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Country Report
On
Plant Protection and Plant Quarantine
of Lao PDR

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1. Introduction

Protecting plants and crops from diseases and insects is as important as crop production.

The Lao People's Democratic Republic (Lao PDR) is a landlocked country with generally rugged terrain, limited infrastructure, a narrow human capital base and emerging social and economic institutions. Lao PDR is located in Southeast Asia, bordered by Viet Nam to the east (1957 km), Cambodia to the south (492 km), Thailand to the west and south (1730 km), Myanmar to the north west (230 km) and China to the north (416 km).

2. Outline of Lao agriculture

Agriculture is one of the most important sectors of the economic of Lao PDR. it contribute s to 50% of the GDP and employs 86% of the total labor force. Among agricultural sub-sector, rice production is the single most important activity and is undertaken primarily by small holder producers. In 2003, approximately 91% of the total rice area in Laos was planted to glutinous rice (Lao-Expenditure and consumption Survey, 2004). In the North, non-glutinous rice is more popular but still about 83% of rice area was planted to glutinous rice.

At present, only 6% of total land area is used for agriculture and pasture. Rice is grown on over 80% of the cultivated land. The other agricultural products include vegetables and fruits. Besides the promotion of cereal and food crop production for the society, market-oriented crop production is also significantly considered as important. Consequently the season is to shift natural-based and semi-natural economy to market economy that produces raw materials for agro-processing that can be commodity for domestic market and export in some extend. This result can create income earning about 10% of overall export ration or about 50 million dollars in 2005. Maize production in the last year has met the domestic demand. There is also part for export that increases from 117,000 tons in 2002 to 372,500 tons in 2005 (maize for feed – 305,150 tons and sweet corn – 67,400 tons). It is increased 3 folds comparing with year 2000. New marketable crop is introduced and being the potential development such as rubber tree - about greater than 6,000 hectares, agar wood – greater than 2,000 hectares. The main agricultural exports include wood and wood products, several valuable number of non timber forest product, coffee, cardamom, maize for feed, potato, job's tear, ground nut, cassava, sesame, cotton, mulberry paper, tobacco lea, cabbage head, banana, ginger, rice, spice and leafy vegetable. Among these, coffee occupies of total agriculture commodities exported. About 20,000 tons of primary processed coffee is exported per year. Europe is the main market for coffee.

3. Historical Background of Plant Quarantine and Plant Protection in Lao PDR

Formerly the Plant Quarantine activities in the country were the development of on ad-hoc system basis. Exact information data was rarely recorded. Since the Plant Protection Service in Laos was established in 1978 accordingly to the recommendation made by FAO following large-scale insect pest and disease outbreaks in 1976 and 1977. Immediate assistance was made available from FAO in 1976 under Technical Cooperation Programme (TCP). In association with the establishment of Plant Protection Service, Plant Quarantine awareness was considered as necessary. For the time being a numerous TCP have paid less attention on plant quarantine matters, while the introduction of high yielding varieties was very significant which the presence of colony of plant pest was difficult to identify.

In 1979, as a follow-up to the FAO TCP assistance, the project “Strengthening Plant Protection Service” started. The project provided some technicians through overseas training, developed a small diagnostic laboratory at central level, created four regional plant protection centers,

produced some lower level technicians through in-service training; created surveillance activities in some provinces. Some farmers had been trained in the use of pesticides and equipment.

The successive phase of project which started in the end of 1983 has undertaken a variety of activities including research on insect pest and diseases on rice in Vientiane plain. Thus, at that time, a small plant quarantine unit has been operating under the Department of Agriculture and functioning in the inspection of plant and plant products offered for exports. Plans to establish a plant quarantine service with quarantine stations in the water ports, land border posts and international airport have not yet completely materialized. With the end of the donor assistance project in 1988 the activities of the Plant Protection and the Plant Quarantine have been dramatically reduced while the regional centers have not been fully operational.

4. Importance and necessity of Plant Quarantine

As the Plant Quarantine still remains a measure which many country in the world use to protect and control the spread of pest and insects. Plant Quarantine awareness is significantly recognized in Laos. Hence, the Lao Government has promulgated the decree No. 66/PM “Decree on Plant Quarantine in Lao People’s Democratic Republic” (unofficial translation, annex-1). International Standard for Phytosanitary Measures (ISPMs) of the International Plant Protection Convention (IPPC), Sanitary and Phytosanitary Agreement (SPS) are considered as important references, especially, when the country is preparing to be membership of WTO. Therefore, it is necessary to improve and develop the Plant Quarantine in Lao PDR. As a result, accordingly to the decree No. 66/PM, the Ministry of Agriculture and Forestry has developed Plant Quarantine Regulation (unofficial translation, annex-2) that still continue to use up to present.

