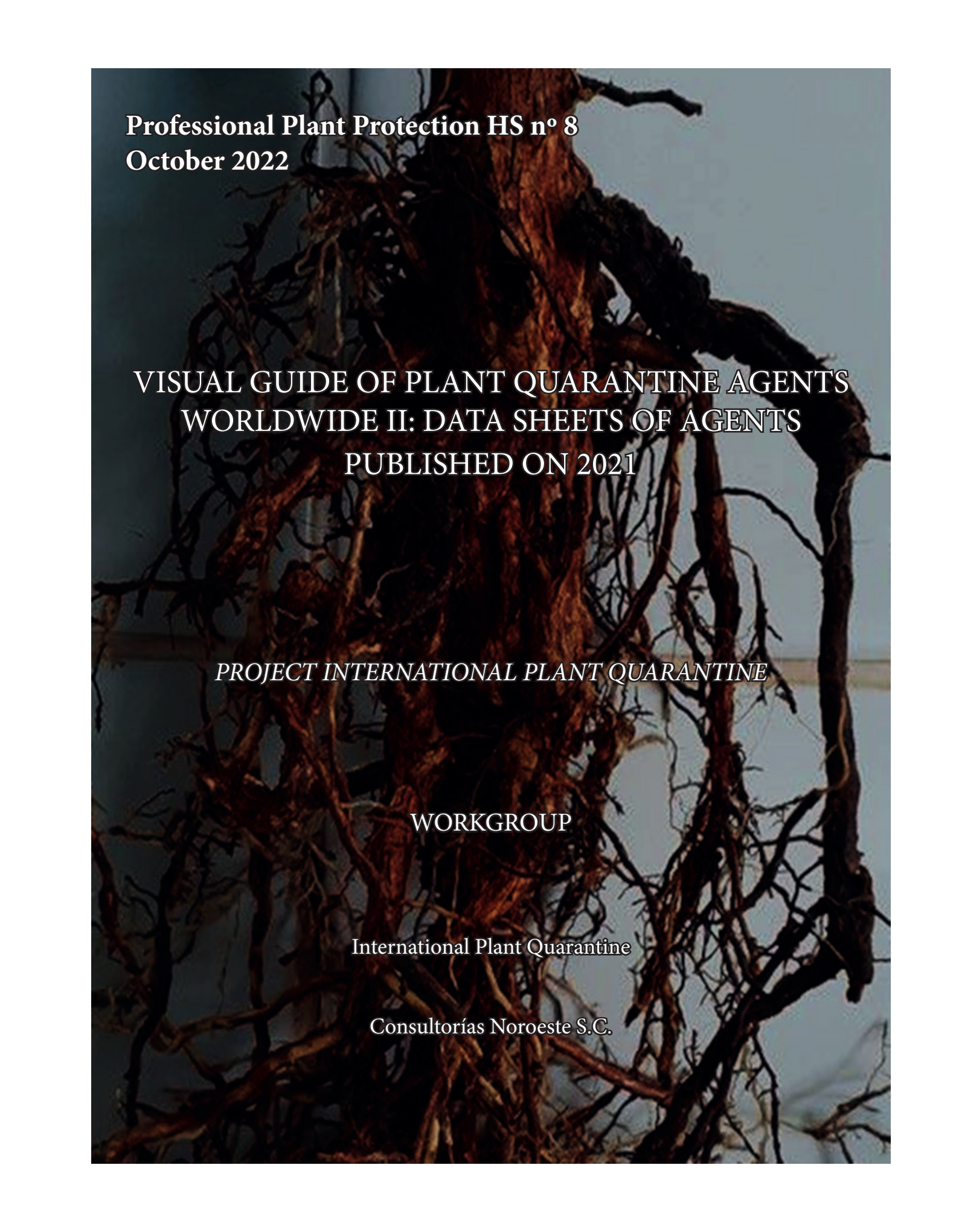




Professional Plant Protection HS nº 8
October 2022

VISUAL GUIDE OF PLANT QUARANTINE AGENTS
WORLDWIDE II: DATA SHEETS OF AGENTS
PUBLISHED ON 2021

PROJECT INTERNATIONAL PLANT QUARANTINE

WORKGROUP

International Plant Quarantine

Consultorías Noroeste S.C.



Professional Plant Protection

Founded in 2015 by Consultorías Noroeste S.C.

Director

Dr. J.L. Andrés Ares, Consultorías Noroeste S.C., Rúa da Seca 36 – 4º D – Pontevedra – España

Editorial Board

Dr. J.L. Andrés Ares

Scientific and technical publisher

Pontevedra – España

Antonio Rivera Martínez

Scientific and technical publisher

O Ferrol – España

José Luis Andrés García

Illustrations and Graphic Publisher

Layout and design

Pontevedra – España

Journal Editorial Office

Consultorías Noroeste S.C. – Rúa da Seca 36– 4º D. 36002–Pontevedra (España)

No part of this publication, with the exception of abstracts, may be reproduced without the prior permission of Consultorías Noroeste S.C.

© 2022 Consultorías Noroeste S.C.

Editor: Consultorías Noroeste S.C.

ISSN-2445-1703

Spanish Legal Deposit: Po 742016

Layout & design: José Luis Andrés García for Consultorías Noroeste S.C.



Professional Plant Protection

International Journal of Professional Plant Protection

Aims and Scope

Professional Plant Protection is an international journal on aspects of Professional Plant Protection. It publishes critical reviews, papers and short communications on the results of original research, experimentation or professional experiences related to plant protection. It is a journal carried out by plant protection professionals for the plant protection and plant production companies: all of the works to be published in the journal must be based in experiences carried out in commercial enterprises, being these horticultural, ornamental or viticultural companies. The journal will only include applied investigation. The journal will willingly accept experiences related to Plant protection described either by technicians or plant protection managers. The journal will also accept investigation carried out by formal investigation groups, either private or public, belonging to formal investigation centers or to private or public universities, but always based on experiences carried out in commercial production companies.

This journal has no impact factor.

The editorial Board



Professional Plant Protection

International Journal of Professional Plant Protection

Volume 7. Special number 8. October 2022

SICI-2445-1703 (20221031) < 1.0; CD; 2-Y

Visual guide of plant quarantine agents worldwide II: data sheets of agents published by the project international plant quarantine on 2021.

Agents data sheets carried out with photographs supplied by Consultorías Noroeste S.C.

All of the data sheets carried out with photographs supplied by Consultorías Noroeste S.C. were written by J.L. Andrés Ares.

Cover photograph supplied by Dra. Aline Ferreira – Brazil.

Quarantine Agent – Host

1. *Phytophthora capsici* – *Capsicum annuum*
2. *Bremia lactuca* – *Lactuca sativa*
3. *Clavibacter michiganense* ssp. *Michiganense* – *Solanum tuberosum*
4. *Colletotrichum lindemutianum* – *Phaseolus vulgaris*
5. *Phyllotreta nemorum* – *Brassica* sp.
6. *Phytophthora infestans* – *Solanum tuberosum*
7. *Phytophthora infestans* – *Solanum lycopersicum*
8. *Plasmodiophora brassicae* – *Brassica oleracea*
9. *Podosphaera fusca* – *Cucurbita pepo*
10. *Rhizoctonia solani* – *Brassica oleracea*
11. TSWV – *Capsicum annuum*
12. *Verticillium dahlia* – *Capsicum annuum*

13. *Autographa gamma* – *Pelargonium* × *hortorum*
14. *Autographa gamma* – *Cyclamen persicum*
15. *Plasmopara obducens* – *Impatiens walleriana*
16. *Puccinia chrysanthemi* – *Chrysanthemum*
17. *Puccinia horiana* – *Chrysanthemum*
18. *Puccinia perlargonii* – *zonalis* – *Pelargonium* × *hortorum*
19. *Mycosphaerella dianthi* – *Dianthus caryophyllus*
20. *Otiorhynchus sulcatus* – *azalea*
21. *Tetranychus urticae* – *Buxus sempervivens*
22. *Rhizocetus falcifer* – *Buxus sempervivens*
23. *Tetranychus urticae* – *Camellia japonica*
24. *Otiorhynchus sulcatus* – *Camellia japonica*
25. *Trioza alacris* – *Clematis* sp.
26. *Tetranychus urticae* – *Cotoneaster lacteus*
27. *Tetranychus urticae* – *Dianthus caryophyllus*
28. *Tetranychus urticae* – *Gleditsia triacanthos*
29. *Polyphagotarsonemus latus* – *Laurus nobilis*
30. *Otiorhynchus sulcatus* – *Metrosideros robusta*
31. *Otiorhynchus sulcatus* – *Osmanthus*
32. *Limantria dispar* – *Quercus robur*
33. *Otiorhynchus sulcatus* – *Rhododendron* sp.
34. *Otiorhynchus sulcatus* – *Thuja plicata*
35. *Phyllosticta ampelicina* – *Aesculus hippocastaneum*
36. *Phytophthora nicotianae* – *Araucaria araucana*
37. *Phytophthora nicotianae* – *Boronia gunni*
38. *Phytophthora ramorum* – *Buddleia*
39. *Armillaria mellea* – *Cedrus atlantica*
40. *Phytophthora citrophthora* – *Citrus lemon*
41. *Phytophthora cinnamomi* – *Correa speciosa*
42. *Gymnosporangium sabinae* – *Crataegus monogina*
43. *Rhizoctonia solani* – *Dianthus caryophyllus*
44. *Phytophthora cinnamomi* – *Gardenia japonica*

45. *Phytophthora cinnamomi* – *Juniperus*
46. *Phytophthora cinnamomi* – *Arbutus unedo*
47. *Phytophthora cinnamomi* – *Metrosideros × robusta*
48. *Phytophthora ramorum* – *Photinia × fraserii*
49. *Phytophthora ramorum* – *Pieris japonica*
50. *Plasmopara viticola* – *Vitis vinifera*
51. *Uncinula necator* – *Vitis vinifera*

All of the data sheets carried out with photographs supplied by other members of the workgroup were written by J.L. Andrés Ares

Quarantine Agent – Host – Author of the data sheet

Note: Either the data sheets of quarantine weeds as some of the data sheets that only include photographs of pathogens are not related with a specific host.

