# 2.9 KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF

## I. GENERAL INFORMATION

Last updated: December 2008

### Overall Executive Summary

The "Juche-based Farming Method" established in the Democratic People's Republic of Korea includes all parts of the farming method as well as the management of pests in crops. The method is updated every year by the Ministry of Agriculture (MOA) for dissemination to cooperative farms across the country.

Pest management by protecting, producing and applying natural enemies such as Trichogramma and biopesticides, while using few chemical pesticides in the fields, is included recently in the method to increase yields of crops.

The Central Plant Protection Station (CPPS), the Ministry of Agriculture, is responsible for carrying out surveillance and managing significant pests in crops in the fields, while the Ministry of Land and Environment Protection is responsible for pest management in the forest.

In 2008, the MOA re-organized the County Plant Protection Office in every county under the CPPS. Each office would survey the outbreak of pests in its county, produce and provide biopesticides such as Trichogramma and Beauveria bassiana to the co-operative farms, educate and train farmers on pest management and report its activities and status of the situation to the CPPS through the Province Plant Protection Station during cropping seasons.

In DPRK, the Central Plant Quarantine Station (CPQS), MOA, is responsible for inspecting and quarantining seeds and planting materials. CPQS also trains the quarantine staff of the Korea Export & Import Commodity Inspection & Quarantine Committee (KIQC). On the other hand, the State Administration for Quality Management (SAQM) is responsible for inspecting and quarantining plant commodities while the Bio-Safety Committee (BSC), the State Academy of Sciences, is responsible for inspecting and quarantining genetically modified organisms.

In 2007, CPQS updated the "Animal and Plant Quarantine Regulations on Border" and compiled new "Minor Regulations of the Border Animal and Plant Quarantine" with the support of SAQM.

From 2007-2008, Swiss Development Cooperation (SDC) offered assistance such as training on vegetable IPM and provision of 4 sets of Trichogramma rearing facilities to 4 respective counties and Bt facility to AAS.

In 2008, the State Administration for Quality Management (SAQM) sent a delegation to China for technical exchange in the field of phytosanitary measures and regulations.

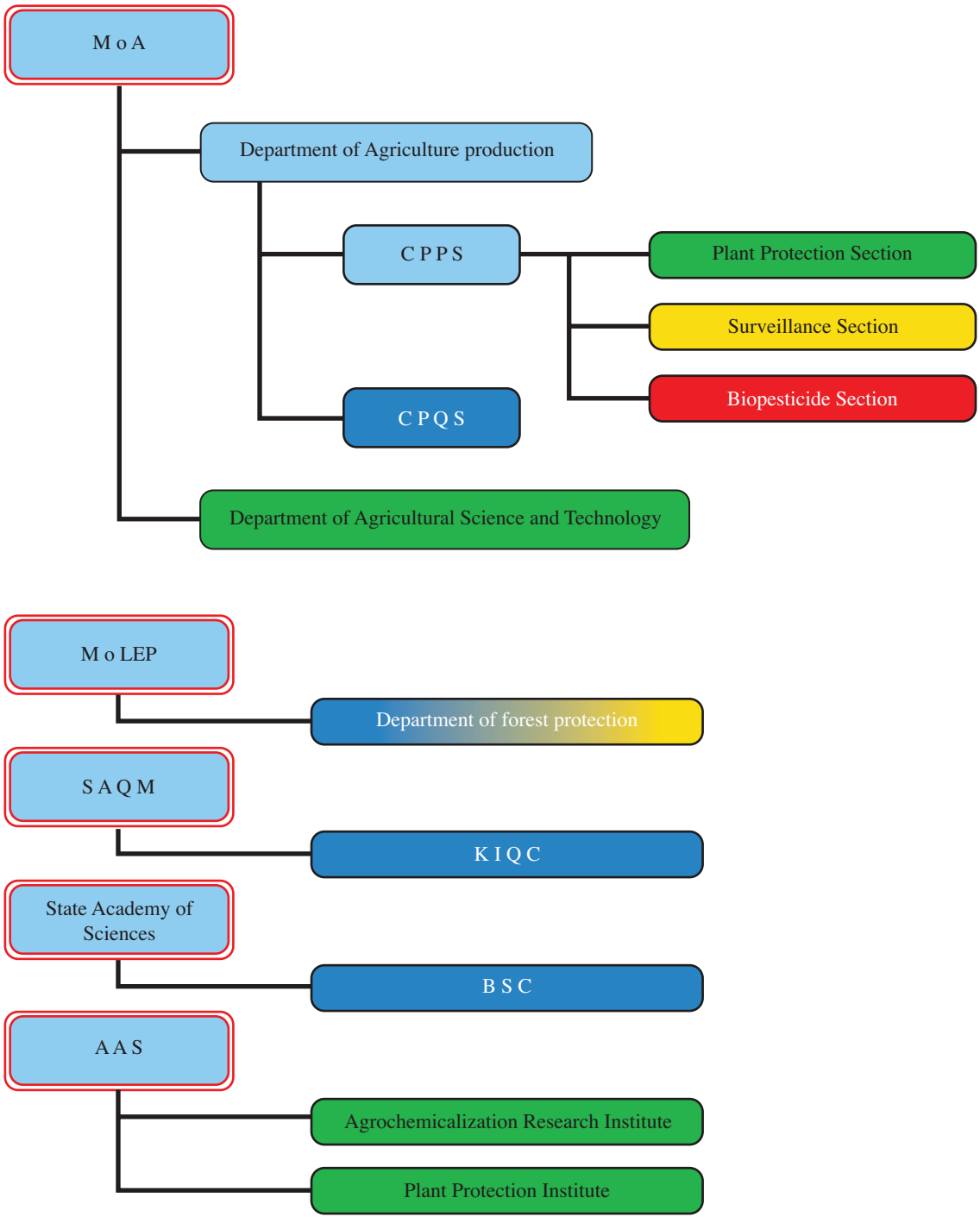
During the period from 2009-2010, DPRK plans to increase the investment in pest management, such as pest control in the fields, production of biopesticides as well as phytosanitary measures and regulations.

