Professional Plant Protection HS N° 10
January 2025

VISUAL GUIDE OF PLANT ABIOTIC DISEASES WORLDWIDE

Data sheets of plant abiotic diseases published by the Project AGRONOMY & CLIMATE CHANGE from 2020 to 2022

WORKGROUP AGRONOMY & CLIMATE CHANGE

Agronomy & Climate Change

Consultorías Noroeste S.C

Professional Plant Protection

Founded in 2015 by Consultorías Noroeste S.C.

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

Edita: Consultorías Noroeste S.C. – Editor: Consultorías Noroeste S.C.
Depósito Legal: Po 742016
ISSN–2445–1703

Cover photograph supplied by Eng. M. Sicilia

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 9. Special number 10. January 2025

VISUAL GUIDE OF PLANT ABIOTIC DISEASES WORLDWIDE: DATA SHEETS OF ABIOTIC DISEASES PUBLISHED BY THE PROJECT AGRONOMY & CLIMATE CHANGE FROM 2020 TO 2022.

DISEASES DATA SHEETS CARRIED OUT BY CONSULTORÍAS NOROESTE S.C.

.

All of the data sheets published by CONSULTORÍAS NOROESTE S.C. were carried out by J.L. Andrés Ares including photographs taken in Galicia (NW Spain).

Plant Abiotic Disease – Host

1. Phytotoxicity – *Phyllostachys aurea*
2. Salt toxicity – *Phyllostachys aurea*
3. Nitrogen deficiency – *Buxus sempervirens*
4. Magnessium deficiency – *Camellia japonica*
5. Low temperatures injury – *Ceanothus repens*
6. Low temperatures injury – *Coprosma sp.*
7. Iron deficiency – *Chrysanthemum*
8. Magnessium deficiency – *Chrysanthemum*
9. Iron deficiency – *Gardenia japonica*
10. Phosphorous toxicity – *Grevillea lanigera*
11. Phytotoxicity – *Grevillea lanigera*
12. Iron deficiency – *Hydrangea macrophylla*
13. Phosphorous deficiency – *Hydrangea macrophylla*

14. Iron deficiency – *Actinidia chinensis*
15. Magnessium deficiency – *Lagerstroemia indica*
16. Iron deficiency – *Liquidambar*
17. Iron deficiency – *Loropetalum chinensis*
18. Low temperaturas injury – *Loropetalum chinensis*
19. Calcium deficiency – *Loropetalum chinensis*
20. Iron deficiency – *Arbutus unedo*
21. Low temperatures injury – *Metrosideros robusta*
22. Iron deficiency – *Pheballium sp.*
23. Sun injury – *Pheballium sp.*
24. Calcium deficiency – *Platanus hispanica*
25. Phytotoxicity – *Polygala myrtifolia*
26. Iron deficiency – *Rhododendron sp.*
27. Iron deficiency – *Skimia sp.*
28. Hail injury – *Westringia sp.*
29. Magnessium deficiency – *Vitis vinifera*
30. Wind injury – *Vitis vinifera*
31. Fungicide phytotoxicity – *Vitis vinifera*
32. Sulphur phytotoxicity – *Vitis vinifera*
33. Potassium deficiency – *Vitis vinifera*
34. Irregular flowering – *Vitis vinifera*
35. Magnessium deficiency – *Cyclamen persicum*
36. Iron deficiency – *Cyclamen persicum*
37. Iron deficiency – *Pelargonium × hortorum*
38. Zinc deficiency – *Pelargonium × hortorum*
39. Potassium deficiency – *Pelargonium × hortorum*
40. Phytotoxicity – *Bellis perennis*
41. Iron deficiency – *Dianthus caryophyllus*
42. Magnessium deficiency – *Impatiens hawkerii*
43. Iron deficiency – *Impatiens walleriana*
61. Phytotoxicity – *Bellis perennis*
62. Iron deficiency – *Dianthus caryophyllus*

