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Bareroot Production

1. *Development of a portable solar warmer-cum-nursery plant protector for high altitude areas.* Sohni, S. K. Indian Journal of Forestry 17(1):91-96. 1994.
2. *Early lifting and transplanting of flowering dogwood seedlings increases survival in the southern United States.* Ruter, J. M.; Garber, M. P.; Moorhead, D. J. Journal of Environmental Horticulture 12(3):164-166. 1994.
3. *Hardwood production techniques at midwestern nurseries.* Stauder, A. F. IN: National proceedings, Forest and Conservation Nursery Associations, p. 2630. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
4. *Nursery sterilization and inoculation regimes for alder production.* Moffat, A. J. Forestry 67(4):313-327 1994.
5. *Portable root wash station.* Fawcett, R.; Paterson, J. Ontario Ministry of Natural Resources.
6. *Undercutting in loblolly and white pine seedbeds.* Dierauf, T. A. IN: National proceedings, Forest and Conservation Nursery Associations, p. 56-72. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
7. *Undercutting in loblolly pine.* Rakestraw, J.; Lowerts, G. IN: National proceedings, Forest and Conservation Nursery Associations, p. 50-55. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

8. ***Use of frost fabric as a seedbed mulch and frost protection method.*** Moench, R. D. IN: National proceedings, Forest and Conservation Nursery Associations, p. 165-167. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
9. ***The use of rootdips on North American conifer seedlings: a review of the literature.*** Sloan, J. P. Tree Planters' Notes 45(1):2631. 1994.
- (SO) ***Winter sowings produce 1-0 sugar pine planting stock in the Sierra Nevada.*** Jenkinson, J. L.; McCain, A. H. USDA Forest Service, Pacific Southwest Research Station, Research Paper PSW- 291. 10 p. 1993. ORDER FROM: USDA Forest Service, Pacific Southwest Research Station, P.O. Box 245, Berkeley, CA 95701- 0245. Free.
12. ***Do something for safety's sake.*** Bartok, J. W., Jr. Greenhouse Manager 13(7):105-106. 1994.
13. ***The future - computer applications.*** Collins, B. International Plant Propagators' Society, combined proceedings, 1993, 43:67-70. 1994.
14. ***Looking to automate? Here's a step-by-step approach.*** Whitten, M. Greenhouse Manager 13(7):65-67. 1994. Guidelines to help you size up your needs before investing in new equipment or systems.
15. ***Microcomputer orderprocessing and inventory control.*** Wenny, D. L.; Geer, L. IN: National proceedings, Forest and Conservation Nursery Associations, p.157161. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

Business Management

10. ***Changes in the British Columbia seedling program.*** Haddow, C. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 11-15. 1994.
11. ***Changing seedling requests: effects on nursery operation.*** Pelton, S. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 55-58. 1994.
16. ***Nursery diversification for the future.*** Scholtes, J. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 51-54. 1994.
17. ***Silvicultural systems - changes and trends.*** Murphy, B. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 5-10. 1994. Due to changes in forest management practices, demand for seedlings will decline, customer needs will be more diverse and quality seedlings will be in high demand.

18. ***Take CARE.*** McCann, K. R. Greenhouse Grower 11(13):20,22- 23. 1993. The greenhouse CARE system offers computerized graphical tracking of your crops' growth.

19. ***Think green!*** Onofrey, D. Greenhouse Grower 11(13):75-76, 78. 1993. With or without state bans, composting is catching on as an alternative to dumping plant material in landfills.

20. ***What can we do to protect our workers from heat stress now that summer is here?*** The Digger 38(6):36-37. 1994.

21. ***What to expect from your suppliers.*** Bartok, J. W., Jr. Greenhouse Manager 13(9):92-93. 1994.