It is noted that DPRK will control Corn Borer, using the biopestisides such as Trichogramma, with less use of chemical pesticides throughout the country.

From 2009-2011 the European Union plans to support CPPS, MOA, the Plant Protection Institute and AAS through a project entitled the "Integrated Pest Management Application to Maize Production for Food Security in DPRK" which will provide 24 counties with Trichogramma Rearing Facilities and train personnel for the quality control of production.

CPQS, MOA, will train more phytosanitary staff and uplift the level of pest risk analysis with the support of SAQM which will provide the advanced inspection equipment with cooperation of

## Plant Protection Organization Chart




*Color Code:* Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

## Important Contact Addresses

**Responsible Ministry/Ministries**

Ministry of Agriculture
*Mr Kim Kyong Il, Officer*
Jungsong-dong, Central District
Pyongyang City, Korea, DPRK

***Operational Offices:***

**Plant Protection**

Central Plant Protection Centre
*Mr Kim Chun San, Director*
Ministry of Agriculture
Janghun Dong No. 1, Mangyongdae District
Pyongyang City, Korea, DPRK
Fax: (+850) 2 381 4427; 850 2 381 4081

**Pesticide Registration**

Agrochemicalization Research Institute
*Mr Kim Chi Yong, Director*
Academy of Agricultural Sciences
Chonggye-dong, Ryongsong District
Pyongyang City, Korea, DPRK
Tel: (+850) 2 18111(381 8557)
Fax: (+850) 2 381 2100
E-mail: ilsop@co.chesin.com

## Official International Contact Points

**National Plant Protection Organization (NPPO) Contact Point** (for IPPC/APPPC)

National Committee for FAO
*Mr Pak Chun Il, Coordinator*
P.O. Box 44
Jungsong-dong, Central District
Pyongyang City, Korea, DPRK
Tel: (+850) 2 (Through operator)
Fax: (+850) 2 381 4460
E-mail: myonghyok.kim@fao.org
Language(s): English
Contact point received: – Source: NPPO Directory

Central Plant Protection Station (country report)
*Mr Kim Chun San, Director*
Ministry of Agriculture
Janghun Dong No. 1 Mangyongdae District
Pyongyang City, Korea, DPRK
Fax: (+850) 2 381 4427; 850 2 381 4081
Source: Country Report

**WTO SPS Contact Point**

**Rotterdam Convention (PIC) DNA Industrial Chemicals and Pesticides (CP)**

National Committee for FAO
*Mr Pak Chun Il, Coordinator*
P.O. Box 44
Jungsong-dong, Central District
Pyongyang City, Korea, DPRK
Tel: (+850) 2 (Through operator)
Fax: (+850) 2 381 4460
E-mail: myonghyok.kim@fao.org

**tockholm Convention (POP) National Focal Point**

National Coordinating Committee for Environment
*Mr Kim Yong U, Coordinator*
P.O. Box 44
Jungsong-dong, Central District
Pyongyang City, Korea, DPRK
Tel: (+850) 2 (Through operator)
Fax: (+850) 2 381 4460

