Vietnam Country Presentation

WORKSHOP ON BIOSECURITY IMPLEMENTATION OF SOUTH AMERICAN LEAF BLIGHT OF RUBBER IN THE ASIA-PACIFIC REGION

12-16 JANUARY 2015

BANGKOK THAILAND

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PART I

Introduction on rubber production in Viet Nam

Rubber growing regions in Vietnam (2013)

Region	Area		Plan of planting(*)	Over planting
	ha	%	ha	ha
South East	**535,514**	***55.8***	**390,000**	**145,514**
Highlands	**258,396**	***26.9***	**280,000**	**-21,614**
Central coastal	**140,775**	***14.7***	**120,000**	**20,775**
North	**25,102**	***2.6***	**50,000**	**-24,898**
Total	**959,787**	***100.0***	**840,000**	**119,787**

Source: Vietnam Rubber Association (June 2014)

(*) Government plan to 2020

Area, production and yield of rubber by region in 2013

Region	Area		Tapped area		Production		Yield
	ha	%	ha	%	Tons	%	Kg/ha/y
South East	**535,514**	***55.8***	**371,298**	***67.8***	**690,355**	***72.7***	**1,856**
Highlands	**258,396**	***26.9***	**114,687**	***20.9***	**178,920**	***18.9***	**1,560**
Central coastal	**140,775**	***14.7***	**62,216**	***11.3***	**79,825**	***8.4***	**1,283**
North	**25,102**	***2.6***	**-**	**-**	**-**	**-**	**-**
Total	**959,787**	***100.0***	**548,835**	***100.0***	**949,100**	***100.0***	**1,729**

Source: Vietnam Rubber Association (June 2014)

Area, production and yield of rubber by sector in 2013

Sector	Area		Tapped area		Production		Yield
	ha	%	ha	%	Tons	%	Kg/ha/y
Estate	**503,061**	**52.4**	**261,953**	**47.7**	**448,231**	**47.2**	**1,711**
Government	*424,194*	*44.2*	*251,566*	*45.8*	*431,174*	*45.4*	*1,714*
Private	*78,867*	*8.2*	*10,387*	*1.9*	*17,057*	*1.8*	*1,642*
Smallholding	**456,726**	**47.6**	**286,882**	**52.3**	**500,869**	**52.8**	**1,746**
Total	**959,787**	**100.0**	**548,835**	**100.0**	**949,100**	**100.0**	**1,729**

Source: Vietnam Rubber Association (June 2014)

PART II

Legislation on plant quarantine of Viet Nam

Legislation on plant quarantine

- Law on Plant Protection and Quarantine number 41/2013/QH13 dated 06th December, 2013;
- Government Decree number 116/2014/NĐ-CP dated 04th December, 2014 on detailed provisions of some Articles of the Law on the Plant Protection and Quarantine;
- Circular of the Minister of Agriculture and Rural Development number 30/2014/TT-BNNPTNT dated 05th September, 20124 issued the List of regulated articles of plant quarantine subject to the pest risk analysis before being imported into Vietnam;
- Circular of the Minister of Agriculture and Rural Development number 33/2014/TT-BNNPTNT dated 30th October, 2014 on Regulations of the order and procedures for phytosanitary import, export, transit and post-entry of the regulated articles on plant quarantine;
- Circular of the Minister of Agriculture and Rural Development number 35/2014/TT-BNNPTNT dated 31st October, 2014 issued the List of plant quarantine pests of Vietnam;
- Circular of the Minister of Agriculture and Rural Development number 36/2014/TT-BNNPTNT dated 31st October, 2014 on Regulations of pest risk analysis procedure applying to the regulated articles subject to the PRA before being imported into Vietnam;

Article 2 – Circular 30/2014/TT-BNNPTNT

List of regulated articles subject to the pest risk analysis before being imported into Vietnam

Nº.	Name of regulated articles
1.	Living plant and living plant parts
2.	Fresh fruit and bulb/tuber
3.	Grass and grass seed
4.	Biological control agent
5.	Imported plant or plant product found quarantine pest of Vietnam
6.	Other regulated articles of plant quarantine with high potential of the introduction of quarantine pest of Vietnam. These articles shall be identified by Vietnam NPPO and decided by the Minister of MARD

