Summaries of presentations

STDF 2020 Inception Meeting Report

Welcome Remarks

Ms. Roshan Khan

Economic Affairs Officer WTO-STDF

Ms. Roshan Khan first introduced STDF, a global partnership to build sanitary and phytosanitary capacity to promote trade. STDF was established by 5 organisations (FAO, WBG, OiE, WHO and WTO). The STDF works closely with other organizations in SPS capacity building. STDF provides funds to develop and implement innovative, collaborative and scalable projects to strengthen SPS capacity. STDF projects have helped governments and private sector to meet international standards for food safety, animal and plant health, boost safe trade to regional and international markets, creating jobs, improving livelihoods, reducing poverty and overall contributing to the sustainable development goals. On behalf of STDF Secretariat, Ms. Roshan Khan would like to express gratitude to local partners, including Western Highlands Agriculture and Forestry Science Institute (WASI), that has been driving this work from the project development stage and initial application. WASI has developed a leadership and ownership which has helped to improve the SPS issues, including in the peppercorn value chain.

STDF is also grateful to Department of Agriculture in Laos, and General Directorate of Agriculture in Cambodia who are leading the STDF project on the ground, helping to involve the relevant stakeholders, and ensuring a wider impact and replicability of results, even after the end of the project. This is the first regional project focusing on peppercorn.

CABI is a long-standing partner of STDF and a strong implementing partner. CABI has shown, during the Covid 19 pandemic, great agility and recalibrated the delivery mechanisms of this project. Ms. Roshan Khan finally thanks to the national focal points Mr. Chhun Hy Heng and Mr. Souliya Souvandouane. Building effective SPS capacity relies on building public private collaborations and ensuring synergies across agriculture and trade.

Welcome Remarks

Dr. A. Sivapragasam,

CABI SEA Regional Director

Dr. Sivapragasam, on behalf of CABI, firstly thanks all partners WASI in Vietnam, GDA in Cambodia and DoA in Laos and welcomes all participants to the STDF Inception Meeting. Despite the unfortunate circumstances of not meeting face to face due to Covid 19 pandemic, Dr. Siva emphasized the recent challenges created by the pandemic and underlined the new paradigm shifts in agriculture, needs to transform value and supply chains, build innovative business models and optimize information sharing modes. CABI is a 110-year-old science and development based intergovernmental organization, with 49 member countries worldwide. CABI's mission is to improve people's lives, providing information and applying scientific expertise to solve problems, largely for smallholder farmers. CABI is guided by a number of SDGs (Sustainable Development Goals). CABI's medium term strategy (2020-2022) has been developed largely in response to specific demand-driven needs of the agriculture sector and to meet our member countries priorities. The project STDF Safer Spices boosting food safety and market access for peppercorn value chain in Vietnam, Laos PDR and Cambodia, is an example of that demand-driven needs, both by the industry and the countries. Dr. Siva highlights that this project, funded by STDF, and with collaboration of WASI Vietnam, Laos PDR DoA and Cambodia GDA is therefore a step in the right direction. The project will focus by large on peppercorn and the spices supply chain, against the backdrop of increasing consumers concerns, particularly in major markets such as EU. The project will primary address sanitary and phytosanitary related issues in exporting peppercorn in the context of food safety and hygiene related norms compliance (high MRLs, physical damage) resulting from either poor farm practices or handling practices, storage issues. The project will also help with the sharing of experiences among the sub regions, particularly with the nexus of information flows. In this context, Dr. Siva reminded the participants that Vietnam's experience with Good Agriculture Practices (GAP) and the Code of Practice (CoP) will be a good example, and thanks the participation of Mr. Nguyen Van Long, Head of Tech Transfer, PRDC Vietnam. Dr. Siva highlighted that PGS is a major initiative and deliverable in this project, with the presence of Dr. Grant Winning who will present during the IM on the role of Participatory Guarantee System (PGS) models in implementing CoP. The project will also highlight the potential South-South cooperation among countries, as we will bring together the global expertise in the peppercorn and spices industry. Dr. Siva welcomes Executive Director of IPC (International Pepper Community), Ms. Hoang Thi Lien, and further expects that IPC can be possibly involved in the project. Finally, Dr. Siva thanks Professor Joni Munarso, Vice Chairman of the Codex Working Group on Standard for Peppers Quality, for his presence and participation to the Inception Meeting. Dr. Siva concluded by expressing his sincere appreciation to STDF and to our country partners for giving CABI this opportunity and trust to manage this project.

Welcome Remarks

Dr. Phan Viet Ha

Vice Director, Western Highlands Agriculture and Forestry Science Institute (WASI)

Dr. Phan Viet Ha, Vice Director of WASI (Vietnam), thanked all participants for their attendance to the Inception Meeting. He explained that today the first step of the project will be set up. On behalf of WASI, the main partner of this project, and Vietnam, the most important pepper producer and exporter (with an area of 140,000 ha and a productivity of 240,000 tons of black pepper) in the world, Dr. Ha expressed his gratitude to STDF for supporting the project. Dr. Ha thanked CABI for its previous project collaborations on pepper. Dr. Phan Viet Ha hopes the project partners will contribute and stand together for a successful project delivery. Dr. Phan Viet Ha finally acknowledged the participation and support from other country partners, Laos and Cambodia. Despite being the first producer worldwide, Vietnam has met a number of sanitary and phytosanitary problems; these issues are related with the cultivation of pepper, the use of chemical pesticides, and links in the supply chain and value chain of black pepper. Therefore, Dr. Ha hopes that this project can contribute to make pepper being of increased quality product in the next years. That can improve the quality of farmers life in the 3 countries where the project will operate.