**Basel Convention Competent Authority (CA)**

National Coordinating Committee for Environment
*Mr Kim Yong U, Coordinator*
P.O. Box 44
Jungsong-dong, Central District
Pyongyang City, Korea, DPRK
Tel: (+850) 2 (Through operator)
Fax: (+850) 2 381 4460

**Montreal Protocol Focal Point**

National Coordinating Committee for Environment
*Mr Kim Yong U, Coordinator*
P.O. Box 44
Jungsong-dong, Central District
Pyongyang City, Korea, DPRK
Tel: (+850) 2 (Through operator)
Fax: (+850) 2 381 4460

**Selected Country Statistics:**

| | | | |
|---|---|---|---|
| Agricultural Population | 7.0 million | Agricultural Land | 1.85 million ha |
| GDP US$ million | Agric. GDP: % | GNI per capita: US$ | Undernourishment: % |
| Main crops grown: rice, maize, soybean, potato, wheat, barley. | | | |

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

## II. PLANT QUARANTINE

Last updated: December 2008

### Executive summary

During the period from 2007-2008, there were some changes and developments in fields of phytosanitary measures and regulations.

- updated the Regulations of the Border Animal and Plant Quarantine.
- inspected and quarantined seeds and planting materials from other countries.
- arranged technical training workshops for quarantine staff.
- established one more quarantine post in the northern border line.
- prepared to formulate new plant quarantine pests.
- conducted a preliminary analysis on some pest risks with the SAQM.
- visited China for cooperation and technical exchange with MOA in 2007.

- inspected and quarantined plant commodities
- engaged in technical exchanges with AQSIQ, China, in 2008.

- inspected the genetically modified organisms of plants

The business plan envisaged for the next two years is as follows:

- Analysis of more pest risks by collaborating with pest specialists,
- Updating the list of plant quarantine pests, and
- Training of quarantine staff.

**List of Key Legislation/Regulations/Rules**

"Legislations of the Border Animal and Plant Quarantine" by the decision of Standing Committee of the Supreme People's Assembly, DPRK, No. 89, 16 July 1997.

"Regulations of the Border Animal and Plant Quarantine" by the Cabinet of DPRK, 14 February 1998.

"Minor Regulations of the Border Animal and Plant Quarantine" by the MOA, Sep, 2008

Web source for further information: –

| (regarding plant quarantine) | Yes | No |
|---|---|---|
| Does phytosanitary legislation cover domestic quarantine? | x | |
| Does phytosanitary legislation cover import quarantine? | x | |
| Does phytosanitary legislation cover export quarantine? | x | |
| Does phytosanitary legislation cover living modified organisms? | x | |
| Is plant quarantine a separate organization from animal quarantine? | x | |
| Other policy initiatives (under review/progress) | | |
| Web source for further information: – | | |

| Organization of Plant Quarantine Functions | Responsible Organizational Unit (Ministry/Department/Unit) |
|---|---|
| Pest Risk Analysis | KIQC |
| National standards development | MOA/MOLEP |
| International notifications | CPPS/SAQM |
| | |
| Import permits | CPQS/SAQM/BSC |
| Import inspections | SAQM/CPQS/BSC |
| Emergency action | MOA/CPPS |
| | |
| Phytosanitary certificates | CPQS/SAQM/BSC |
| Treatment of commodities | SAQM |

MOA Ministry of Agriculture
Ministry of Land & Environment Protection
CPPS Central Plant Protection Station
CPQS Central Plant Quarantine Service
KIQC Korea Export & Import Commodity Inspection & Quarantine Committee
SAQM State Administration for Quality Management
BSC Bio-Safety Committee
AAS-PPI Academy Agriculture Science-Plant Protection Institute
ARI Agrochemicalization Research Institute

| Infrastructure | Years: 2007-2008 |
|---|---|
| Number of plant quarantine officers authorized to inspect/certify | 56 |
| Total qualified personnel for plant pest risk analysis | 32 |
| Number of quarantine offices | 30 |
| entry points (sea/air/land/mail = total) | 7/1/17/1 = 26 |
| post-entry plant quarantine containment facilities | 2 |
| other offices | 2 |
| Number of quarantine service diagnosis laboratories | 7 |
| In-country recognized pest diagnostics capabilities (incl. universities, etc.) | |
| Number of laboratories for insect/mite (arthropod) samples | Many |
| Number of laboratories for bacteria samples | Many |
| Number of laboratories for virus samples | Many |
| Number of laboratories for fungus samples | Many |
| Number of laboratories for mycoplasma samples | Many |
| Number of laboratories for nematode samples | Many |
| Number of laboratories for plant/weed samples | Many |
| Number of laboratories for other pests (snail, slug, rodents, etc.) | Many |