Article 3 – Circular 30/2014/TT-BNNPTNT

List of regulated articles to be exempted from pest risk analysis

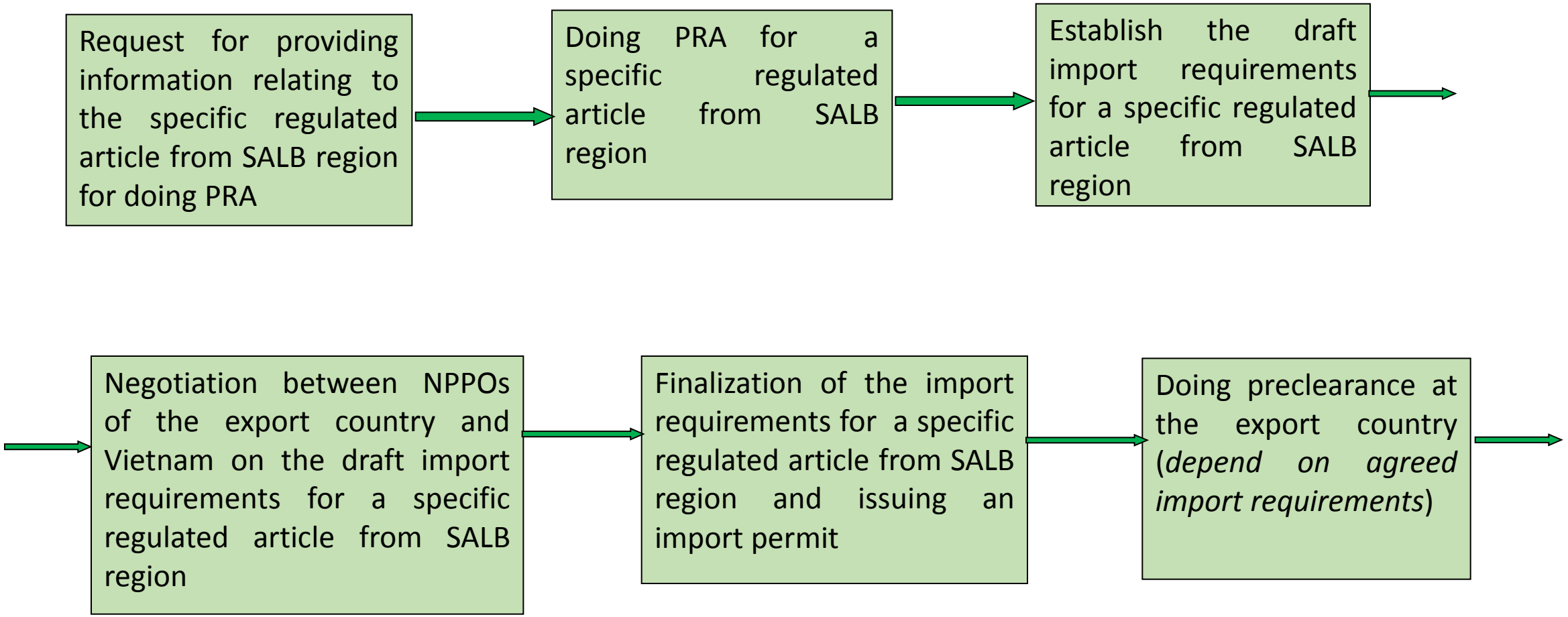
Nº.	Name of regulated articles
1.	Planting material to be imported for scientific purpose
2.	Biological control agent to be imported for scientific purpose
3.	Other articles to be identified by DG of Vietnam NPPO and decided by the Minister of MARD

Circular 35/2014/TT-BNNPTNT

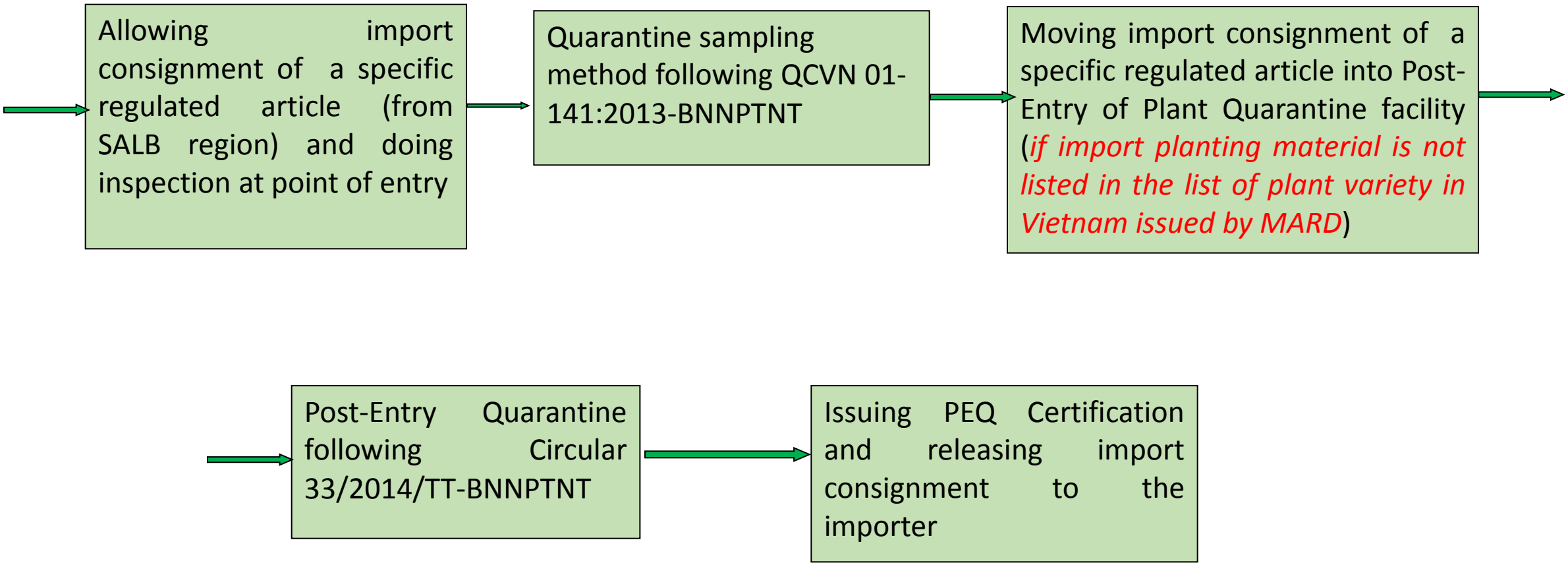
List of plant quarantine pests of Viet Nam