63. Magnesium deficiency – *Impatiens hawkerii*
64. Iron deficiency – *Impatiens walleriana*
65. Phosphorous deficiency – *Mathiola incana*
66. Magnesium deficiency – *Mathiola incana*
67. Cold water injury – *Pelargonium × hortorum*
68. Salt excess injury – *Pelargonium × hortorum*
69. Magnesium deficiency – *Portulaca grandiflora*
70. Phosphorous deficiency – *Primula acaulis*
71. Iron deficiency – *Primula acaulis*
72. Salt toxicity – *Primula acaulis*
73. Hail injury – *Petunia hybrida*
74. Phosphorous deficiency – *Azalea*
75. Potassium deficiency – *Dianthus caryophyllus*
76. Iron deficiency – *Loropetalum chinensis.*
77. Phosphorous deficiency – *Camellia japonica*
78. Iron deficiency – *Platanus hispanica*
79. Salt toxicity – *Platanus hispanica*
80. Magnesium deficiency – *Camellia japonica*
81. Phosphorous deficiency – *Taxus baccata*
82. Tip burn –*Spinacia oleracea*–. Antonio Rivera Martínez.
83. Phytotoxicity – *Photinia × fraserii*
84. Iron deficiency – *Lactuca sativa.*
85. Potassium deficiency – *Brahea spp.*
86. Magnesium deficiency – *Caryota mitis*
87. Magnesium deficiency – *Dypsis lutescens*
88. Magnesium deficiency – *Neodypsis sp.*
89. Magnesium deficiency – *Phoenix canariensis*
90. Magnesium deficiency – *Washingtonia filifera*
91. Magnesium deficiency – *Zamia furfuracea*
92. Potassium deficiency – *Neodypsis decaryi*
93. Potassium deficiency – *Phoenix canariensis*
94. Potassium deficiency – *Phoenix sylvestris*

95. Potassium deficiency – *Trachycarpus fortunei*

96. Potassium deficiency – *Zamia furfuracea*

97. Nitrogen deficiency – *Phoenix canariensis*

98. Phytotoxicity – *Phyllostachys nigra*

99. Salt toxicity – *Phyllostachys nigra*

100. Water stress – *Cyca revoluta*

101. Water stress – *Dracaena marginata*

102. Water stress – *Dypsis decaryi*

103. Water stress – *Neodypsis sp.*

104. Water stress – *Zamia furfuracea*

105. Frost injury – *Diosma ericoides*

106. Frost injury – *Loropetalum chinensis*

108. Iron deficiency – *Camellia japonica*

109. Salt toxicity – *Lactuca sativa*

DISEASE DATA SHEETS CARRIED OUT BY OTHER MEMBERS OF THE WORK-GROUP.

Plant Abiotic Disease – Host – Author of the data sheet

44. Calcium deficiency –*Beta vulgaris* var. *cicla*–. Antonio Rivera Martínez.

45. Phosphorous deficiency –*Brassica oleracea* var. *Botrytis*–. Antonio Rivera Martínez.

46. Light excess injury –*Brassica oleracea* var. *Botrytis*–. Antonio Rivera Martínez.

47. Magnessium deficiency –*Phaseolus vulgaris*–. Antonio Rivera Martínez.

48. Sun injury –*Phaseolus vulgaris*–. Antonio Rivera Martínez.

49. Phytotoxicity –*Lactuca sativa*–. Antonio Rivera Martínez.

50. Light excess injury –*Lactuca sativa*–. Antonio Rivera Martínez.

51. Tip burn –*Lactuca sativa*–. Antonio Rivera Martínez.

52. Calcium deficiency –*Capsicum annuum*–. Antonio Rivera Martínez.

53. Phosphorous deficency –*Brassica napus*–. Antonio Rivera Martínez.

54. Calcium deficiency –*Solanum lycopersicum*–. Antonio Rivera Martínez.

55. Catface –*Solanum lycopersicum*–. Antonio Rivera Martínez.

56. Temperatures disorder in Iran –*Zea mays*–. Elaheh Gerami.

57. Zinc deficiency in Iran –*Zea* mays–. Elaheh Gerami.

58. Potassium deficiency in Iran –*Solanum lycopersicum*–. Elaheh Gerami.
59. Sun scald in Iran –*Capsicum annuum*–. Elaheh Gerami.
60. Salt toxicity in Badajoz (W Spain) – *Glycine max*–. Damián Fernández.
107. Water excess –*Capsicum annuum*–. Antonio Rivera Martínez.
110. Fruits abortions –*Persea americana*–. Miguel Sicilia.
111. Wind injuries –*Musa paradisiaca*–. Miguel Sicilia.
112. Catface –*Carica papaya*–. Miguel Sicilia.
113. Hollow fruits –*Carica papaya*–. Miguel Sicilia.
114. Low temperaturas injuries –*Vicia faba*–. Miguel Sicilia.
115. Frost in a *geraniaceous weed*–. Miguel Sicilia.
116. Boron deficiency –*Persea americana*–. Miguel Sicilia.
117. Chlorine toxicity –*Persea americana*–. Miguel Sicilia.
118. Plantation stress –*Persea americana*–. Miguel Sicilia.
119. Hail injurie –*Persea americana*–. Miguel Sicilia.
120. Boron deficiency –*Persea americana*– .Miguel Sicilia.
121. Fruits abortions –*Persea americana* (II)–. Miguel Sicilia.
122. Sun burn –*Persea americana*–. Miguel Sicilia
123. Zinc deficiency –*Persea americana*–. Miguel Sicilia.
124. Fruits abortions –*Mangifera indica*–. Miguel Sicilia.
125. Polinization disorder –*Fragaria vesca*–. Thiago Sampaio Guerra.
126. Carpelody –*Carica papaya*–. Miguel Sicilia.
127. Frostbite –*Pistachio*–. Elaheh Gerami.
128. Boron deficiency –*Persea americana*–. Miguel Sicilia.
129. Salt toxicity –*Persea americana*–. Miguel Sicilia.
130. Wind injuries –*Musa paradisiaca*–. Miguel Sicilia.
131. Boron deficiency –*Persea americana*–. Miguel Sicilia.
132. Fruit abortions –*Manguifera indica*–. Miguel Sicilia.
133. Low temperaturas injuries –*Manguifera indica*–. Miguel Sicilia.
134. Nitrogen deficiency –*Persea americana*–. Miguel Sicilia.
135. Stenopermocarpy –*Persea americana*–. Miguel Sicilia.
136. Sun scald –*Persea americana*–. Miguel Sicilia.
137. Potassium deficiency –Zea mays–. Cinthia Martínez.
138. Wind –*Musa paradisiaca*–. Miguel Sicilia.