(SO) ***Hazard communications manual: a suggested model program.*** American Association of Nurserymen. 1993? A 70-page looseleaf binds to help you comply with OSHA Hazard Communication Standard. Contents: Introduction to the Federal OSHA hazard communication standard; Summary of OSHA hazard communication standard and compliance checklist; Suggested written hazard communication program; Hints on developing an employee training program; How to read and understand material safety data sheets. ORDER FROM: American Association of Nurseryman, 1250 I Street NW, Suite 500, Washington, DC 20005. Phone (202) 789-2900.. Fax (202) 7891893. Price: \$40 to members, \$80 to nonmembers + \$2.50 S&H.

Container Production

22. ***Container size alters root growth of western black cherry as measured via image analysis.*** Oddiraju, V. G.; Beyl, C. A.; Barker, P. A.; Stutte, G. W. HortScience 29(8):910-913. 1994.

23. ***Developing container conifer seedling specifications... a balanced approach?*** van Steenis, E. IN: National proceedings, Forest and Conservation Nursery Associations, p. 84-91. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994. Discusses carbon fixation as it relates to plants and photosynthesis.

24. ***Growth and ectomycorrhizal development of northern red oak seedlings treated with IBA.*** Crunkilton, D. D.; Garrett, H. E.; Pallardy, S. G. HortScience 29(7):771-773. 1994.

25. ***Growth responses of four vigorous-rooted tree species in cupric hydroxide-treated containers.*** Ruter, J. M. HortScience 29(9):1089. 1994.

26. ***Improving conifer seedling quality with CONFER.*** Smith, D. B.; Lloyd, E.; O'Neill, G. IN: National proceedings, Forest and Conservation Nursery Associations, p. 280-283. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

27. **Mother Nature knows best.** Davis, T. Nursery Manager 10(9):42-45. 1994. Examples of successful overwintering by making snow, using leaves for insulation, or storing in wooded areas.
28. **Pepper transplants are excessively damaged by brushing.** Latimer, J. G. HortScience 29(9):1002-1003. 1994. Mechanical damage caused by brushing was excessive for the small amount of growth regulation provided.
29. **The potential for chemical root pruning an container nurseries.** Regan, R. P.; Landis, T. D.; Green, J. L. International Plant Propagators' Society, combined proceedings, 1993, 43:208-212. 1994.
30. **Pulsing temps at sunrise.** Faust, J. E.; Verlinden, S.; Heins, R. D. Greenhouse Grower 12(1):82, 84-85. 1994. Two ways to reduce the rate of stem elongation on plants: pulsing temperatures at sunrise and syringing plant foliage.
31. **Security blankets.** lies, J. K.; Agnew, N. H.; Taber, H. G.; Christians, N. E. American Nurseryman 180(7):54-62. 1994. An evaluation of 5 structureless overwintering systems for container-grown herbaceous perennials.
32. **Seedling development of sugar maple and black maple irrigated at various frequencies.** Graves, W. R. HortScience 29(. 1 1 x:1292-1294. 1994.
33. **Shading of plants.** Andersson, N. E. International Plant Propagators' Society, combined proceedings, 1993, 43:194-195. 1994.
34. **Sodium metabisulfite reduces fungal inoculum in containers used for conifer nursery crops.** Dumroese, R. K.; James, R. L.; Wenny, D. L. Tree Planters' Notes 44(4):161-165. 1993.
35. **The use of a pin type seedling extractor.** Willingdon, T. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 61-62. 1994.
36. **Using copper compounds to modify roots on container-grown trees.** Appleton, B. L. International Plant Propagators' Society, combined proceedings, 1993, 43:376-379. 1994.
37. **Using "limiting factors" to design and manage propagation environments.** Landis, T. D. International Plant Propagators' Society, combined proceedings, 1993, 43:213-218. 1994.