60	Mọt đậu Mê-hi-cô	*Zabrotes subfaciatus* (Boheman)
B. Nhện		
61	Nhện đỏ Chi-lê	*Brevipalpus chilensis* Baker
62	Nhện xanh hại sắn	*Mononychellus tanajoa* Bondar
63	Nhện nhỏ Thái Bình Dương	*Tetranychus pacificus* McGregor
C. Nấm		
64	Bệnh cây hương lúa	*Balansia oryzae - sativae* Hashioka
65	Bệnh thối khô củ khoai tây	*Boeremia foveata* (Foister) Aveskamp, Gruyter & Verkley
66	Bệnh nấm cựa gà cao lương	*Claviceps africana* Frederickson, Mantle & De Milliano
67	Bệnh thối trắng hoa trà	*Ciborinia camelliae* Kohn
68	Bệnh thối loét cây dẻ	*Cryphonectria parasitica* (Murrill) Barr
69	Bệnh thối đen quả nho	*Guignardia bidwellii* (Ellis) Viala & Ravaz
70	Bệnh cháy lá cao su Nam Mỹ	*Microcyclus ulei* (Henn.) Arx
71	Bệnh đốm lá cà phê Châu Mỹ	*Mycena citricolor* (Berk. & Curtis) Sacc.
72	Bệnh khô cành cam quýt	*Phoma tracheiphila* (Petri) Kantachveli & Gikachvili
73	Bệnh thối rễ bông	*Phymatotrichopsis omnivora* (Duggar) Hennebert
74	Bệnh thối quả bông	*Phytophthora boehmeriae* Sawada
75	Bệnh đốm củ khoai tây	*Polyscytalum pustulans* (M.N. Owen & Makef) M.B. Ellis
76	Bệnh rỉ sắt bạch đàn	*Puccinia psidii* G. Winter
77	Bệnh ung thư khoai tây	*Synchytrium endobioticum* (Schilb.) Percival
78	Bệnh than đen lúa mì	*Tilletia indica* Mitra
79	Bệnh chết héo bông	*Verticillium albo-atrum* Reinke & Berthold
D. Vi khuẩn		
80	Bệnh vi khuẩn thối loét quả cà chua	*Clavibacter michiganensis* subsp. *michiganensis* (Smith) Davis
81	Bệnh vi khuẩn héo rũ ngô	*Pantoea stewartii* (Smith) Mergaert

Procedure for importation of a regulated article from SALB region into Vietnam



Procedure for importation of a regulated article from SALB region into Vietnam



Plant quarantine sampling method (QCVN 01-141:2013/BNNPTNT)

Table 2. The number of samples to be taken for the initial batch of seedlings, cuttings, slips, grafts

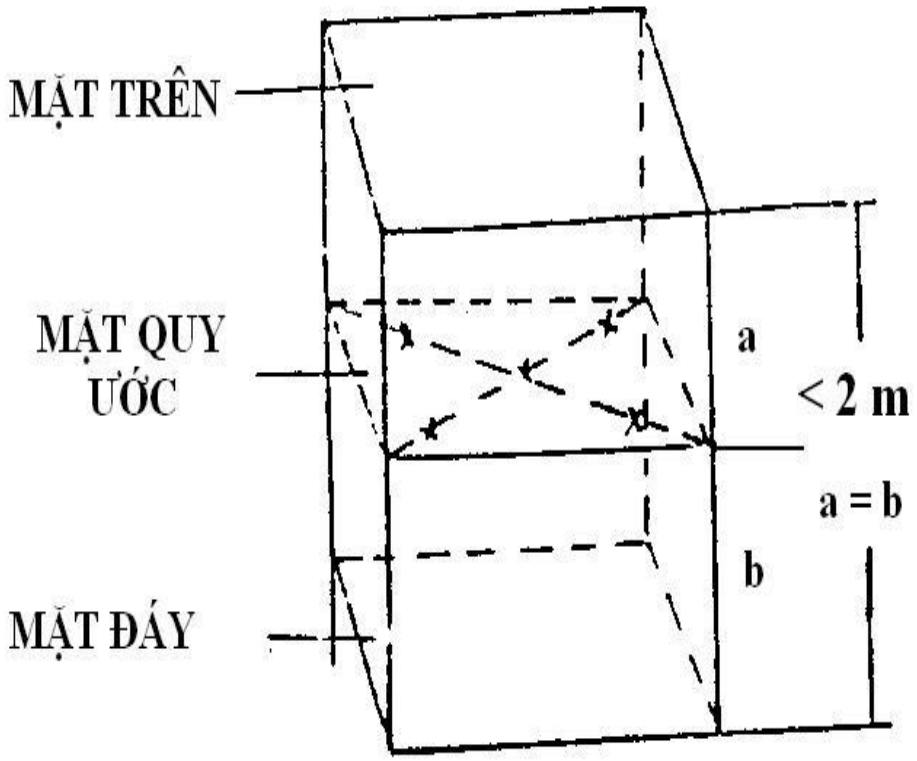
Lot of articles per individual unit	Number of sample	Lot of articles per individual unit	Number of sample
≤10	5	101 - 120	47
11-15	8	121 - 140	49
16-20	11	141 - 160	50
21-25	14	161 - 180	51
26-30	17	181 - 200	51
31-35	20	201- 230	52
36-40	23	231 - 260	53
41 - 45	35	261 - 290	53
46 - 50	37	291 - 320	54
51-60	39	321 - 350	54
61-70	41	351 - 400	55
71-80	43	401 - 450	55
81-90	44	451 - 500	56
91-100	45		

Note: For lots of objects less than 5 individuals, the entire batch of objects considered as prototype

Plant quarantine sampling method (QCVN 01-141:2013/BNNPTNT)

