GI (Geographical Indication) is an indicating-symbol or indicating-sign or indicating-mark which is attached on the product, to let the consumer know the followings: 1. From where (specific geographical origin) the product's origin is located. 2. What reputation, characteristics and qualities of the product is essentially relating to such place of origin. http://www.ipthailand.go.th/index.php/en