P1 Standards and Trade Development Facility (STDF) Introduction and Expectations from the Project

Ms. Angelica Grisuk (& Ms. Roshan Khan)

Junior Economic Affairs Officer WTO-STDF

Ms. Angelica Grisuk, Junior WTO Economic Affairs Officer, reminded to the participants that STDF is a global partnership, and how STDF was funded. STDF's main goal is to help developing countries to improve their food safety and animal and plant health capacity to meet SPS requirements. It is also a coordination platform that brings together donors, founding partners, developing countries experts, private sector, other partners, and the country partners in the STDF working group, which meets twice a year. The STDF Working Group involves more than 40 experts on trade, health and agriculture; these experts discuss and decide on various STDF work streams, such as PPG (Project Preparation Grants) and PG (Project Grants), to be approved during each meeting.

STDF team is comprised of 8 people that delivers the work plan and STDF outreach and also has the STDF policy committee. STDF has knowledge work linked to SPS capacity building (including electronic SPS certification, prioritizing SPS investments, reducing SPS trade costs, good regulatory practice, public-private partnerships and funding mechanism for SPS projects and project development. At the end, Ms. Angelica Grisuk described the STDF funding mechanisms, with PPG and PG funding types. PPG are seed funding (up to USD 50,000) to

develop SPS capacity building projects, apply capacity evaluation / prioritization tools and assess feasibility before project development. PGs are up to USD 1,000,000 and aim at identifying, developing or sharing good practice. PGs are replicable, innovative, collaborative, inter-disciplinary and include regional/global approaches.

Ms. Roshan Khan introduced the last slide, which detailed the specific objectives of the STDF "Safer Spices" project. The main objective is to improve safety and traceability in peppercorn production, post-harvest, processing and trade. Expectations of the project are to (i) identify, develop and disseminate good practices, (ii) develop code of practice based on Codex standards (iii) serve a blue print for regional value chain development (with a focus on the role of informal trade) (iv) promote South-South cooperation; (v) shows proof of concept for the PGs approach and last (vi) supports the role of women in peppercorn cultivation.

P2: Project Brief

Mr. Muhammad Faheem,

CABI Integrated Crop Management Advisor and Project Manager

Mr. Faheem, being the Project Manager presented the project overview covering main objective, project partner, approach, deliverables and management framework. The project is funded by STDF for improving food safety and market access for the pepper value chain in Vietnam, Lao PDR and Cambodia, with duration time of 3 years from October 1, 2020 to September 30, 2023. This project is implemented by three country partners i.e. the Western Highlands Agroforestry Science Institute (WASI), Vietnam, Agricultural Regulatory Division, Department of Agriculture (DoA), Lao PDR and Plant Protection, Sanitary and Phytosanitary Department, General Directorate of Agriculture (GDA), Cambodia. It is further facilitated by national, regional and international consultants; value chain, ICT and communications experts and peppercorn industry experts. The project's objectives are to increase financial returns, improve productivity, ensure food safety and market access for pepper growers and processors by improving compliance with requirements food safety according to the standards of imported peppercorn products from high value markets such as the EU, the United States and Japan. Base on three main outputs of project.

- Output 1- Prepare Code of Practice: The code of practice will be designed, as much as possible, to minimize implementation costs. Minimum criteria will be identified to ensure peppercorn safety and a risk based approach will focus farmer's efforts on specific problem areas. The code of practice will include guidance on improving farm management practices to lower production costs, increase yield and improve pepper quality. Practical aspects of implementation and known barriers to implementation of good practices will be addressed

- Output 2- Pilot tested CoP though PGS: The Participatory Guarantee Scheme (PGS) model will be piloted in the 3 countries, to facilitate the implementation of the code. Although PGSs are adapted to local conditions. The peppercorn code of practice will be adopted and based on the guidance documents and management system framework. Each PGS will design

their own compliance criteria, internal control systems and documented management systems to suit their own situation

- Output 3- Strategies for wider roll-out: Based on a synthesis of the experiences, lessons learnt and stakeholder feedback during implementation of the pilot test, the project will identify approaches/strategies for wider roll-out of the code of practice and management system. Success stories are useful for promotion of the outcomes of the project to the local donor community, the pepper industry and grower groups external to the project.

In addition the project through the project's media and website also communicates with the project partners and collaborators about the project's activities and outcomes, and provides visibility, knowledge portal and learning center containing information resources on strengthening the food value chain, addressing key food safety challenges and securing access to domestic and export markets. Besides, the repository stores project-related files and informs donors about progress, updates and milestones completion. And publish the success and achievement stories of the project to provide articles on the value chain related to pepper in Vietnam, Lao PDR and Cambodia.