World Plant Abiotic Diseases Data sheets

1. Phytotoxicity on *Phyllostachys aurea* in Galicia (NW Spain)

José Luis Andrés Ares. Consultorías Noroeste S.C. Galicia (Spain)

Agronomy & Climate Change Workgroup.

Data sheet: Nº 1

Plant Abiotic Disease: Nº 1

Name: *Phytotoxicity.*

Host: *Phyllostachys aurea.*

Geographical zone: Galicia (NW Spain).

Author: J. L. Andrés Ares.

Year of the photograph: 2002.

Photograph 1. Phytotoxicity on *Phyllostachys aurea* in Galicia (NW Spain)

Photograph 2. Phytotoxicity on *Phyllostachys aurea* in Galicia (NW Spain)

Photograph 3. Phytotoxicity on *Phyllostachys aurea* in Galicia (NW Spain)

Photograph 4. Phytotoxicity on *Phyllostachys aurea* in Galicia (NW Spain)

World Plant Abiotic Diseases Data sheets

12. Iron deficiency on *Hydrangea macrophylla* in Galicia (NW Spain)

José Luis Andrés Ares. Consultorías Noroeste S.C. Galicia (Spain).

Agronomy & Climate Change Workgroup.

Data sheet: Nº 12

Plant Abiotic Disease: Nº 12

Name: Iron deficiency.

Host: *Hydrangea macrophylla.*

Geographical zone: Galicia (NW Spain).

Author: J. L. Andrés Ares.

Year of the photograph: 2015.

Photograph 2. Iron deficiency on *Hydrangea macrophylla* in Galicia (NW Spain)

Photograph 1. Iron deficiency on *Hydrangea macrophylla* in Galicia (NW Spain)

Photograph 3. Iron deficiency on *Hydrangea macrophylla* in Galicia (NW Spain)

World Plant Abiotic Diseases Data sheets

44. Calcium deficiency on *Beta vulgaris* var. *cicla* in Galicia (NW Spain)

Antonio Rivera Martínez. Servizo de Explotacións Agrarias de A Coruña. Xunta de Galicia.

Agronomy & Climate Change Workgroup.

Data sheet: Nº 44

Plant Abiotic Disease: Nº 37

Name: Calcium deficiency.

Host: *Beta vulgaris* var. *cicla.*

Geographical zone: Galicia (NW Spain).

Author: Antonio Rivera Martínez.

Year of the photograph: 2017.

Photograph 2. Calcium deficiency on *Beta vulgaris* var. *cicla* in Galicia (NW Spain)

Photograph 1. Calcium deficiency on *Beta vulgaris* var. *cicla* in Galicia (NW Spain)

Photograph 2. Calcium deficiency on *Beta vulgaris* var. *cicla* in Galicia (NW Spain)

World Plant Abiotic Diseases Data sheets

52. Calcium deficiency on *Capsicum annuum* in Galicia (NW Spain)

Antonio Rivera Martínez [1] & J.L. Andrés Ares [2]

[1] Servizo de Explotacións Agrarias de A Coruña. Xunta de Galicia.

[2] Consultorías Noroeste S.C.

Agronomy & Climate Change Workgroup.

Data sheet: Nº 52

Plant Abiotic Disease: Nº 45

Name: Calcium deficiency.

Host: *Capsicum annuum.*

Geographical zone: Galicia (NW Spain).

Authors: Antonio Rivera Martínez & J.L. Andrés Ares.

Year of the photograph: 2016.

Photograph 2. Calcium deficiency on *Capsicum annuum* in Galicia (NW Spain)

Photograph 1. Calcium deficiency on *Capsicum annuum* in Galicia (NW Spain)

Photograph 3. Calcium deficiency on *Capsicum annuum* in Galicia (NW Spain)

World Plant Abiotic Diseases Data sheets

56. Temperature disorder on Zea mays in Iran

Elaheh Gerami. TBIO Crop Science. Iran.