5. Plant quarantine in Lao PDR

Plant quarantine has been carried out in Plant Protection Center, Department of Agriculture, and supported by Agricultural Regulatory Division of Department of Agriculture.

In collaboration with Oxfam-CAA, Department of Agriculture organized the In-country training course on plant quarantine in 2007, which attended by 16 plant quarantine staff from 7 provinces and another training course in 2007 with government funding and contribution from JICA, which participated by 12 plant quarantine staffs from 5 provinces.

In addition 4 senior officials attended for the training courses were conducted on ASEAN-ROK Training Program on Plant Quarantine and 2 people in Japan and another 2 people in China.

At the present, Laos has 9 entry/exit plant quarantine border posts were officially established in the country and there were nationwide 27 plant quarantine inspectors.

6. Pest Management

Pest management is also nationwide recognized in Lao PDR through Integrated Pest Management Project which has been implemented since 1995 under the Technical Cooperation Programme between FAO and Lao PDR. Based on IPM project’s success, integrated pest management has been basically promoted for clean agriculture. National IPM Project Office based in Plant Protection Center has the central and local networks within the line institutions, aiming at promoting and educating farmers in sustainable and environmentally friendly pest management.

In 2000-2001, and with a reorganization of the Lao Ministry of Agriculture and Forestry (MAF), the IPM national team supporting the work was disbanded, program leadership was changed twice in rapid succession, the program was moved to the newly-established National Agriculture and Forestry Extension Service (NAFES), and counterpart capacity at the central level was assumed by a single part-time National IPM Coordinator.

In July 2005, the Lao government transferred the IPM programme in the Lao PDR from National Agriculture and Forestry Service (NAFES) to Department of Agriculture (DOA), Ministry of Agriculture and Forestry. Department of Agriculture, subsequently, appointed a staff of the Plant Protection Center (PPC) as National IPM Coordinator as well as one additional staff to be the support staff to assume the duties of the Lao IPM Programme, who then began setting up a Lao National IPM Office. To strengthen and develop a strong IPM programme at the national level, the Lao IPM programme has requested to the FAO IPM Programme (1) to recruit a temporary office assistant and four trainers (support staff) to assist the overall work in this office, (2) to assist in the rehabilitation of the national IPM office and (3) to provide the necessary equipment. Although, efforts for the development of overall, long-term programme strategy might not be effective until sufficient capacity and commitment exist to carry this process forward. In near future, it might be better to continue work on a limited number of activities which could serve to begin building the capacity of the national level team.

IPM activities play an important role on implementing the Lao government's current policies on agriculture with emphasis on increasing productivity, market-orientation, exports and household food security. At the same time, the policy also stresses the preservation of agricultural biodiversity and sustainability, equitable development, and the conservation of natural resources. Organic crops and production areas, and production for niche markets have also been advocated.

Strategy for integrated pest management has been placed on vegetables since 2005. Although the agricultural context in Lao PDR is changing, the overall strategy for vegetable IPM activities remains similar to that of previous periods. The primary issues that must be addressed before moving ahead with this strategy also remain the same.

Since 2005, the IPM activities in Lao PDR have been placed on increasing the capacity of IPM program and policy support, and increasing role of participation of the stakeholders especially farmers in the planning and implementation. In addition the promotion of involvement of additional agencies in the program support and implementation, including effective coordination among these agencies and strengthening technical and training capabilities among field staff. Furthermore, use of biological control agents, with possible field-level production has been initially developed and exploration and development of targeted methodologies for small-holder farmers for which vegetable production is a secondary vocation. The IPM project also continues biological control of coffee berry borer and coconut hispine beetles. More 14 farmer field schools were conducted in the target areas totally 231 farmers. A preliminary baseline survey was conducted in the northern and southern highlands of the country for the technical assessments on the situation of the parasitoids *Diadegma semiclausum* and *cotesia plutellae* which have been introduced to Lao PDR for control of diamond back moth.