- (SO) *Nursery planning, development, and management. The container tree nursery manual, volume 1.* Landis, T. D.; Tinus, R. W.; McDonald, S. E.; Barnett, J.. P. USDA Agriculture Handbook 674, volume 1. 188 p. 1994. Chapters: Initial planning and feasibility assessment; Site selection; Nursery design and site layout; Environmental controls and seedling production equipment; Nursery management. ORDER FROM: Tom Landis, USDA Forest Service, State and Private Forestry, P.O. Box 3623, Portland, OR 97208. Free.
41. *Fern propagation from spores.* O' Dell, K. International Plant Propagators' Society, combined proceedings, 1993, 43:462- 463. 1994.
42. *Flowering and seed yield in three species of prairie plants.* Bohnen, J. L.; Hanchek, A. M. HortTechnology 4(3):255259. 1994.
43. *A germination study of purple sage.* Love, B.; Johnson, W. S.; Fernandez, G. C. J. HortTechnology 4(3):244-247. 1994.
44. *Investigating native plant marketability.* Shank, D. Hortus Northwest 5(1):19, 41. 1994.

Diverse Species

38. *The benefits of wet-acclimating woody wetland plant species.* McIninch, S.; Garbisch, E.; Biggs, D. Wetlands Journal 6(2):19-23. 1994.
39. *Conserving threatened rare plants: some nursery strategies.* Edson, J. L.; Wenny, D. L.; Legee-Brusven, A.; Everett, R. L.; Henderson, D. M. IN: National proceedings, Forest and Conservation Nursery Associations, p. 149-156. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
40. *The effects of osmotic pre-sowing treatment on laboratory germination in a range of wildflower species.* Tallowin, J. R. B.; Rook, A. J.; Brookman, S. K. E. Annals of Applied Biology 124(2):363370. 1994.
45. *Matric priming increases germination rate of Great Basin native perennial grasses.* Hardegree, S. P. Agronomy Journal 86: 289-293. 1994.
- *46* *Native seed collection, processing, and storage for revegetation projects in the western United States.* Lippitt, L.; Fidelibus, M. W.; Bainbridge, D. A. Restoration Ecology 2(2): 120-131. 1994.
47. *Native woody shrub propagation -three key steps.* Finnerty, T. L. International Plant Propagators' Society, combined proceedings, 1993, 43:311-312. 1994. 1) Know your plants; 2) Planning and scheduling; 3) Recordkeeping.

48. *Native woody shrub propagation -three key steps. Part 1. Know your plants.* Finnerty, T. L. North American Regions Plant Propagator 6(1 j:16-18. 1994.
49. *Native woody shrub propagation -three key steps. Part 11. Planning, scheduling, and good recordkeeping.* Finnerty, T. L. North American Regions Plant Propagator 6(2):16-18. 1994.
50. *The propagation of Australian native plants from cuttings at the Australian National Botanic Gardens (ANGBG).* Carmen, P. International Plant Propagators' Society, combined proceedings, 1993, 43:60-63. 1994.
51. *Propagation of Juniperus for conservation planting.* Cregg, B.; Lee, S.; Hovland, T.; Fleege, C.; Gleason, J. IN: National proceedings, Forest and Conservation Nursery Associations, p. 273277. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
52. *Propagation of Pacific Northwest native plants from seed.* Date, L. International Plant Propagators' Society, combined proceedings, 1993, 43:299-300. 1994.
53. *Protocols for mass micropropagation of antelope and desert bitterbrush.* Lege-Brusven, A.; Edson, J. L.; Wenny, D. L.; Hironaka, M. IN: National proceedings. Forest and Conservation Nursery Associations, p. 238-244. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
54. *Restoring a lowland forest remnant.* Conway, M. International Plant Propagators' Society, combined proceedings, 1993, 43:320-324. 1994.
55. *Sites to behold.* Obensehain, K. American Nurseryman 180(8):40-43. 1994. A landscape company ventures into environmental contracting to restore wetlands from destroyed natural sites.
- (SO) *Hortus Northwest: A Pacific Northwest native plant directory and journal.* Hortus Northwest, Canby Oregon. Contains directory of seed and plant sources as well as technical articles on revegetation and restoration. Semiannual subscription costs \$9.00 per year (\$12.00 foreign) from Hortus Northwest, P.O. Box 955, Canby, OR 97013. Phone: (503) 266-7968. Fax: (503) 399-6173.
- (SO) *Native plant propagation techniques for National Parks—interim guide.* Link, E. USDA Soil Conservation Service and USDI National Park Service. 240 p. 1993. Provides propagation information for over 200 species. ORDER FROM: Rose Lake Plant Materials Center, 7472 Stoll Road, East Lansing, MI 48823.