The project is monitored and evaluated based on the project management environment PRINCE-II, the Project Board consists of senior CABI staff involved in monitoring to ensure project activities are completed on schedule. Based on monthly and 6-month reports.

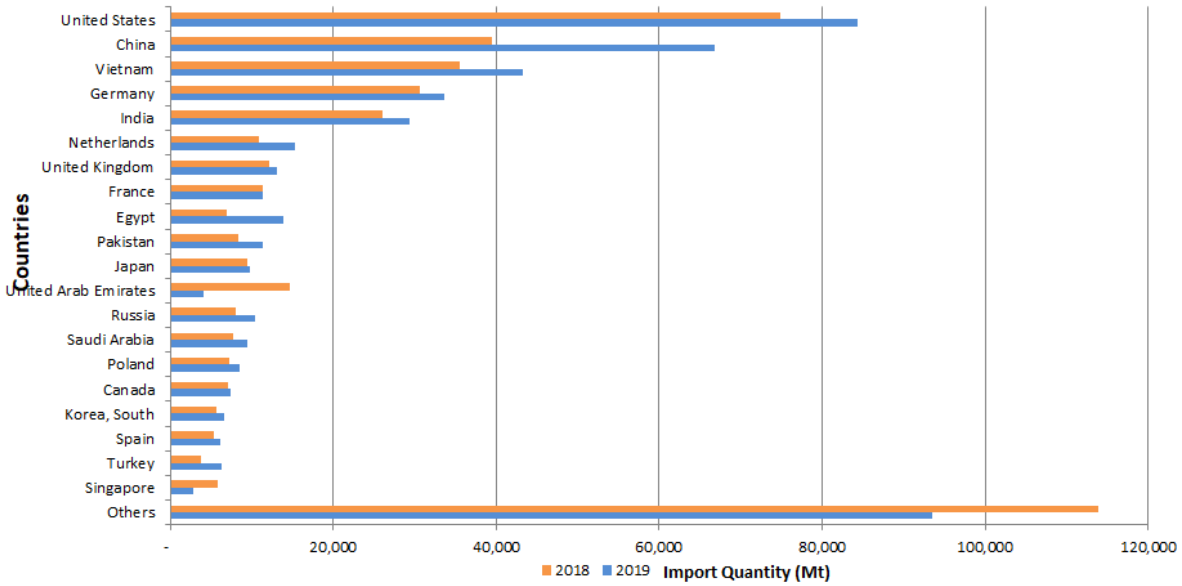
P3: Global overview of peppercorn and spice industry

Ms. Hoang Thi Lien

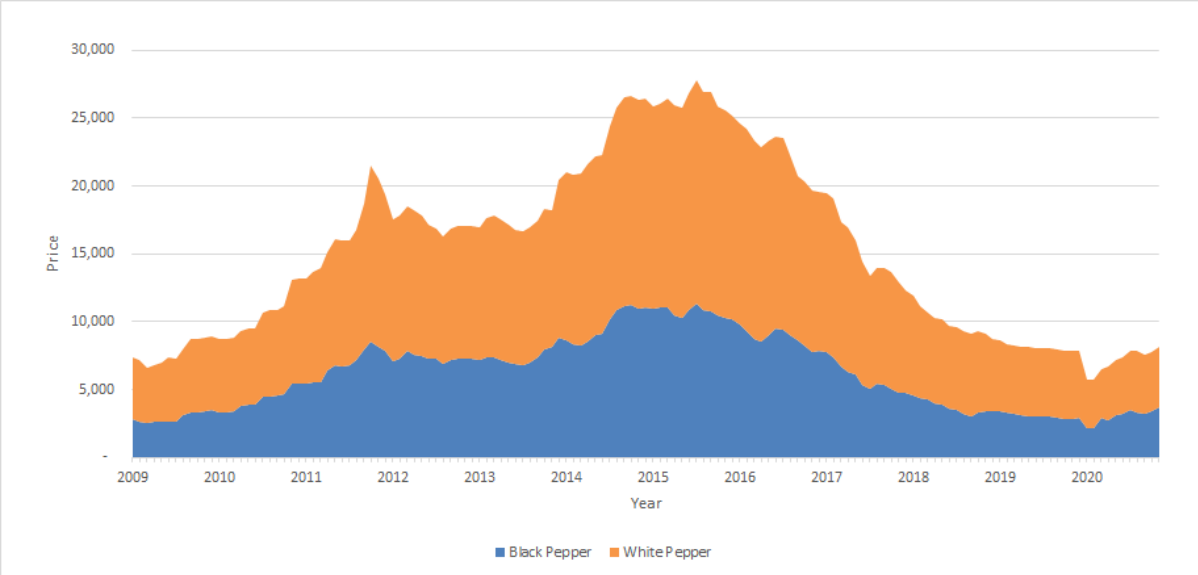
Executive Director, International Peppercorn Community (IPC)

Ms Lien highlighted in her report that the world production in 2019 was 591,946 Mt, and increase of 11% from 2018. The highest increase was recorded in Vietnam, followed by Brazil and Indonesia. In 2020, the production in these countries is estimated to decrease following low prices and unfavourable weather, whilst in India Sri Lanka and China they are expected to increase. Export is increasing by 15% in 2019 to 489,128 Mt. In Cambodia, is a new member to IPC and have recorded increase of 264% in exports.

