Laurence V. Madden
(Distinguished Professor of Plant Protection, Ohio State University)

Refereed journal articles

1. Madden, L., S. P. Pennypacker, and A. A. MacNab. 1978. FAST, a forecast system for *Alternaria solani* on tomato. *Phytopathology* 68: 1354-1358.
2. Madden, L., and S. P. Pennypacker. 1979. Principal component analysis of tomato early blight epidemics. *Phytopathol. Z.* [*Journal of Phytopathology*] 95: 364-369.
3. Pennypacker, S. P., H. D. Knoble, C. E. Antle, and L. V. Madden. 1980. A flexible model for studying plant disease progression. *Phytopathology* 70: 232-235.
4. Campbell, C. L., L. V. Madden, and S. P. Pennypacker. 1980. Structural characterization of bean root rot epidemics. *Phytopathology* 70:152-155.
5. Campbell, C. L., S. P. Pennypacker, and L. V. Madden. 1980. Progression dynamics of hypocotyl rot of snapbean. *Phytopathology* 70:487-494.
6. Madden, L. V. 1980. Quantification of disease progression. *Protection Ecology* 2:159-176.
7. Madden, L. V., S. P. Pennypacker, C. E. Antle, and C. H. Kingsolver. 1981. A loss model for crops. *Phytopathology* 71:685-689.
8. Madden, L. V., S. P. Pennypacker, and C. H. Kingsolver. 1981. A comparison of crop loss models. *Phytopathol. Z.* [*Journal of Phytopathology*] 101:196-201.
9. Madden, L. V., R. Louie, J. J. Abt, and J. K. Knoke. 1982. Evaluation of tests for randomness of infected plants. *Phytopathology* 72:195-198.
10. Madden, L. V., J. K. Knoke, and R. Louie. 1982. Considerations for the use of multiple comparison procedures in phytopathological investigations. *Phytopathology* 72:1015-1017.
11. Chef, D. G., H. A. J. Hoitink, and L. V. Madden. 1983. Effects of organic composts in container media on suppression of Fusarium wilt of Chrysanthemum and Flax. *Phytopathology* 73:279-281.
12. Pennypacker, S. P., L. V. Madden, and A. A. MacNab. 1983. Validation of an early blight forecasting system for tomatoes. *Plant Dis.* 67:287-289.
13. Knoke, J. K., R. Louie, L. V. Madden, and D. T. Gordon. 1983. Spread of maize dwarf mosaic virus from johnsongrass to corn. *Plant Dis.* 67:367-370.
14. Louie, R., D. T. Gordon, L. V. Madden, and J. K. Knoke. 1983. Symptomless infection and incidence of maize white line mosaic virus. *Plant Dis.* 67:371-373.
15. Thuma, B. A., R. C. Rowe, and L. V. Madden. 1983. Relationship of soil temperature and moisture to clubroot (*Plasmodiophora brassicae*) severity on radish in organic soil. *Plant Dis.* 67:758-762.
16. Madden, L. V. 1983. Measuring and modeling crop losses at the field level. *Phytopathology* 73:1591-1596.
17. Kuter, G. A., E. B. Nelson, H. A. J. Hoitink, and L. V. Madden. 1983. Fungal populations in container media amended with composted hardwood bark suppressive and conducive to Rhizoctonia damping-off. *Phytopathology* 73:1450-1456.
18. Madden, L. V., and L. R. Nault. 1983. Differential pathogenicity of corn stunting mollicutes to leafhopper vectors in *Dalbulus* and *Baldulus* species. *Phytopathology* 73:1608-1614.
19. Walker, G. P., L. V. Madden, and D. E. Simonet. 1984. Spatial dispersion and sequential sampling of the potato aphid (*Macrosiphum euphorbiae*) in processing tomato fields in Ohio. *Can. Entomol.* 116:1069-1075.
20. Nault, L. R., L. V. Madden, W. E. Styer, B. W. Triplehorn, G. F. Shambaugh, and S. E. Heady. 1984.

Pathogenicity of corn stunt spiroplasma and maize bushy stunt mycoplasma to its vector *Dalbulus longulus*. *Phytopathology* 74:977-979.

21. Ellis, M. A., L. V. Madden, and L. L. Wilson. 1984. Evaluation of an electronic apple scab predictor for scheduling fungicides with curative activity. *Plant Dis.* 68:1055-1057.
22. Thal, W. M., C. L. Campbell, and L. V. Madden. 1984. Sensitivity of Weibull model parameter estimates to variation in simulated disease progression data. *Phytopathology* 74:1425-1430.
23. Madden, L. V., L. R. Nault, S. E. Heady, and W. E. Styer. 1984. Effect of maize stunting mollicutes on survival and fecundity of *Dalbulus* leafhopper vectors. *Ann. Appl. Biol.* 105:431-441.
24. Nault, L. R., and L. V. Madden. 1985. Ecological strategies of Dalbulus leafhoppers. *Ecol. Entomol*. 10:57-63.
25. Grove, G. G., L. V. Madden, M. A. Ellis, and A. F. Schmitthenner. 1985. Influence of temperature and wetness duration on infection of immature strawberry fruit by *Phytophthora cactorum*. *Phytopathology* 75:165-169.
26. Grove, G. G., L. V. Madden, and M. A. Ellis. 1985. Splash dispersal of *Phytophthora cactorum* from infected strawberry fruit. *Phytopathology* 75:611-615.
27. Grove, G. G., L. V. Madden, and M. A. Ellis. 1985. Influence of temperature and wetness duration on sporulation of *Phytophthora cactorum* on infected strawberry fruit. *Phytopathology* 75:700-703.
28. Grove, G. G., M. A. Ellis, L. V. Madden, and A. F. Schmitthenner. 1985. Overwinter survival of *Phytophthora cactorum* in infected strawberry fruit. *Plant Disease* 69:514-515.
29. Heady, S. E., L. V. Madden, and L. R. Nault. 1985. Oviposition behavior of *Dalbulus* leafhoppers (Homoptera: Cicadellidae). *Annals of the Entomological Society of America* 78:723-727.
30. Grove, G. G., M. A. Ellis, and L. V. Madden. 1985. Leather rot of strawberry: A summary of research in Ohio. *Advances in Strawberry Production* 4:4-9.
31. Ellis, M. A., D. C. Feree, and L. V. Madden. 1986. Evaluation of metalaxyl and captafol soil drenches, composted hardwood bark soil amendments, and graft union placemnt on control of apple collar rot. *Plant Disease* 70:24-26.
32. Madden, L. V., L. R. Nault, S. E. Heady, and W. E. Styer. 1986. Effect of temperature on the population dynamics of three *Dalbulus* leafhopper species. *Annals of Applied Biology* 108:475-485.
33. Ellis, M. A., L. V. Madden, and L. L. Wilson. 1986. An electronic grape black rot predictor for scheduling fungicides with curative activity. *Plant Disease* 70:938-940.
34. Trillas-Gay, M. I., H. A. J. Hoitink, and L. V. Madden. 1986. Nature of suppression of Fusarium wilt of radish in container medium amended with composted hardwood bark. *Plant Disease* 70:1023-1027.
35. Madden, L. V., J. K. Knoke, and R. Louie. 1986. Effect of source strength, distance, and direction on the spread of maize dwarf mosaic virus. *Phytopathologische Zeitschrift* 117:92-96.
36. Madden, L. V., R. Louie, and J. K. Knoke. 1987. Temporal and spatial analysis of maize dwarf mosaic epidemics. *Phytopathology* 77:148-156.
37. Reynolds, K. M., L. V. Madden, D. L. Reichard, and M. A. Ellis. 1987. Methods for study of raindrop impaction on plant surfaces with application to predicting inoculum dispersal by rain. *Phytopathology* 77:226-232.
38. Madden, L. V., and C. L. Campbell. 1987. Potential effects of air pollutants on epidemics of plant diseases. *Agriculture, Ecosystems, and Environment* 18:251-262.
39. Francl, L. J., L. V. Madden, R. C. Rowe, and R. M. Riedel. 1987. Potato yield loss prediction and discrimination using preplant population densities of *Verticillium dahliae* and *Pratylenchus penetrans*. *Phytopathology* 77:579-584.
40. Reynolds, K. M., M. A. Bulger, L. V. Madden, and M. A. Ellis. 1987. New methods using simulated rain to study the splash dispersal of plant pathogens. *Phytopathology* 77:921-929.