Fertilization and Nutrition

56 *Copper deficiency a probable cause of stem deformity in fertilized Eucalyptus nitens.*

Turnbull, C. R. A.; Beadle, C. L.; West, P. W.; Cromwer, R. N. Canadian Journal of Forest Research 24(7):1434-1439. 1994.

57. *Effects of contrasting fertilizer regimes on greenhouse growth and outplant performance of containerized jack pine.* Henderson, G. S. IN: National proceedings, Forest and Conservation Nursery Associations, p. 129-137. T.D. Landis and R. K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

58 *Effects of irrigation and nitrogen fertilizer on the growth and nutrient relations of Prunus avium L. and 'Colt' (Prunus avium x Prunus pseudocerasus) in the nursery and after transplantation.* Hipps, N. A.; Higgs, K. H.; Collard, L. G.; Samuelson, T. J. Annales des Sciences Forestieres 51(5):433-445. 1994.

59 *Effects of nitrogen on the response of loblolly pine to drought. II. Biomass allocation and C:N balance.* Green, T. H.; Mitchell, R. J.; Gjerstad, D. H. New Phytologist 128(1):145-152. 1994.

60 *The fate of spring applied fertilizer N during the autumn-winter period: comparison between winter fallow and green manure cropped soil.* Vos, G. J. M.; Bergevoet, I. M.; J.; Vedy, J. C.; Neyroud, J. A. Plant and Soil 160(2):201-213. 1994.

61. *Fertile results: controlled release products exhibit varied performance at a Wisconsin nursery.* Herrick, T. A. American Nurseryman 180(2):60-67. 1994.

62 *Fertilizers: interactions and overwintering-a review.* Barnes, H. W. International Plant Propagators' Society, combined proceedings, 1993, 43:475-479. 1994.

63. *On farm nitrogen tests improve fertilizer efficiency, protect groundwater.* Hartz, T. K.; Smith, R. F.; Schulbach, K. F.; LeStrange, M. California Agriculture 48(4):29-32. 1994. Petiole sap analysis and soil nitrate quick tests were valuable techniques for monitoring crop and soil nitrogen status.

64. *Poultry litter and manure contributions to nitrate leaching through the vadose zone.* Adams, P. L.; Daniel, T. C.; Edwards, D. R.; Nichols, D. J.; Pote, D. H.; Scott, H. D. Soil Science Society of America Journal 58(4):1206-1211. 1994.

65 *Steady-state nutrition of Pinus resinosa seedlings: response to nutrient loading, irrigation and hardening regimes.* Miller, B. D.; Timmber, V. R. Tree Physiology 14(12):1327-1338. 1994.

General and Miscellaneous

66. *Comparing performance of the 1985 and the 1990 Conservation Reserve Programs in the west.* Young, D.; Bechtel, A.; Coupal, R. Journal of Soil and Water Conservation 49(5):484-487. 1994.

67. *Current trends in natural regeneration vs. planting in British Columbia.* von der Gonna, M. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 65-68. 1994.

68. *Environmental effects on reforestation in the Pacific Northwest United States.* Zensen, F. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 33-35. 1994.

69. *Quebec new policy - no herbicides, larger seedlings - rationale and economics.* Perreault, F. N.; Brouillette, J. G.; Robert, D. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 27-32. 1994.

70. *Reforestation technical assistance for the non-industrial private forestland owner - opportunity knocks.* Mangold, R. Tree Planters' Notes 45(1):1-2. 1994.

71. *Reforestation trends in the eastern United States.* Lantz, C. W. IN: National proceedings, Forest and Conservation Nursery Associations, p. 1-3. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

72. *Tomorrow's forestry in Scandinavia - a challenge to nurseries and forest management.*

Kristiansen, S. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 21-24. 1994.