The top ten countries with the most imports were USA with 735,028 Mt (19% from world total import during 2010-2019), Germany with 290,264 Mt (8%), India with 214,065 Mt (6%), Viet Nam with 208,985 Mt (5%), China 168,698 Mt (4.4%), Netherlands with 151,010 Mt (3.93%), UAE with 149,494 Mt (3.89%), UK with 124,411 Mt (3.24%), Singapore with 121,992 Mt (3.17%) and France with 100,268 Mt (2.6%). The global increase in imports has been driven in the last two years by Egypt, Turkey and China, with increased imports in 2019 reaching 101%, 70% and 69% respectively. Whilst decreases were recorded in UAE (Middle East hub), Singapore and France. Germany and Netherlands are a major importing hub for Europe, exporting to neighbouring countries often after value addition. Vietnam, whilst a major exporter, is also a major importer and processing hub.



The prices peaked in 2014/15, but due to significant increase in supply from Vietnam and Brazil prices dropped and have now stabilised. Increases are now being observed in 2020, with black pepper prices up by 6% and white by 2%. Peppercorn is now on an upward trend, mainly due to reduced production from Vietnam as a result of Government intervention.



An oversight of the peppercorn industry in each of the project countries was then presented by the different country representatives.

P4: National Industry perspective to peppercorn

Ms Nguyen Thi Thanh Truc

Assistant to Chairman of Vietnam Pepper Association (VPA)

Ms. Nguyen Thanh Thi Truc began with the overview of the Vietnam Pepper Industry. The largest pepper growing areas are in the Southern region with Dak Lak and Dak Nong being the highest producers (contribute to more than 50% in the country). The total peppercorn growing area in 2019 is 149, 000 ha. VPA has proposed to the ministry of agricultural in rural development to carry out investigation in statistics on pepper area in 2021. The export volume in 2019 stood at 287,003 Mt and Vietnam has exported 241,770 Mt as of October 2020. Vietnam imported 43,000 Mt of pepper from Indonesia, Brazil and Cambodia for export purpose in 2019. Asia is the largest market for Vietnam pepper (54%), followed by EU (20%), America (19%) and Africa (7%) in 2019. China, US, India, Germany and UAE imported pepper from Vietnam in 2019. Pepper price was fixed at low rate for the last year and there was a fluctuation of price from January 2019 to October 2020.

Secondly, Ms. Nguyen Thanh Thi Truc focused on market access where she mentioned that the information on available market is limited. The Vietnamese SEMs mainly referred to VPA website for data on export, import, price and customer database and international market. In 2020, VPA has upgraded their website to which is more user-friendly and has six languages options. VPA supported the exporters' participation in exhibition of Anuga in Germany in 2019. Exporters can also refer to the newsletter and Yellow Pages for customers' information. Vietnam pepper industry is facing a reduction in exporters over the world. Limitation of the Vietnam pepper industry are; 70% of pepper export quality is the raw material, 80% of pepper produce is from SMEs with small capital, limitation in getting good material source, shortage of the correct database of pepper producing areas, lack of customer database and information for market analysis, and poor linkage between farmers and exporters within the country. Ms Truc also mentioned the residue issue of Chlorpyrifos on pepper which has impacted the market access in EU. The latest testing however showed that the residues level was relatively lower compared to earlier screenings due to reduced use of agrochemicals.

Lastly, Ms. Nguyen Thanh Thi Truc shared details on the local demand trends related to pepper. The export of both black and white pepper increased in 2019 with the black pepper's export change being twice as much than the white, compared to the previous year. The export situation is predicted to be better once the Covid-19 pandemic eases. Ms. Nguyen Thanh Thi Truc also presented people's search on pepper-related topics (e.g. black pepper, white pepper, peppercorn) on websites and YouTube channels which have increased despite the Covid-19 pandemic (e.g. increasing trend in May-July 2020 period). Ms. Nguyen Thanh Thi Truc concluded by highlighting that pepper is much affected in the context of pandemic.

P5: Peppercorn Industry in Vietnam

Dr Khoa Dang Le

Senior Researcher, Western Highlands Agroforestry Science Institute (WASI), Vietnam

With an annual production of 200,000 tonnes of peppercorn, Vietnam is the biggest peppercorn producer and exporter in the world. By the year of 2020, a nationwide record is about 140 thousand hectares of grown peppercorn. The crop is mainly grown in Central Highlands region, which is the home of Dak Lak, Dak Nong, Gia Lai, Kon Tum and Lam Dong provinces, counting for 57% of Vietnamese peppercorn area (approximately 80,000 ha). With 48 thousand hectares, South East region (including Binh Phuoc, Ba Ria Vung Tau, and Dong Nai) is the second biggest peppercorn producer of Vietnam.