7. Pesticide Management

Pesticide management has been nationally recognized since the declaration of Pesticide Regulation No. 0886/MAF, dated on 10/03/2000, aiming at management and prohibition of the

non-quality pesticides and harmfulness to human, plants, animals and environment in Lao PDR. In addition, the regulation also aims at giving definition, principles, measures and approaches for management and inspection of pesticides used in Lao PDR.

Up to date, 26 kinds of pesticides in Lao PDR are prohibited to use in the country. Presently, 100 brand names of the pesticides have been registered with DOA, consisting of 75 products from Vietnam and 25 from Thailand.

Lao PDR did not yet sign the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and their Disposal.

Ministry of Agriculture and Forestry has presented a recommendation for ratification of the Rotterdam Convention to the Prime Minister's Office. In April 2006, this recommendation was under consideration by STEA, which falls under the Prime Minister's Office.

8. Legal framework

- "Prime Minister Decree on Plant Quarantine" No.66/PM, dated 21 March 1993.
- "Ministerial Agreement on Plant Quarantine Regulation" No.0369/MAF, dated 02 July 1993
- "Ministerial Notice on Role and Function and Standard for Entry/exit Plant Quarantine Stations for implementing the Prime Minister Decree No.66/PM" No.0754/MAF.DoA.06, dated 14 July 2006

9. Assistance from donors

Plant Protection and Plant quarantine in Lao PDR has been developed following the ISPMs of IPPC in line with the government's policy through JICA cooperation initiative, cooperation programme under ASEAN – AusAID, ASEAN – NZAID, ASEAN-China and ASEAN-ROK .

9.1 NZAID

NZAID conducted "NZAID Project on Phytosanitary Capacity Development" for three years (2001-2004) to establish strategic plan on phytosanitary and national phytosanitary database (NPD). Now "Phytosanitary Capacity Building Project for the Mekong Region" is under preparing as a second phase project.

9.2 AusAID

AusAID is implementing "Sanitary and Phytosanitary Capacity Building Program" to enhance SPS capacity in Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Vietnam as a part of "Asia Regional Development Cooperation Program".

9.3 World Bank

WB is formulating a paper called "Sanitary and Phytosanitary (SPS) management Capacity Building Action Plan" which consolidates the methods to strengthen SPS in Lao PDR.

10. National goal and objectives

1. Improve inspection system at the main entry/exit points.
2. Draft new regulation on plant quarantine and plant protection in compliance with WTO/SPS requirements.

3. Improve pest surveillance systems and pest inventory and insect pest collection for major high economic potential crops.
4. Improve pest diagnostic capability.
5. Improve pest risk analysis capability.
6. Improve export certification system
7. Develop national pest of plant and plant products eradication standards.
8. Develop a repository of plant pest information on selected major crops based on general surveillance data by collating data/information on all previously recorded pests in the country and entering the data/information in the pest status records component of the national phytosanitary database (NPD).
9. Develop and strengthen of physical facilities (premise and equipment) required for plant pest diagnosis. This is to be required a two level-reference laboratory capable for diagnosis of a wide range of plant pest in the various disciplines in central laboratory that should be set in the Plant Protection Center (PPC) in Vientiane, and the development of smaller regional laboratories refurbishing with necessary rudimentary equipment capable for identification of plant pest at a more basic level at strategic location in the provincial offices near major entry/exit points and major crop production areas. In this context, the post-entry plant quarantine station should be also taken into account.
10. Develop the human resource capabilities for undertaking pest diagnosis in the various phytosanitary and plant health disciplines.

11. Constraints and Needs

(1) Constraints

- Insufficient of human resources, such as specialist in the field of biology, entomology, plant pathology, weed science, nematology, etc...
- Limited availability of financial budget for operational activities
- Inadequacy of equipment, laboratory, and tools.
- Insufficient number of staff to address significant role of border trade.
- Insufficient government and private support services.
- Weak publicity and awareness on importance of plant quarantine and plant health issue.

(2) Needs for Technical Assistance Cooperation

- Technical assistance for strengthening plant quarantine system and review of existing regulations.
- Rehabilitation of inspection points, laboratory and equipment.
- Capacity building of plant quarantine officials (entomologist, plant pathologist, etc...)
- National and international collaboration and linkages.
- Public awareness

(3) Training Needs

- Plant quarantine treatment
- Pest Risk Analysis inter-country
- Inspection procedure and sampling method for import and export commodities
- Pest identification and pest specimen preservation (central laboratory and part in regional laboratory)