73. *Why plant trees?* A Weyerhaeuser perspective. Hee, S. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 37-40. 1994.

(SO) *Directory of forest and conservation tree nurseries in the United States.* Okholm, D. J.; Abriel, R. D. USDA Forest Service, State and Private Forestry, Publication R6-CP-TP-02-94. 99 p. 1994. Lists nurseries by state with address, ownership, stock type, seedling distribution and potential production. A second section lists special nursery products and services. ORDER FROM: Tom Landis, USDA Forest Service, State and Private Forestry, P.O. Box 3623, Portland, OR 97208. Free.

(SO) *Forest Nursery Association of British Columbia, proceedings, 1993.* Huber, R. ed. Forest Nursery Association of British Columbia. Held September 1315, 1993, Courtenay, B.C. 92 p. 1994. ORDER FROM: Ralph Huber, B.C. Ministry of Forests, 3-31 Bastion Square, Victoria, B.C. Canada V8W 3E7. Phone: (604) 387- 8942. Fax: (604) 387-1467. Price: Free while supply lasts.

(SO) ***Forest nursery practice.*** Aldhous, J. R.; Mason, W. L. Forestry Commission (Great Britain), Bulletin 111. 268 p. 1994. A revision of 1972 edition. Sections: Nursery policy and planning; Selection layout and formation of a nursery; Forest nursery soils; Plant nutrition; Seed; Production of bareroot seedlings and transplants; Mycorrhizas, actinorhizas and rhizobia; Production of undercut stock; Container production of tree seedlings; Vegetative propagation; Irrigation; Nursery weed control; Protection against climatic damage, fungal diseases, insects and animal pests; Lifting, storage, handling and despatch; Legislation and the nursery manager. ORDER FROM: HMSO Publications Centre, P.O. Box 276, London, SW8 3DT Great Britain. Price: 25 British Pounds or apx. \$39.30 U.S.

(SO) ***Hardwood nursery guide.*** Williams, R. D.; Hanks, S. H. USDA Agriculture Handbook 473. 78 p. 1994 revised. Sections: Soil management; Seed; Seedbed preparation, sowing, and care; Vegetative propagation; Nursery protection; Inventory; Seedling handling. ORDER FROM: Tom Landis, USDA Forest Service, State and Private Forestry, P.O. Box 3623, Portland, OR 97208. Free.

(SO) ***Methyl bromide: its atmospheric science, technology and economics.*** Watson, R. T.; Albritton, D. L.; Andersen, S. O.; Lee-Baptist, S. United National Environmental Programme. Montreal Protocol Assessment Supplement. 41 p. 1992. Contents: Section 1: Methyl bromide and the ozone layer. Human activities and methyl bromide abundances. Impact of bromine on the ozone layer. Highest priority, near term research needs. Section 2: Soil fumigation. Methyl bromide for quarantine and non-quarantine commodity treatments. Structural fumigation. Containment, recovery, recycle, and disposal options. Economic and developing country perspectives. Research needs. ORDER FROM: United National Environment Programme, United Nations Headquarters, Ozone Secretariat, P.O. Box 30552, Nairobi, Kenya.

(SO) ***National proceedings, Forest and Conservation Nursery Associations.*** Landis, T. D.; Dumroese, R. K. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994. ORDER FROM: Tom Landis, USDA Forest Service, State and Private Forestry, P.O. Box 3623, Portland, OR 97208. Free.

Genetics and Tree Improvement

74 ***Adaptation of Picea engelmannii populations to the heterogeneous environments of the Intermountain West.*** Rehfeldt, G. E. Canadian Journal of Botany 72 (8).1197-1208. 1994.