41. Madden, L. V., T. P. Pirone, and B. Raccah. 1987. Temporal analysis of two viruses increasing in the same tobacco fields. *Phytopathology* 77:974-980.
42. Reynolds, K. M., M. A. Ellis, and L. V. Madden. 1987. Progress in development of a strawberry leather rot forecasting system. *Advances in Strawberry Production* 6:18-22.
43. Bulger, M. A., M. A. Ellis, and L. V. Madden. 1987. Influence of temperature and wetness duration on infection of strawberry flowers by *Botrytis cinerea* and disease incidence of fruit originating from infected flowers. *Phytopathology* 77:1225-1230.
44. Lalancette, N., M. A. Ellis, and L. V. Madden. 1987. Estimating the infection efficiency of *Plasmopara viticola* on grape. *Plant Disease* 71:981-983.
45. Madden, L. V., T. P. Pirone, and B. Raccah. 1987. Analysis of spatial patterns of virus-diseased tobacco plants. *Phytopathology* 77:1409-1417.
46. Reynolds, K. M., and L. V. Madden. 1988. Analysis of epidemics using spatio-temporal autocorrelation. *Phytopathology* 78:240-246.
47. Reynolds, K. M., L. V. Madden, and M. A. Ellis. 1988. Spatio-temporal analysis of epidemic development of leather rot of strawberry. *Phytopathology* 78:246-252.
48. Francl, L. J., R. C. Rowe, R. M. Riedel, and L. V. Madden. 1988. Effect of three soil types on potato early dying disease and associated yield reductions. *Phytopathology* 78:159-166.
49. Pirone, T. P., B. Raccah, and L. V. Madden. 1988. Suppression of aphid colonization by insecticides: effect on the incidence of potyviruses of tobacco. *Plant Dis.* 72:350-353.
50. Lalancette, N., M. A. Ellis, and L. V. Madden. 1988. Development of an infection efficiency model for *Plasmopara viticola* on American grape based on temperature and duration of leaf wetness. *Phytopathology* 78:794-800.
51. Reynolds, K. M., L. V. Madden, and M. A. Ellis. 1988. Effect of weather variables on strawberry leather rot epidemics. *Phytopathology* 78:822-827.
52. Raccah, B., T. P. Pirone, and L. V. Madden. 1988. Correlation between the incidence of aphid species and the incidence of two nonpersistent viruses in tobacco. *Agric., Ecosys., and Environ.* 21:281-292.
53. Lipps, P. E., and L. V. Madden. 1988. Effect of triadimenol seed treatment and triadimefon foliar treatment on powdery mildew epidemics and grain yield of winter wheat cultivars. *Plant Disease* 72:887-892.
54. Lalancette, N., L. V. Madden, and M. A. Ellis. 1988. A quantitiative model for describing the sporulation of *Plasmopara viticola* on grape leaves. *Phytopathology* 78:1316-1321.
55. Madden, L. V., K. M. Reynolds, T. P. Pirone, and B. Raccah. 1988. Modeling of tobacco virus epidemics as spatio-temporal autoregressive integrated moving-average processes. *Phytopathology* 78:1361-1366.
56. Chen, W., H. A. J. Hoitink, and L. V. Madden. 1988. Microbial activity and biomass in container media for predicting suppressiveness to damping-off caused by *Pythium ultimum*. *Phytopathology* 78:1447-1450.
57. Nault, L. R., and L. V. Madden. 1988. Phylogenetic relatedness of maize chlorotic dwarf virus leafhopper vectors. *Phytopathology* 78:1683-1687.
58. Heady, S. E., L. V. Madden, and L. R. Nault. 1989. Courtship behavior and experimental hybridization in Dalbulus leafhoppers with evolutionary inferences (Homoptera:Cicadellidae). *Ann. Entomol. Soc. Am.* 82:535-543.
59. Madden, L. V., and P. S. Teng. 1989. Whither Plant Disease Epidemiology? *Plant Disease* 73:279.
60. Lipps, P. E., and L. V. Madden. 1989. Assessment of methods of determining powdery mildew severity in relation to grain yield of winter wheat in Ohio. *Phytopathology* 79:462-470.
61. Reynolds, K. M., L. V. Madden, D. L. Reichard, and M. A. Ellis. 1989. Splash dispersal of

Phytophthora cactorum from infected strawberry fruit by simulated canopy drip. *Phytopathology* 79:425-432.

62. Lipps, P. E., and L. V. Madden. 1990. Effect of fungicide application timing on control of powdery mildew and grain yield of winter wheat. *Plant Disease* 73:991-994.
63. Wilson, L. L., L. V. Madden, and M. A. Ellis. 1990. Influence of temperature and wetness duration on infection of immature and mature strawberry fruit by *Colletotrichum acutatum*. *Phytopathology* 80:111-116.
64. Francl, L. J., L. V. Madden, R. C. Rowe, and R. M. Riedel, 1990. Correlation of growing season environmental variables and the effect of eary dying on potato yield. *Phytopathology* 80:425-432.
65. Madden, L. V., J. K. Knoke, and R. Louie, 1990. Spread of maize chlorotic dwarf virus by its leafhopper vector, *Graminella nigrifrons.* *Phytopathology* 80:291-298.
66. Yang, X., L. L. Wilson, L. V. Madden, and M. A. Ellis. 1990. Rain splash dispersal of *Colletotrichum acutatum* from infected strawberry fruit. *Phytopathology* 80:590-595.
67. Funt, R. C., M. A. Ellis, and L. V. Madden. 1990. Economic analysis of protectant and disease-forecast-based curative fungicide spray programs for control of apple scab and grape black rot in Ohio. *Plant Dis.* 74:638-642.
68. Madden, L. V., B. Raccah, and T. P. Pirone. 1990. Modeling plant disease increase as a function of vector numbers: nonpersistent viruses. *Researches on Population Ecology* 32:47-65.
69. Madden, L. V., and M. A. Ellis. 1990. Effect of ground cover on splash dispersal of *Phytophthora cactorum* from strawberry fruits. *Journal of Phytopathology* 129:170-174.
70. Larsen, K. J., L. V. Madden, and L. R. Nault. 1990. Effect of temperature and host plant on the development of the blackfaced leafhopper. *Entomologia Experimentalis et Applicata* 55:285-294.
71. Yang, X., L. V. Madden, L. L. Wilson, and M. A. Ellis. 1990. Effects of surface topography and rain intensity on splash dispersal of *Colletotrichum acutatum*. *Phytopathology* 80:1115-1120.
72. Madden, L. V., M. A. Ellis, G. G. Grove, K. M. Reynolds, and L. L. Wilson. 1991. Epidemiology and control of leather rot of strawberry. *Plant Disease* 75:439-446.
73. Todd, J. L., L. V. Madden, and L. R. Nault. 1991. Comparative growth and spatial distribution of *Dalbulus* leafhopper populations (Homoptera: Cicadellidae) in relation to maize phenology. *Environmental Entomology* 20:556-564.
74. Yang, X., L. V. Madden, D. L. Reichard, R. D. Fox, and M. A. Ellis. 1991. Motion analysis of drop impaction on a strawberry surface. *Agricultural and Forest Meteorology* 56:67-92.
75. Yang, X., L. V. Madden, and R. D. Brazee. 1991. Application of the diffusion equation for modelling splash disperasl of point-source pathogens. *New Phytologist* 118:295-301.
76. Wheeler, T. A., L. V. Madden, R. C. Rowe, and R. M. Riedel. 1992. Modeling of yield loss in potato early dying caused by *Pratylenchus penetrans* and *Verticillium dahliae.* *Journal of Nematology* 24: 99-102.
77. Yang, X. L. V. Madden, D. L. Reichard, L. L. Wilson, and M. A. Ellis. 1992. Splash dispersal of *Colletotrichum acutatum* and *Phytophthora cactorum* from strawberry fruit by single drop impactions. *Phytopathology* 82:332-340.
78. Wilson, L. L., L. V. Madden, and M. A. Ellis. 1992 Overwinter survival of *Colletotrichum acutatum* in infected strawberry fruit in Ohio. *Plant Disease* 76:948-950.
79. Lipps, P. E., and L. V. Madden, 1992. Effects of plot size and border width on assessment of powdery mildew of winter wheat. *Plant Disease* 76:299-303.
80. Madden, L. V., L. L. Wilson, X. Yang, and M. A. Ellis. 1992. Splash dispersal of *Colletotrichum acutatum* and *Phytophthora cactorum* by short-duration simulated rains. *Plant Pathology* 41:427-436.
81. deNazareno, N. R. X., P. E. Lipps, and L. V. Madden. 1992. Survival of *Cercospora zeae* maydis in

corn residue in Ohio. *Plant Disease* 76:560-563.