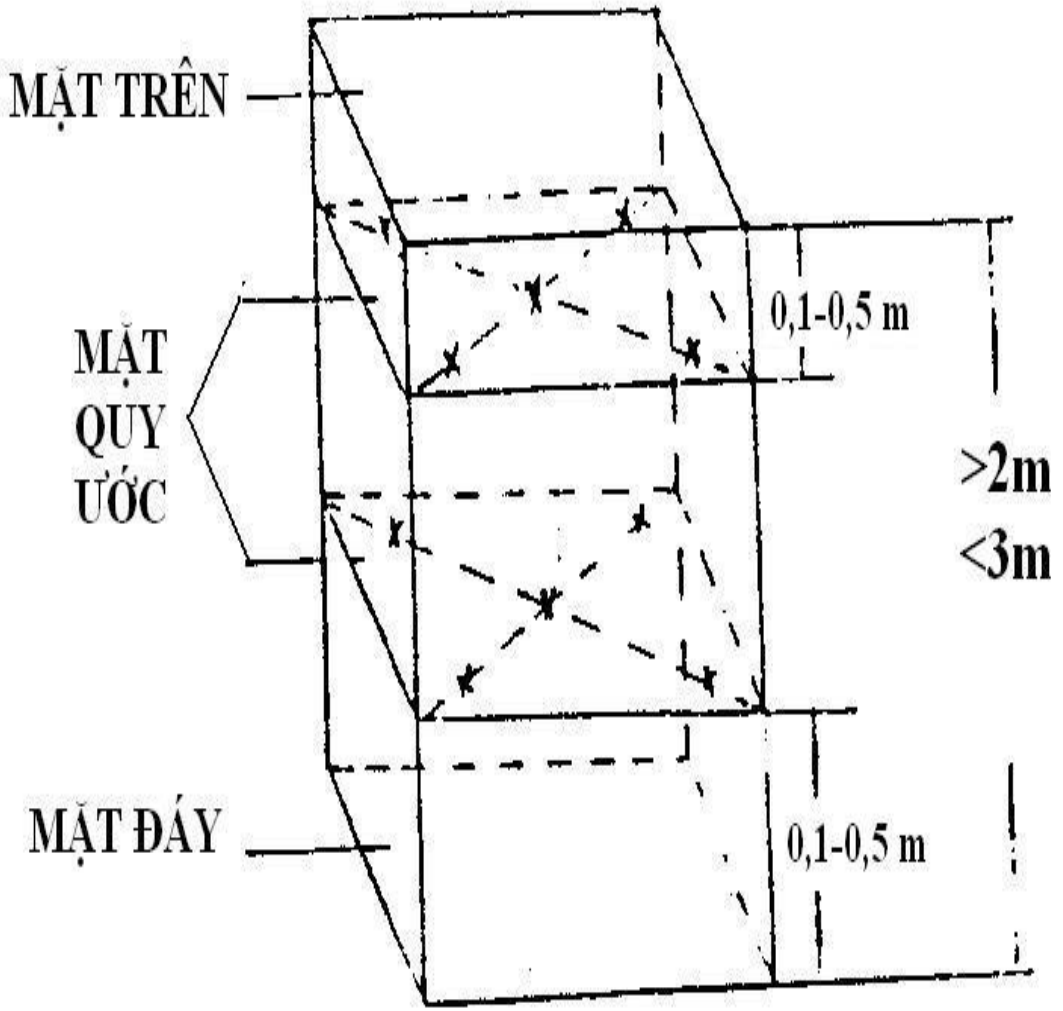
Appendix B - Distribution locations initial sample points

1. Plot article height <2m



Plant quarantine sampling method (QCVN 01-141:2013/BNNPTNT)

