COUNTRY REPORT ON CURRENT DEVELOPMENT OF PLANT PROTECTION IN MYANMAR

(2005-2006 to 2006- 2007)

SUMMARY

The economy of Myanmar depends on the agricultural sector, which generates about 43% of the total GDP. Myanma Agriculture service and Myanma Industrial Crop Development Enterprise are the two main departments, responsible for crop production. Myanmar is signatory to the IPPC since 2006, Plant Protection Division was designated as the National Plant Protection Organization (NPPO). Contact point for WTO/ SPS is Directorate of Investment and Company Administration (DICA).

By the cooperation projects of Aus AID, NZAID, and ASEAN dialogue partners, technology of insect and disease collection, curation, preservation, diagnostic, and fruit fly, thrip, mealy bug, whitefly, scale, lepidoptera and cercosporoid disease identification methods are widely become known . SPS awareness, Pest Risk Analysis (PRA) method, plant quarantine methods and pest list database methods have become improved.

The pest museum buildings have already been built and materials for insect collection, disease collection and weed collection have already prepared. NZAID project supported butterfly cages and one stereo microscope for insect identification. Internet assess has been already upgraded.

The plant quarantine law was under review by the FAO expert in 2006. Plant Protection Division has conducted the mango pest list survey throughout the country in 2006. Data collected from surveys have recorded by using Excel and Access formats. Team for the Pest Risk Assessments was formed with trained persons and PRA will be initiated by the end of 2007.

Pest outbreak is normally occurs on rice, pulses, cotton, maize, tomato, potato, onion, and durian crops. Chemical control is the effective method to manage outbreak problems in Myanmar. Agricultural extension staffs are employed in every townships throughout the country, apart from FFSs managed by plant protection division. Farmer's Field Schools were established since the year 2000, emphasis is made on rice, pulses and vegetable growing farmers.

Pesticide law is under reviewed and in progress. The old pesticide formulations such as EC, WP, GR, SL, etc. are still widely using in Myanmar. No pesticides, identified by the Rotterdam Convention and Stockholm Convention were registered in Myanmar. The pesticide consumption has increased in the fiscal years 2005-06 and 2006-07 due to the extension of sown acreage of pulses and cotton. Insecticide takes the first position, follow by fungicide and herbicide. Pesticide residue analysis was done on export commodities and locally consumed crops.

There are three neem pesticide formulation plants in Myanmar. The use of neem pesticide is being promoted in vegetables and food legumes.

Myanmar, as a developing country, was faced with many challenges resulting from changes in the international order of global trading.

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1. General Information

- Comments on the general organization of plant protection functions, in particular the degree of centralization or fragmentation as well as the involvement of other ministries or specialized agencies.

  The economy of Myanmar depends on the agricultural sector, which generates about 43% of the total GDP, 14% of total export earnings; and employs 63% of the total labour force. Under Ministry of Agriculture and Irrigation, two main departments, responsible for crop production are Myanma Agriculture Service and Myanma Industrial Crop Development Enterprise.

  Myanma Agriculture Service is trying to achieve surplus in paddy production, self-sufficiency in edible oil and to step up the production of exportable pulses. While, Myanma Industrial Crop Development Enterprise is trying to step up the production of industrial crops such as cotton, sugarcane, jute, rubber, coffee and oil palm.

- Role of the national plant protection organization for the implementation of WTO-SPS rules.

  Plant Pest Quarantine law has been enacted in 1993. Plant Protection Division, under Myanma Agriculture Service was designated as the National Plant Protection Organization. It has undertaken the responsibilities with transferring the plant protection technology to farmers, solving the pest outbreak problems, accomplishing the performance of the Plant Pest Quarantine Law. Myanmar is a signatory to the IPPC since May 2006, notification of organization had been made through FAO office in Myanmar. Head of PPD is official contact point for IPPC and APPPC, however contact point for WTO/SPS is from Directorate of Investment and Company Administration (DICA), Ministry of National Planning and Economic Development.

- Role of the national plant protection organization in the implementation of international pesticide conventions.

  Myanmar, Pesticide Law in line with the FAO guidelines has been enacted since 1990. In exercise of the powers conferred under section 50 (a) of the Pesticide Law, the Ministry of Agriculture & Irrigation with the approval of the government, has prescribed the procedures relating to the Pesticide Law, in 1991. The government of the Union of Myanmar, formed the Pesticide Registration Board (PRB) constituted with (10) competent authorities from Ministry of Agriculture, Ministry of Health, Ministry of Forest, Ministry of Livestock Breeding & Veterinary and Ministry of Trade, in 1992. The secretary of PRB is the head of Plant Protection Division. Plant Protection Division has undertaken the responsibilities to accomplish the performance of the Pesticide Law.

- General review of progress technical, policy/ legal, infrastructural and institutional development and challenges in national plant protection since 2005.