A rapid development of Vietnamese peppercorn industry has been recorded since 2009. The peppercorn area of Vietnam tripled in 8 years of the development. In 2017, there was 151 thousand hectares of grown peppercorn reported by Vietnam Peppercorn Association (VPA). Up to date, although there is a decrease in the cultivating area because of global devaluation and growing challenges of pests, peppercorn sector is still a giant of Vietnamese agriculture and provides a living for million people in the producing regions.

To ensure for peppercorn development, Vietnamese Government has itself prioritized and made unique policies. The national strategy has been shaped to lead the peppercorn sector to the international market. Domestically, capacity in research and transfer technology to peppercorn growers is strengthened in focuses of Good Agriculture Practices, Diseases Management, Soil Health, Environmental Sustainability, and Development of Bio-pesticides and fertilizers. Moreover, the government facilitates the connection amongst NGOs, central and local government institutions, and private sectors for helping the farmers in a better way.

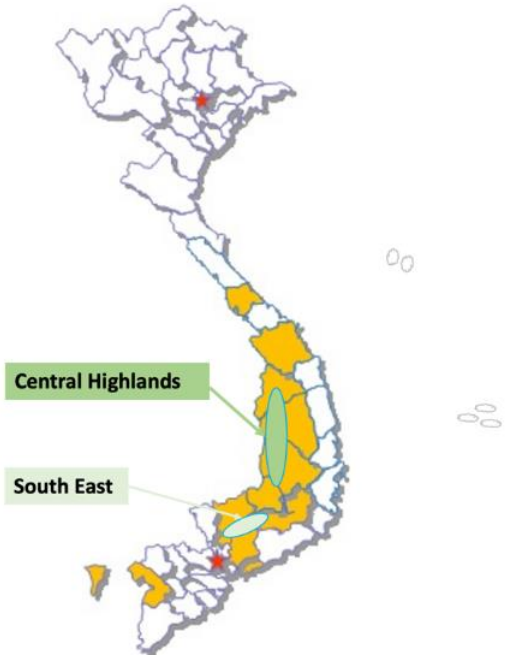


Figure 1: Peppercorn producing regions in Vietnam (in light orange colour)

While being the largest peppercorn producer worldwide, Vietnamese peppercorn sector is still struggling with some challenges. Firstly, it is hard to deal with the issues of pests and diseases, such as root rot disease caused by Phytophthora sp., and yellow leaves caused by nematodes and fungi. Pesticides using to control these two key pests also bring some related issues to the growers who truly believe that counterfeit, low quality and ineffectiveness of used pesticides contribute to the failure of pest management. Secondly, climate change might threaten peppercorn production in Vietnam since the dry season in the growing regions of peppercorn seems to be longer than usual. More water needed for irrigation and a lack of water resource can make pepper cultivation very challenging. Obviously, an increasing cost of fertilizers, pesticides, and watering for the intensive farming system can block the growers' efforts to take care their peppercorn plantations. Furthermore, there are more and more peppercorn sites with lower yields as expected because of their long-life cycle of producing and they need to be replanted. Last but not least, low quality peppercorn can be banned at export by potential markets if issues are found in terms of micro-toxin contaminations, non-traceability, and non-certification.

Becoming a country partner of the STDF/PG/619 Project, Vietnam would expect that the project can help its peppercorn sector to: (1) Improve in advisory services of crop and soil health, sustainability, traceability, quality management. (2) Gain better knowledge in pesticide contamination, micro-toxins, Code of Practices and Participatory Guarantee Systems. (3) Change organic peppercorn.

P6: Peppercorn Industry in Cambodia

Mr. Chhun Hy Heng

Deputy Director, GDA Cambodia

Mr. Chhun Hy Heng Pepper first presented Cambodia and key features of pepper production in Cambodia. Production of peppercorn is mentioned in documents as old as the reports of the Chinese explorer Tchéou Ta Kouan in the 13th century. The production has increased rapidly in recent years from 12 KMT in 2016 to 20 KMT in 2018. Production in 2019 is on target to register a further increase to 21 KMT. The total pepper production area in Cambodia in 2019 was 7,946 hectares. Deputy Director Mr. Chhun Hy Heng highlighted that Cambodia's Kampot pepper was awarded Protected Geographical Indication designation (PGI) in 2016, allowing it to be sold in EU countries as "Kampot pepper". In 2015, most of Kampot pepper (70%) was exported, mostly to the EU, the United States and Japan.

Mr. Chhun Hy Heng reminded to participants that it exists four different types of Cambodia Pepper depending on the time of harvesting and the processing they receive afterwards: Green pepper: is the unripe fruit of the pepper plant, harvested when still young in the plant. Black pepper is harvested when the berries start to turn from green to yellow, they are afterwards dried. Red pepper is the dried product of fully ripe berries. And last, white pepper is produced from red or ripe berries and by a subsequent process of soaking. Thereafter, Mr. Chhun Hy Heng described the different aromatic characteristics of Kampot pepper, with emphasis on flavors and taste from the green, black, red, white peppers from Kampot.

