



Past achievement and current situation on pest surveillance issues, prioritized area to be improved in Thailand

**Regional Workshops on Pest Surveillance
22-24 April 2017**

The Imperial Mae Ping Hotel, Chiang Mai



Pornpimon Athipunyakom
Plant Protection Research and Development Office,
Department of Agriculture, Thailand



Director General of Department of Agriculture

Office of the
Senior Experts

Office of the
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Cluster 1
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Division

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NPPO

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Development on
Specific Disciplines

Plant Protection Research
and Development Office

Agricultural Production Science
Research and Development
Office

Post-harvest and Products
Processing Research and
Development Office

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Development Office

Plant Varieties Protection
Division

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Research and
Development

Field Crops
Research
Institute

Horticulture
Research
Institute

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Research
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Research
Institute

Cluster 4
Regional Research
and Development

OARD Region 1
(Chiang Mai)

OARD Region 2
(Phitsanulok)

OARD Region 3
(Khon Khen)

OARD Region 4
(Ubon Ratchathani)

OARD Region 5
(Chai Nat)

OARD Region 6
(Chanthaburi)

OARD Region 7
(Surat Thani)

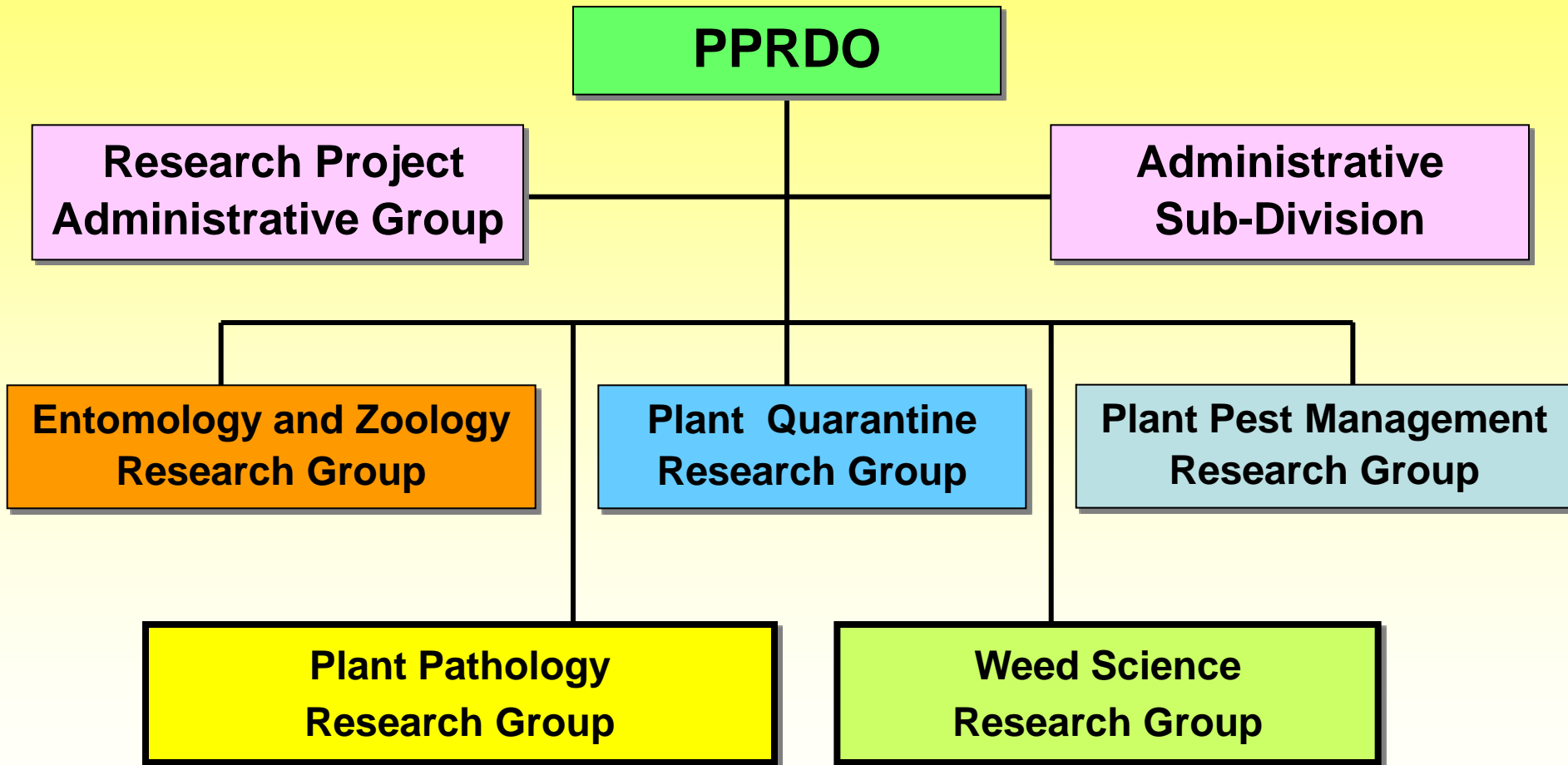
OARD Region 8
(Songkhla)