52. *Scyphophorus acupunctatus* – *Agave Americana* – Miguel Sicilia
53. *Theba pisana* – *Persea americana* – Miguel Sicilia
54. *Olygonichus persea* – *Persea americana* – Miguel Sicilia
55. *Parasaissetia nigra* – *Annona cherimola* – Miguel Sicilia
56. *Dactylopius coccus* – *Opuntia ficus – indica* – Miguel Sicilia
57. *Stigmina carpophila* – *Prunus armeniaca* – Miguel Sicilia
58. *Lasiodiplodia theobromae* – *Vitis vinifera* – Cinthia Martínez
59. *Phymatotrichopsis omnívora* – *Juglans regia* – Cinthia Martínez
60. *Clavibacter michiganensis* subsp. *michiganensis* – *Solanum lycopersicum* – Cinthia Martínez
61. *Meloidogyne incognita* – *Solanum lycopersicum* – Cinthia Martínez
62. *Spodoptera frugiperda* – *Zea mays* – Cinthia Martínez
63. *Heliothis zea* – *Zea mays* – Cinthia Martínez
64. *Copitarsa decolora* – *Lactuca sativa* – Cinthia Martínez
65. *Paysandisia archon* – *Livistona chinensis* – Miguel Sicilia
66. HVBA – *Oryza sativa* – Johanna Echeverri
67. HVBA – *Echinochloa* sp. – Johanna Echeverri
68. *Tagosodes oryzicolus* – *Oryza sativa* – Johanna Echeverri
69. *Gaeumannomyces graminis* var. *graminis* – *Oryza sativa* – Johanna Echeverri
70. Virus de la necrosis rayada del arroz – *Oryza sativa* – Johanna Echeverri

71. *Helicotylenchus dihistera* – Aline Ferreira
72. *Heterodera glycines* – *Glycine max* – Aline Ferreira
73. *Meloidogyne exigua* – Aline Ferreira
74. *Meloidogyne paranaensis* – *Coffea arabica* – Aline Ferreira
75. *Meloidogyne* spp. – Liliana Estupiñán
76. *Meloidogyne exigua* – Liliana Estupiñán
77. *Pratylenchus zae* – Liliana Estupiñán
78. *Pratylenchus* spp. – Liliana Estupiñán
79. *Meloidogyne incognita* – *Lactuca sativa* – Liliana Estupiñán
80. *Heterodera glycines* – Liliana Estupiñán
81. *Meloidogyne incognita* – Liliana Estupiñán
82. *Meloidogyne incognita* – *Abelmoschus esculentus* – Liliana Estupiñán
83. *Helicotylenchus dihistera* – Liliana Estupiñán
84. *Pratylenchus brachyurus* – *Solanum lycopersicum* – Liliana Estupiñán
85. *Rotylenchus reniformis* – *Lactuca sativa* – Liliana Estupiñán
86. *Meloidogyne* spp. – *Coffea arabica* – Liliana Estupiñán
87. *Meloidogyne* spp. – *Abelmoschus esculentus* – Liliana Estupiñán
88. *Meloidogyne incognita* – *Lactuca sativa* – Liliana Estupiñán
89. *Rotylenchus reniformis* – Liliana Estupiñán
90. *Meloidogyne javanica* – Liliana Estupiñán
91. *Meloidogyne paranaensis* – *Coffea arabica* – Liliana Estupiñán
92. *Rotylenchus reniformis* – *Gossypium hirsutum* – Liliana Estupiñán
93. *Giberella zae* – *Zea mays* – Camila Lage – Laboratorio Agronomica
94. *Meloidogyne* spp. – Elaheh Gerami
95. *Pratylenchus brachyurus* & *P. zae* – Camila Lage – Laboratorio Agronomica
96. *Phytophthora palmivora* – Camila Lage – Laboratorio Agronomica
97. *Phytophthora palmivora* – *Theobroma cacao* – Camila Lage – Laboratorio Agronomica
98. *Erwinia* spp. – *Solanum tuberosum* – Camila Lage – Laboratorio Agronomica
99. *Chrysomphalus aonidium* – *Mangifera indica* – Laboratorio Agronomica
100. *Papaya Meleira Virus* – *Carica papaya* – Laboratorio Agronomica

101. *Cenopalpus pulcher* – *Malus domestica* – Laboratorio Agronomica
102. *Aleurothrixus floccosus* – *Citrus × sinensis* – Laboratorio Agronomica
103. *Hemiberlesia palmae* – *Cocos nucifera* – Laboratorio Agronomica
104. *Lasiodiplodia theobromae* – *Vitis vinifera* – Laboratorio Agronomica
105. *Rotylenchus reniformes* – Laboratorio Agronomica
106. *Diaporthe citri* – *Citrus × sinensis* – Laboratorio Agronomica
107. *Xanthomonas citri* sbsp. *citri* – *Citrus × sinensis* – Laboratorio Agronomica
108. *Criptonestus ferrugineus* – *Oryza sativa* – Laboratorio Agronomica
109. *Thrips palmi* – *Cucurbita pepo* – Laboratorio Agronomica
110. *Fusarium graminearum* – *Zea mays* – Laboratorio Agronomica
111. *Rhizoglyphus robini* – Laboratorio Agronomica
112. *Scutellonema brachyurus* – *Zea mays* – Laboratorio Agronomica
113. *Stenocarpella macrospora* – *Triticum aestivum* – Laboratorio Agronomica
114. *Fusarium fujikuroi* – *Zea mays* – Laboratorio Agronomica
115. *Pratylenchus zeae* – *Zea mays* – Laboratorio Agronomica
116. *Spodoptera frugiperda* – *Capsicum annuum* – Laboratorio Agronomica
117. *Helix aspersa* – Laboratorio Agronomica
118. *Cenopalpus pulcher* – *Pyrus communis* – Laboratorio Agronomica
119. *Raoiella indica* – *Musa paradisiaca* – Laboratorio Agronomica
120. *Acarus siro* – Laboratorio Agronomica
121. *Rhizoctonia solani* – *Medicago sativa* – Laboratorio Agronomica
122. *Lepidosaphes gloveri* – *Citrus × sinensis* – Laboratorio Agronomica
123. *Aphelenchoides besseyi* – *Brachiaria ruziziensis* – Laboratorio Agronomica
124. *Pratylenchus penetrans* – *Prunus persica* – Laboratorio Agronomica
125. *Cladosporium carpophyllum* – *Prunus persica* – Laboratorio Agronomica
126. *Sclerotinia sclerotiorum* – Laboratorio Agronomica
127. *Colletotrichum acutatum* – *Catharanthus roseus* – Laboratorio Agronomica
128. *Helicotylenchus dihystra* – *Glycine max* – Laboratorio Agronomica
129. *Stenocarpella maydis* – *Zea mays* – Laboratorio Agronomica
130. CMV – *Nicotiana tabacum* – Laboratorio Agronomica