Interestingly, the Cambodia pepper production has kept increasing in the last 4 years, with 9,845 tons being produced in 2015, to 21,281 tons in 2019. The top pepper production province in Cambodia is from far the province of Tbong Khmum, with 14,960 tons. Other provinces are producing very much less quantities, with Rattanakiri (1,234 tons) and Kratie (1,216 tons) ranking second and third as producing pepper. Battambang, Kampong Cham, Kampot, Mondulkiri, Preah Vihear, Pursat and Kep also produce pepper but in even lesser quantities. Mr. Chhun Hy Heng presented the quantities of pepper exported from 2014 to 2020, with a trend towards a nearly fivefold increase from 2014 (1,159 tons exported) to nearly 5,000 tons exported in 2020. The exported pepper predominantly goes to Vietnam (3,219 tons in 2020); the second export is Germany (889 tons) and the third is Russia (460 tons). Other countries where Cambodia pepper is exported are Belgium, Canada, France, India, Brazil, Israel, Japan, Netherlands, and Thailand.

In the last part of the presentation, Mr. Chhun Hy Heng detailed the specific challenges for peppercorn production in Cambodia: lack of quality planting material, poor farm management, poor access to information especially on pests and diseases management, lack of pre-harvest risk management, limited implementation of Good Practices (GAP, GMP), complex supply chains and lack of traceability.

P7: Peppercorn Industry in Laos

Mr. Souliya Souvandouane,

Director of Agricultural Regulatory Division,
Department of Agriculture, Laos PDR

Mr. Souliya Souvandouane first described the background of pepper production in Laos PDR. Lao PDR pepper production is very small compared to Cambodia and Vietnam, estimates suggest about 6 KMT in 2018. The country is actively pursuing policies to increase export sales of pepper, although official exports account for only about 0.05 KMT or less than 1% of total production in 2018. Domestic consumption accounts for only 0.5 KMT. Official export of pepper from Lao PDR is low (US$0.02 million in 2015) but investors in Sekong province plan to increase production and exports, with a particular interest in exporting 90% of their production to Vietnam (250 tons by 2018). Most of the pepper production crosses the border to Vietnam through the central highlands including Kon Tum, Gia Lai and Dak Lak provinces along the border of Vietnam and Lao PDR.

The main regions are Salavan, Sekong, Champasuck, Attapeu provinces. In a very insightful slide, Mr. Souliya Souvandouane presented the main features of Laos peppercorn value chain: 60% of farmer production goes through small collectors and 25% through large collectors. A minor proportion, 15%, will reach directly trader/wholesaler, without any intermediary. Interestingly, 80% of what is collected by small collectors end up to large collectors. The climatic conditions from the 4 main provinces of production are shown, with minor difference of temperature and rainfall. Sekong and Attapeu provinces have larger pepper growing areas (66 ha and 24 ha respectively), compared to Salavan and Champasuck (0.6 -0.64 ha). Overall, 18.7 tons were exported from Sekong province and 10 tons from Attapeu province in 2019. Laos policy and vision for peppercorn development (“Vision 2025”) is production with a special focus on modernization, improvement of cleanness, safety, quality, stability, and sustainability. The main goals are that (i) specific crops are prioritized and respect food safety standards, and (ii) that “clean” agriculture is targeted at 20% of the total crop-planted area and half of the clean agriculture area is certified.

Mr. Souliya Souvandouane displayed the different regulations in Lao PDR for food safety legislation for primary production: Agriculture law, decision on Good Agriculture Practices (GAP) for Environmental Management Standard, for Food safety Standard, for Produce Quality Management standard and for Worker Health, Safety and Welfare standard. It is emphasized that there are regulation on Control of Pesticides in Lao PDR. Implementation of Voluntary Standards, such as Laos Organic Certified is to be noted, and GAP standards for a few crops are presented (e.g. maize, sugarcane). The SPS legislation in Laos follows Plant Protection and Quarantine Law, No 13/NA (2016), Food Law No 33/NA (2013), National Food safety Policy (2009), Export Regulation, No.2986/MAF (2019). It also follows ISPM standards No.7: Export Certification system and ISPM No.12: Guidelines for Phytosanitary certificates, and CODEX MRL standards. Department of Agriculture is the contact point for IPPC and for EUPHYTE. Finally, Mr. Souliya Souvandouane concluded with the main challenges of peppercorn industry in Laos: food safety risks: excessive pesticide residue levels and pathogen contamination (i.e. Salmonella or Mycotoxins), lack of quality planting material, poor farm management and post-harvest technology. There are pesticides active substances which are authorised in Lao, but banned in

the EU, such as carbofuran. There is still poor access to information and import requirement and supply chains suffer from being too complex and lacking traceability. For those reasons, the STDF project will aim at (i) developing a code of practice for Farm-village level pepper producer, collector and input provider based on existing national good practice standards and harmonized regionally (ii) conducting a pilot tested for Code of Practice and PGS based system developed for the pepper sector at farmer level (iii) supporting for market access and training for import requirement for potential market (EU) and (iv) Sharing Knowledge and experiences between participant Countries and domestic stake holder.