Agricultural Regulatory Office



Plant Quarantine Operation

Organizational Structure of Plant Protection Research and Development Office (PPRDO)



Plant Protection Research and Development Office (PPRDO)

Responsible for

Conduct research and survey on pest and diseases and effective control measures

Conduct pest risk analysis

Stipulate phytosanitary requirements, restrictions and prohibitions on imported plants and plant products

Why a surveillance workshop?

- International Standards provide only general guidance
- Need for a multidisciplinary approach, e.g.
 - Field experience
 - Statistical knowledge
 - taxonomic skills
- To address the questions:
 - How do we get good “presence” data?
 - How do we get good “absence” data?

In Thailand, a work to promote the appropriate application of plant pest surveillance system among rice farmers was carried out in 1988.



In 2003: surveying pests to develop pest list







โรคที่สำคัญของ ลำไย

Plant Pathology Research Group, Plant Protection Research and Development Office, DOA



โรคถั่นจี

Litchi chinensis Sonn.



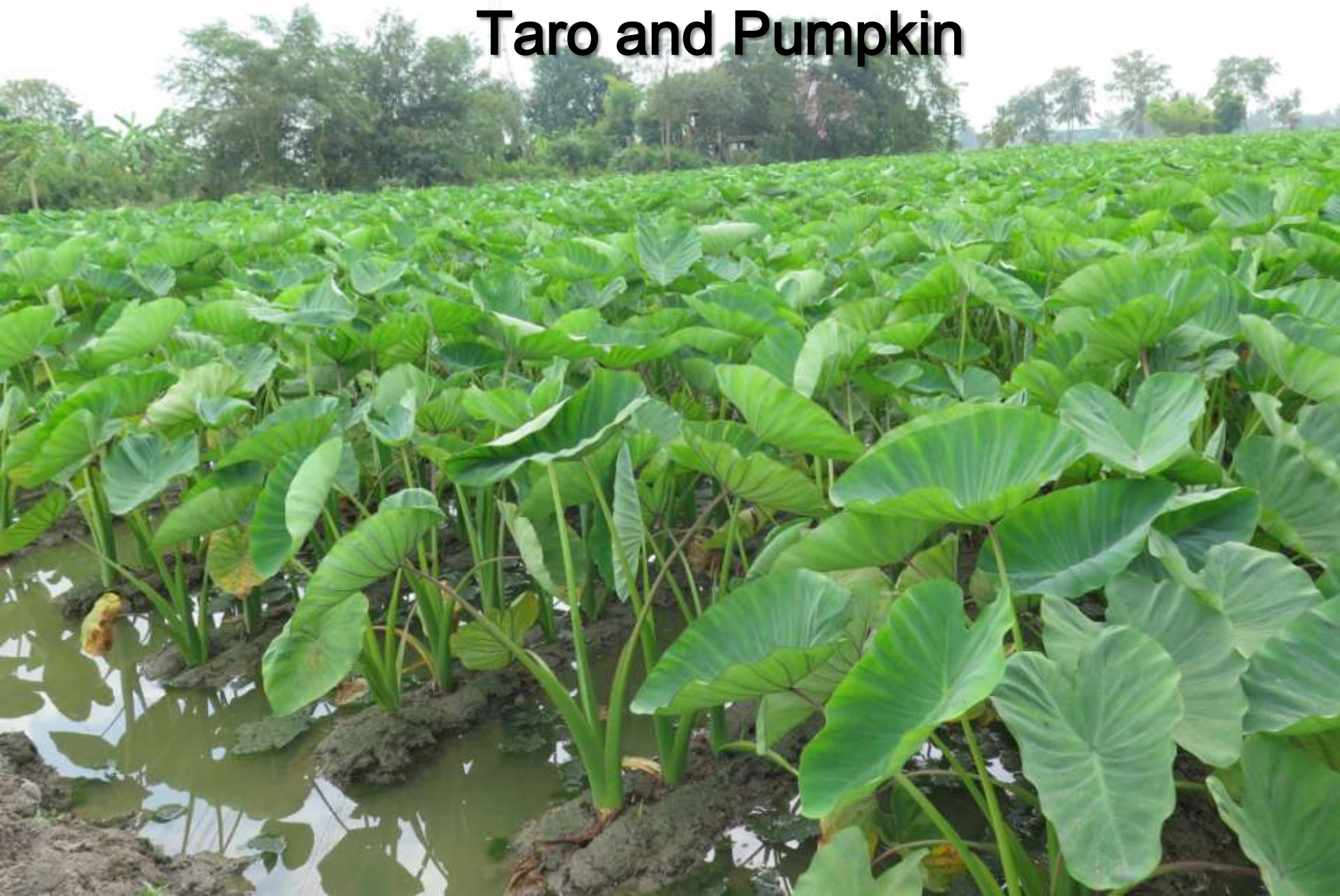
Plant Pathology Research Group, Plant Protection Research and Development Office, DOA