131. PVY – *Nicotiana tabacum* – Laboratorio Agronomica
132. *Leptoglossus occidentalis* – Laboratorio Agronomica
133. PPV – *Prunus persica* var. *nucipersica* – Laboratorio Agronomica
134. ToCV – *Solanum tuberosum* – Laboratorio Agronomica
135. *Helicotylenchus dihystra* – *Nicotiana tabacum* – Laboratorio Agronomica
136. *Pectobacterium carotovorum* – *Cucurbita maxima* – Laboratorio Agronomica
137. CMV – *Adenium obesum* – Laboratorio Agronomica
138. *Clavibacter michiganensis* – *Solanum lycopersicum* – Laboratorio Agronomica
139. *Brevipalpus lewisi* – *Vitis vinifera* – Laboratorio Agronomica
140. *Phthorimaea operculella* – *Solanum tuberosum* – Laboratorio Agronomica
141. *Ralstonia solanacearum* – *Solanum lycopersicum* – Laboratorio Agronomica
142. *Colletotrichum truncatum* – *Glycine max* – Laboratorio Agronomica
143. *Meloidogyne javanica* – *Solanum lycopersicum* – Laboratorio Agronomica
144. *Protopulvinaria pyrifomis* – Laboratorio Agronomica
145. *Meloidogyne ethiopica* – *Solanum lycopersicum* – Laboratorio Agronomica
146. *Meloidogyne incognita* – Laboratorio Agronomica
147. *Colletotrichum gloeosporioides* – *Persea americana* – Laboratorio Agronomica
148. *Colletotrichum truncatum* – *Carica papaya* – Laboratorio Agronomica
149. *Guignardia bidwellii* – *Vitis rotundifolia* – Laboratorio Agronomica
150. *Fusarium graminearum* – *Zea mays* – J.L. Andrés Ares & A. Rivera Martínez
151. *Tridax procumbens* – Laboratorio Agronomica
152. *Setaria pumila* – Laboratorio Agronomica
153. *Phalaris paradoxa* – Laboratorio Agronomica
154. *Chenopodium album* – Laboratorio Agronomica
155. *Papaver* sp. – Laboratorio Agronomica
156. *Galium aparine* – Laboratorio Agronomica
157. *Phthorimaea operculella* – Laboratorio Agronomica
158. *Descurainia sophia* – Laboratorio Agronomica
159. *Heterodera glycines* – *Glycine max* – Liliana Estupiñán
160. *Physoderma maydis* – *Zea mays* – Eder Moreira

161. *Kabatiella zae* – *Zea mays* – Eder Moreira
162. *Neonectria ditissima* – *Malus domestica* – Laboratorio Agronomica
163. *Heterodera glycines* – *Glycine max* – Liliana Estupiñán
164. *Globisporangium irregulare* – J.L. Andrés Ares & A. Rivera Martínez
165. *Pythium myriotilum* – J.L. Andrés Ares & A. Rivera Martínez
166. *Pythium tracheiphilum* – J.L. Andrés Ares & A. Rivera Martínez
167. *Pythium tracheiphilum* – *Lactuca sativa* – J.L. Andrés Ares & A. Rivera Martínez
168. *Pythium aphanidermatum* – J.L. Andrés Ares & A. Rivera Martínez
169. *Pythium oligandrum* – J.L. Andrés Ares & A. Rivera Martínez
170. *Pythium peritum* – *Phyllostachys aurea* – J.L. Andrés Ares & A. Rivera Martínez
171. *Globisporangium ultimum* – J.L. Andrés Ares & A. Rivera Martínez
172. *Globisporangium ultimum* – *Phaseolus vulgaris* – J.L. Andrés Ares & A. Rivera Martínez
173. *Phytophythium vexans* – J.L. Andrés Ares & A. Rivera Martínez
174. *Phytophythium vexans* – *Impatiens hawkerii* – J.L. Andrés Ares & A. Rivera Martínez
175. *Pythium debaryanum* – J.L. Andrés Ares & A. Rivera Martínez
176. *Phytophthora cinnamomi* – J.L. Andrés Ares & A. Rivera Martínez
177. *Globisporangium hypogynum* – J.L. Andrés Ares & A. Rivera Martínez
178. *Cydia pomonella* – *Malus domestica* – Laboratorio Agronomica
179. *Aleurothrixus floccosus* & *Aleurocanthus woglumi* – *Citrus reticulata* – Laboratorio Agronomica
180. *Neoleucinodes elegantalis* – *Capsicum annuum* – Laboratorio Agronomica
181. *Lepidosaphes neckii* – *Citrus sinensis* – Laboratorio Agronomica
182. *Spodoptera frugiperda* – *Zea mays* – Laboratorio Agronomica
183. *Ustilago maydis* – *Zea mays* – Laboratorio Agronomica
184. *Streptomyces scabiei* – *Solanum lycopersicum* – Laboratorio Agronomica
185. *Dickeya zae* – *Zea mays* – Laboratorio Agronomica
186. *Venturia oleaginea* – *Olea europaea* – Laboratorio Agronomica
187. *Dytilenchus dipsaci* – *Allium sativum* – Laboratorio Agronomica
188. *Puccinia pelargonii* – *zonalis* – *Pelargonium × hortorum* – Laboratorio Agronomica
189. *Glomerella cingulata* – *Vitis vinifera* y *V. labrusca* – Laboratorio Agronomica
190. *Rotylenchus reniformis* – *Zea mays* – Laboratorio Agronomica

191. *Aphelenchoides besseyi* – *Brachiaria ruziziensis* – Laboratorio Agronomica
192. *Xylella fastidiosa* – *Malus domestica* – Laboratorio Agronomica
193. CTV – *Citrus × bergamia* – Laboratorio Agronomica
194. *Brevipalpus chilensis* – *Actinidia deliciosa* – Laboratorio Agronomica
195. *Colletotrichum truncatum* – *Glycine max* – Laboratorio Agronomica
196. *Trichodorus* sp. *Vitis labrusca* – Laboratorio Agronomica
197. *Meloidogyne incognita* – *Nicotiana tabacum* – Laboratorio Agronomica
198. *Colletotrichum gloeosporioides* – *Persea americana* – Laboratorio Agronomica
199. *Daktulospharia vitifoliae* – *Vitis vinifera* – Laboratorio Agronomica
200. *Meloidogyne javanica* – *Daucus carota* – Laboratorio Agronomica
201. *Pieris brassicae* – M. Sicilia
202. *Coccus hesperidum* – *Passiflora quadrangularis* – Fredy Alexander Rodríguez Cruz
203. *Ceratitis capitata* – *Ficus carica* – M. Sicilia
204. *Colletotrichum acutatum* – Cinthia Martínez
205. *Verticillium albo – atrum* – Cinthia Martínez
206. *Verticillium dahliae* – *Spinacia oleraceae* – Cinthia Martínez
207. *Phytophthora infestans* – *Solanum lycopersicum* – Cinthia Martínez
208. PRSV – *Carica papaya* – Laboratorio Agronomica
209. *Pratylenchus zeae* – *Zea mays* – Aline Ferreira
210. *Olygonichus punicae* – *Persea americana* – Miguel Sicilia
211. *Lasioidiplodia theobromae* – *Persea americana* – F. Rojas
212. *Puccinia pittieriana* – *Solanum tuberosum* – F. Rojas
213. *Rhizoctonia solani* – *Oryza sativa* – F. Rojas
214. *Thekopsora minima* – *Vaccinium corymbosum* – F. Rojas
215. *Radopholus similis* – *Musa paradisiaca* – Liliana Estupiñán
216. *Meloidogyne incognita* – Liliana Estupiñán
217. *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* – *Glycine max* – Laboratorio Agronomica
218. *Meloidogyne* sp. – Liliana Estupiñán
219. *Aucalaspis tubercularis* – *Mangifera indica* – Miguel Sicilia
220. *Pennisetum setaceum* – Miguel Sicilia

221. *Aphelenchoides besseyi* – *Glycine max* – Liliana Estuppián
222. *Phytophthora infestans* – *Solanum tuberosum* – F. Rojas
223. *Alternaria solani* – *Solanum tuberosum* – F. Rojas
224. *Cirsium arvense* – Laboratorio Agronomica
224. *Amaranthus spinosus* – Laboratorio Agronomica
225. *Pratylenchus brachyurus* – Aline Ferreira
226. *Sorghum halepense* – Laboratorio Agronomica
227. *Pratylenchus zeae* – *Zea mays* – Liliana Estuppián
228. *Fusarium avenaceum* – *Pisum sativum* – Antonio Rivera Martínez
229. *Helicoverpa zeae* – *Zea mays* – Laboratorio Agronomica
230. CpMMV – *Glycine max* – Laboratorio Agronomica
231. *Thekopsora minima* – F. Rojas
232. CBT – *Solanum lycopersicum* – Laboratorio Agronomica
233. *Diaporthe longicolla* – *Glycine max* – Laboratorio Agronomica
234. *Bemisia tabaci* – *Cucurbita pepo* – Liliana Estuppián
235. *Helicotylenchus multicinctus* – Liliana Estuppián
236. *Pseudomonas syringae* pv. *syringae* – *Persea americana* – Miguel Sicilia
237. *Pratylenchus* sp. – Liliana Estuppián
238. *Grapholita domestica* – *Prunus domestica* – Laboratorio Agronomica
239. *Xyleborus ferrugineus* – Laboratorio Agronomica
240. *Plasmopara viticola* – *Vitis vinifera* – F. Rojas
241. *Uncinula necator* – *Vitis vinifera* – F. Rojas
242. *Meloidogyne incognita* – Liliana Estuppián
243. *Tagosodes oryzae* – *Oryza sativa* – Laboratorio Agronomica
244. *Icerya seychellarum* – *Mangifera indica* – Miguel Sicilia
245. *Meloidogyne* sp. – Aline Ferreira
246. *Phytophthora capsici* – *Capsicum annuum* – F. Rojas
247. *Cydia araucariae* – *Araucaria angustifolia* – Laboratorio Agronomica
248. *Sclerotinia sclerotiorum* – *Capsicum annuum* – Antonio Rivera Martínez
249. *Lasiodiplodia theobromae* – *Persea americana* – F. Rojas