P8: Good Agriculture Practices (GAP) standards for peppercorn

Mr. Nguyen Van Long,

Head of Tech Transfer, PRDC Vietnam

GAP (Good Agricultural Practices) are first presented by 3 main areas: selection of cultivars, nutrition management and diseases management. Cultivars with high quality and highest yield, diseases-free are preferred. For nutrient management, Mr. Nguyen Van Long displayed to participants the key features for optimal nutrition: organic, mineral and foliar. Across the seasons and a whole year, the optimum level of fertilization is recommended for each stage of cultivation: bud setting, fruit set, young fruit and mature fruit times. Advantages of using fish fertilizer sources are shown, with fish fertilizer being produced at low cost and providing acid humic, vitamins, proteins, minerals and nitrogen sources to the soil. Main diseases on pepper in Vietnam are caused by nematodes and Phytophthora fungus. Key areas for successful diseases management are underlined: cultural practices, biological control and chemical control.

The main and interesting features are summarized by Mr. Nguyen Van Long for good cultural practices: soil cover, live support, regulation of shade, mulching, cover crop with a legume, and well-drained soil. For Biological Control, the use of Pseudomonas spp., Bacillus subtilis and Trichoderma spp. are presented and can help to reduce nematodes and diseases prevalence. Finally, for chemical control, Mr. Nguyen Van Long reminded that early detection and prevention must remain the best way for managing diseases, therefore reducing the pesticide inputs.

P9: CODEX standards for food safety and market access of peppercorn

Prof. Joni Munarso,

Vice Chairman of the Codex Working Group on Standard for Peppers Quality

Professor Joni Munarso first introduced the Codex Alimentarius and its key features. He reminded the participants that CODEX has developed many products such as Codes of Standard for quality and Maximum Residue Levels, guidelines, and Codes of Practices (CoP). The three main products from CODEX are dedicated to facilitate the fair trade and the consumer health.

Pr. Joni Munarso presented then one example of quality standards developed for Black, White and Green (BWG) pepper and adopted by CODEX in 2017. He highlighted that the standards apply to BWG peppers offered for direct consumption, as an ingredient in food processing or for repackaging. Yet, this excludes BWG peppers intended for industrial processing. He also pointed out that there is red pepper in Cambodia, but that the detailed standards apply for black, white and green pepper. Quality factors such as odour, flavour and colour are presented in several tables; besides those factors – there are physical and chemical properties of BWG peppers.

With regards to contaminants and food Hygiene, Pr. J. Munarso explained that the products shall comply with the maximum levels of the General Standard for Contaminants and Toxins in Food and Feed (CXS193-1995) and with the Maximum Residue Limits (MRLs) for pesticides established by the Codex Alimentarius Commission. Recommendations entail that the products shall be prepared and handled in accordance with the appropriate sections of the Code of Hygienic Practice for low moisture foods (CXC75-2015, Annex III) and other relevant Codex texts, such as codes of hygienic practice and codes of practice. The products should also comply with any microbiological criteria established in accordance with the Principles and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods (CXG21-1997). For the STDF coming project, each country will develop the specific CoP. Mycotoxins are still a very critical issue, with Dr. Joni Munarso pointing out Aflatoxin and Ochratoxin as the two main mycotoxins.

Pr. Joni Munarso further detailed how the Code of Practice (CoP) can work for the prevention and reduction of mycotoxins in spices. The objective of this specific CoP is to establish the prevention and reduction of mycotoxins in spices in order to attain as low as reasonably achievable level of these toxins by applying specific Good Agricultural Practices (GAPs), Good Manufacturing Practices (GMPs) and Good Storage Practices (GSPs) throughout all the steps in the food chain, thus reducing consumers' exposure through preventive measures. This CoP applies to spices - whole, broken, ground or blended. Dried aromatic herbs are not included under the scope of this CoP. With regards to the use of this CoP, it shall be used in conjunction with the Code of Hygienic Practice for Low Moisture-Foods (CXC75-2015) and its annex on spice and culinary herbs, and other relevant Codex codes of practice. It is importantly reminded that this Code is a recommendation to which producers, transporters, processors and manufacturers in different

countries should adhere as far as possible in order to ensure the safety of their products in all circumstances.

In conclusion of the presentation, Pr. J. Munarso highlighted the recommended practices based on GAP, GMP and GSP. They include pre-harvest and post-harvest agriculture recommendations, as well for industrial processing of pepper. Specific procedures for proper drying on the farm, transport, and suitable storage conditions are detailed.

P10: CODEX standards for food safety and market access of peppercorn

Dr. Grant Vinning,

International Market Development Specialist

Dr Grant Vinning introduced the concepts of PGS; Grant used to work in Solomon Islands with two buyers who were interested in organic product. The project tried to get the farmers certified organic but certifiers required land area to be clearly demarcated, amongst other requirements, this was not possible in Solomon Islands. If you have a willing buyer and a willing supplier, then there is no need to have a third party certifyer, as long as ground rules and commitments can be made. This is where PGS came into play. PGS is a quality assurance system promoting production of premium quality produce, and market arrangements that are reliable, consistent and volume requirements. PGS is not only about accepting a standard but also making money. The key is market knowledge. The figures below show farmers going into the kitchen of a hotel, and the chef of the hotel going into the field to meet the farmer. The farmers now understanding why the hotel demands t he quality they do, and the chef understanding the challenges and

opportunities with growing the food they require.