82. Rodriguez, C. M., L. V. Madden, and L. R. Nault. 1992. Diel flight periodicity of *Graminella nigrifrons*. *Annals of the Entomological Society of America* 85:792-798.
83. Hughes, G., and L. V. Madden. 1992. Aggregation and incidence of disease. *Plant Pathology* 41:657-660.
84. deNazareno, N. R. X., P. E. Lipps, and L. V. Madden. 1993. Effect of levels of corn residue on the epidemiology of gray leaf spot disease of corn in Ohio. *Plant Disease* 77:67-70.
85. Rodriguez, C. M., L. V. Madden, L. R. Nault, and R. Louie. 1993. Spread of maize chlorotic dwarf virus from infected corn and johnsongrass by *Graminella nigrifrons.* *Plant Disease* 77:55-60.
86. Madden, L. V. 1993. Aggregation of *Colletotrichum acutatum* in response to simulated rain episodes. *Journal of Phytopathology* 138:145-156.
87. Adipala, E., P. E. Lipps, and L. V. Madden. 1993. Occurrence of *Exserohilum turcicum* on maize in Uganda. *Plant Disease* 77:202-205.
88. Adipala, E. P. E. Lipps, and L. V. Madden. 1993. Reaction of maize cultivars from Uganda to *Exserohilum turcicum*. *Phytopathology* 83:217-223.
89. Adipala, E., P.E. Lipps, and L. V. Madden. 1993. Use of disease assessment methods in predicting yield loss due to northern leaf blight of maize. *African Crop Science Journal* 1: 159-173.
90. Yang, X., and L. V. Madden. 1993. Effects of ground cover, rain intensity and strawberry plants on splash of simulated raindrops. *Agricultural and Forest Meteorology* 65:1-20.
91. Hughes, G., and L. V. Madden. 1993. Using the beta-binomial distribution to describe aggregated patterns of disease incidence. *Phytopathology* 83:759-763.
92. deNazareno, N. R. X., L. V. Madden, and P. E. Lipps. 1993. Characterization of gray leaf spot epidemics of maize. *Zeitschrift für Pflanzenkrankheiten und Pflanzenschutz* 100:410-425.
93. Madden, L. V., L. L. Wilson, and M. A. Ellis. 1993. Field spread of anthracnose fruit rot of strawberry in relation to ground cover and ambient weather conditions. *Plant Disease* 77:861-866.
94. Boehm, M. J., L. V. Madden, and H. A. J. Hoitink. 1993. Effect of organic matter decomposition level on bacterial species diversity and composition in relationship to Pythium damping off severity. *Applied and Environmental Microbiology* 59:4171-4179
95. Wheeler, T. A., R. C. Rowe, R. M. Riedel, and L. V. Madden. 1994. Influence of cultivar resistance to *Verticillium* spp. on potato early dying. *American Potato Journal* 71: 39-57.
96. Wheeler, T.A., L.V. Madden, R.M. Riedel, and R.C. Rowe. 1994. Distribution and yield-loss relations of *Verticillium dahliae, Pratylenchus penetrans, P. scribneri, P. crenatus,* and *Meloidogyne hapla* in commercial potato fields. *Phytopathology* 84: 843-852.
97. Iannotti, D. A., M. Grebus, B. L. Toth, L. V. Madden, and H. A. J. Hoitink. 1994. Oxygen respirometry to assess stability and maturity of composted municipal solid waste. *Journal of Environmental Quality* 23:1177-1183.
98. Madden, L. V., and G. Hughes. 1994 BBD--Computer software for fitting the beta-binomial distribution to disease incidence data. *Plant Disease* 78: 536-540.
99. Ammar, E. D., R. E. Gingery, and L. V. Madden. 1995. Transmission efficiency of three isolates of maize stripe tenuivirus in relation to virus titre in the planthopper vector. *Plant Pathol*. 44: 239-243.
100. Boudreau, M. A. and L. V. Madden. 1995. Effect of strawberry density on dispersal of *Colletotrichum acutatum* by simulated rain. *Phytopathology* 85: 934-941.
101. Madden, L. V., G. Hughes, and M. A. Ellis. 1995. Spatial heterogeneity of the incidence of grape downy mildew. *Phytopathology* 85: 269-275.
102. Madden, L. V., L. R. Nault, D. J. Murral, and M. R. Apelt. 1995. Spatial pattern analysis of the

incidence of aster yellows disease in lettuce. *Researches on Population Ecology* 37: 279-289.

103. Madden, L. V., and F. W. Nutter. 1995. Modeling crop losses at the field scale. *Canadian Journal of Plant Pathology* 17: 124-137.
104. Sosa-Alvarez, M., L. V. Madden, and M. A. Ellis. 1995. Effects of temperature and wetness duration on sporulation of *Botrytis cinerea* on strawberry leaf residues. *Plant Disease* 79: 609-615.
105. Hughes, G. and L. V. Madden. 1995. Some methods allowing for aggregated patterns of disease incidence in the analysis of data from designed experiments. *Plant Pathology* 44: 927-943.
106. Hughes, G. and L. V. Madden. 1996. Cluster sampling for disease incidence data. *Phytopathology* 86: 132-137.
107. Madden, L. V., X. Yang, and L. L. Wilson. 1996. Effects of rain intensity on splash dispersal of *Colletotrichum acutatum*. *Phytopathology* 86:864-874.
108. Madden, L. V., G. Hughes, and G. P. Munkvold. 1996. Plant disease incidence: inverse sampling, sequential sampling, and confidence intervals when observed mean incidence is zero. *Crop Protection* 15: 621-632.
109. Murral, D. J., L. R. Nault, C. W. Hoy, L. V. Madden, and S. A. Miller. 1996. Effects of temperature and vector age on transmission of two Ohio strains of the aster yellows phytoplasma by the aster leafhopper (Homoptera: Cicadellidae). *J. Econ. Entomol*. 89: 1223-1232.
110. King, W. T., L. V. Madden, M. A. Ellis, and L. L. Wilson. 1997. Effects of temperature on sporulation and latent period of *Colletotrichum* species infecting strawberry. *Plant Disease* 81: 77-84.
111. Miller, S. A., L. V. Madden, and A. F. Schmitthenner. 1997. Distribution of *Phytophthora* spp. in field soils determined by immunoassay. *Phytopathology* 87: 101-107.
112. Boehm, M. J., T. Wu, A. G. Stone, B. Kraakman, D. A. Iannotti, G. E. Wilson, L. V. Madden, and H. A. J. Hoitink. 1997. Cross-polarized magic-angle spinning ^{13}C nuclear magnetic resonance spectroscopic characterization of soil organic matter relative to culturable bacterial species composition and sustained biological control of Pythium root rot. *Applied and Environmental Microbiology* 63: 162-168.
113. Hughes, G., N. McRoberts, L. V. Madden, and S. C. Nelson. 1997. Validating mathematical models of plant disease progress in space and time. *IMA Journal of Mathematics Applied in Medicine and Biology* 14: 85-112.
114. Madden, L. V. 1997. Effects of rain on the splash dispersal of fungal pathogens. *Canadian Journal of Plant Pathology* 19: 225-230.
115. Ntahimpera, N., L. V. Madden, and L. L. Wilson. 1997. Effect of rain distribution alteration on splash dispersal of *Colletotrichum acutatum*. *Phytopathology* 87: 649-655.
116. Madden, L. V., and M. A. Boudreau. 1997. Effect of strawberry density on the spread of anthracnose caused by *Colletotrichum acutatum*. *Phytopathology* 87: 828-838.
117. Sun, P., and L. V. Madden. 1997. Using a normal approximation to test for the binomial distribution. *Biometrical Journal* 39: 553-544.
118. Hughes, G., McRoberts, N., Madden, L. V., and Gottwald, T. R. 1997. Relationships between disease incidence at two levels in a spatial hierarchy. *Phytopathology* 87: 542-550.
119. Jeger, M. J., F. van den Bosch, L. V. Madden, and J. Holt. 1998. A model for analysing plant-virus transmission characteristics and epidemic development. *IMA Journal of Mathematics Applied in Medicine* and Biology 15: 1-18.
120. Ellis, M. A., W. F. Wilcox, and L. V. Madden. 1998. Efficacy of metalaxyl, fosetyl-aluminum and straw mulch for control of strawberry leather rot, caused by *Phytophthora cactorum*. *Plant Disease* 82: 329-332.
121. Ellis, M. A., D. C. Ferree, R. C. Funt, and L. V. Madden. 1998. Effects of an apple scab-resistant

cultivar on use patterns of inorganic and organic fungicides and economics of disease control. *Plant Disease* 82: 428-433.