250. TOCV – *Solanum tuberosum* – Laboratorio Agronomica
251. *Grapholita molesta* – *Prunus domestica* – Laboratorio Agronomica
252. *Pratylenchus brachyurus* – C. Bellé
253. *Pratylenchus zeae* – *Zea mays* – C. Bellé
254. *Mesocriconema xenoplax* – *Prunus* sp. – C. Bellé
255. *Meloidogyne graminícola* – C. Bellé
256. *Meloidogyne* sp. – C. Bellé
257. *Pratylenchus* sp. – C. Bellé
258. *Meloidogyne* sp. – *Zea mays* – C. Bellé
259. *Meloidogyne moroccensis* – *Prunus persicae* – C. Bellé
260. *Meloidogyne incognita* – *Ophiopogon japonicus* – C. Bellé
261. *Ditylenchus dipsaci* – *Allium sativum* – C. Bellé
262. *Meloidogyne graminicola* – *Hordeum vulgare* – C. Bellé
263. *Meloidogyne luci* – *Luffa aegyptiaca* – C. Bellé
264. *Meloidogyne graminícola* – *Juncus* sp. – C. Bellé
265. *Meloidogyne* sp. – *Echinochloa* sp. – C. Bellé
266. *Meloidogyne graminicola* – *Oryza sativa* – C. Bellé
267. *Meloidogyne incognita* – *Punica granatum* – C. Bellé
268. *Fusarium oxysporum* f. sp. *cubense* – *Musa paradisiaca* – Laboratorio Agronomica
269. *Hirschmanniella spinicaudata* – *Oryza sativa* – Laboratorio Agronomica
270. *Cercospora kikuchi* – *Glycine max* – Laboratorio Agronomica
271. *Meloidogyne graminicola* – *Oryza sativa* – C. Bellé
272. *Meloidogyne* sp. – C. Bellé
273. *Meloidogyne* sp. – *Solanum tuberosum* – C. Bellé
274. *Tagosodes oryzicolus* – *Oryza sativa* – Laboratorio Agronomica
275. *Meloidogyne graminicola* – *Digitaria* sp. – C. Bellé
276. *Icerya seychellarum* – *Strelizia Nicolai* – Miguel Sicilia
277. *Meloidogyne* sp. – Aline Ferreira
278. *Icerya seychellarum* – *Persea americana* – Miguel Sicilia
279. *Lasiodiplodia* – *Theobroma* – *Persea americana* – F. Rojas

280. *Olygonichus perseae* – *Carya illinoensis* – Miguel Sicilia
281. *Heterodera glycines* – C. Bellé
282. *Ceratocystis fimbriata* – *Actinidia chinensis* – Laboratorio Agronomica
283. *Dickeya dadantii* – *Prunus domestica* – Laboratorio Agronomica
284. GLRaV – *Vitis vinifera* – Laboratorio Agronomica
285. *Meloidogyne* sp. – *Cucumis melo* – C. Bellé
286. *Thekopsora minima* – *Vaccinium corymbosum* – F. Rojas
287. *Meloidogyne incognita* – Laboratorio Agronomica
288. *Alphitobius laevigatus* – *Glycine max* – Laboratorio Agronomica
289. *Meloidogyne graminicola* – *Echinochloa crus-galli* – C. Bellé
290. *Diaporthe aspalathi* – *Glycine max* – Laboratorio Agronomica
291. *Colletotrichum gloeosporioides* – *Anthurium* – Laboratorio Agronomica
292. *Golovinomyces orontii* – *Hydrangea macrophylla* – Laboratorio Agronomica
293. *Frankliniella occidentalis* – J.L. Andrés & A. Rivera Martínez
294. *Heliothrips haemorrhoidalis* – J.L. Andrés & A. Rivera Martínez
295. *Thrips fuscipennis* – J.L. Andrés & A. Rivera Martínez
296. *Thrips simplex* – J.L. Andrés & A. Rivera Martínez
297. *Thrips tabaci* – J.L. Andrés & A. Rivera Martínez
298. *Meloidogyne* spp. – C. Bellé
299. *Chinavia hilaris* – *Citrus × limonia* – Laboratorio Agronomica
300. TCV – *Solanum tuberosum* – Laboratorio Agronomica
301. *Neovectria ditissima* – *Malus domestica* – Laboratorio Agronomica
302. *Giberella zeae* – *Zea mays* – Laboratorio Agronomica
303. PRSV – *Cucurbita pepo* – Laboratorio Agronomica
304. *Meloidogyne graminicola* – *Oryza sativa* – C. Bellé
305. Maize Bushy Stunt Phytoplasma – *Zea mays* – Laboratorio Agronomica
306. *Heterodera glycines* – C. Bellé
307. *Sphaceloma fawcetti* – *Citrus × limonia* – Laboratorio Agronomica
308. *Meloidogyne javanica* – *Glycine max* – C. Bellé
309. *Meloidogyne graminicola* – *Oryza sativa* – C. Bellé

- 310. *Aphelenchoides besseyi* – Laboratorio Agronomica
- 311. *Colletotrichum gloeosporioides* – *Hydrangea macrophylla* – Laboratorio Agronomica
- 312. *Scyphophorus acupunctatus* – *Agave sp.* – Miguel Sicilia
- 313. *Phytophthora palmivora* – *Theobroma cacao* – Laboratorio Agronomica
- 314. *Oidium mangiferae* – *Mangifera indica* – Nelsi Yulisa Velasco Peña
- 315. *Phakopsora pachyrizi* – *Glycine max* – Laboratorio Agronomica
- 316. *Fusarium fujikuroi* – *Zea mays* – Laboratorio Agronomica
- 317. *Plasmodiophora brassicae* – *Brassica oleracea* – Fernanda Silva Sandoval
- 318. *Helicotylenchus* – Fernanda Silva Sandoval
- 319. *Sclerotium cepivorum* – *Allium sativum* – Fernanda Silva Sandoval
- 320. *Spodoptera frugiperda* – Fernanda Silva Sandoval
- 321. *Meloidogyne sp* – *Solanum lycopersicum* – Fernanda Silva Sandoval
- 322. *Tetranychus urticae* – *Cucurbita pepo* – Fernanda Silva Sandoval
- 323. *Pucciniastrum vaccini* – Fernanda Silva Sandoval
- 324. *Meloidogyne graminicola* – *Echinochloa* – C. Bellé
- 325. *Xanthomonas campestris* pv. *viticola* – *Vitis vinifera* – Laboratorio Agronomica
- 326. *Begomovirus* – *Solanum lycopersicum* – Laboratorio Agronomica
- 327. *Thekopsora minima* – *Vaccinium corymbosum* – F. Rojas
- 328. *Pythium myriotylum* – *Lactuca sativa* – Laboratorio Agronomica
- 329. *Phakopsora pachyrizi* – *Glycine max* – Laboratorio Agronomica
- 330. *Elasmopalpus lignosellus* – *Phaseolus vulgaris* – Thiago Sampaio Guerra
- 331. *Hypothenemus hampei* – Thiago Sampaio Guerra
- 332. *Anastrepha* – Thiago Sampaio Guerra
- 333. *Tilletia barclayana* – *Oryza sativa* – Laboratorio Agronomica
- 334. *Pythium myriotylum* – *Lactuca sativa* – Laboratorio Agronomica
- 335. *Phytophthora infestans* – *Solanum tuberosum* – Nelsi Yulisa Velasco
- 336. *Spodoptera frugiperda* – Thiago Sampaio Guerra
- 337. *Heterodera glycines* – *Glycine max* – C. Bellé
- 338. *Scutellonema brachyurus* – *Glycine max* – C. Bellé

International Plant Quarantine Agents Data sheets:

15. *Plasmopara obducens* on *Impatiens walleriana* in Galicia (NW Spain)

José Luis Andrés Ares. Consultorías Noroeste S.C.

International Plant Quarantine Workgroup.

Data sheet: Nº 15

Agent: Nº 73

Name: *Plasmopara obducens*.

Host: *Impatiens walleriana*.

Geographical zone: Galicia (NW Spain).

Author: J.L. Andrés Ares & R. Bastos Bermúdez.

Year of the photograph: 2018.

Quarantine Zone:

Brazil (EPPO, 2021; Andrés & Bastos, 2021).

Copyright of the photographs: J.L. Andrés Ares.

Determination methods: determined by the authors plating the chromistic material sporulating on the diseased plant material on slides with methyl blue. The classification to species was carried out following the descriptions of the specialized bibliography (Shen *et al.*, 2013; Andrés & Bastos, 2021).

References:

<https://gd.eppo.int/taxon/PLASOB/categorization>.

Andrés Ares, J.L. & R. Bastos Bermúdez. 2021. Compendio de Patología Ornamental Herbácea. Consultorías Noroeste S.C. 287 pp.

Shen, Y.M., Huang, J.H. & H.L. Liu. 2013. First report of Downy Mildew caused by *Plasmopara obducens* on *Impatiens* in Taiwan. Plant Disease: 97 (11): 1512.

Note: This was the first reference of the presence of the pathogen in Spain.