PGS is essentially a localized quality assurance scheme, based on active participation. It is based on three specific requirements: identified demand from the buyer (quality and scheduling), production, and business skills. It also facilitates sharing between the farmers; joint

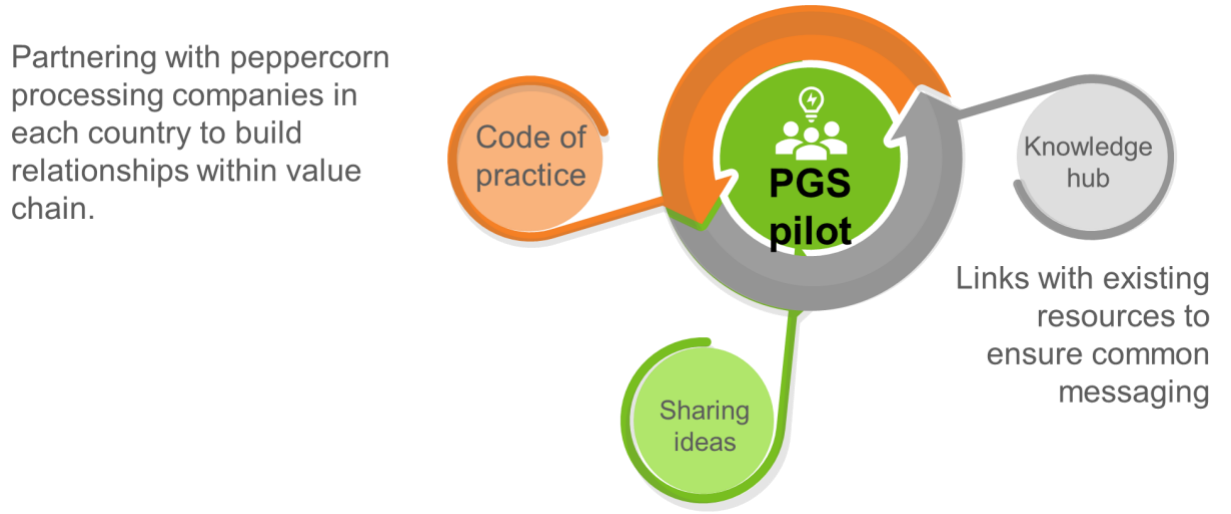
quality control (groups ensuring that produce is being grown to the quality they all agreed to). It is up to the farmers as a whole to “certify” that the product is at the agreed quality.

In peppercorn, there is no standard way of implementing PGS. We need to start off with a map. We will talk with grower groups about where they want to see themselves. As you move up the chain the profits get higher, but so does the responsibilities and difficulty of doing it. Some growers may be happy to take risk and increase quality, others not.

- We need to know what the growers want.
- Stakeholders take a public undertaking to comply, it does not need to be in law.
- Organisation and marketing skills are really important. Cooperative is a natural choice, but is it the best vehicle to do things?
- Then, we set about achieving what has been agreed.

Mayu Ino, then shared her experience of PGS in Vietnam, which started in 2009. Initially 86 farmers, now there are 7 PGS involving 550 farmers, including 6 private companies. Mayu’s organization is helping small scale farmers to apply PGS in organic production, in North Vietnam and Mekong Delta. Farmers income has increased. 15 – 20% increase in price is being achieved for coconut, and for vegetables, 3 times increase. Also retailers and supermarket, and coconut processors are also involved. All parties work together and discuss demands and production aspects, and agree on a plan. Prices are agreed before production. It is very unique and fair approach. Some larger farmers are now keen to join PGS and therefore it is becoming more diverse.

The idea of this approach for this project, is to create a platform for collaboration, not only within the project but also linkages with existing projects implemented by other organisations.



Open Discussion

Ms. Suzanne Neave,

Discussion leader, Entomologist and Value Chain Expert at CABI

Siva asked a question about the issue of CODEX and changing limits. Prof. Joni Munarso shared his experience from Indonesia, highlighting that it is a challenge.

Siva asked Grant how is sees the uptake of PGS with commercial farms. Grant gave an example of a beef farmer in Pakistan is several thousand ha, so there is no reason why commercial farmers couldn't be involved. The key is that everyone should commit. Dr Khoa agreed with Grant that currently we still need third party for organics, but the question is why we still need third party. Grant shared an example of a cocoa buyer who said that certification was also very expensive to maintain, not just for the farmer. Buyer's don't necessarily want organic but they do want an agreement to comply with a standard. Suz also added that markets highlighted that there is a growing interest and trend in the 'story behind the food'. PGS gives an opportunity to create the story.

Roshan commented on STDFs projects that are related to third party certification schemes. This is STDF's first project on PGS, but is interested to learn about the limiting factor, and why it is not globally known. Grant responded by saying that it depends on the market you are selling. PGS story and process. Large companies are trying to introduce their own schemes, as there is no follow up with certification and does not necessarily provide them with the reassurances they require. PGS is about every-day compliance. Roshan wanted to know about the challenges. Grant responded that it is rare that an end buyer communicates with the farmers. The ability to have one on one negotiation that everyone agrees on a standard, is what sets PGS apart from other approaches.