  By the cooperation projects of Aus AID, NZAID, the technical assistance for phytosanitary capacity building is now in progress. Technology of insect and disease collection, curation, preservation, diagnostic, and fruit fly, thrip, mealy bug, whitefly, scale, lepidoptera and cercosporoid disease identification methods are widely become known in ASEAN countries by training workshop and re-entry workshop.

  By the cooperation projects of Aus AID and ASEAN dialogue partner countries such as China, Japan, Korea, SPS awareness, Pest Risk Analysis (PRA) method, plant quarantine methods and pest list database methods have become improved.

  The pest museum buildings have already been built and materials for insect collection, disease collection and weed collection have already prepared. NZAID project supported butterfly cages and one stereo microscope for insect identification. Internet assess has been already upgraded.

2. Plant Quarantine

- Changes in the organization, legislation and regulations since 2005.

  The plant pest quarantine law was under reviewed by the FAO expert in 2006. Some changes and amendments in line with International Plant Protection Convention (IPPC) are in progress. The NPPO, the Plant Protection Division (PPD) through the Plant Quarantine Service, was the agency mandated to regulate the movement of plants and plant products. One new border station adjacent to the India border was opened in 2006.

- Adequacy of personnel and facilities for the execution of plant quarantine functions.

  Training for inspectors in the fields of inspection, sampling methods, treatment procedures, post-entry quarantine studies, International Standards for Phytosanitary Measures, Identification tools, etc are required.

- Progress in the establishment of pest free places of production and pest free production sites.

  Plant Protection Division has conducted the mango pest list survey throughout the country in 2006. The pest images that need to be identified by the specialists have been uploaded at Mango Pest Website namely " picazaweb.google.com ". Pest list and pest distribution map are the basic components to establish the pest free places of production and pest free production sites.

- Impact of cooperation projects.

  (1) Aus AID SPS capacity building programme.

(2) ASEAN Australian Development Cooperation Program (AADCP).

(3) Phytosanitary Capacity Building Project for the Mekong Region (CLMV) Countries second phase assisted by NZAID, New Zealand Government

(4) Various trainings/ workshops under ASEAN cooperation programme.

- Number of phytosanitary certificates and import inspections in relation to the export/ import of agricultural commodities.

2005-2006

International Trade		
Main Import Plant Commodities	Main countries of origin	No. of phytosanitary inspections
- Germinated oil palm seeds	Costa Rica, South Africa ,	277[number]
-Orchid Plant; Ornamental plant ; Vegetables and Fruits seeds ;Cut flowers.	Thailand	
- Grape cutting ;Rubber cutting; Tulip cutting	Isreal,Singapore, Spain; Malaysia; Netherlands	
Main Export Plant Commodities	Main destination countries	
-Pulses	India,Malaysia,Indonesia,Pakistan,China,Bangladesh, Sri Lanka, Korea, U.A.E, Japan, Thailand, Egypt, Philippines, Vietnam	8418 [number] 901094 MT
-Oil crops (Groundnut, Sesame)	China, Singapore, Japan,	285 [number] 21470 MT
-Maize; Cereal ;	Malaysia,China,Singapore,Bangladesh, Korea, Togo, Ivory Coast, Sierra Leone	432 [number] 272715 MT
-Timber	India, Malaysia, Indonesia, Pakistan, China, Bangladesh, Vietnam	6867 [numb er] 743618 HT

2006-2007

International Trade		
Main Import Plant Commodities	Main countries of origin	No. of phytosanitary inspections
- Germinated oil palm seeds	Costa Rica	328 [number]
- Ornamental plant	Germany, Nether land	
- Cassava cutting	Thailand	
- Vegetable seeds	Thailand, China	
- Rice Seed	Philippines	
Main Export Plant Commodities	Main destination countries	
-Pulses	India,Malaysia,Indonesia,Pakistan,China,Bangladesh, Sri Lanka, Korea, U.A.E, Japan, Thailand, Egypt, Philippines, Vietnam, Nepal	12187 [number] 1238348 MT
-Oil crops (Groundnut, Sesame)	China, Singapore, Japan,	447 [number] 40297 MT
-Maize; Cereal ;	Malaysia, Indonesia, China, Singapore, Thailand, Bangladesh, Vietnam	627 [number] 197644 MT
-Timber	India, Malaysia, Indonesia, Pakistan, China, Bangladesh, Vietnam	7313 [numb er] 711847 HT

- Effectiveness of interception of quarantine pests.

  For the time being, no interception has been done, due to the importation of limited quantities of plant propagative materials and mostly was treated with internationally recognized standard treatment procedures.

- Progress in preparation of lists of regulated pests in accordance with ISPM 19.