Photograph 1. Symptoms of *Plasmopara obducens* on *Impatiens walleriana* in Galicia



Photograph 2. Symptoms of *Plasmopara obducens* on *Impatiens walleriana* in Galicia



Photograph 3. Symptoms of *Plasmopara obducens* on *Impatiens walleriana* in Galicia

International Plant Quarantine Agents Data sheets:

22. *Rhizoecus falcifer* on *Buxus sempervivens* in Galicia (NW Spain)

José Luis Andrés Ares. Consultorías Noroeste S.C.

International Plant Quarantine Workgroup.

Data sheet: Nº 22

Agent: Nº 86

Name: *Rhizoecus falcifer*.

Host: *Buxus sempervivens*.

Geographical zone: Galicia (NW Spain).

Author: J.L. Andrés Ares.

Year of the photograph: 2015

Quarantine Zone: Chile, Venezuela, Mexico, French Polynesia, Argentina (Andrés & International Plant Quarantine, 2021; EPPO, 2022).

Copyright of the photographs: J.L. Andrés Ares.

Determination method: the mounting methods were based on the studies of Williams and Granara de Willink (1992). The species determinations, carried out by the author, were performed based on the following taxonomical keys: Ramos-Portilla (2015).

References:

Andrés & International Plant Quarantine, 2021. Quarantine Hemiptera of the world on 2021: Taxonomy, referenced Hosts and Quarantine Zones. Professional Plant Protection 10: 109-150.

EPPO, 2022. <https://gd.eppo.int/taxon/RHIOFA/categorization>

Granara de Willink, M & L. Claps. 2003. Cochinillas (Hemiptera:Coccoidea) Presentes en Plantas Ornamentales de la Argentina. Neotropical Entomology 32(4):625-637.

Ramos-Portilla, A. A. 2015. Revisión taxonómica de las cochinillas hipógeas del género *Rhizoecus* (Hemiptera: Rhizoecidae del Neotropico. Tesis Doctoral. Universidad Nacional de Colombia. 229 páginas.

Note: this was the first reference of this pest species in Spain.



Photograph 1. Symptoms of *Rhizoecus falcifer* on *Buxus sempervivens* in Galicia



Photograph 2. Symptoms of *Rhizoecus falcifer* on *Buxus sempervivens* in Galicia



Photograph 3. Symptoms of *Rhizoecus falcifer* on *Buxus sempervivens* in Galicia

International Plant Quarantine Agents Data sheets:

66. Rice Hoja Blanca tenuivirus and *Tagosodes oryzicola* on *Oryza sativa* in Colombia

Johanna Echeverri – FEDEARROZ.

International Plant Quarantine Workgroup.

Data sheet: Nº 66

Agent: Nº 133

Name: Rice Hoja Blanca *tenuivirus*.

Vector: *Tagosodes oryzicola*-*Tagosodes oryzicola* (*Sogatodes orizicolus*).

Host: *Oryza sativa*.

Geographical zone: Colombia.

Author: Johanna Echeverri.

Year of the photograph: 2020

Quarantine Zone:

Rice Hoja Blanca *Tenuivirus*–Mexico & Bahrain (EPPO, 2022).

Tagosodes oryzicola– APPPC, PPO (EPPO, 2022).

Copyright of the photographs: Johanna Echeverri.

References:

<https://gd.eppo.int/taxon/RHBV00/categorization>.

<https://gd.eppo.int/taxon/SOGAOR/categorization>.



Photograph 1. *Tagosodes oryzicola* on *Oryza sativa* in Colombia



Photograph 2. Rice Hoja Blanca *tenuivirus* on *Oryza sativa* in Colombia



Photograph 3. Rice Hoja Blanca *tenuivirus* on *Oryza sativa* in Colombia

International Plant Quarantine Agents Data sheets:

72. *Heterodera glycines* on *Glycine max* Colombia

Aline Ferreira. Agroteste Pesquisa e Desenvolvimento. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 72

Agent: Nº 139

Name: *Heterodera glycines*.

Host: *Glycine max*.

Geographical zone: Brazil.

Author: Aline Ferreira.

Year of the photograph: 2021

Quarantine Zone: Madagascar, Georgia, Morocco, Egypt, Turkey, Sri Lanka, Croatia, Belarus, Russia, Kazakhstan, Kirguistan, Armenia, Ukraine, Uruguay, Chile, Nicaragua, Peru, Panama, Ecuador, New Caledonia, Australia, French Polynesia, Myanmar & Cuba (Andrés & International Plant Quarantine Work Group, 2022).

Copyright of the photographs: Johanna Echeverri.

References:

Andrés & International Plant Quarantine Work Group. 2022. Plant Quarantine Nematodes of the world on 2022: Taxonomy, referenced Main hosts and Quarantine Zones. Professional Plant Protection 12: 81-138.



Photograph 1. *Heterodera glycines* on *Glycine max* in Brazil. Male



Photograph 2. *Heterodera glycines* on *Glycine max* in Brazil. Females



Photograph 3. *Heterodera glycines* on *Glycine max* in Brazil. Females & brown cists



Photograph 4. *Heterodera glycines* on *Glycine max* in Brazil. Male on a root

International Plant Quarantine Agents Data sheets:

80. *Heterodera glycines* on *Glycine max* in Brazil

Liliana Estupiñán López. PROMIP. Manejo Integrado de Pragas. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 80

Agent: Nº 147

Name: *Heterodera glycines*.

Host: *Glycine max*.

Geographical zone: Brazil.

Author: Liliana Estupiñán López.

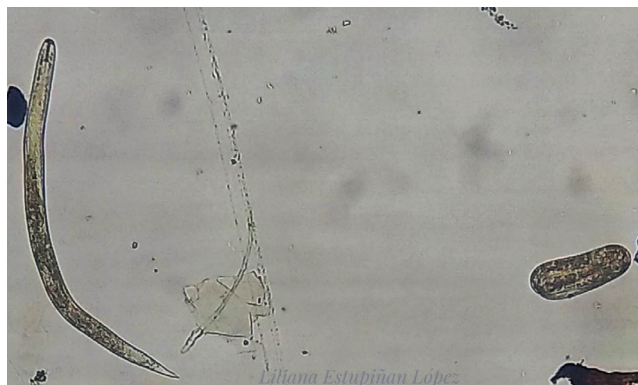
Year of the photograph: 2021

Quarantine Zone: Madagascar, Georgia, Morocco, Egypt, Turkey, Sri Lanka, Croatia, Belarus, Russia, Kazakhstan, Kirguistan, Armenia, Ukraine, Uruguay, Chile, Nicaragua, Peru, Panama, Ecuador, New Caledonia, Australia, French Polynesia, Myanmar & Cuba (Andrés & International Plant Quarantine Work Group, 2022).

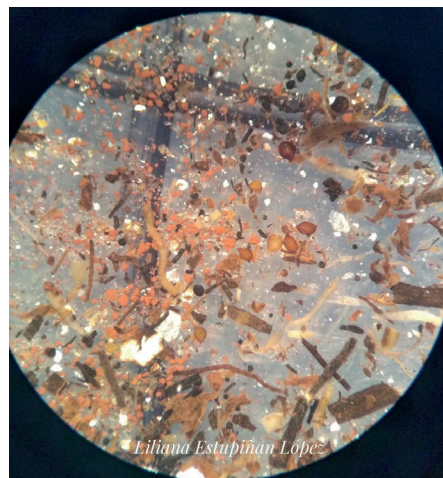
Copyright of the photographs: Liliana Estupiñán López.

References:

Andrés & International Plant Quarantine Work Group. 2022. Plant Quarantine Nematodes of the world on 2022: Taxonomy, referenced Main hosts and Quarantine Zones. Professional Plant Protection 12: 81-138.



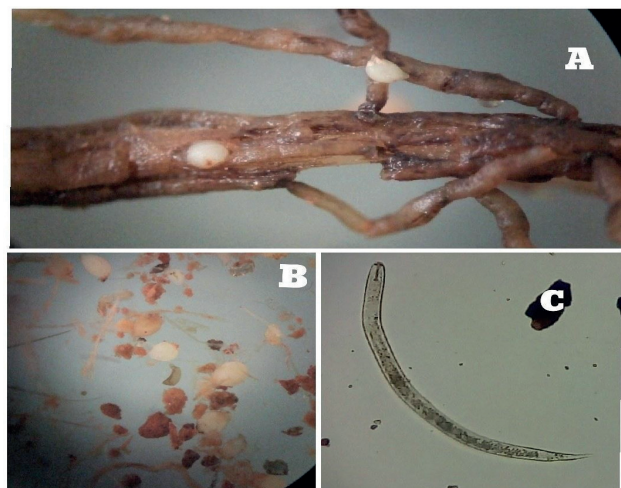
Photograph 1. *Heterodera glycines* on *Glycine max* in Brazil. Juvenile and egg



Photograph 2. *Heterodera glycines* on *Glycine max* in Brazil. Cysts



Photograph 3. *Heterodera glycines* on *Glycine max* in Brazil. Male



Photograph 4. *Heterodera glycines* on *Glycine max* in Brazil. A: females on the roots. B: Cysts. C- Male

International Plant Quarantine Agents Data sheets:

93. *Gibberella zeae* on *Zea mays* in Brazil

Camila Lage de Andrade. Agronomica Laboratorio de Diagnostico Fitossanitario e Consultoria. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 93

Agent: Nº 160

Name: *Gibberella zeae* – *Fusarium graminearum*.