122. Hughes, G., and L. V. Madden. 1998. Comment: Using spatial and temporal patterns of Armillaria root disease to formulate management recommendations for Ontario's black spruce (*Picea mariana*) seed orchards. *Canadian J. Forest Res*. 28: 154-158.
123. Ntahimpera, N., M. A. Ellis, L. L. Wilson, and L. V. Madden. 1998. Effects of a cover crop on splash dispersal of *Colletotrichum acutatum* conidia. *Phytopathology* 88: 536-543.
124. Madden, L. V., L. L. Wilson, and N. Ntahimpera. 1998. Calibration and evaluation of an electronic sensor for rainfall kinetic energy. *Phytopathology* 88: 950-959.
125. Pielaat, A., L. V. Madden, and G. Gort. 1998. Spores splashing under different environmental conditions: A modeling approach. *Phytopathology* 88: 1131-1140.
126. Erincik, O., L. V. Madden, J. C. Scheerens, and M. A. Ellis. 1998. Evaluation of foliar applications of calcium chloride for control of Botrytis fruit rot on strawberry and effects on strawberry fruit quality. *Advances in Strawberry Research* 17: 7-17.
127. Turechek, W. W., and L. V. Madden. 1999. Spatial pattern analysis of strawberry leaf blight in perennial production systems. *Phytopathology* 89: 421-433.
128. Ntahimpera, N., L. L. Wilson, M. A. Ellis, and L. V. Madden. 1999. Comparison of rain effects on splash dispersal of three *Colletotrichum* species infecting strawberry. *Phytopathology* 89: 555-563.
129. Madden, L. V., and G. Hughes. 1999. An effective sample size for predicting plant disease incidence in a spatial hierarchy. *Phytopathology*. 89: 770-781.
130. Turechek, W. W., and L. V. Madden. 1999. Spatial pattern analysis and sequential sampling for the incidence of leaf spot on strawberry in Ohio. *Plant Disease* 83: 992-1000.
131. Madden, L. V., and G. Hughes. 1999. Sampling for plant disease incidence. *Phytopathology* 89: 1088-1103.
132. Ntahimpera, N., J. K. Hacker, L. L. Wilson, F. R. Hall, and L. V. Madden. 1999. Characterization of splash droplets from different surfaces with a phase Doppler particle analyzer. *Agricultural and Forest Meteorology* 97: 9-19.
133. Turechek, W. W., and L. V. Madden. 2000. Analysis of the association between the incidence of two spatially aggregated foliar diseases of strawberry. *Phytopathology* 90:157-170.
134. Madden, L. V., M. A. Ellis, N. Lalancette, G. Hughes, and L. L. Wilson. 2000. Evaluation of a disease warning system for downy mildew of grapes. *Plant Disease* 84: 549-554.
135. Wheeler, T. A., L. V. Madden, R. C. Rowe, and R. M. Riedel. 2000. Effects of quadrat size and time of year for sampling of *Verticillium dahliae* and lesion nematodes in potato fields. *Plant Disease* 84: 961-966.
136. Madden, L. V., M. J. Jeger, and F. van den Bosch. 2000. A theoretical assessment of the effects of vector-virus transmission mechanism on plant virus disease epidemics. *Phytopathology* 90: 576-594.
137. Madden, L. V., G. Hughes, and M. E. Irwin. 2000. Coupling disease-progress-curve and time-of-infection functions for predicting yield loss of crops. *Phytopathology* 90: 788-800.
138. Ellis, M. A., L. V. Madden, and T. J. Burr. 2000. Effectiveness of Fosetyl-Aluminum and Streptomycin alone and in combination for control of blister spot of 'Mutsu' apples in Ohio and New York. *Plant Health Progress* Accession DOI: 10.1094/PHP-2000-0412-01-RS. [www.plantmanagementnetwork.org].
139. Adipala, E., P. E. Lipps, and L. V. Madden. 2000. Development of northern leaf blight from an inoculated point source on three maize cultivars in Uganda. *African Journal of Plant Protection* 10: 1-13.
140. Turechek, W. W., M. A. Ellis, and L. V. Madden. 2001. Sequential sampling for incidence of

Phomopsis leaf blight of strawberry. *Phytopathology* 91: 336-347.

141. Erincik, O., L. V. Madden, D. C. Feree, and M. A. Ellis. 2001. Studies to determine time of susceptibility of grape berry and rachis tissues to infection by *Phomopsis viticola*. *Plant Disease* 85: 517-520.
142. Turechek, W. W., and Madden, L. V. 2001. Effect of scale on plant disease incidence and heterogeneity in a spatial hierarchy. *Ecological Modelling* 144: 75-93.
143. Krause, M. S., Madden, L. V., and Hoitink, H. A. J. 2001. Effect of potting mix microbial carrying capacity on biological control of Rhizoctonia damping-off of radish and Rhizoctonia crown and root rot of poinsettia. *Phytopathology* 91: 1116-1123.
144. Hughes, G., and Madden, L. V. 2002. Some applications for eliciting expert knowledge of plant disease epidemics and their application in cluster sampling for disease incidence. *Crop Protection* 21: 203-215.
145. Madden, L. V., and van den Bosch, F. 2002. A population-dynamic approach to assess the threat of plant pathogens as biological weapons against annual crops. *BioScience* 52: 65-74.
146. Madden, L. V., Turechek, W. W., and Nita, M. 2002. Evaluation of generalized linear mixed models for analyzing disease incidence data obtained in designed experiments. *Plant Disease* 86: 316-325.
147. Erincik, O., Madden, L. V., Ferree, D. C., and Ellis, M. A. 2002. Infection of grape berry and rachis tissues by *Phomopsis viticola*. *Plant Health Progress* doi:10.1094/PHP-2002-0702-01-RS. [www.plantmanagementnetwork.org/pub/php].
148. Shah, D. A., R. M. Clear, L. V. Madden, and G. C. Bergstrom. 2002. Summarizing the regional incidence of seedborne fungi with the beta-binomial distribution. *Canadian Journal of Plant Pathology* 24: 168-175.
149. Wheelis, M., Casagrande, R., and Madden, L. V. 2002. Biological attack on agriculture: low-tech, high-impact bioterrorism. *BioScience* 52: 569-576.
150. Xu, X., and Madden, L. V. 2002. Incidence and density relationships of powdery mildew on apple. *Phytopathology* 92: 1005-1-14.
151. Pethybridge, S. J., and Madden, L. V. 2003. Analysis of spatio-temporal dynamics of virus spread in an Australian hop garden by stochastic modeling. *Plant Disease* 87: 56-62.
152. Turechek, W. W., and Madden, L. V. 2003. A generalized linear modeling approach for characterizing disease incidence in a spatial hierarchy. *Phytopathology* 93: 458-466.
153. De Wolf, E. D., Madden, L. V., and Lipps, P. E. 2003. Risk assessment models for wheat Fusarium head blight epidemics based on within-season weather data. *Phytopathology* 93: 428-435.
154. McRoberts, N., Hughes, G., and Madden, L. V. 2003. The theoretical basis and practical application of relationships between different disease intensity measurements in plants. *Annals of Applied Biology* 142: 191-211.
155. Nita, M., Ellis, M. A., and Madden, L. V. 2003. Effects of temperature, wetness duration, and leaflet age on infection of strawberry foliage by *Phomopsis obscurans*. *Plant Disease* 87: 579-584.
156. Hughes, G., and Madden, L. V. 2003. Evaluating predictive models with application in regulatory policy for invasive weeds. *Agricultural Systems* 76: 755-774.
157. Erincik, O., Madden, L. V., Ferree, D. C., and Ellis, M. A. 2003. Temperature and wetness-duration requirements for grape leaf and cane infection by *Phomopsis viticola*. *Plant Disease* 87: 832-840.
158. Nita, M., Ellis, M.A., and Madden, L. V. 2003. Reliability and accuracy of visual estimation of Phomopsis leaf blight of strawberry. *Phytopathology* 93: 995-1005.
159. Krause, M. S., De Ceuster, T. J. J., Tiquia, S. M., Michel, F. C., Jr., Madden, L. V., and Hoitink, H. A. J. 2003. Isolation and characterization of Rhizobacteria from composts that suppress the severity of bacterial leaf spot of radish. *Phytopathology* 93: 1292-1300.
160. Engle, J. S., Madden, L. V., and Lipps, P. E. 2003. Evaluation of inoculation methods to determine

resistance reactions of wheat to *Fusarium graminearum*. *Plant Disease* 87: 1530-1535.

161. Xu, X., and Madden, L. V. 2003. Considerations for the use of SADIE statistics to quantify spatial patterns. *Ecography* 26: 821-830.
162. Shah, D., and Madden, L. V. 2004. Nonparametric analysis of ordinal data in designed factorial experiments. *Phytopathology* 94: 33-43.
163. Xu, X.-M., and Madden, L. V. 2004. Use of SADIE statistics to study spatial dynamics of plant disease epidemics. *Plant Pathology* 53: 38-49.
164. Khan, J., Ooka, J. J., Miller, S. A., Madden, L. V., and Hoitink, H. A. J. 2004. Systemic resistance induced by *Trichoderma hamatum* 382 in cucumber against Phytophthora crown rot and leaf blight. *Plant Disease* 88: 280-286.
165. Hughes, G., McRoberts, N., and Madden, L. V. 2004. Daamen's incidence-severity relationship revisited. *European Journal of Plant Pathology* 110: 759-761.
166. Jeger, M. J., Holt, J., van den Bosch, F., and Madden, L. V. 2004. Epidemiology of insect transmitted plant viruses: modelling disease dynamics and control interventions. *Physiological Entomology* 29: 291-304.
167. Garrett, K. A., Madden, L. V., Hughes, G., and Pfender, W. F. 2004. New applications of statistical tools in plant pathology. *Phytopathology* 94: 999-1003.
168. Pethybridge, S. A., Madden, L. V., Griggs, J. and Wilson, C. R. 2004. Species composition and abundance of aphids in Australian hop gardens and their impact on spatiotemporal patterns of Carlavirus epidemics. *Plant Pathology* 53: 498-507.
169. Paul, P. A., El-Allaf, S. M., Lipps, P. E., and Madden, L. V. 2004. Rain splash dispersal of *Gibberella zeae* within wheat canopies in Ohio. *Phytopathology* 94: 1342-1349.
170. Rebollar-Alviter, A., Madden, L. V., and Ellis, M. A. 2005. Efficacy of azoxystrobin, pyraclostrobin, potassium phosphate, and mefenaxam for control of strawberry leather rot caused by *Phytophthora cactorum*. *Plant Health Progress*. doi:10.1094/PHP-2005-0107-01-RS. [www.plantmanagementnetwork.org/php/].
171. Saint-Jean, S., Testa, A., Kamoun, S., and Madden, L. V. 2005. Use of green fluorescent protein marker for studying splash dispersal of sporangia of *Phytophthora infestans*. *European Journal of Plant Pathology* 112: 391-394.
172. Xu, X.-M., and Madden, L. V. 2005. Interrelationships among SADIE indices for characterizing spatial patterns of organisms. *Phytopathology* 95: 874-883.
173. Beanland, L., Madden, L. V., Hoy, C. W., Miller, S. A., and Nault, L. R. 2005. Temporal distribution of aster leafhopper (*Macrosteles quadrilineatus*) sex ratios and spatial pattern of aster yellows phytoplasma disease in lettuce. *Annals Entomological Society of America* 98: 756-762.
174. Paul, P. M., El-Allaf, S. M., Lipps, P. E., and Madden, L. V. 2005. Relationships between incidence and severity of Fusarium head blight on winter wheat in Ohio. *Phytopathology* 95: 1049-1060.
175. Horst, L. E., Locke, J., Krause, C. R., McMahaon, R. W., Madden, L. V., and Hoitink, H. A. J. 2005. Suppression of Botrytis blight of Begonia by *Trichoderma hamatum* 382 in peat and compost-amended potting mixes. *Plant Disease* 89: 1195-1200.
176. Paul, P. M., Lipps, P. E., and Madden, L. V. 2005. Relationship between visual estimates of Fusarium head blight intensity and deoxynivalenol accumulation in harvested wheat grain: A meta-analysis. *Phytopathology* 95: 1225-1236.
177. Hoitink, H. A. J., Madden, L. V., and Dorrance, A. E. 2006. Systemic resistance induced by *Trichoderma*: Interactions between the host, the pathogen, the biocontrol agent and soil organic matter quality. *Phytopathology* 95: 186-189.
178. Dufault, N. S., De Wolf, E. D., Lipps, P.E., and Madden, L. V. 2006. Role of temperature and moisture