75. *Early selection of black spruce seedlings and global change: which genotypes should we favor?* Wang, Z. M.; Lechomcz, M. J.; Potvin, C. Ecological Applications 4(3):604- 616. 1994.
76. *Genetic diversity in a seed production population vs. natural populations of Sitka spruce.* Chaisurisri, K.; El-Kassaby, Y.A. Biodiversity and Conservation 3(6):512-523. 1994.
77. *Genetic improvement of southern hardwoods—1994 update.* Kellison, R. C. IN: National proceedings, Forest and Conservation Nursery Associations, p. 2025. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
- *78* *Genetic structure of western red cedar populations in the Interior West.* Rehfeldt, G. E. Canadian Journal of Forest Research 24(4):670-680. 1994.
79. *Genetic variation in incense-cedar (*Calocedrus decurrens*): L Provenance differences in a twelve year-old common-garden study.* Rogers, D. L.; Harry, D. E.; Libby, W. J. Western Journal of Applied Forestry 9(4):113-117. 1994.
80. *Genetic variation in photoperiodic preconditioning in *Pinus sylvestris* L. seedlings.* Eriksson, G.; Dormling, L; Norell, L. Scandinavian Journal of Forest Research 9(3):218-225. 1994.
81. *Genotyping of longleaf pine ramets after Hurricane Hugo by using DNA and isozyme markers.* Jermstad, K. D.; Guge, P. A.; Carroll, E. R.; Friedman, S. T.; Neale, D. B. Tree Planters' Notes 44(4):157-160. 1994.
- *82* *Geographic pattern of adaptive variation of lodgepole pine (*Pinus contorta* Dougl.) within the species' coastal range: field performance at age 20 years.* Ying, C. C.; Liang, Q. Forest Ecology and Management 67(1-3):281-298. 1994.
- *83* *Germination and early growth of western larch (*Larix occidentalis*), alpine larch (*Larix lyallii*), and their reciprocal hybrids.* Varlson, C. E. Canadian Journal of Forest Research 24(5):911-916. 1994.
84. *Growth rhythm and hardiness of *Picea abies* progenies of high altitude parents from seed produced at low elevations.* Skroppa, T. Silvae Genetica 43(2-3):95-100. 1994.
85. *A *Paulownia* seed source trial in east Texas and its implications to species introduction.* Dong, H.; van Buijtenen, J. P. Southern Journal of Applied Forestry 18(2):65-67. 1994.
86. *RAPD-fingerprinting to identify *Eucalyptus grandis* clones.* de Lange, W. J.; Wingfield, B. D.; Viljoen, C. D.; Wingfield, M. J. South African Forestry Journal 167:47-50. 1994.

(SO) *Genetic variation and seed transfer guidelines for ponderosa pine in central Oregon.* Sorenson, F. C. USDA Forest Service, Pacific Northwest Research Station, Research Paper PNW-472. 24 p. 1994. ORDER FROM: USDA ForestService, Pacific Northwest Research Station, P.O. Box 3890, Portland, OR 97208. Free.

Mycorrhizae and Beneficial Microorganisms

87 *Biology of the ectomycorrhizal genus, Rhizopogon. L Host associations, host-specificity and pure culture syntheses.* Molina, R.; Trappe, J. M. New Phytologist 126(4):653-675. 1994.

88 *Dependence of Laccaria bicolor basidiome development on current photosynthesis of Pinus strobus seedlings.* Lamhamedi, M. S.; Godbout, C.; Fortin, J.A. Canadian Journal of Forest Research 24(9):1797-1804. 1994.

89 *Ecological growth response specificity of two Douglas-fir ecotypes inoculated with coexistent beneficial rhizosphere bacteria.* Chanway, C. P.; Holy F. B. Canadian Journal of Botany 72(5):582-586. 1994.

90 *Ectomycorrhizas and rhizosphere microorganisms of seedlings of Pseudotsuga menziesii (Mirb.) Franco planted on a degraded site and inoculated with forest soils pretreated with selective biocides.* Colinas, C.; Molina, R.; Trappe, J.; Perry, D. New Phytologist 127(3):529537. 1994.

91. *Effect of prescribed burning on the ectomycorrhizal infectivity of a forest soil.* Herr, D. G.; Duchesne, L. C.; Tellier, R.; McAlpine, R. S.; Peterson, R. L. International Journal of Wildland Fire 4(2):95-102. 1994.