| Pest Free Areas According to ISPM 10 | Responsible Organizational Unit (Ministry/Department/Unit) |
|---|---|
| Overall management | MOA/MOLEP |
| – surveillance | CPPS/SAQM |
| – management | CPPS |
| – certification | CPPS/SAQM |
| List of target pest species and crops ISPM 4 | Number of sites in 2008 |
| | |
| | |
| List of target pest species and crops ISPM 10 | Number of sites in 2008 |
| | |
| | |

## Key Situation Indicators

| International Trade | | Years: 2007-2008 |
|---|---|---|
| Main Import Plant Commodities | Main countries/areas of origin | Quantity (tons) |
| Rice | China | |
| Maize | China/Australia | |
| Wheat | China/Australia/Ukraine | |
| | | |
| Main Export Plant Commodities | Main destination countries | |
| | | |
| | | |

| Cooperation Projects | | | |
|---|---|---|---|
| Title (Purpose/Target) | Donor | Amount | Years (start-end) |
| | | | |
| | | | |
| Title of government follow-up programmes | | Amount | Years (start-end) |
| | | | |
| | | | |

## Key Operation Indicators

| Institutional Functions | Years: 2007-2008 |
|---|---|
| Number of import permits issued | |
| Number of import inspections carried out | |
| Number of emergency phytosanitary treatments taken on imports | |
| Number notifications of non-compliance | |
| Number of conventional phytosanitary certificates issued | |
| Number of electronic phytosanitary certificates issued | |

| Number of quarantine pests intercepted | | Years: 2007-2008 |
|---|---|---|
| Top three commodity | Top three pest/commodity | # of interceptions |
| | Unaspis yanoensis/Orange | |
| | Plnococcus citri Risso/Orange | |
| | Polyphagotarsonemus latus/Orange | |
| | | |
| | | |

| Lists of Regulated Pests | Year of last update | Insects | Pathogens | Plants |
|---|---|---|---|---|
| Number of quarantine pests | 2004 | 79 | 63 | 33 |
| Number of regulated non-quarantine pests | | | | |
| Number of regulated import articles | | | | |
| Website for the above information: – | | | | |

| Pest Risk Analysis | Insects | Pathogens | Plants |
|---|---|---|---|
| No. of PRA completed and documented (according to ISPM) | 11 | 3 | 0 |
| Web source for further information: – | | | |

## Progress and Constraints

| **Main Progress in Recent Years** (legislation, policies, infrastructure, investments, training, etc.) |
|---|
| Updated the Legislations of the Border Animal and Plant Quarantine.<br>Conducted training courses for phytosanitary staff. |
| **Main Constraints** (personnel, infrastructure, administrative, operational, training, etc.) |
| Staff training on the PRA and surveillance. |

| Implementation of ISPM | Relevance | | | Implementation | | | | Planned/Actual Year of full implementation |
|---|---|---|---|---|---|---|---|---|
| **International Measures** | low | medium | high | none | partial | most | full | |
| ISPM 01 Principles of plant quarantine as related to international trade | | | x | | | x | | |
| ISPM 02 Guidelines for pest risk analysis | | | x | | x | | | |
| ISPM 03 Code of conduct for the import and release of exotic biological control agents | | x | | | | x | | |
| ISPM 04 Requirements for the establishment of pest free areas | | x | | x | | | | |
| ISPM 05 Glossary of phytosanitary terms | | | x | | | | x | |
| ISPM 06 Guidelines for surveillance | | | x | | | x | | |
| ISPM 07 Export certification system | | | x | | | | x | |
| ISPM 08 Determination of pest status in an area | | | x | | | | x | |
| ISPM 09 Guidelines for pest eradication programmes | | x | | x | | | | |
| ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites | | | x | | | | x | |
| ISPM 11 Pest risk analysis for quarantine pests | | | x | | x | | | |
| ISPM 12 Guidelines for phytosanitary certificates | | | x | | | | x | |
| ISPM 13 Guidelines for the notification of noncompliance and emergency action | | | x | | | | x | |
| ISPM 14 The use of integrated measures in a systems approach for pest risk management | | | x | x | | | | |
| ISPM 15 Guidelines for regulating wood packaging material in international trade | | | x | | | x | | |
| ISPM 16 Regulated non-quarantine pests: concept and application | | | x | x | | | | |
| ISPM 17 Pest reporting | | | x | | | x | | |
| ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure | | | x | x | | | | |
| ISPM 19 Guidelines on lists of regulated pests | | | x | | x | | | |
| ISPM 20 Guidelines for a phytosanitary import regulatory system | | | x | | | | x | |
| ISPM 21 Pest risk analysis for regulated non-quarantine pests | | | x | | x | | | |
| ISPM 22 Requirements for the establishment of areas of low pest prevalence | | | x | | | | x | |
| ISPM 23 Guidelines for inspection | | | x | | | x | | |
| ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures | | | x | | | x | | |
| ISPM 25 Consignments in transit | | | x | | | x | | |
| ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae) | | | x | | x | | | |
| ISPM 27 Diagnostic protocols for regulated pests | | | x | | x | | | |
| ISPM 28 Phytosanitary treatments for regulated pests | | | | | | | | |
| ISPM 29 Recognition of pest free areas and areas of low pest prevalence | | | | | | | | |
| ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae) | | | | | | | | |
| ISPM 31 Methodologies for sampling of consignments | | | | | | | | |
| Comments/Constraints | | | | | | | | |