in the production and maturation of *Gibberellla zeae* perithecia. *Plant Disease* 90: 637-644.

179. Schaad, N. W., Abrams, J., Madden, L. V., Frederick, R. D., Luster, D. G., Damsteegt, V. D., and Vidaver, A. K. 2006. An assessment model for rating high-threat crop pathogens. *Phytopathology* 96: 616-621.
180. Madden, L. V. 2006. Botanical epidemiology: Some key advances and its continuing role in disease management. *European Journal of Plant Pathology* 115: 3-23.
181. Paul, P. A., Lipps, P. E., and Madden, L. V. 2006. Meta-analysis of regression coefficients for the relationship between Fusarium head blight and deoxynivalenol content of wheat. *Phytopathology* 96: 951-961.
182. Nita, M., Ellis, M. A., Wilson, L. L., and Madden, L. V. 2006. Effects of application of fungicide during the dormant period on Phomopsis cane and leaf spot of grape disease intensity and inoculum production. *Plant Disease* 90: 1195-1200.
183. Nita, M., Ellis, M. A., Wilson, L. L., and Madden, L. V. 2006. Evaluation of a disease warning system for Phomopsis cane and leaf spot of grape: A field study. *Plant Disease* 90: 1239-1246.
184. Engle, J. S., Madden, L. V., and Lipps, P. E. 2006. Distribution and pathogenic characterization of *Pyrenophora tritici-repentis* and *Stagonospora nodorum* in Ohio. *Phytopathology* 96: 1355-1362.
185. Saint-Jean, S., Testa, A., Madden, L. V., and Huber, L. 2006. Relationship between pathogen splash dispersal gradient and Weber number of impacting drops. *Agricultural and Forest Meteorology* 141: 257-262.
186. Paul, P. A., Lipps, P. E., Hershman, D. E., McMullen, M. P., Draper, M. A., and Madden, L. V. 2007. A quantitative review of tebuconazole effect on Fusarium head blight and deoxynivalenol content in wheat. *Phytopathology* 97: 211-220.
187. Alfano, G., Lewis Ivey, M. L., Cakir, C., Bos, J. I. B., Miller, S. A., Madden, L. V., Kamoun, S., and Hoitink, H. A. J. 2007. Systemic modulation of gene expression in tomato by *Trichoderma hamatum* 382. *Phytopathology* 97: 429-437.
188. Rebollar-Alviter, A., Madden, L. V., and Ellis, M. A. 2007. Pre- and post-infection activity of azoxystrobin, pyraclostrobin, mefenoxam, and phosphite against leather rot of strawberry, caused by *Phytophthora cactorum*. *Plant Disease* 91: 559-564.
189. Ziems, A. D., Giesler, L. J., Graef, G. L., Redinbaugh, M. G., Vacha, J. L., Berry, S. A., Madden, L. V. and Dorrance, A. E. 2007. Response of soybean cultivars to Bean pod mottle virus infection. *Plant Disease* 91: 719-726.
190. Madden, L. V., Paul, P. A., and Lipps, P. E. 2007. Consideration of nonparametric approaches for assessing genotype-by-environment (G × E) interactions with disease severity data. *Plant Disease* 91: 891-900.
191. Bull, C. T., Goldman, P. H., Hayes, R., Madden, L. V., Koike, S. T., and Ryder, E. 2007. Genetic diversity of lettuce for resistance to bacterial leaf spot caused by *Xanthomonas campestris* pv. *vitians*. *Plant Health Progress* doi:10.1094/PHP-2007-0917-02-RS [www.plantmanagementnetwork.org/php/].
192. Nita, M., Ellis, M. A., Wilson, L. L., and Madden, L. V. 2007. Evaluation of the curative and protectant activity of fungicides and fungicide-adjuvant mixtures on Phomopsis cane and leaf spot of grape: a controlled-environment study. *Crop Protection* 26: 1377-1384.
193. Nita, M., Ellis, M. A., Wilson, L. L., and Madden, L. V. 2007. Evaluations of new and current management strategies to control Phomopsis cane and leaf spot of grape. *Plant Health Progress* doi:10.1094/PHP-2007-0726-06-RS. [www.plantmanagementnetwork.org/php/]
194. Paul, P. A., Lipps, P. E., De Wolf, E., Shaner, G., Buechley, G., Adhikari, T., Ali, S., Stein, J., Osborne, L., and Madden, L. V. 2007. A distributed-lag analysis of the relationship between *Gibberella zeae* inoculum density on wheat spikes and weather variables. *Phytopathology* 97: 1608-1624.
195. Rebollar-Alviter, A., Madden, L. V., Jeffers, S. N., Ellis, M. A. 2007. Baseline and differential

sensitivity to two QoI fungicides among isolates of *Phytophthora cactorum* that cause leather rot and crown rot on strawberry plants. *Plant Disease* 91: 1625-1637.

196. van den Bosch, F., McRoberts, N., van den Berg, F., and Madden, L. V. 2008. The basic reproduction number of plant pathogens: Matrix approaches to complex dynamics. *Phytopathology* 98: 239-249.
197. Nita, M., Ellis, M. A., and Madden, L. V. 2008. Variation in disease incidence of Phomopsis cane and leaf spot of grape in commercial vineyards in Ohio. *Plant Disease* 92: 1053-1061.
198. Bathke, A. C., Harrar, S. W., and Madden, L. V. 2008. How to compare small multivariate samples using nonparametric tests. *Computational Statistics and Data Analysis* 52: 4951-4965.
199. Paul, P. A., Lipps, P. E., Hershman, D. E., McMullen, M. P., Draper, M. A., and Madden, L. V. 2008. Efficacy of triazole-based fungicides for Fusarium head blight and deoxynivalenol control in wheat: A multivariate meta-analysis. *Phytopathology* 98: 999-1011.
200. Ellis, M.A., Madden, L.V., Wright, S.R., Wilson, L.L. 2008. Efficacy of preharvest fungicide applications and cold storage for postharvest control of Botrytis fruit rot (gray mold) on red raspberry. *Plant Health Progress.* doi:10.1094/PHP-2008-1015-01-RS. [on-line journal, http://www.plantmanagementnetwork.org/sub/php/research/2008/graymold/]
201. Jeger, M. J., Madden, L. V., and van den Bosch, F. 2009. The effect of transmission route on plant virus epidemic development and disease control. *Journal of Theoretical Biology* 258: 198-207.
202. Madden, L. V., and Paul, P. A. 2009. Assessing heterogeneity in the relationship between wheat yield and Fusarium head blight intensity using random-coefficient mixed models. *Phytopathology* 99: 850-860.
203. Bathke, A. C., Schabenberger, O., Tobias, R. D., and Madden, L. V. 2009. Greenhouse-Geisser adjustment and the ANOVA-type statistic: Cousins or twins? *The American Statistician* 63: 239-246.
204. Anco, D. J., Kim, S., Mitchell, T. K., Madden, L. V., and Ellis, M. A. 2009. Transformation of *Phomopsis viticola* with the green fluorescent protein. *Mycologia* 101: 853-858.
205. Paul, P. A., Hershman, D. E., McMullen, M. P., and Madden, L. V. 2010. Meta-analysis of the effects of triazole-based fungicides on wheat yield and test weight as influenced by Fusarium head blight intensity. *Phytopathology* 100: 160-171.
206. Redinbaugh, M. G., Molineros, J. E., Vacha, J., Berry, S. A., Hammond, R. B., Madden, L. V., and Dorrance, A. E. 2010. Bean pod mottle virus spread in insect feeding resistant soybeans. *Plant Disease* 94: 265-270.
207. Rebollar-Alviter, A., Wilson, L. L., Madden, L. V., and Ellis, M. A. 2010. A comparative evaluation of post-infection efficacy of mefenoxam and potassium phosphite with protectant efficacy of azoxystrobin and potassium phosphite for controlling leather rot of strawberry caused by *Phytophthora cactorum*. *Crop Protection* 29: 349-353.
208. Kriss, A. B., Paul, P. A., and Madden, L. V. 2010. Relationship between yearly fluctuations in Fusarium head blight intensity and environmental variables: A window-pane analysis. *Phytopathology* 100: 784-797.
209. Nagle, A. M., Long, R. P., Madden, L. V., and Bonello, P. 2010. Association of Phytophthora cinnamomi with white oak decline in southern Ohio. *Plant Disease* 94: 1026-1034.
210. Madden, L. V., and Paul, P. A. 2010. An assessment of mixed-modeling approaches for characterizing profiles of time-varying response and predictor variables. *Phytopathology* 100: 1015-1029.
211. Madden, L. V., and Paul, P. A. 2011. Meta-analysis for evidence synthesis in plant pathology: An overview. *Phytopathology* 101: 16-30.
212. Schörgendorfer, A., Madden, L. V., and Bathke, A. C. 2011. Choosing appropriate covariance matrices in a nonparametric analysis of factorials in block designs. *Journal of Applied Statistics* 38: 833-850.
213. Ngugi, H.K., Lehman, B.L., and Madden, L.V. 2011. Multiple treatment meta-analysis of products