2. Plot article height from 2-3 m

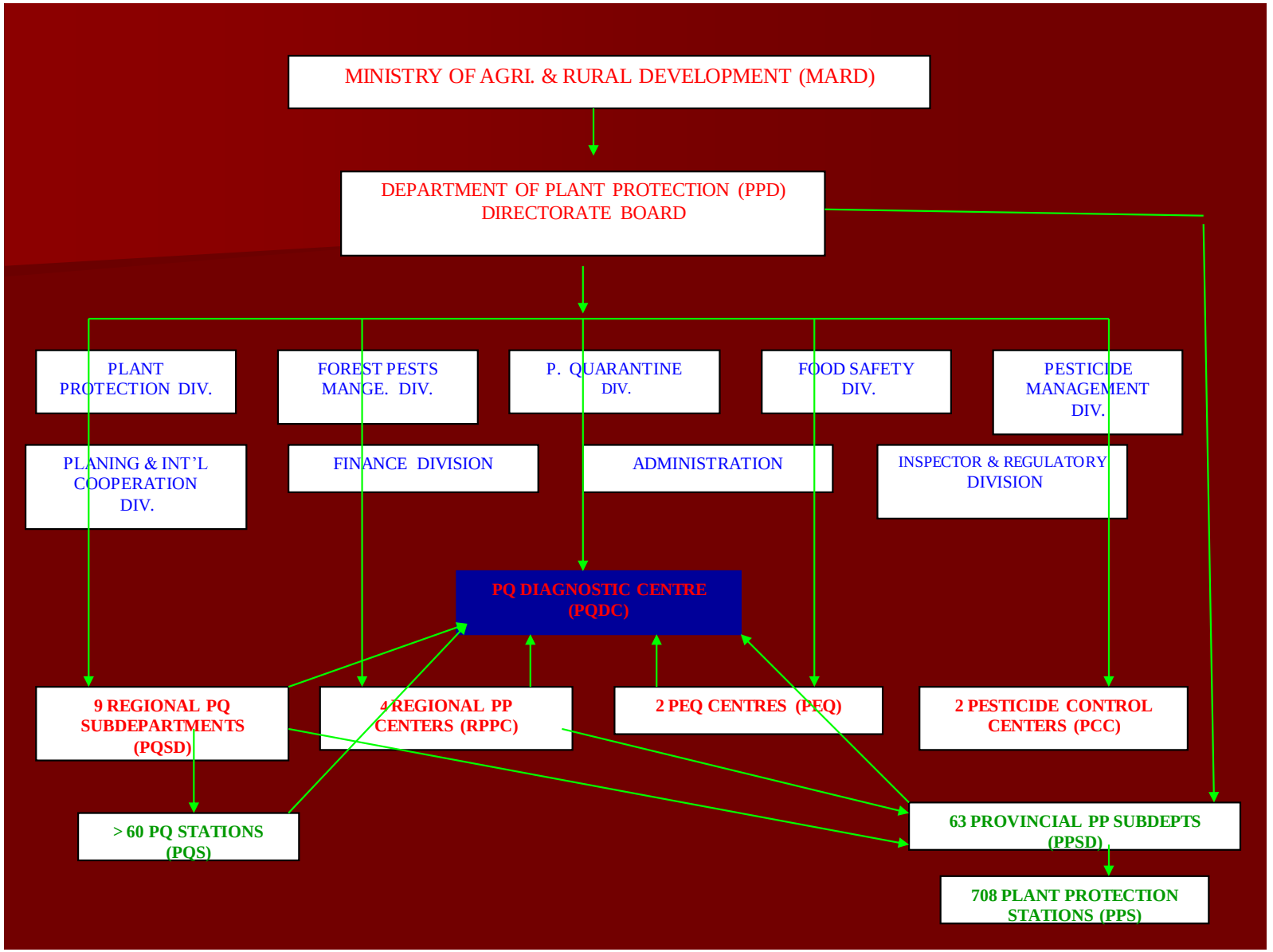


National protocol for diagnostic of South American leaf blight of rubber (*Microcyclus ulei* (Henn.) Arx)

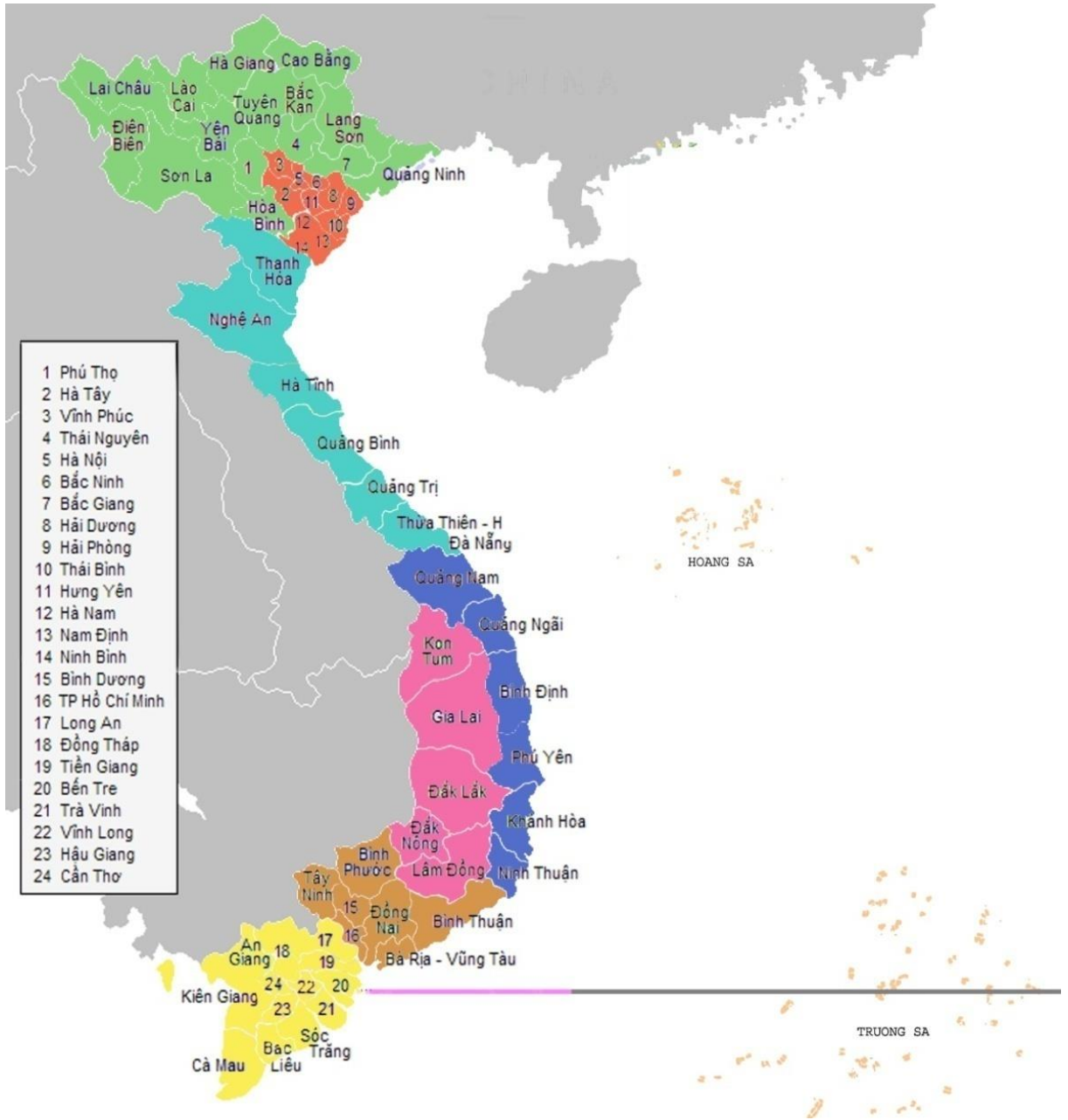
QCVN 01 - 179 : 2014/BNNPTNT

National technical regulation on Procedure for identification of South American leaf blight of rubber (*Microcyclus ulei* (Henn.) Arx) – Plant quarantine pest of Vietnam

NATIONAL PLANT PROTECTION ORGANISATION OF VIETNAM - NPPO)