Host: *Zea mays*.

Geographical zone: Brazil.

Author: Camila Lage de Andrade.

Year of the photograph: 2021

Quarantine Zone: Egypt (RNQP) (EPPO, 2022).

Copyright of the photographs: Camila Lage de Andrade.

References:

<https://gd.eppo.int/taxon/GIBBZE/categorization>.



Photograph 1. *Gibberella zeae* on *Zea mays* in Brazil. Perithecium



Photograph 2. *Gibberella zeae* on *Zea mays* in Brazil. Perithecium



Photograph 3. *Gibberella zeae* on *Zea mays* in Brazil. Rotted spikes



Photograph 4. *Gibberella zeae* on *Zea mays* in Brazil. Asci and ascospores

International Plant Quarantine Agents Data sheets:

94. *Meloidogyne* spp. in Iran

Elaheh Gerami. TBIO Crop Science. Iran.

International Plant Quarantine Workgroup.

Data sheet: N° 94

Agent: N° 161

Name: *Meloidogyne* sp.

Host: not specified.

Geographical zone: Brazil.

Author: Elaheh Gerami.

Year of the photograph: 2021

Quarantine Zone: Egypt & Tunisia (EPPO, 2022).

Copyright of the photographs: Elaheh Gerami.

References:

<https://gd.eppo.int/taxon/MELGSP/categorization>.



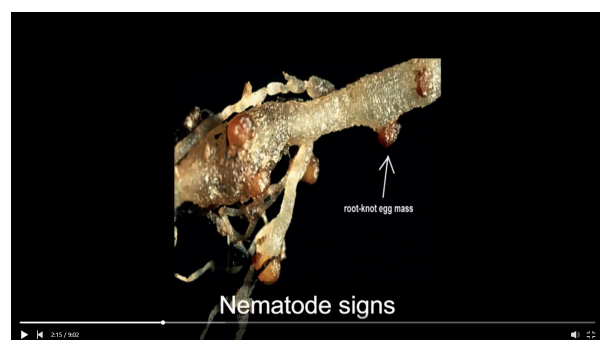
Photograph 2. *Meloidogyne* spp. in Iran. Root damage



Photograph 3. *Meloidogyne* spp. in Iran. Root damage



Photograph 4. *Meloidogyne* spp. in Iran. Infective juvenile



Photograph 1. *Meloidogyne* spp. in Iran. Egg masses



Photograph 5. *Meloidogyne* spp. in Iran. Females

International Plant Quarantine Agents Data sheets:

105. *Rotylenchulus reniformis* on *Zea mays* in Brazil

Raul Coutinho. Agronomica Laboratorio de Diagnostico Fitossanitario e Consultoria. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 105

Agent: Nº 171

Name: *Rotylenchulus reniformis*.

Host: *Zea mays*.

Geographical zone: Brazil

Author: Raul Coutinho.

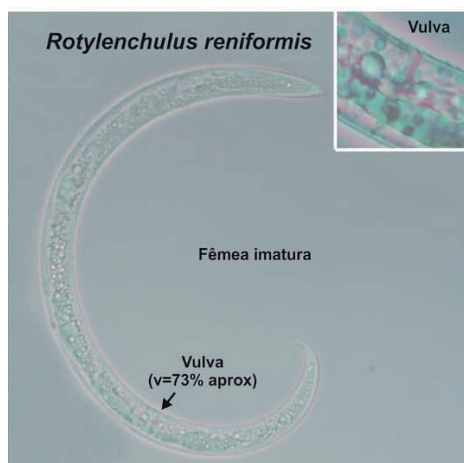
Year of the photograph: 2021

Quarantine Zone: Argentina, Tunisia, Egypt, Saudi Arabia, Guatemala, Chile, Bolivia, French Polynesia, Santo Tomé & Príncipe (Andrés & International Plant Quarantine Work Group, 2022).

Copyright of the photographs: Raul Coutinho.

References:

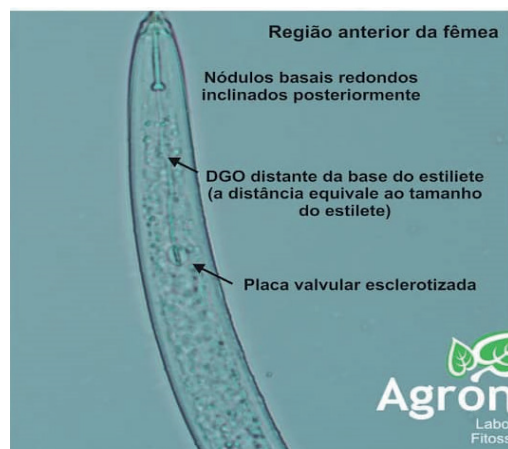
Andrés & International Plant Quarantine Work Group. 2022. Plant Quarantine Nematodes of the world on 2022: Taxonomy, referenced Main hosts and Quarantine Zones. Professional Plant Protection 12: 81-138.



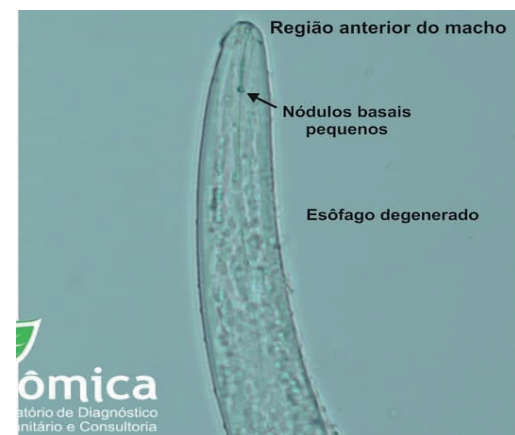
Photograph 1. *Rotylenchulus reniformis* on *Zea mays* in Brazil. Inmature female. Vulva



Photograph 2. *Rotylenchulus reniformis* on *Zea mays* in Brazil. Male. Espicula



Photograph 3. *Rotylenchulus reniformis* on *Zea mays* in Brazil. Female anterior region. Basal stylet nodules. DGO distant from the stylet base. Sclerotized valvular plate



Photograph 4. *Rotylenchulus reniformis* on *Zea mays* in Brazil. Male anterior region. Short basal nodules. Degenerated esophagus

International Plant Quarantine Agents Data sheets:

109. *Thrips palmi* on *Cucurbita pepo* in Brazil

Vinicius Ferreira & Felipe Colares. Agronomica Laboratório de Diagnostico Fitossanitario e Consultoria. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 109

Agent: Nº 175

Name: *Thrips palmi*.

Host: *Cucurbita pepo*.

Geographical zone: Brazil.

Authors: Vinicius Ferreira & Felipe Colares.

Year of the photograph: 2021

Quarantine Zone: Egypt, Morocco, Tunisia, Argentina, Chile, Mexico, Paraguay, Uruguay, Bahrain, Israel, Jordan, Kazakhstan, Azerbaijan, Georgia, Moldova, Norway, Iceland, Russia, Turkey, Ukraine, New Zealand, EAEU, EU, United Kingdom, Madagascar, Ghana, Saudi Arabia, Oman, Iran, Qatar, Singapur, Macedonia, Croacia, Bielorrusia, Georgia, Ukraine, Montenegro, Guatemala, Bolivia, Venezuela, Peru, Antigua & Barbuda, Granada, Haiti, Japan (Andrés & International Plant Quarantine Work Group, 2021).

Copyright of the photographs: Vinicius Ferreira & Felipe Colares.

References:

Andrés & International Plant Quarantine Work Group. 2021. Plant Quarantine Thysanoptera of the world on 2022: Taxonomy, referenced Main hosts and Quarantine Zones. Professional Plant Protection II: 53-81.



Photograph 1. *Thrips palmi* on *Cucurbita pepo* in Brazil



Photograph 2. *Thrips palmi* on *Cucurbita pepo* in Brazil. Male



Photograph 3. *Thrips palmi* on *Cucurbita pepo* in Brazil. Female

International Plant Quarantine Agents Data sheets:

153. *Phalaris paradoxa* detected in Brazil on *Lolium* sp. imported from Uruguay

Priscila S. Da C.F. Gomes & J. Pedroso . Agronomica Laboratorio de Diagnostico Fitossanitario e Consultoria. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 153

Agent: Nº 218

Name: *Phalaris paradoxa*.

Host: *Lolium* sp.

Geographical zone: detected in Brazil on *Lolium* sp. imported from Uruguay.

Authors: Priscila S. Da C.F. Gomes & J. Pedroso.

Year of the photograph: 2021

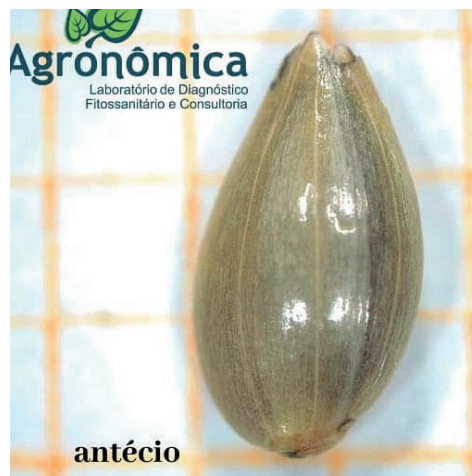
Quarantine Zone: Brazil (EPPO, 2022).