evaluated for control of fire blight in the Eastern United States. *Phytopathology* 101: 512-522.

214. McRoberts, N., Hall, C., Madden, L.V., and Hughes, G. 2011. Perceptions of disease risk: From social construction of subjective judgments to rational decision making. *Phytopathology* 101: 654-665.

215. Paul, P. A., Madden, L. V., Bradley, C. A., Robertson, A. E., Munkvold, G. P., Shaner, G., Wise, K. A., Malvick, D. K., Allen, T., Grybauskas, A., Vincelli, P., and Esker P. 2011. Meta-analysis of yield response of hybrid field corn to foliar fungicides in the U.S. Corn Belt. *Phytopathology* 101: 1122-1132.

216. Jeger, M.J., van den Bosch, F., and Madden, L.V. 2011. Modelling virus- and host-limitation in vectored plant disease epidemics. *Virus Research* 159: 215-222.

217. Salgado, J. D., Wallhead, M. W., Madden, L. V., and Paul, P. A. 2011. Grain harvesting strategies to minimize grain quality losses due to Fusarium head blight in wheat. *Plant Disease* 95: 1448-1457.

218. Turechek, W. W., Madden, L. V., Gent, D. H., and Xu, X.-M. 2011. Comments regarding the binary power law for heterogeneity of disease incidence. *Phytopathology* 101: 1396-1407.

219. Kriss, A. B., Paul, P. A., and Madden, L. V. 2012. Variability in Fusarium head blight epidemics in relation to global climate fluctuations as represented by the El Niño Southern Oscillation and other atmospheric patterns. *Phytopathology* 102: 55-64.

220. Nita, M., Ellis, M.A., and Madden, L.V. 2012. Spatial distribution of Phomopsis cane and leaf spot symptoms in commercial vineyards in Ohio. *Journal of Phytopathology* 160: 26-36.

221. Li, B., Madden, L.V., and Xu, X.-M. 2012. Spatial analysis by distance indices: An alternative local clustering index for studying spatial patterns. *Methods in Ecology and Evolution* 3: 368-377. doi: 10.1111/j.2041-210X.2011.00165.x

222. Kriss, A.B., Paul, P.A., Xu, X., Nicholson, P., Doohan, F.M., Hornok, L., Rietini, A., Edwards, S.G., and Madden, L.V. 2012. Quantification of the relationship between the environment and Fusarium head blight, Fusarium pathogen density, and mycotoxins in winter wheat in Europe. *European Journal of Plant Pathology* 133: 975-993. doi: 10.1007/s10658-012-9968-6.

223. Willyerd, K.T., Li, C., Madden, L.V., Bradley, C.A., Bergstrom G.C., Sweets, L.E., McMullen, M., Ransom, J. K., Grybauskas, A., Osborne, L., Wegulo, S. N., Hershman, D.E., Wise, K., Bockus, W.W., Groth, D., Dill-Macky, R., Milus, E., Esker, P.D., Waxman, K.D., Adee, E.A., Ebelhar, S.E., Young, B.G., and Paul, P.A. 2012. Efficacy and stability of integrating fungicide and cultivar resistance to manage Fusarium head blight and deoxynivalenol in wheat. *Plant Disease* 96: 957-967.

224. Anco, D. J., Madden, L. V., and Ellis, M. A. 2012. Temporal patterns of sporulation potential of *Phomopsis viticola* on infected grape shoots, canes, and rachises. *Plant Disease* 96: 1297-1302.

225. Kriss, A. B., Madden, L. V., Paul, P. A., and Xu, X. 2012. Heterogeneity of Fusarium head blight of wheat: Multi-scale distributions and temporal variation in relation to environment. *Plant Health Progress* (on-line journal). doi:10.1094/PHP-2012-0723-01-RS. (http://www.plantmanagementnetwork.org/sub/php/symposium/melhus/2011/wheat/)

226. Anco, D. J., Madden, L. V., and Ellis, M. A. 2012. Effects of temperature and wetness duration on the sporulation of *Phomopsis viticola* on infected grape canes. *Plant Health Progress* (on-line journal). doi:10.1094/PHP-2012-0723-02-RS. (http://www.plantmanagementnetwork.org/sub/php/symposium/melhus/2011/grape/)

227. Kriss, A. B., Paul, P. A., and Madden, L. V. 2012. Characterizing heterogeneity of disease incidence in a spatial hierarchy: A case study from a decade of observations of Fusarium head blight of wheat. *Phytopathology* 102: 867-877.

228. Piepho, H.-P., Williams, E. R., and Madden, L. V. 2012. The use of two-way linear mixed models in multi-treatment meta-analysis. *Biometrics* 68: 1269-1277.

229. Anco, D. J., Madden, L. V., and Ellis, M. A. 2013. Effects of temperature and wetness duration on the sporulation rate of *Phomopsis viticola* on infected grape canes. *Plant Disease* 97: 579-589.

230. Shah, D.A., Molineros, J.E., Paul, P.A., Willyerd, K.T., Madden, L.V., and De Wolf, E.D. 2013. Predicting Fusarium head blight epidemics with weather-driven pre- and post-anthesis logistic regression models. *Phytopathology* 103: 906-919.

231. Xu, X., Madden, L.V., Edwards, S.G., Doohan, F.M., Moretti, A., Hornok, L., Nicholson, P., and Ritieni, A. 2013. Developing logistic models to relate the accumulation of DON associated with Fusarium head blight to climatic conditions in Europe. *European Journal of Plant Pathology* 137: 689-706. (DOI 10.1007/s10658-013-0280-x).

232. Shah, D., and Madden, L.V. 2013. A comment on Mendes and Yigit (2013), 'Type I error and test power of different tests for testing interaction effects in factorial experiments', Statistica Neerlandica, 67:1-26. *Statistica Neerlandica* 67: 397-399. (doi:10.1111/stan.12013).

233. Xu, X., Madden, L.V., and Edwards, S.G. 2014. Relating HT2 and T2 toxin accumulation in field oat grains to environmental conditions. *Phytopathology* 104: 57-66.

234. Shah, D.A., De Wolf, E.D., Paul, P.A., and Madden, L.V. 2014. Predicting Fusarium head blight epidemics with boosted regression trees. *Phytopathology* 104: 702-714.

235. Xie, L., and Madden, L.V. 2014. %HPGLIMMIX, a high performance SAS macro for GLMM estimation. *Journal of Statistical Software* 58(8): 1-25. http://www.jstatsoft.org/

236. Xu, X., and Madden, L.V. 2014. The limits of the binary power law describing spatial variability for incidence data. *Plant Pathology* 63: 973-982.

237. D'Angelo, D. L., Bradley, C. A., Ames, K. A., Willyerd, K. T., Madden, L. V., and Paul, P. A. 2014. Efficacy of fungicide applications during and after anthesis against Fusarium head blight and deoxynivalenol in soft red winter wheat. *Plant Disease* 98: 1387-1397.

238. Andersen, K. F., Morris, L., Derksen, R.C., Madden, L.V., and Paul, P. A. 2014. Rainfastness of prothioconazole+tebuconazole for Fusarium head blight and deoxynivalenol management in soft red winter wheat. *Plant Disease* 98: 1398-1406.

239. Salgado, J. D., Madden, L. V., and Paul, P. A. 2014. Efficacy and economics of integrating in-field and harvesting strategies to manage Fusarium head blight of wheat**.** *Plant Disease* 98: 1407-1421.

240. Andersen, K.F., Madden, L.V., and Paul, P.A. 2015. Fusarium head blight development and deoxynivalenol accumulation in wheat as influenced by post-anthesis moisture patterns. *Phytopathology* 105: 210-219.