## III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

### Executive Summary

During the period from 2007 to 2008, pests such as rice leaf folder and BPH were immigrated to DPRK and caused damage to crops. The damage in 2007 was more serious than 2008. In 2008, the outbreak of rice water weevil causing damage to rice paddy was much less serious, thanks to

In 2008, MOA re-organized the County Plant Protection Office in every county. Each office surveys pest outbreak and reports to the CPPS and MOA through the Province's City Plant Protection Station during cropping seasons.

During the next two years, CPPS, MOA, will increase the pest surveillance posts which will make a survey and report every week, instead of every 10 days. CPPS will also conduct training courses for the responsible staff.

**List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency**

Regulations of Crop Protection, 21 February 2005
Minor Regulations for Crop Protection, 16 August 2005

Web source for further information: –

| (regarding invasive/migratory species management) | Yes | No |
|---|---|---|
| National strategy to control serious field pest outbreaks? | x | |
| National strategy to control migratory or periodically occurring pests? | x | |
| National strategy to eradicate serious newly invaded exotic pests? | x | |
| Other policies: (e.g. subsidies, etc.) | | |
| Web source for further information: – | | |

| Organization of Outbreak Management Functions | Responsible Organizational Unit (Ministry/Department/Unit) |
|---|---|
| *Field/Storage Pest Outbreaks* | (e.g. BPH, bollworm, etc.) |
| Response strategy/plans | CPPS , MOA/MOLEP |
| Surveillance | Cooperative farm unit, county unit, Provincial nit under guidance of CPPS, MOA and MOLEP |
| Control | CPPS, MOA/MOLEP |
| *Migratory Pest Outbreaks* | (e.g. locusts, birds, armyworm) |
| Response strategy/plans | CPPS, MOA/MOLEP |
| Surveillance | Cooperative farm unit, county unit, Provincial nit under guidance of CPPS, MOA and MOLEP |
| Control | MOA/MOLEP |
| *New Exotic Pest Eradication* | (e.g. coconut beetle) |
| Response strategy/plans | MOA/MOLEP |
| Surveillance | CPQS/ SAQM |
| Control/eradication | MOA/MOLEP |
| | |
| Reporting to bilateral or international organizations | CPPS, MOA/MOLEP |

| Infrastructure | Years: 2007/2008 |
|---|---|
| Number of designated staff for **surveillance** of field pests of national importance | 390 |
| Number of designated staff for **surveillance** of migratory and periodically occurring pests | 390 |
| Number of designated staff for **surveillance** of invasive species | 390 |
| Number of designated staff for **control** of field pests of national importance | 5 416 |
| Number of designated staff for **control** of migratory and periodically occurring pests | 5 416 |
| Number of designated staff for **eradication** of invasive species | 5 416 |

## Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

| New exotic species found established in country | Insects | Pathogens | Weeds |
|---|---|---|---|
| Total number for year: 2007 | 4 | 7 | |
| Total number for year: 2008 | 2 | 9 | 1 |
| Total number on record | 6 | 16 | 1 |

| Eradication or internal quarantine actions taken against economically important species | | | |
|---|---|---|---|
| Name of species | *Dryocosmus Kuriphilus* | *Trialeurodes vaporariorum* | *Lissorhoptrus oryzophilus* |
| Year of first discovery | 1964 | 1970 | 1982 |
| Passway | Europe | Europe | Japan |
| Location of first discovery | | | |
| Area affected [ha] | | | |
| Area treated [ha] | | | |
| Control method | Pesticide | Pesticide | Pesticide |
| | | | |

| Pest outbreak actions | Outbreak 1 | Outbreak 2 | Outbreak 3 |
|---|---|---|---|
| Name of species | Rice water weevil | Armyworm | |
| Year of outbreak | 2004 | 2004 | |
| Area affected [ha] | 207 741 | 107 444 | |
| Estimated damage $ | 10-13% | 5-6% | |
| Area treated by government [ha] | 142 000 | 90 000 | |
| Expenditures by government [$] | | | |
| Control method | Deltamethrin | Deltamethrin, Bt | |
| More information | | | |

## Progress and Constraints

| **Main Progress in Recent Years** (legislation, policies, infrastructure, investments, training, etc.) |
|---|
| Update the Regulations of Crop Protection |
| **Main Constraints** (personnel, infrastructure, administrative, operational, training, etc.) |
| Lack of information on origin and characters of invasive pests.<br>Lack of equipment to survey and control the pests. |

## IV. PEST MANAGEMENT

Last updated: December 2008

### Executive Summary

In 2008, the County Plant Protection Office in every country was re-organized and its responsibilities

- Conducting surveillance of pest outbreaks in its area,
- Managing pests in the fields,
- Training farmers,
- Producing biopesticides such as Trichogramma and Beauveria bassiana and distributing them to cooperative farms, and
- Facilitating linkages between cooperative farms and the Province's City Plant Protection Station during cropping seasons.

During the period from 2007-2008, dangerous pests in most areas were controlled by chemical pesticides imported from other countries, especially from China. However, the pests in some areas were controlled by biopesticides produced locally.

During the period, SDC gave following support:

- Training on vegetable IPM,
- 3 Trichogramma rearing facilities,
- 1 Bt production facility,
- 1 locally designed Trichogramma rearing facility, and
- Training on quality control of Trichogramma production.

During the next two years, DPRK will increase its investment in biopesticide production for control of main pests such as Chilo suppressalis and Ostrinia nubilalis as well as forest pests in order to increase sustainable crop yields and protect the forest.

A CABI-EU project worth one million Euros will provide the following:

- 20 locally designed county Trichogramma rearing facilities,
- Training producers and farmers on Tichogramma rearing and application, and
- Training on rotation (e.g. maize-soybean)

### List of Key Legislation/Regulations/Rules for Pest Management

Regulations of Crop Protection, 21 February 2005
Minor Regulations for Crop Protection, 16 August 2005

Web source for further information: –

| (regarding pest management) | Yes | No |
|---|---|---|
| Do you have policies encouraging organic or low-pesticide use production | x | |
| Is IPM specifically mentioned in laws or policy documents? | x | |
| Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management? | x | |
| Is pest management extension separate from general extension? | x | |
| Other policies: (subsidies, production inputs, etc.) | | |
| Web source for further information: – | | |

| Organization of Plant Protection Functions | Responsible Organizational Unit (Ministry/Department/Unit) |
|---|---|
| Policy development | MOA/MOLEP |
| Pest management research | PPI (AAS)/CPPS |
| Control recommendations | CPPS/MOA/MOLEP |
| Pest management extension | CPPS/AAS/MOLEP |
| IPM training | CPPS/MOA |
| GAP training | MOA |

| Infrastructure | Years: 2007-2008 |
|---|---|
| Number of technical officers for pest management | 2 708 |
| Number of central, regional, provincial or state offices | 11 |
| Number of district and village level field offices | 208 |
| Number of field/extension agents for pest management advice | 510 |
| Number of field/extension agents trained in IPM-FFS facilitation | 500 |
| Number of government biocontrol production/distribution facilities | 208 |
| Number of government biopesticide production/distribution facilities | 208 |
| Number of general extension staff involved in pest management | 510 |
| Number of designated plant protection technical officers for extension | 510 |