Agronomy & Climate Change Workgroup.

Data sheet: Nº 56

Plant Abiotic Disease: Nº 48

Name: Temperature disorder.

Host: *Zea mays.*

Geographical zone: Iran .

Author: Elaheh Gerami.

Year of the photograph: 2020.

Photograph 1. Injuries by a temperature disorder on *Zea mays* in Iran

Photograph 2. Injuries by a temperature disorder on *Zea mays* in Iran

Photograph 3. Injuries by a temperature disorder on *Zea mays* in Iran

World Plant Abiotic Diseases Data sheets

60. Salt toxicity on *Glycine max* in Badajoz (Western Spain)

Damián Fernández. University of Extremadura (Spain).

Agronomy & Climate Change Workgroup.

Data sheet: Nº 60

Plant Abiotic Disease: Nº 70

Name: Salt toxicity.

Host: *Glycine max.*

Geographical zone: Badajoz (Western Spain).

Author: Damián Fernández.

Year of the photograph: 2020.

Photograph 1. Salt toxicity on *Glycine max* in Badajoz (Western Spain)

World Plant Abiotic Diseases Data sheets

110. Fruit abortions on *Persea americana* in Spain

Miguel Sicilia. Independent Agronomical Engineer. Málaga (Spain).

Agronomy & Climate Change Workgroup.

Data sheet: Nº 110

Plant Abiotic Disease: Nº 109

Name: Fruit abortions.

Host: *Persea americana.*

Geographical zone: Spain.

Author: Miguel Sicilia.

Year of the photograph: 2020.

Copyright of the photographs: Miguel Sicilia.

Photograph 2. Fruit abortions on *Persea americana* in Spain

Photograph 1. Fruit abortions on *Persea americana* in Spain

Photograph 3. Fruit abortions on *Persea americana* in Spain

World Plant Abiotic Diseases Data sheets

125. Polinization disorder on *Fragaria vesca* in Brazil

Thiago Sampaio Guerra. Agroteste Pesquisa e Desenvolvimento. Minas Gerais (Brazil).

Agronomy & Climate Change Workgroup.

Data sheet: Nº 125

Plant Abiotic Disease: Nº 124

Name: Polinization disorders.

Host: *Fragaria vesca.*

Geographical zone: Brazil.

Author: Thiago Sampaio Guerra.

Year of the photograph: 2021.

Photograph 2. Polinization disorder on *Fragaria vesca* in Brazil

Photograph 1. Polinization disorder on *Fragaria vesca* in Brazil

Photograph 3. Polinization disorder on *Fragaria vesca* in Brazil

World Plant Abiotic Diseases Data sheets

137. Potassium deficiency on *Zea mays* in Mexico

Agronomy & Climate Change Workgroup.

Data sheet: Nº 137

Plant Abiotic Disease: Nº 136

Name: Potassium deficiency.

Host: *Zea mays*..

Geographical zone: Mexico.

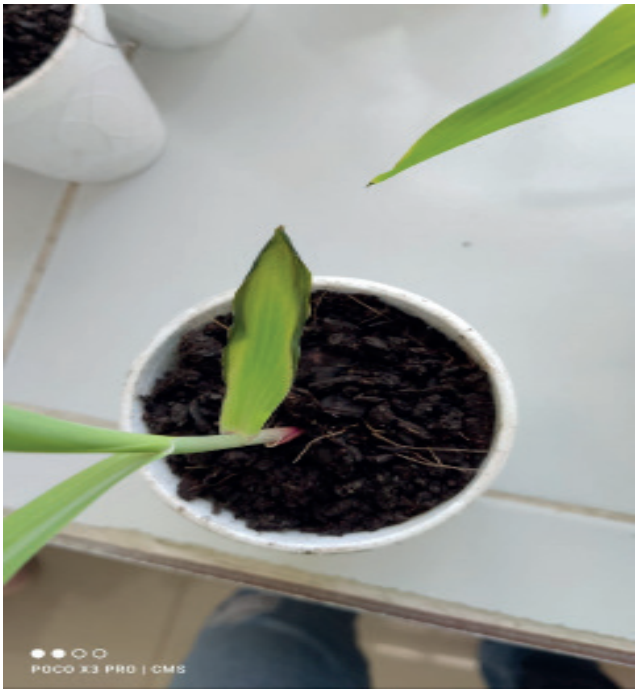
Author: Cinthia Martínez.

Year of the photograph: 2022.

Copyright of the photographs: Cinthia Martínez..

Photograph 2. Potassium deficiency on *Zea mays* in Mexico

Photograph 1. Potassium deficiency on *Zea mays* in Mexico



Photograph 3. Potassium deficiency on *Zea mays* in Mexico