241. Salgado, J. D., Madden, L. V., and Paul, P. A. 2015. Quantifying the effects of Fusarium head blight on grain yield and test weight in soft red winter wheat. *Phytopathology* 105: 295-306.

242. Piepho, H.-P., Madden, L.V., and Williams, E.R. 2015. Multiplicative interaction in network meta-analysis. *Statistics in Medicine* 34: 582-594.

243. Hu, X., Edwards, S., Madden, L.V., and Xu, X. 2015. Combining models is more likely to give better predictions than single models. *Phytopathology* 105: 1174-1182.

244. Willyerd, K. T., Bradley, C. A., Chapara, V., Conley, S. P., Esker, P. D., Madden, L. V., Wise, K. A., and Paul, P. A. 2015. Revisiting fungicide-based management guidelines for leaf blotch diseases in soft red winter wheat. *Plant Disease* 99: 1434-1444.

245. Zhang, X.-F., Guo, J., Zhang, X., Meulia, T., Paul, P., Madden, L.V., Li, D., and Qu, F. 2015. Random plant viral variants attain temporal advantages during systemic infections and in turn resist other variants of the same virus. *Scientific Reports* 5: 15346 (DOI: 10.1038/srep15346).

246. Madden, L.V., Shah, D.A., and Esker, P.D. 2015. Does the *P* value have a future in plant pathology? *Phytopathology* 105: 1400-1407.

247. Madden, L.V., Piepho, H.-P., and Paul, P.A. 2016. Statistical models and methods for network meta-analysis. *Phytopathology* 106: 792-806.

248. Jeger, M. J., Stevenson, K. L., and Madden, L. V. 2017. Plant disease epidemiology. *Oxford*

Bibliographies. http://oxfordbibliographiesonline.com/. (DOI: 10.1093/OBO/9780199830060-0166).

249. Mila, A. L., and Madden, L. V. 2017. Introduction to Bayesian analysis of phytopathological data using SAS. *Plant Health Instructor*. http://www.apsnet.org/edcenter/Pages/phi.aspx. (DOI: 10.1094/PHI-A-2017-0603-01).
250. Cieniewicz, E. J., Pethybridge, S. J., Gorny, A., Madden, L. V., McLane H., Perry, K. L., and Fuchs, M. 2017. Spatiotemporal spread of grapevine red blotch-associated virus in a California vineyard. *Virus Research* 241:156-162. http://dx.doi.org/10.1016/j.virusres.2017.03.020.
251. Cordova, L. G., Madden, L. V., Amiri, A., Schnabel, G., and Peres, N. A. 2017. Meta-analysis of a web-based disease forecast system for control of anthracnose and Botrytis fruit rots of strawberry in southeastern United States. *Plant Disease* 101: 1910-1917.
252. Ojiambo, P.S., Yuen, J., van den Bosch, F., and Madden, L.V. 2017. Epidemiology: Past, present, and future impacts on understanding disease dynamics and improving plant disease management—a summary of Focus Issues articles. *Phytopathology* 107: 1092-1094.
253. Savary, S., Djurle, A., Yuen, J., Ficke, A., Rossi, V., Esker, P.D., Fernandes, M. C., Del Ponte, E. M., Kumar, J., Madden, L. V., Paul, P., McRoberts, N., Singh, P. K., Huber, L., Pope de Vallavielle, C., Saint-Jean, S., and Willocquet, L. 2017. A white paper on global wheat health based on scenario development and analysis. *Phytopathology* 107: 1109-1122.
254. Conrad, A. O., McPherson, B. A., Wood, D. L., Madden, L. V., and Bonello, P. 2017. Constitutive phenolic biomarkers identify naïve Quercus agrifolia resistant to Phytophthora ramorum, the causal agent of sudden oak death. *Tree Physiology* 37: 1686-1696.
255. Jeger, M. J., Madden, L. V., and van den Bosch, F. 2018. Plant virus epidemiology: Applications and prospects for mathematical modeling and analysis to improve understanding and disease control. *Plant Disease* 102: 837-854.
256. Madden, L. V., Hughes, G., Bucker Moraes, W., Xu, X.-M., and Turechek, W. W. 2018. Twenty-five years of the binary power law for characterizing heterogeneity of disease incidence. *Phytopathology* 108: 656-680.
257. Piepho, H.-P., Madden, L. V., Roger, J., Payne, R., and Williams, E. R. 2018. Estimating the variance for heterogeneity in arm-based network meta-analysis. *Pharmaceutical Statistics* 17: 264-277.
258. Cordova L.G., Ellis, M.A., Wilson, L.L., Madden, L.V., and Peres, N.A. 2018. Evaluation of the Florida strawberry advisory system for control of Botrytis and anthracnose fruit rots in Ohio. *Plant Health Progress* 19: 182-187.
259. Paul, P. A., Bradley, C. A., Madden, L. V., Dalla Lana, F., Bergstrom, G. C, Dill-Macky, R., Esker, P. D., Wise, K. A., McMullen, M., Grybauskas, A., Kirk, W. W., Milus, E., and Ruden, K. 2018. Meta-analysis of the effects of QoI and DMI fungicide combinations on Fusarium head blight and deoxynivalenol in wheat. *Plant Disease* 102: 2602-2615.
260. Paul, P. A., Bradley, C. A., Madden, L. V., Dalla Lana, F., Bergstrom, G. C, Dill-Macky, R., Wise, K. A., Esker, P. D., McMullen, M., Grybauskas, A., Kirk, W. W., Milus, E., and Ruden, K. 2018. Effects of pre- and post-anthesis applications of demethylation inhibitor fungicides on Fusarium head blight and deoxynivalenol in spring and winter wheat. *Plant Disease* 102: 2500-2510.
261. Piepho, H.-P., Madden, L. V., and Williams, E. R. 2018. Contribution to the discussion of the paper by Jackson and White: Using general-purpose GLMM software for meta-analysis. *Biometrical Journal* 60: 1059-1061.
262. Shah, D. A., De Wolf, E. D., Paul, P. A., and Madden, L. V. 2019. Functional data analysis of weather variables linked to Fusarium head blight epidemics in the United States. *Phytopathology* 109: 96-110.
263. Paul, P. A., Salgado, J. D., Bergstrom, G. C., Bradley, C., Byamukama, E., Byrne, A. M., Chapara, V., Cummings, J. A., Chilvers, M. I., Dill-Macky, R., Friskop, A. J. Kleczewski, N. M., Madden, L. V., Nagelkirk, M., Stevens, J., Smith, M., Wegulo, S. N., Wise, K. A., Yabwalo, D. 2019. Integrated effects

of genetic resistance and prothioconazole + tebuconazole application timing on Fusarium head blight in wheat. *Plant Disease* 103: 223-237.

264. Shah, D. A., Paul, P. A., De Wolf, E. D., and Madden, L.V. 2019. Predicting plant disease epidemics from functionally-represented weather series. *Philosophical Transactions of the Royal Society B* 374: 20180273.
265. Mills, K. B., Madden, L. V., and Paul, P.A. 2020. Quantifying the effects of temperature and relative humidity on the development of wheat blast incited by the Lolium pathotype of Magnapothe oryzae. *Plant Disease* (in press). doi.org/10.1094/PDIS-12-19-2709-RE.
266. Madden, L. V., and Paul, P. A. 2020. Is disease intensity a good surrogate for yield loss or toxin contamination? A case study with Fusarium head blight of wheat. *Phytopathology* (in press). doi.org/10.1094/PHYTO-11-19-0427-R.
267. Mills, K. B., Salgado, J. D., Cruz, C. D., Valent, B., Madden, L. V., and Paul, P. A. 2020. Comparing the temporal development of wheat spike blast epidemics in a region of Bolivia where the disease is endemic. *Plant Disease* (in press).
268. Dalla Lana, F., Madden, L. V., and Paul, P. A. 2020. Natural occurrence of maize Gibberella ear rot and contamination of grain with mycotoxins in association with weather variables. *Plant Disease* (in press).
269. Dalla Lana, F., Paul, P. A., Minyo, R., Thomison, P., and Madden, L. V. 2020. Stability of hybrid maize reaction to Gibberella ear rot and deoxynivalenol contamination of grain**.** *Phytopathology* 110: (in press).

Books

Campbell, C. L., and Madden, L. V. 1990. ***Introduction to Plant Disease Epidemiology*.** John Wiley & Sons, New York.

Madden, L. V., Hughes, G., and van den Bosch, F. 2007. ***The Study of Plant Disease Epidemics*.** APS Press, American Phytopathological Society, St. Paul, MN.

National Research Council (NRC) books

Mack, R. N., Barrett, S.C.H., deFur, P.L., MacDonald, W.L., Madden, L.V., Marshall, D.S., McCullough, D.G., McEvoy, P.B., Nyrop, J.P., Reichard, S.E.H., Rice, K.J, and Tolin, S.A. 2002. ***Predicitng Invasions of Nonindigenous Plants and Plant Pests***. National Research Council (NRC), National Academy Press, Washington, D.C. 194 pp.