NATIONAL PLANT PROTECTION ORGANISATION OF VIETNAM - NPPO)



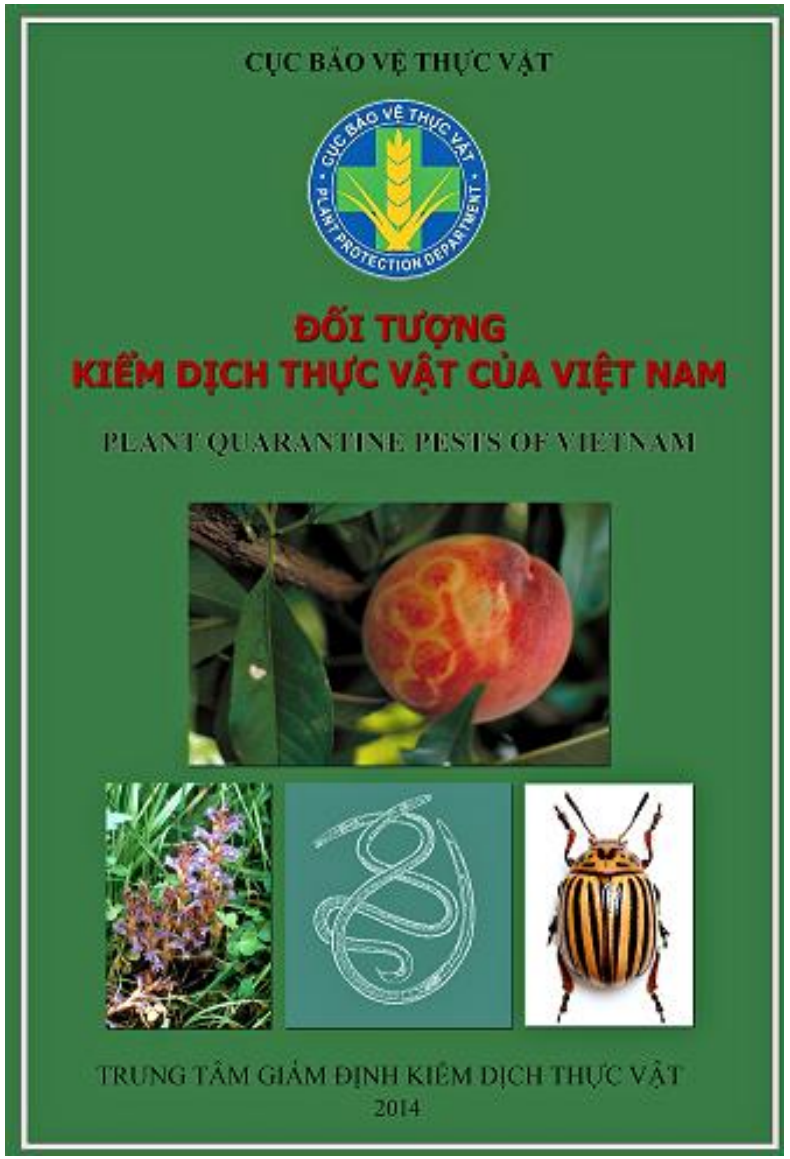
NATIONAL SURVEILLANCE FOR PLANT PESTS OF VIETNAM

1). Annual surveys for plant pests in each regions are being carried-out by Regional Plant Quarantine Sub-Departments (RPQDs) and Provincial Plant Protection Sub-Departments (PPSDs);

2). National surveillance for quarantine pests of Vietnam are being carried-out by the coordinating of the Plant Quarantine Diagnostic Centre (PQDC) and participation of all RPQDs and PPSDs in Vietnam;

3). National Surveillance for SALB is being done by Rubber Research Institute of Vietnam (RRIV) and PQDC.

Atlas of plant quarantine pests of Vietnam (including South American Leaf Blight – SALB)



South American Leaf Blight – SALB

70. Bệnh cháy lá cao su Nam Mỹ
***Microcyclus ulei* (Henn.) Arx**
Tên khác: *Aposphaeria ulei* Henn.,
Bộ: Hypocreales;**Họ**: Mycosphaerellaceae

Phân bố trên thế giới: châu Mỹ: Mexico, Brazil, Belize, Costa Rica, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Trinidad và Tobago, Bolivia, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela, Dominica, Mexico (CABI, 2014)

Phân bố trong nước: chưa có mặt ở Việt

Phổ ký chủ: *Hevea brasiliensis* (cao su), *H. benthamiana*, *H. camargoana*, *H. camporum*, *H. guianensis*, *H. pauciflora* và *H. Spruceana* (CABI, 2014)

Đặc điểm hình thái tác nhân gây bệnh

Bào tử phân sinh có vách ngăn (2 tế bào) hoặc có một số ít là đơn bào.Bào tử có hình gậy, tế bào phía trên to hơn tế bào phía dưới, phần đuôi cụt và bào tử có dạng xoắn đặc trưng. Bào tử có màu trong suốt khi còn non sau đó xám dần theo thời gian. Kích thước của bào tử khá đa dạng 23-65x5-10µm (Chee); 23-62x5-10µm (Holliday); 12-30x5-8µm (Langford). Trong điều kiện khô thì bào tử teo lại và sẽ căng lên khi gặp ẩm độ cao. Bào tử phấn có dạng chày một đầu to hơn (12-25µm) đầu kia (2-5µm). Bào tử dài 6-10µm. Bào tử túi 2 tế bào có vách ngăn thắt lại. Tế bào có kíchthước không đồng đều 3 -5 x 10-15 µm (Langford, 1945); 2-5 x 12-20 µm(Holliday, 1970);12-20 x 2-5 µm (Chee and Holliday, 1986).