Copyright of the photographs: Priscila S. Da C.F. Gomes & J. Pedroso.

References:

<https://gd.eppo.int/taxon/PHAPA/categorization>.

Note: the seeds are conserved in a collection of reference seeds in Laboratorio Agronomica.



Photograph 1. *Phalaris paradoxa* detected in Brazil on *Lolium* sp. imported from Uruguay. Anthecium



Photograph 2. *Phalaris paradoxa* detected in Brazil on *Lolium* sp. imported from Uruguay. Caryopsis



Photograph 3. *Phalaris paradoxa* detected in Brazil on *Lolium* sp. imported from Uruguay

International Plant Quarantine Agents Data sheets:

161. *Physoderma maydis* on *Zea mays* in Brazil

Eder Moreira. FITOLAB R&D Agricultural. Brazil
International Plant Quarantine Workgroup.

Data sheet: Nº 161

Agent: Nº 226

Name: *Kabatiella zeae* – *Aureobasidium zeae*.

Host: *Zea mays*.

Geographical zone: Brazil.

Author: Eder Moreira.

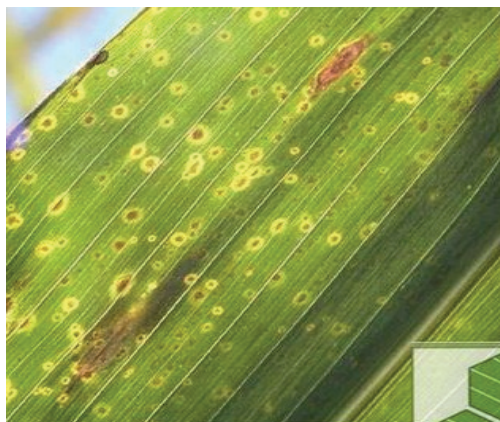
Year of the photograph: 2021

Quarantine Zone: Israel (EPPO, 2022).

Copyright of the photographs: Eder Moreira.

References:

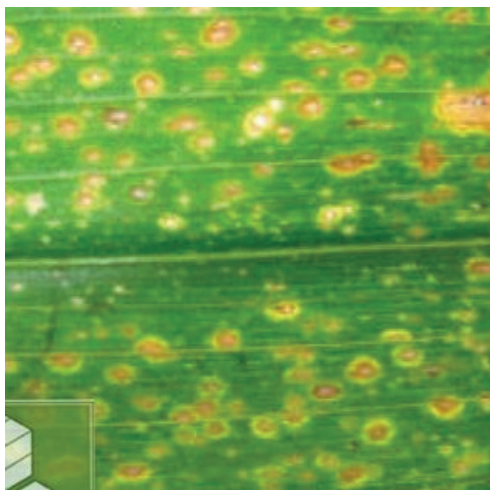
<https://gd.eppo.int/taxon/KABAZE/categorization>.



Photograph 2. *Kabatiella zeae* on *Zea mays* in Brazil. Eye spot



Photograph 3. *Kabatiella zeae* on *Zea mays* in Brazil. Eye spot



Photograph 1. *Kabatiella zeae* on *Zea mays* in Brazil. Eye spot



Photograph 4. *Kabatiella zeae* on *Zea mays* in Brazil. Fungal structures

International Plant Quarantine Agents Data sheets:

169. *Pythium oligandrum* – reference isolate

J. L. Andrés Ares^{1,2}

A. Rivera Martínez^{1,3}

¹ Former position: Centro de Investigacións Agrarias de Mabegondo. A Coruña. Spain.

² Actual position: Consultorías Noroeste S.C.

³ Servizo de Explotacións Agrarias de A Coruña. Xunta de Galicia. Spain.

International Plant Quarantine Workgroup.

Data sheet: Nº 169

Agent: Nº 235

Name: *Pythium oligandrum*

ISOLATE CODE: CBS 109981.

ISOLATE ORIGIN: Denmark.

ISOLATE Host: *Brassica oleracea*.

Authors: Andrés Ares & Rivera Martínez.

Illustrations: J.L. Andrés García.

Year of the photograph: 2005

Quarantine Zone: As *Pythium* sp.: USA (RNQP) (APHIS, 2022)

Copyright of the photographs: Andrés Ares & Rivera Martínez.

Determination methods: the formerly named *Pythium* isolates were replated on V8 medium and later in sterile distilled water in order to produce sporangia and classified following Van der Plaats-Niterink (1981) and Uzuhashi *et al.* (2010).

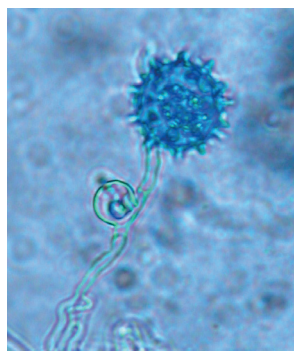
References:

APHIS. 2022. <https://www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/rppl/rppl-table>.

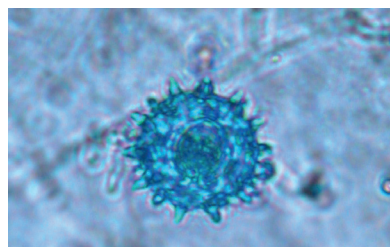
Uzuhashi, S., Tojo, M., Kakishima, M. 2010. Phylogeny of the genus *Pythium* and descriptions of new genera. *Mycoscience* 51: 337-365.

Van der Plaats-Niterink, J. 1981. Monograph of the genus *Pythium*.

Note: The photographs were taken from the isolate CBS 109981 obtained from Centraalbureau voor Schimmelcultures.



Photograph 1. *Pythium oligandrum* – reference isolate 109981. Oogonium and anteridium



Photograph 2. *Pythium oligandrum* – reference isolate 109981. Oospore

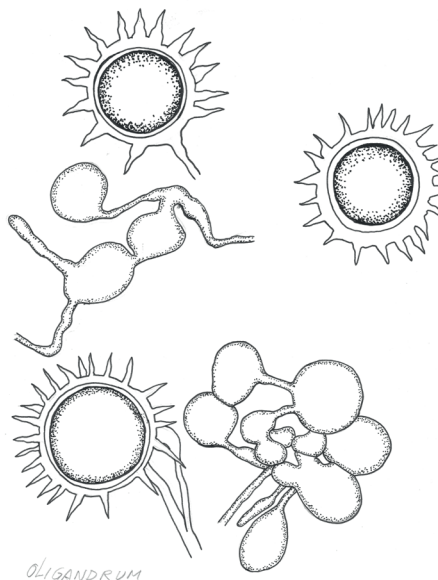


Illustration 1. *Pythium oligandrum*. Oogonia, anteridia, oospores and sporangia. J.L. Andrés García for Consultorías Noroeste S.C

International Plant Quarantine Agents Data sheets:

212. *Puccinia pittieriana* on *Solanum tuberosum* in Peru

F. Rojas. CAPEAGRO S.A.C. Perú.

International Plant Quarantine Workgroup.

Data sheet: N° 212

Agent: N° 279

Name: *Puccinia pittieriana*.

Host: *Solanum tuberosum*.

Geographical zone: Peru.

Author: F. Rojas.

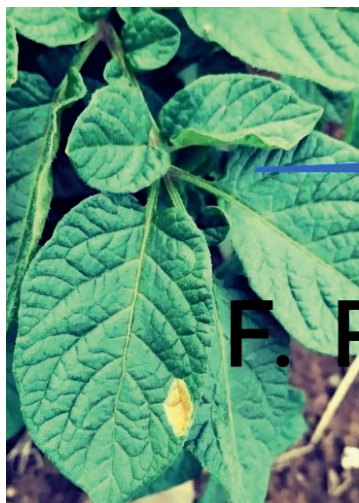
Year of the photograph: 2021

Quarantine Zone: Macedonia, Croacia, Senegal, Syria, Morocco, Tunisia, Egypt, Sudan, Bostwana, Chile, Malaysia, Saudi Arabia, Japan, Bahrain, Oman, Iran, Qatar, Korea, Singapur, EU & United Kingdom (Andrés & International Plant Quarantine Work Group, 2021).

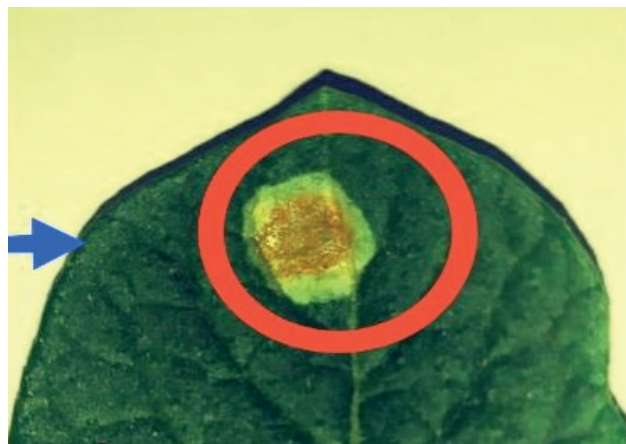
Copyright of the photographs: F. Rojas.