In 2014-2015: imported plants Tobacco and Cassava



In 2014-2015: exported plants

Taro and Pumpkin





**In 2005 – to delimiting survey for establish
of pest free areas for production sites**

- to start the plant pest surveillance project
In 2007.
- focus for plant quarantine pest
- 3 years/experiment





Purpose of Surveillance

1. Detection- presence or absence
2. Delimiting- to establish of pest free areas for production site





Detection- presence or absence

Urocystis cepulea

Pseudomonas syringae pv. *syringae*

Pantoea stewartii subsp. *stewartii*

Sternochetus mangiferae





Purpose of Surveillance

2. Delimiting- to establish of pest free areas for production sites

Xanthomonas axonopodis pv. *citri*





Detection- presence or absence

Target pests:

Urocystis cepulea

Pseudomonas syringae pv. *syringae*

2010-2013



There was some report of both diseases for over 50 years.

The researcher reported that both diseases have never found in Thailand.

In 2009, the export of shallots from Thai to Indonesia required Phytosanitary certificate.



Host:

Shallot: *Allium ascalonicum*

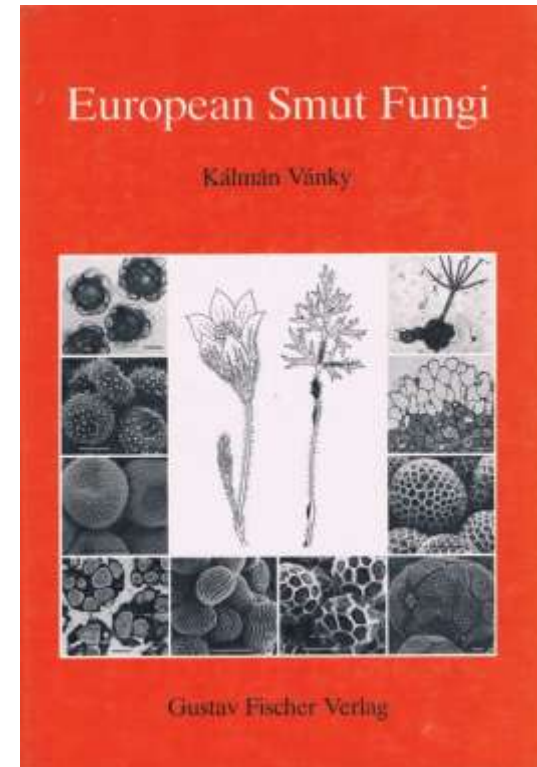
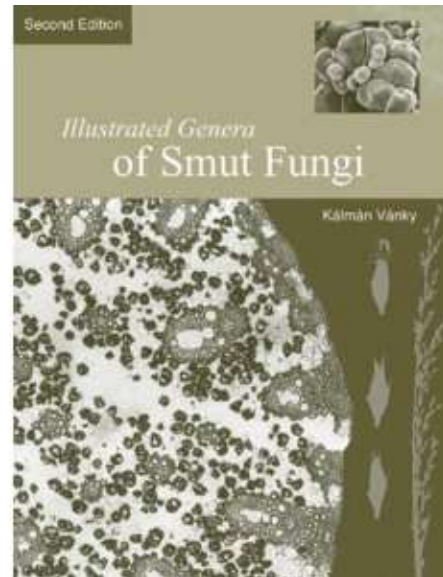
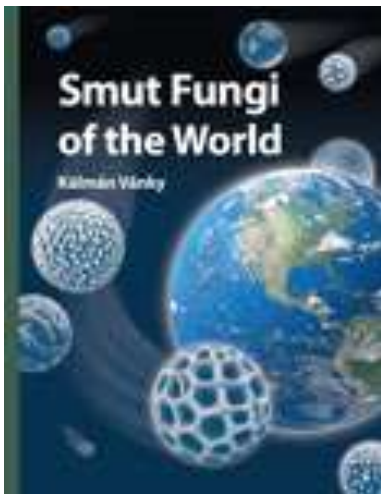