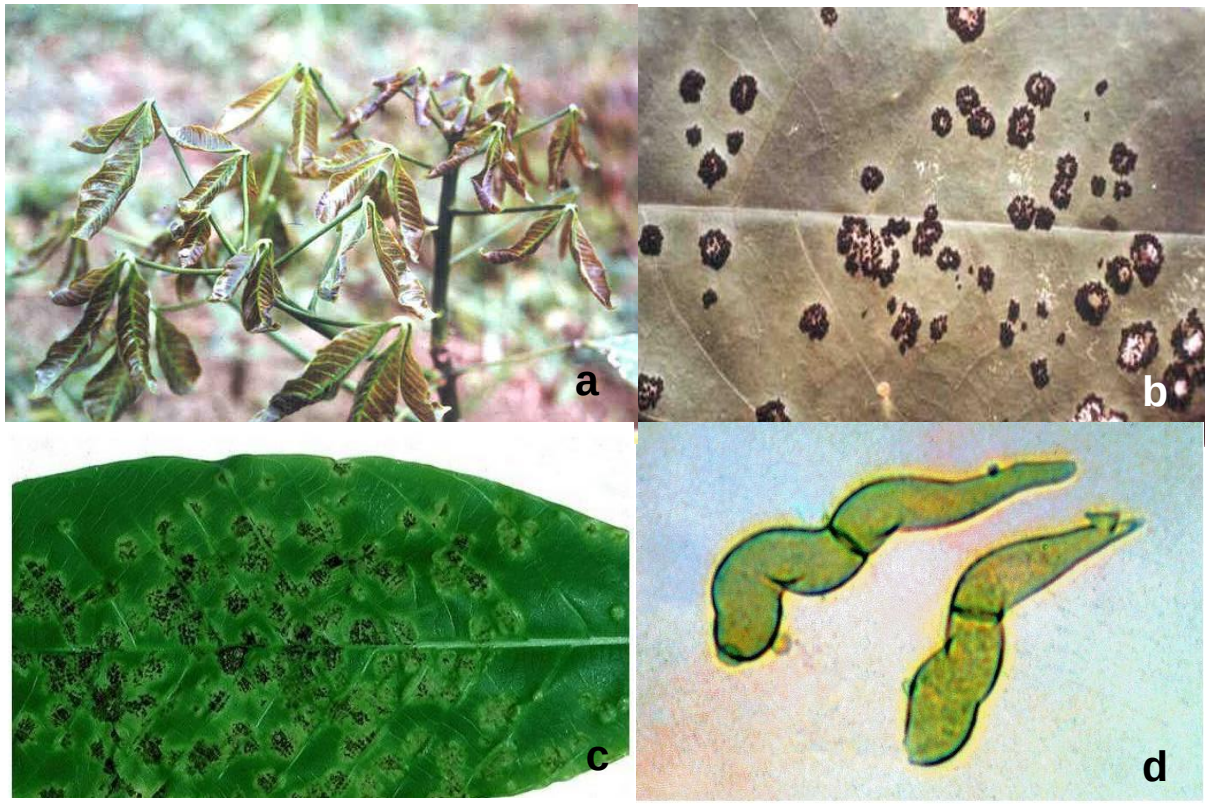
Đặc điểm sinh học, sinh thái học

Bệnh lây truyền qua cành, mắt ghép. Bào tử lây lan qua không khí và phát triển trong giọt nước trên bề mặt lá. Gió là một trong những yếu tố quan trọng giúp cho quá trình lan truyền bào tử bệnh từ vùng này sang vùng khác. Sự phát tán của bào tử chủ yếu vào lúc 9.00 - 14.00 giờ, đây là thời điểm nhiệt độ lên cao và ẩm độ ở mức thấp nhất. Bào tử túi được phát tán vào buổi tối với đỉnh điểm là từ 18.00 - 20.00 giờ. Để lây nhiễm, bào tử nấm cần mặt lá ướt trong vòng 4 -5 giờ để xâm nhập vào lớp biểu bì non của phiến lá. Sau khoảng 1 tuần thì sinh bào tử. Nhiệt độ thích hợp cho bào tử nảy mầm là 24^{o}

Triệu chứng

Bệnh chủ yếu trên các bộ phận non của cây.

Vết bệnh ở mặt trên lá là những đốm nhỏ dạng tròn hoặc không đều, màu xanh vàng nhạt. Bệnh nặng lá bị héo rũ và rụng. Trên các lá già còn lại ở giữa vết bệnh thường bị khô, xung quanh vết bệnh xuất hiện những quả bào tử nhỏ màu đen.



Hình: *Microcyclus ulei*
a: Triệu chứng trên ngọn non; **b:** Triệu chứng bệnh trên lá già (Nguồn: FAO, 2014); **c:** Triệu chứng bệnh trên lá non**; d:** Bào tử phân sinh (Nguồn:CABI, Crop Protection Compedium, 2014)

DVD disk of plant quarantine pests of Vietnam (including South American Leaf Blight – SALB)



South American Leaf Blight – SALB

1) Usage of Training module: Atlas, DVD disk and hard copy of all relevant document of quarantine pests in general and SALB in particular.