  Survey programs had been carried out to investigate existing pest lists since 2006. Data collected from surveys have recorded by using Excel and Access according to the formats provided by ASEAN Australian Development Cooperation Program (AADCP). However, Pest status information system needs to be reviewed in line with International Phytosanitary Standards for Surveillance (ISPM 6).

- Progress of pest risk assessments.

  Team for the Pest Risk Assessments was formed with trained persons and PRA will be initiated by the end of 2007. PRA training that had been provided to ASEAN countries approaches the matter from the view point of a prospective importing country and their concerns about the introduction of new pests. As Myanmar is the exporting country of agricultural products, technical market access looks at the issue from the point of the prospective exporter who may be frustrated by lack of, or slow access, to new markets.

- Status of implementation of International / Regional Standard for Phytosanitary Measures (ISPMs/ RSPMs) and target date for full implementation.

  The guidelines on the main international standards for phytosanitary measures received from the IPPC from time to time were considered and followed according to the resources available and conditions prevalent. Myanmar is committed to implement the international and regional phytosanitary standards and collaborating in this regard at regional and international levels according to available resources.

Others

- Use of International Phytosanitary Portal (IPP) for information exchange, setting up national phytosanitary information website; other forms of distribution for the information.

  International Phytosanitary Portal (IPP) for information exchange is occasionally used, but national phytosanitary information website has not set up yet.

- Phytosanitary capacity evaluation (PCE); training on phytosanitary capacity building.

  Phytosanitary capacity evaluation (PCE) tool, version 2005 has been received and the latest evaluation was done in May, 2007.

- Proposal on Regional Standards for Phytosanitary Measures (RSPMs) and ISPMs to be set or revised; possible contribution for RSPM development to the Commission.

  Myanmar has no proposal on Regional Standards for Phytosanitary Measures (RSPMs) and ISPMs to be set or revised, possible contribution for RSPM development to the Commission.

3. Surveillance, Pest outbreak and invasive species management.

- Changes in national strategy, organization, legislation and regulations since 2005.

  Department of Forest, Myanma Agriculture Service and Myanma Industrial Crop Development Enterprise, which may also have responsibilities for pest surveillance within their mandated functions. Myanmar has identified the priority crops as the target for building pest lists through surveys with a view to furthering export opportunities. The crops nominated are pigeon pea, mung bean and black gram.

  Pest outbreak is normally occurs on rice, pulses, cotton, maize, tomato, potato, onion, and durian crops. Chemical control is the effective method to manage outbreak problems in Myanmar.

- Adequacy of personnel and facilities in relation to pest outbreaks and invasive species management.

  Personnel from private pesticide companies and departmental concerns are trying to solve the out break problems.

- Successes or difficulties in controlling pest outbreaks and the eradication of newly invaded species.

  Up to now, pest outbreak problems have been successfully solved.

4. Pest Management

- Assessment of national policies, rules and regulations for sustainable and environmentally friendly pest management.

  Myanmar has national IPM policy (ies) and is one of the main pillars to the development of Plant Protection. It has been established by steering committee since 1999. It supports the needs for Integrated Pest Management as a national crop protection policy. It also makes decision on information exchange regarding Integrated Pest Management between Myanmar and other ASEAN countries and International organizations.

- Adequacy of extension personnel and facilities for educating farmers in sustainable and environmentally friendly pest management.

  Agricultural extension staffs are employed in every townships throughout the country, apart from FFSs managed by plant protection division, some frontier field camps are located in the most of intensive crop growing areas.

- Successes or difficulties in changing pest management practices of growers.

  It is difficult to have IPM concepts to farmers because they are relying too much on pesticides. Also there is no market or no demand on pesticide residue free commodities.

- Assessment of the impact of IPM on production and pest management, particularly in the crops requiring most pesticide applications.

  Currently Integrated Pest Management (IPM) practices are being adopted to make less pest damage. The other aspect of the botanical insecticide like neem pesticide has been tested against the vegetable pests in field condition.

- Changes in the market share of alternative pest management technology in relation to chemical pest control.

  There is no data about the market share of alternative pest management technology in relation to chemical pest control.

- Assessment of on-going farmer education activities in IPM and general pest management.

  Farmer's Field Schools were established since the year 2000, emphasis is made on rice, pulses and vegetable growing farmers. However, the assessment of FFSs education activities in IPM and general pest management has not done yet.

- Impact of pest or on-going international cooperation projects in IPM

  Myanmar has no on-going international cooperation projects in IPM since 2005.

- Progress in the introduction of good agricultural practices for pest management.

  The introduction of good agricultural practices for pest management is just initial stage in Myanmar.

5. Pesticide Management

- Changes in national strategy, organization, legislation and regulations since 2005.

  Pesticide law is under reviewed. Pesticides, which are under WHO hazardous class 1a and 1b, is not considered to grant pesticide registration except rodenticides. Pesticide

Registration Board (PRB) is considering to band the only one organo-chlorine, Endosulfan which is aimed to use on cotton. DDT is restrictedly allowed to use for malaria control only.