The purpose of the survey to conduct
pest status for shallot export





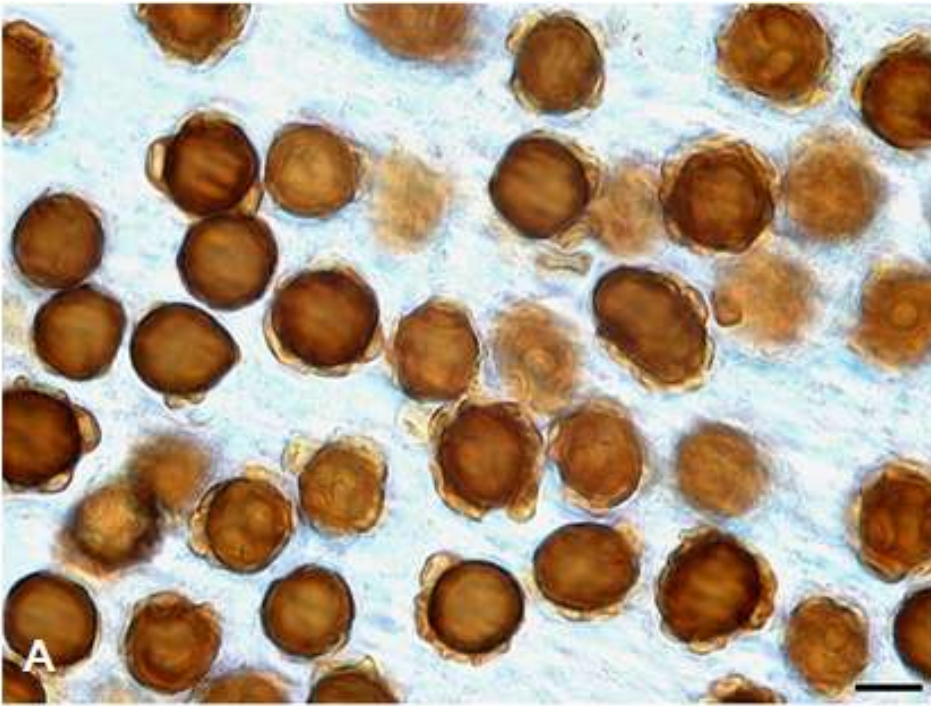
Source of information



Website, Texts, Journals

Urocystis cepulae

spore balls under light
microscope



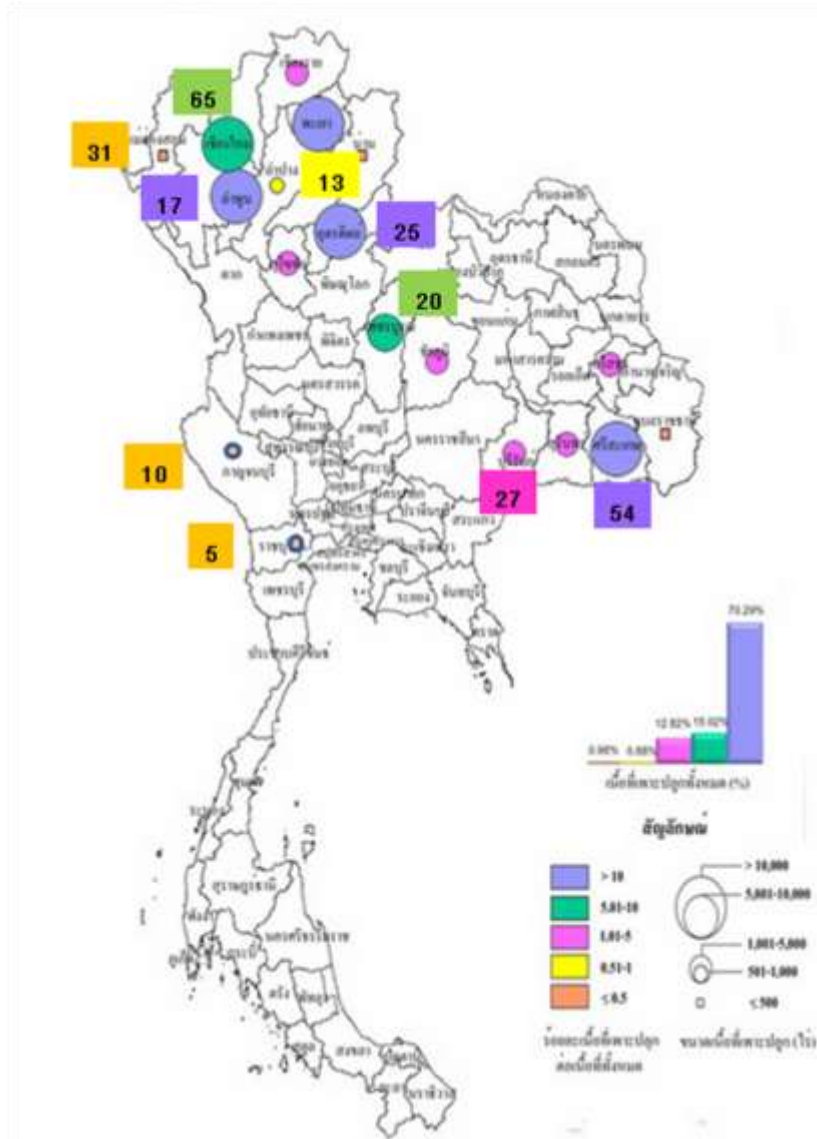
spore ball under
Scanning Electron
Microscope



(Shivas,2010)



Symptoms of smut disease



Shallot planting areas in 2010 (Office of Agricultural Economics, 2010) and the number of shallot fields for sampling to detect the smut fungi and bacteria in this survey.





Sampling and collecting shallots
at Sri Saket province to detect
the smut fungi



What data to record in the field

- Observers name
- Field site number or name
- Sampling site number or name
- Targeted pest names
- Date and time
- Weather conditions
- Location, e.g. GPS reading
- Description of habitat
- Population density of pest
- Life stages of pest present
- Symptoms
- Observations of behaviour
- Area of plot or length of transect
- Cross reference to photographs
- Notes on host plant, e.g. flower colour
- Notes on management of crop
- Cross reference to specimen(s)
- Associated organisms, e.g. parasites, predators, vectors

Waypoints

New Waypoint

Edit

All Waypoints (613) >

Auto Waypoints (1) >

Home Waypoint (1) >

Recently Added (577) >

Import (0) >

Points of Interest (34) >

Back

Waypoint Details

Wypt 087

Notes:

แปลงที่ 1 แอนแทรกโนส ลงหัว
และโค่น 50% ใบจุดสีม่วง



Bearing: 352° Distance (km): 420 Altitude (m): 64

Latitude: 17° 34' 25" N Longitude: 99° 59' 24" E

Share

Start Nav

Set as Home

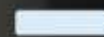
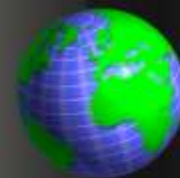
Delete



OpenStreetMap

MotionX

Zoom: 13.0



Map

Menu