## Key Situation and Operation Indicators

| Pest Management | Yes | No |
|---|---|---|
| Does the country have a National IPM Programme?<br>*If yes, give Name and Address of IPM Programme:* | | |
| Does the country have specific IPM extension programmes?<br>*If yes, in which crops?:* | Maize<br>IPM | |
| Does the country have specific IPM research programmes?<br>*If yes, in which crops?:* | Rice Maize<br>Vegetables | |
| Does the country have specific GAP extension programmes? GAP<br>If yes, in which crops?: | All crops | |
| Does the country have specific GAP research programmes?<br>*If yes, in which crops?:* | All crops | |

| Market shares (estimated value, volume or area under control) | Years: 2007-2008 |
|---|---|
| Size of chemical pest control market | |
| Size of biopesticides market | |
| Size of biological control agents market | |

| Major pest control requiring crops (requiring most pesticide applications) | 1st | 2nd | 3rd |
|---|---|---|---|
| Affected crop | rice | maize | vegetables |
| Name(s) of pest(s) | Rice water weevil | Corn Stem Borer | Diamond Back Moth |
| Estimated crop loss | | | |
| | | | |
| Number of pesticide applications or amount of pesticide used | | | |
| Government action taken | 142 000 | 90 000 | |

| Cooperation Projects | | | |
|---|---|---|---|
| Purpose/Target | Donor | Amount | Years (start-end) |
| SDC-funded Trichogramma activities | Switzerland | | 2005-2008 |
| IPM application to maize production for food security in DPRK | EU | 1 million euro | 2009-2011 |
| Purpose/Target of government follow-up programmes | | Amount | Years (start-end) |
| | | | |
| | | | |

| Pest Management Extension | Years: 2007-2008 |
|---|---|
| Number of farmers trained in IPM during the year | |
| Number of IPM-FFS conducted during the year | |
| Number of farmers trained in GAP standards during the year | |
| Area under IPM/low pesticide management [ha] | |
| Area under organic/pesticide-free management [ha] | 0.3 million ha |
| Crops in which IPM or other ecology friendly programmes are successfully implemented: maize, cabbage and fruits | |
| Crops grown organic/pesticide-free: cabbage and fruits | |

## Progress and Constraints

| Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.) |
|---|
| Re-organized County Plant Protection Offices<br>Biopesticides use from 2011 in maize fields is set as obligatory by Government policy |
| **Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)** |
| Analysis and definition of the origin and characters of invasive pests |

## V. PESTICIDE MANAGEMENT

Last updated: December 2008

### Executive Summary

DPRK imported chemical pesticides from China and used them in the fields and forests to control main pests, while producing chemical pesticide with imported raw materials authorised/permitted by the Agro-chemical station Institute, AAS and CPPS, MOA.

### List of Key Legislation/Regulations/Rules

1986: Law of the DPRK on the Protection of Environment.
Administration Council Directive No. 78 (12 May 1992): Regulations on Pesticide Control.

Others:
1. Law of the DPRK on the Pesticide Management
2. Pesticide Management Regulation of the DPRK
3. Detailed Regulations for Enforcement of the Pesticide Management Regulation
4. Law of the DPRK on Agriculture
5. Law of the DPRK on the Public Health
6. Law of the DPRK on the Quality Control
7. Law of the DPRK on River
8. Law of the DPRK on Pomiculture
9. Law of the DPRK on Fish Breeding
10. Law of the DPRK on the Conservation of Biodiversity.

Web source for further information: –

| (regarding pesticide management) | Yes | No |
|---|---|---|
| Do you have national pesticide reduction targets?<br>*If yes, what is the target:*_____ | x | |
| Have you ratified the Rotterdam (PIC) Convention? | x | |
| Have you ratified the Stockholm (POP) Convention? | x | |
| Have your ratified the Basel Convention? (hazardous wastes) | x | |
| Have your ratified the Montreal Protocol? (MeBr phasing-out) | x | |
| Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code? | x | |
| Have you adopted Good Laboratory Practices (GLP)? | x | |
| *Pesticide Registration* | | |
| Do you require pesticides to conform to relevant FAO or WHO specifications? | x | |
| Do you allow the "me-too" registration and sale of generic pesticides? | | |
| Do you require data on product equivalence for generic registration? | x | |
| Do you conduct country-specific risk assessments for… | | |
| occupational risks? | x | |
| consumer risks? | x | |
| environmental risks? | x | |
| Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling? | | |
| Do you accept evaluation results from other countries? | x | |
| Do you accept field studies conducted in other countries? | x | |
| Do you require environmental fate studies? | x | |

| *Incentives/Disincentives* | | |
|---|---|---|
| Do you have a special tax on pesticides to cover externality costs? | | x |
| Do you subsidize or provide low-cost pesticides? | x | |
| Do you subsidize or provide low-cost biopesticides? | | x |
| | | |
| Other policies: | | |
| Web source for further information: – | | |