- National targets and efforts with regard to pesticide reduction.

  Due to the introduction of multiple cropping system and intensive agricultural programme, pest incidence has become more problematic and the trend of pesticide demand is increasing annually. The old pesticide formulations such as EC, WP, GR, SL, etc. are still widely using in Myanmar. Newer types of user and environment friendly pesticide formulations are considered priority to grant the registration by the pesticide registration board in the future.

- Status of ratification and implementation of international conventions on pesticide management (Rotterdam, Stockholm, Basel, Montreal) including national strategic planning for ratification and implementation of the conventions.

  Myanmar has ratified the Stockholm convention in 2004 and National Commission for Environmental Affairs (NCEA) under Ministry of Forest is managing implementation of the convention. Director General, Department of Agricultural Planning is Designated National Authority to implement the PIC procedures. No pesticides identified by the Rotterdam Convention and Stockholm Convention were registered in Myanmar and hence could not be used.

- Status of the implementation of International Code of Conduct on the Distribution and use of Pesticides.

  Plant growth regulator, defoliant, desiccant and agent for thinning fruit etc, are being granted registration by the PRB and necessary amendments are being made in the Pesticide Law. The advertising of pesticides in the media is needed prior approval by the technical member of PRB. The staff involved in sale promotion must have certified pesticide applicator training certificate.

- Adequacy of personnel and facilities for the implementation and enforcement of pesticide regulations.

  Pesticide inspectors are assigned in most of the district levels and every states and divisions with skills completed trainings in sound management of pesticides.

  The private entrepreneurs involved in pesticide industry have very limited knowledge of newer technology for production, the latest types of user and environment friendly formulations and about the provisions under Stockholm Convention on POPs. The Pesticide Registration Board will make use of awareness to the newer technology and to pursue these persons to see clear picture on this important task in the future.

- National trends in the amount and composition of pesticides use.

  The pesticide consumption has increased in the fiscal years 2005-06 and 2006-07 due to the extension of sown acreage of pulses and cotton. Insecticide takes the first position, follow by fungicide and herbicide.

- Progress in the monitoring and management of pesticide residues in food and the environment.

  Pesticide residues analysis was done on export commodities and locally consumed crops for the purpose of issuance of sanitary certificate, research and the harmonization of ASEAN MRLs. Issuance of sanitary certificate becomes a vital role due to the WTO, SPS agreements. Myanmar, as a developing country, was faced with many challenges due to the lack of skilled personnel who are specialized in the subject matters and need of analytical instruments and chemicals.

- Development and application status of bio-pesticides, including botanical pesticides.

  There are three neem pesticide formulation plants in Myanmar. The production of neem pesticide from these plants are about 30,000 liters per year and it is formulated 1% azadirachtin as Suspension Concentrate (SC). The quality assurance of neem pesticides produced in various factories was individually controlled by High Performance Liquid Chromatography (HPLC) analysis. Production was based on the demand from various states and divisions, because of the limited or short shelf-life of the neem pesticide**.** Strengthening of existing facilities for technology development is essential, for example, changing the formulation type.

  The use of neem pesticide is being promoted in vegetables and food legumes. Although several brands of *Bacillus thuringiensis* are registered in Myanmar, the farmers do not widely use B.T.

- Changes in the list of banned/ prohibited pesticides.

  There are no changes in the list of banned/ prohibited pesticides.

- Impact of cooperation projects in pesticide management.

  Myanmar has no cooperation projects in pesticide management since 2005.

6. Additional Information and General comments conclusion

- Status of implementation of good agricultural practice (GAP)

  Training on GAP standards for food safety and produce security of post-harvest fruits and vegetables is conducted to the farm managers and private growers in all parts of the country.

- Status in the cultivation of GMO crops with pest management properties.

  No importation of GMO seeds into Myanmar, therefore no information of pest problems has been reported.

- Main challenges in the implementation of plant protection.

  Myanmar, as a developing country, was faced with many challenges resulting from changes in the international order of global trading. The most enormous challenge was lack of skilled personnel who are specialized in subject matters. The network of the plant protection at the central and local levels has also not yet been strengthened while infrastructure, especially laboratory facilities, has been considerably low.

- Changes under discussion

  To identify the problems on major use of pesticide on crops.

  To develop the crop-based IPM packages.

  Plant Protection Clinics are established in some selective areas in most of the states and divisions with the main responsibility to offer consultancy service for farmers for plant protection technical know-how.

- International cooperation projects/ program for plant protection.

  (1) Capacity building for sanitary issues.

  (2) Market assessment capacity building.

  (3) Diseases diagnostic and identification capacity building.

  (4) Insect diagnostic and identification capacity building.

  (5) Weed diagnostic and identification capacity building.