Moon, H. W., Ascher, M., Cook, R. J., Franz, D. R., Hoy, M., Husnik, D. F., Hensen, H. H., Keller, K. H., Lederberg, J., Madden, L. V., Powers, L. S., and Steinberg, A. D. 2002. ***Countering Agricultural Bioterrorism***. National Research Council (NRC), National Academy Press, Washington, D.C.

Chapters in books (may be incomplete)

Madden, L. V., J. K. Knoke, and R. Louie. 1983. The statistical relationship between aphid trap catches and maize dwarf mosaic virus inoculation pressure. Pages 159-168 in: R. T. Plumb and J. M. Thresh, eds. Plant Virus Epidemiology. Blackwell, Oxford, England. 377 pp.

Madden, L. V., J. K. Knoke, and R. Louie. 1983. Classification and prediction of maize dwarf mosaic intensity. Pages 238-242 in: D. T. Gordon, J. K. Knoke, L. R. Nault, and R. M. Ritter, eds. Proc. Int.

Maize Virus Disease Colloq. and Workshop, 2-6 August 1982. The Ohio State University, the Ohio Agricultural Research and Development Center, Wooster. 266 pp.

Knoke, J. K., R. J. Anderson, R. Louie, L. V. Madden, and W. R. Findley. 1983. Insect vectors of maize dwarf mosaic virus and maize chlorotic dwarf virus. Pages 130-138 in: D. T. Gordon, J. K. Knoke, L. R. Nault, and R. M. Ritter, eds. Proc. Int. Maize Virus Disease Colloq. and Workshop, 2-6 August 1982. The Ohio State University, the Ohio Agricultural Research and Development Center, Wooster. 266 pp.

Madden, L. V., and C. L. Campbell. 1986. Description of virus disease epidemics in time and space. Pages 273-293 in: G. D. McLean, R. G. Garrett, and W. G. Ruesink, eds. Plant Virus Epidemiology: Monitoring, Modelling, and Predicting Outbreaks. Academic Press, Sydney, Australia. 550 pp.

Madden, L. V. 1985. Modeling the population dynamics of leafhoppers. Pages 235-258 in: L. R. Nault and J. G. Rodriguez, eds. The Leafhoppers and Planthoppers. John Wiley & Sons, Inc., New York. 500 pp.

Madden, L. V. 1986. Statistical analysis and comparison of disease progress curves. Pages 55-84 in: K. Leonard and W. E. Fry, eds., Plant Disease Epidemiology. Macmillan Publishing Co., New York. 372 pp.

Madden, L. V., and M. A. Ellis. 1988. How to develop disease forecasters. Pages 191-208 in: J. Kranz and J. Rotem, eds., Experimental Techniques in Plant Disease Epidemiology. Springer-Verlag Publishers.

Campbell, C. L., K. M. Reynolds, and L. V. Madden. 1988. Modeling epidemics of root diseases and development of simulators. Pages 253-265 in: J. Kranz and J. Rotem, eds., Experimental Techniques in Plant Disease Epidemiology. Springer-Verlag Publishers.

Madden, L. V. 1987. The pest as part of the ecosystem. Pages 77-85. in: N. N. Ragsdale and R. Kuhr, eds. Minimizing the Risk Associated with Pesticide Use. Am. Chem. Soc. Symposium Series No. 336.183pp.

Madden, L. V. 1989. Dynamic nature of within-in field disease and pathogen distributions. Pages 96-126 in: M. J. Jeger, ed. The Spatial Component of Plant Disease Epidemics. Prentice-Hall.

Madden, L. V., and C. L. Campbell. 1990. Nonlinear disease progress curves. Pages 181-229. in: J. Kranz, ed. Epidemics of Plant Diseases: Mathematical Analysis and Modeling. 2nd edition. Springer, Berlin.

Madden, L. V. 1990. Understanding and predicting losses losses due to virus diseases. Pages: 130-139 in: Viruses en Plantas: Revista de Investigaciones Agropecuarias, Vol. 22(1). 328 pp.

Ellis, M. A., and L. V. Madden. 1991. Progress in the development of disease forecasting systems for strawberry fruit rots in Ohio. Pages 244-251 in: A. Dale and J. J. Luby, eds. The Strawberry into the 21st Century. Timber Press, Portland, Orgeon, 288 pp.

Madden, L. V. 1992. Rainfall and the dispersal of fungal spores. Pages 39-79 in: J. H. Andrews and I. Tommerup, eds. Advances in Plant Pathology. Academic Press, London, Vol. 8.

Ellis, M. A., and L. V. Madden. 1993. Studies and observations on the epidemiology and control of anthracnose fruit rot of strawberry in Ohio. Pages 449-457 in: J. L. Maas and G. L. Galletta, eds. Second International Strawberry Symposium. Acta Horticulturae, Vol. 348.

Hughes, G., and L. V. Madden. 1994. Aggregation and incidence of disease: some implications for sampling. Aspects of Applied Biology (Sampling to Make Decisions). Association of Applied Biologists. Vol. 37, pp. 25-31.

Madden, L. V., and G. Hughes. 1995. Plant disease incidence: distributions, heterogeneity, and temporal analysis. Annual Review of Phytopathology 33: 529-564.

Savary, S., L. V. Madden, J. C. Zadoks, and H. W. Klein-Gebbinck. 1995. Use of categorical information and correspondence analysis in plant disease epidemiology. Pages 213-240 in: J. A. Callow, ed. Advances in Botanical Research Incorporating Advances in Plant Pathology). Vol. 21. Academic Press, London.

McRoberts, N., G. Hughes, and L. V. Madden. 1996. Incorporating spatial variability into simple disease progress models for crop pathogens. Aspects of Applied Biology, Vol. 46. pp. 75-82.

Hoitink, H. A. J., L. V. Madden, and M. J. Boehm. 1996. Relationships among organic matter decomposition level, microbial species diversity, and soilborne disease severity. Pages 237-249 in: R. Hall (editor), Principles and Practice of Managing Soilborne Plant Pathogens. APS Press, St. Paul, MN. 220 pp.

Hughes, G., and L. V. Madden. 1997. A method for the determination of yeld losses due to diseased or missing plants. Pages 152-155 in: L. J. Francl and D. Neher, eds. Exercises in Plant Disease Epidemiology. APS Press, St. Paul, MN 233 pp.

Hughes, G., and L. V. Madden. 1997. The determination of yield losses with aggregated patterns of diseased or missing plants. Pages 156-160 in: L. J. Francl and D. Neher, eds. Exercises in Plant Disease Epidemiology. APS Press, St. Paul, MN 233 pp.

Huber, L., L. V. Madden, and B. D. L. Fitt. 1998. Rain-splash and spore dispersal: a physical perspective. Pages 348-370 in: Plant Disease Epidemiology. G. Jones, editor. Kluwer, London.

Ellis, M. A., and L. V. Madden. 1998. Leather rot. Pages 33-35 in: Compendium of Strawberry Diseases. J. Maas, editor. APS Press, St. Paul. 98 pp.

Madden, L. V., and G. Hughes. 2002. Plant epidemics, models, and analysis. Pages 1557-1562 in: *Encyclopedia of Environmetrics, Volume 3.* A. El-Shaarawi and W. Piegorsch, editors. John Wiley & Sons.

Madden, L. V., and Wheelis, M. 2003. The threat of plant pathogens as weapons against U.S. crops. *Annual Review of Phytopathology* 41: 155-176.

Nutter, F. W., Jr., and Madden, L. V. 2005. Plant diseases as a possible consequence of biological attack. Pages 793-818 in: *Biodefense: Principles and Pathogens.* M. S. Bronze and R. A. Greenfield, editors. Horizon Bioscience, Norfold, England.

Huber, L., L. Madden, and B. D. L. Fitt. 2006. Environmental biophysics applied to the dispersal of fungal spores by rain-splash. Pages 417-444 in: *The Epidemiology of Plant Diseases*. B. M. Cooke and D. Gareth Jones, editors. Springer, The Netherlands.

Paul, P. A., and Madden, L. V. 2014. Meta-analysis in plant disease epidemiology. Pages 137-145 in Exercises in Plant Disease Epidemiology, 2nd edition. K. L. Stevenson and M. J. Jeger, editors. APS Press, St. Paul, MN.

Proceedings edited or *special journal issues*

Pennypacker, S. P., and L. V. Madden, (editors). 1980. Proceedings of the epidemiology workshop held from 29 July to 3 August, 1979 at The Pennsylvania State University (University Park, PA) and Plant Disease Research Laboratory (Frederick, MD). *Protection Ecology* (journal replaced by *Agriculture, Ecosystems, and Environment*). Volume 2, issue 3, pp. 157-284 (dedicated issue).

Madden, L. V. and R. A. Morrall, (editors). 1995. Epidemiology, crop loss assessment, and phytopathometry; Sixth Int. Congress of Plant Pathology, Montreal, Canada, July 28 to August 6, 1993. *Canadian Journal of Plant Pathology* , Volume 17, issue 2, pp. 95-189 (dedicated issue).

Ojiambo, P., van den Bosch, F., Yuen, J., and Madden, L. V (editors). 2017. Epidemiology: Past, Present, and Future Impacts on Understanding Disease Dynamics and Improving Plant Disease Management. *Phytopathology* 107, issue 10, pp 1092-1278 (special Focus Issue of the journal).