References:

Andrés & International Plant Quarantine Work Group, 2021. Quarantine Rusts of the world on 2021: Taxonomy, referenced Hosts and Quarantine Zones. Professional Plant Protection 10: 153-164.



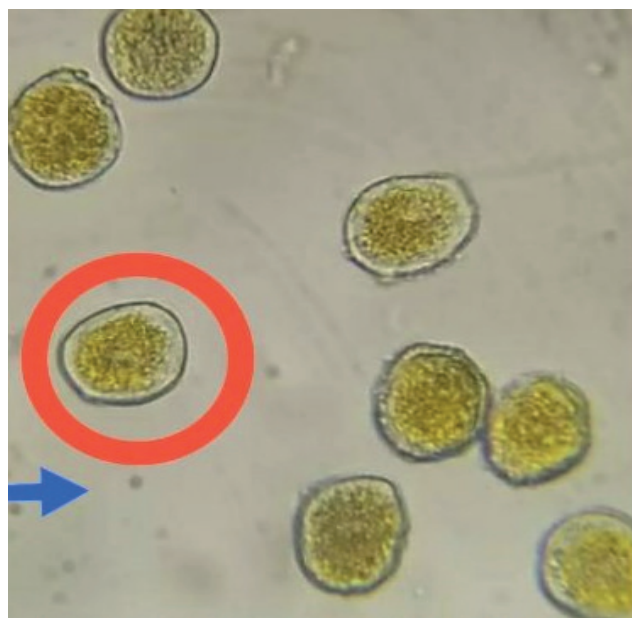
Photograph 1. *Puccinia pittieriana* on *Solanum tuberosum* in Perú. Damage



Photograph 2. *Puccinia pittieriana* on *Solanum tuberosum* in Perú. Pustule



Photograph 3. *Puccinia pittieriana* on *Solanum tuberosum* in Perú. Damage



Photograph 4. *Puccinia pittieriana* on *Solanum tuberosum* in Perú. Uredospores

International Plant Quarantine Agents Data sheets:

243. *Tagosodes oryzicola* on *Oryza sativa* in Colombia

Rodríguez-Cruz, F.R. Laboratorio Agronomica.

International Plant Quarantine Workgroup.

Data sheet: Nº 243

Agent: Nº 314

Name: *Tagosodes oryzicola* (*Sogatodes orizicolus*).

Host: *Oryza sativa*.

Geographical zone: Colombia.

Author: Rodríguez-Cruz, F.R.

Year of the photograph: 2021

Quarantine Zone: Cambodia, Sri Lanka, Indonesia, Japan (Andrés & International Plant Quarantine Work Group, 2021).

Copyright of the photographs: Rodríguez-Cruz, F.R. .

References:

Andrés & International Plant Quarantine Work Group. 2021. Plant Quarantine Hemiptera of the world on 2021: Taxonomy, referenced Main hosts and Quarantine Zones. Professional Plant Protection 10: 109-150.

Rodríguez-Cruz, F.R. *Tagosodes orizicolus* en Yopal, Colômbia/Rice Delphacid in Yopal, Colombia. Agriporticus.



Photograph 1. *Tagosodes oryzicola* on *Oryza sativa* in Colombia. Females



Photograph 2. *Tagosodes oryzicola* on *Oryza sativa* in Colombia. Male



Photograph 3. *Tagosodes oryzicola* on *Oryza sativa* in Colombia.

International Plant Quarantine Agents Data sheets:

314. *Oidium mangiferae* on *Mangifera indica* in Peru

Nelsi Yulisa Velasco Peña. LPD PERÚ E.I.R.L.

International Plant Quarantine Workgroup.

Data sheet: N° 314

Agent: N° 387

Name: *Oidium mangiferae* – *Oidium anacardii*.

Host: *Mangifera indica*.

Geographical zone: Peru.

Author: Nelsi Yulisa Velasco Peña.

Year of the photograph: 2021

Quarantine Zone: Indonesia & Sudan (Andrés & International Plant Quarantine Work Group, 2021).

Copyright of the photographs: Nelsi Yulisa Velasco Peña.

References:

Andrés, J.L. & international Plant Quarantine Work Group. 2021. Plant Quarantine Powdery Mildews of the world on 2021: Taxonomy, referenced Main hosts and Quarantine Zones. Professional Plant Protection 12: 82-100.



Photograph 1. *Oidium mangiferae* infecting *Mangifera indica*



Photograph 2. *Oidium mangiferae* infecting *Mangifera indica*

International Plant Quarantine Agents Data sheets:

323. *Pucciniastrum vaccinii* in Mexico

Fernanda Silva Sandoval. Altus Bio. Mexico.

International Plant Quarantine Workgroup.

Data sheet: Nº 323

Agent: Nº 396

Name: *Pucciniastrum vaccinii* – *Naohidemyces vaccinii*.

Host: Not specified.

Geographical zone: Mexico.

Author: Fernanda Silva Sandoval.

Year of the photograph: 2021

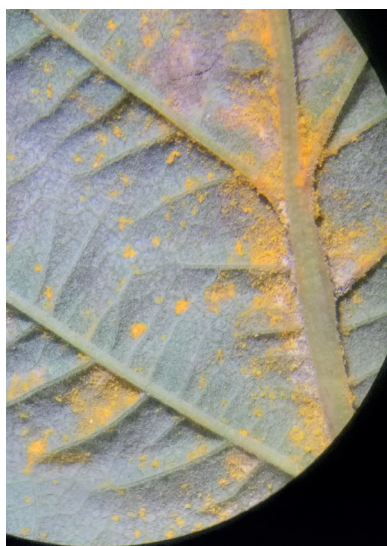
Quarantine Zone: Colombia, French Polynesia, Chile & Mexico (Andrés & International Plant Quarantine Work Group, 2021; EPPO, 2022).

Copyright of the photographs: Fernanda Silva Sandoval.

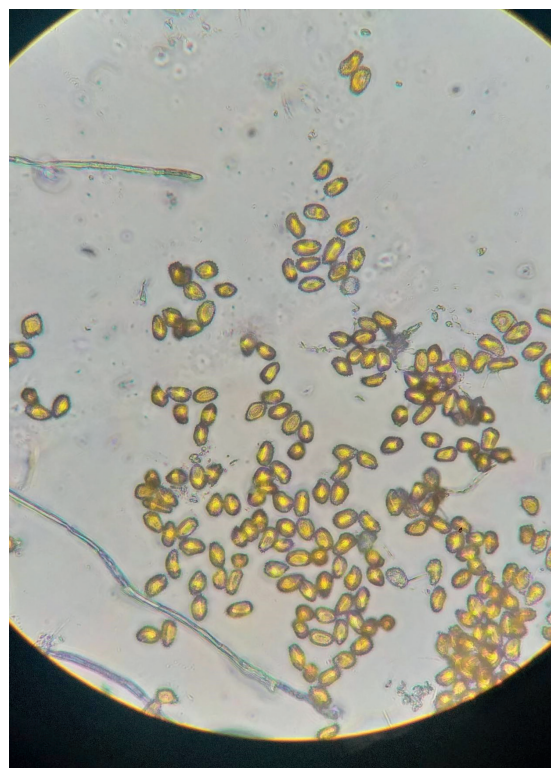
References:

Andrés & International Plant Quarantine Work Group, 2021. Quarantine Rusts of the world on 2021: Taxonomy, referenced Hosts and Quarantine Zones. Professional Plant Protection 10: 153-164.

EPPO, 2022. <https://gd.eppo.int/taxon/PUCCHN/categorization>



Photograph 1. *Pucciniastrum vaccinii* in Mexico



Photograph 2. *Pucciniastrum vaccinii* in Mexico



Photograph 3. *Pucciniastrum vaccinii* in Mexico

International Plant Quarantine Agents Data sheets:

331. *Hypothenemus hampei* on *Coffea arabica* in Brazil

Thiago Sampaio Guerra. Agroteste Pesquisa e Desenvolvimento. Brazil.

International Plant Quarantine Workgroup.

Data sheet: Nº 331

Agent: Nº 404

Name: *Hypothenemus hampei*.

Host: *Coffea arabica*.

Geographical zone: Brazil.

Author: Thiago Sampaio Guerra.

Year of the photograph: 2021

Quarantine Zone: Mexico, USA & China (EPPO, 2022).

Copyright of the photographs: Thiago Sampaio Guerra.

References:

<https://gd.eppo.int/taxon/STEHHA/categorization>.



Photograph 2. *Hypothenemus hampei* on *Coffea arabica* in Brazil. Adults on coffee fruits



Photograph 3. *Hypothenemus hampei* on *Coffea arabica* in Brazil. Larvae and nymphs on coffee fruits



Photograph 1. *Hypothenemus hampei* on *Coffea arabica* in Brazil. Adults on coffee fruits



Photograph 4. *Hypothenemus hampei* on *Coffea arabica* in Brazil. Damaged fruits