2) Status on translation: In Vietnamese

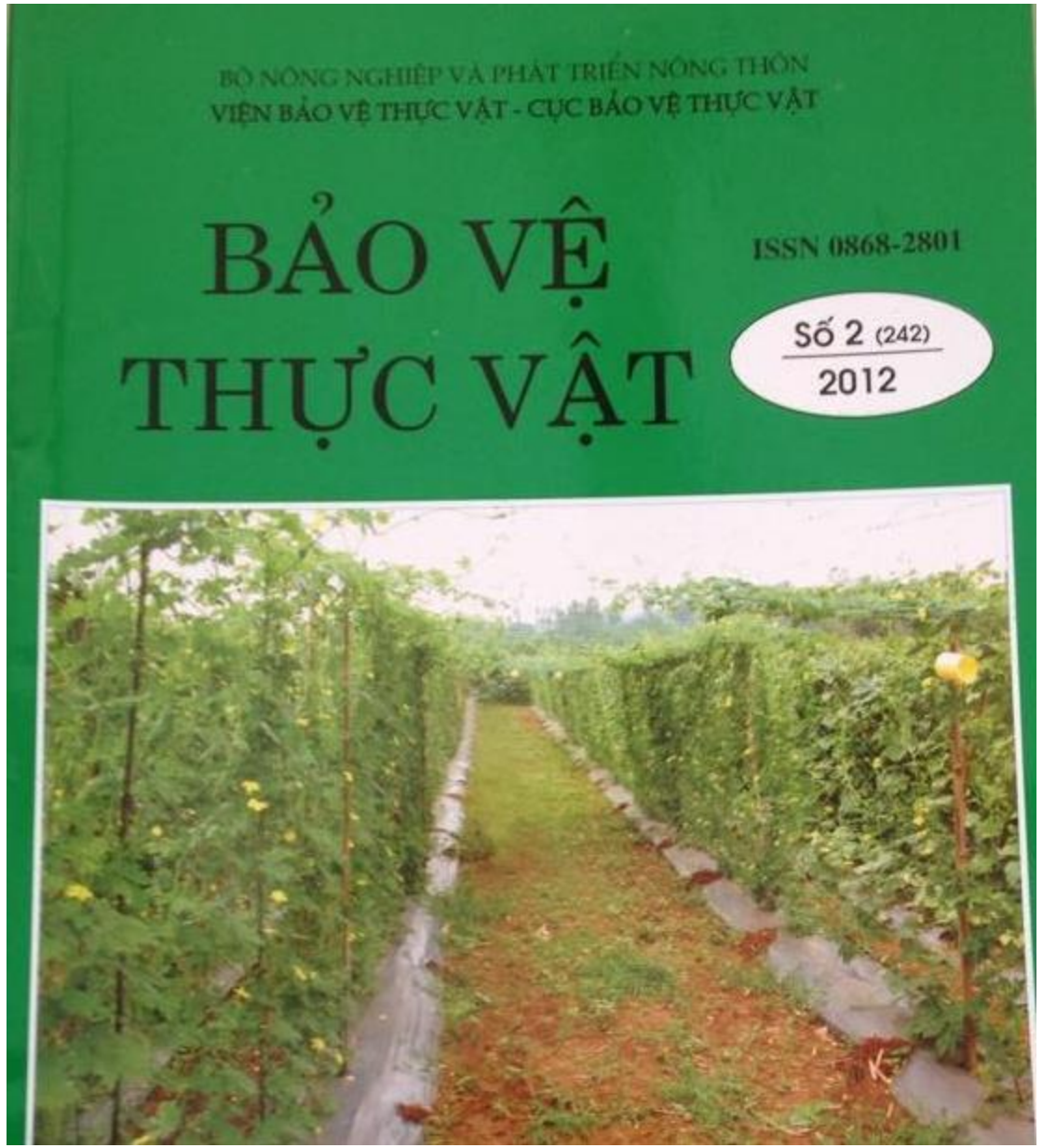
3) Training of implementer: Plant Quarantine Diagnostic Centre (PQDC) for NPPO system and Rubber Research Institute of Vietnam (RRIV) for Vietnam Rubber Group.

4) Time of training: One or twice a year

5) Trainee: Plant protection officer, quarantine inspector, quarantine officer, rubber grower, rubber researcher, etc.

6) Awareness program: Plant protection Journal, NPPO website, RRIV website, etc.

AWARENESS AND CAPACITY BUILDING ON SOUTH AMERICAN LEAF BLIGHT - SALB





BỆNH RỤNG LÁ CAO SU NAM MỸ VÀ CẢNH BÁO

Dương Minh Tú



PLANNING ON SOUTH AMERICAN LEAF BLIGHT (SALB) PEST FREEDOM AREA

1) Border control – diagnostic: NPPO system of Vietnam is being run for preventing the introduction and spread of quarantine pests included SALB. National protocol for diagnostic of SALB is being used;
2) Surveillance – maintaining pest freedom: Through annual regional surveys for plant pests and national surveillance for quarantine pests of Vietnam that are being kept for pest free area of SALB in Vietnam;
3) Surveillance data management and sharing: Data from regional and national surveillance are being shared between Vietnam NPPO and other relevant agencies in Vietnam such as Rubber Research Institute of Vietnam (RRIV);
4) Pest reporting : Pest surveillance and reporting is being done following ISPM 6.

SHARING OF INFORMATION ON SOUTH AMERICAN LEAF BLIGHT (SALB)

1) Type of sharing: Information sharing through IPPC Portal, NPPO website, RRIV website, trade partner website and Media such as television, newspaper etc.

2) Scope of data that can be shared: Data from regional surveys and national surveillance on quarantine pests in general and SALB in particular and intercepted quarantine pests of Vietnam.

3) Obligation in reporting: NPPO of Viet Nam (PPD).

DIFFICULTY ON TRAINING AND CAPACITY BUILDING OF SALB IN VIETNAM

1) Not enough budget and man power for doing surveys on plant pests in general and SALB in particular in all rubber plantations in Vietnam;
2) Not enough budget for making television tape, leaflet, brochure, etc. on SALB to disseminate to all rubber growers in Vietnam;
3) Not enough budget and man power for training all plant protection persons (at commune level) and small rubber growers in Vietnam on South American Leaf Blight.

THANK YOU FOR YOURS KIND ATTENTION