| Organization of Plant Protection Functions | Responsible Organizational Unit (Ministry/Department/Unit) |
|---|---|
| Legislation | Cabinet/MOA |
| Registration | MOA/CPPS/ARI/MOLEP |
| Licensing of shops | |
| Licensing of field applicators | MOA/CPPS/MOLEP |
| Enforcement/inspections | MOA/CPPS/MOLEP |
| Testing of pesticide efficacy | ARI/CPPS |
| Development of pesticide use recommendations | ARI |
| Safe use training/extension | ARI/MOA/CPPS/MOLEP |
| Food residue monitoring | Ministry of Health (MOPH) |
| Environmental monitoring | MOLEP |
| Health monitoring | MOPH |
| *Other Stakeholders:* | |
| Pesticide Industry Association | |
| Civil Society Organizations | |

| Infrastructure | Years: 2007-2008 |
|---|---|
| Number of registration officers | 1 |
| Number of enforcement officers | 11 |
| Number of department quality control laboratories | 11 |
| Number of quality control laboratory personnel | 25 |
| Number of department residue analysis laboratories | 11 |
| Number of residue laboratory personnel | 25 |

## Key Situation Indicators

| Pesticide Trade: | Tons | US$ '000 Value |
|---|---|---|
| | | |
| Manufacture | | |
| | | |
| Domestic Use/Sales | | |
| **Pesticide Use Profile:** | **Tons (a.i./formulation to be specified)** | **US$ '000 Value** |
| | | |
| Chem. Insecticides | | |
| Chem. Fungicides | | |
| Chem. Herbicides | | |
| Chem. Others: e.g. molluscicide, acaricide | | |
| Other: e.g. Avamectrin, Bt, Neem | | |
| Other purposes | | |
| | | |

## Post Registration Monitoring

| Testing, Quality Control and Effects in the Field | Yes | No |
|---|---|---|
| Do you have significant problems with low-quality pesticides in the market? | x | |
| Do you have significant problems with pesticide resistance? | x | |
| Do you have a list of pesticides under close observation for problems | x | |
| Source for more information: – | | |

| Health and Environmental Information | Yes | No |
|---|---|---|
| Do you maintain data on pesticide poisoning cases? | x | |
| Do you have a system to monitor pesticide residues in food? | x | |
| Do you have a system to monitor pesticide residues in the environment? | x | |
| Do you have significant problems of environmental contamination from pesticides? | | x |
| Do you have data on pesticides effects on wildlife and ecosystems? | | x |
| Source for more information: – | | |

| Pesticide Disposal | Yes | No |
|---|---|---|
| Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides? | x | |
| Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage) | x | |
| Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____ | | x |
| Source for more information: – | | |

## Key Operation Indicators

| Registration/Regulation/Monitoring | Years: 2007-2008 | |
|---|---|---|
| | a.i.* | Trade Name |
| Number of registered pesticide products | | |
| Number of registered biopesticides (Avamectrin, Bt, Neem, etc.) | | |
| Number of restricted-use pesticides/formulations | | |
| Number of banned pesticides | | |
| Number of licensed outlets | | |
| Number of licensed field applicators (professional and/or farmers) | | |
| Number of licensing violations reported during year | | |
| Number of quality control analyses conducted during year | | |
| Number of food samples analyzed for pesticide residues during year | | |
| Number of samples exceeding MRL | | |
| Number of environmental samples analyzed for pesticide residues | | |

* active ingredient

| Pesticides Restricted in Recent Years | |
|---|---|
| Year | Name of active ingredient or hazardous formulation |
| | |
| | |

| Pesticides Banned in Recent Years | |
|---|---|
| Year | Name of active ingredient |
| | |
| | |

| Cooperation Projects | | | |
|---|---|---|---|
| Purpose/Target | Donor | Amount | Years (start-end) |
| | | | |
| | | | |
| Purpose/Target of government follow-up programmes | | Amount | Years (start-end) |
| | | | |
| | | | |

## Progress and Constraints

| Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.) |
|---|
| Updated the regulation on Registration and management of pesticides.<br>Encourage to use as much as possible environmental friendly pesticides.<br>Training workshops on safe using and effect increasing of pesticides were conducted by CABI and other international organizations. |
| **Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)** |
| Lack of techniques and means for pesticide residue monitoring.<br>Lack of information on effective pesticides |

## VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

| Genetically Modified Crops | |
|---|---|
| Name of GMO Crop | Area under Cultivation [ha] |
| | |
| | |
| | |