92 *Effects of liming and boron fertilization on mycorrhizas of Picea abies.* Lehto, T. Plant and Soil 163(1):65-68. 1994.

93 *Helper bacteria: a new dimension to the mycorrhizal symbiosis.* Garbaye, J. New Phytologist 128(2):197-210. 1994.

94 *Inoculation of containerized Pinus halepensis (Miller) seedlings with basidiospores of Pisolithus arhizue (Pers) Rauschert, Rhizopogon roseolus (Corda) Th M Fr and Suillus collinitus (Fr) O Kuntze.* Tomes, P.; Honrubia, M. Annales des Sciences Forestieres 51(5):521-528. 1994.

95 *Local reduction of mycorrhizal arbuscule frequency in enriched soil microsites.* Duke, S. E.; Jackson, R. B.; Caldwell, M. 1VI. Canadian Journal of Botany 72(7):998-1001. 1994

96 *Mycorrhizal associations in Pinus massoniana Lamb. and Pinus elliottii Engel. inoculated with Pisolithus tinctorius.* Tam, Pa C. F. Mycorrhizae 4(6):255-263. 1994.

97. *Mycorrhizal colonization increases herbicide toxicity in apple.* Hamel, C.; Morin, F.; Forin, A.; Granger, R. L.; Smith, D. L. Journal of the American Society for Horticultural Science 119(6):1255-1260. 1994.

98 *A new method to quantify the inoculum potential of arbuscular mycorrhizal fungi.* Liu, R. J.; Luo, X. S. New Phytologist 128(1):89-92. 1994.

99 *Seasonal fluctuations of photosynthesis and its pigments in 1-year mycorrhized spruce seedlings.* Vodnik, D.; Gogala, N. Mycorrhizae 4(6):277-281. 1994.

100 *Variation in mycorrhizal development and growth stimulation by 20 Pisolithus isolates inoculated on to Eucalyptus grandis W. Hill ex Maiden.* Burgess, T.; Dell, B.; Malajczuk, N. New Phytologist 127(4):731-739. 1994.

101 *Vesicular-arbuscular mycorrhizae colonization of redwood and incense cedar seedlings following storage.* Afek, U.; Lappet, L. A.; Adams, D.; Menge, J. A.; Pond, E. HortScience 29(11):1362-1365. 1994.

Nursery Structures and Equipment

102. *An aid for planning construction.* Bartok, J. W., Jr. Greenhouse Manager 13(5):114-115. 1994. Gives estimates of construction costs and environmental control equipment in a new greenhouse.

103. *Avoid winter worries for your greenhouses: start winterizing now.* Cuny, H. Greenhouse Manager 13(9):67-69. 1994.

104. *Conceptual modeling automated seedling transfer from growing trays to shipping modules.* Brewer, H. L. Transactions of the American Society of Agricultural Engineers 37(4):1043-1051. 1994.

105. *Get your greenhouses rolling to higher profits.* Davis, T. Greenhouse Manager 13(7):69-74. 1994. Carts save you money by lowering labor costs and by speeding up deliveries. They may be racks that carry plants, wagons with fewer shelves, electric vehicles or monorail systems.

106. *Greenhouses heated with waste oil - a true story.* Schwartz, J. D.; Schwartz, M. Tree Planters' Notes 44(4):146-148. 1994.

107. *If you know where to look, potential heat sources are virtually everywhere.* Davis, T. Greenhouse Manager 13(6):60-63. 1994. Discusses heating with sawdust, geothermal energy, tires, solar energy, landfill gas.

108. *Intermittent mist control via solar cells.* Burger, D. W. HortTechnology 4(3):273-274. 1994.
109. *A look at: automatic label printers.* Roskens, L. J. Greenhouse Manager 13(8):83-84. 1994.
110. *A look at: carbon dioxide generators.* Roskens, L. J. Greenhouse Manager 13(6):81-83. 1994.
111. *A look at: germination chambers.* Greenhouse Manager 13(10):63-64. 1994.
112. *A look at: low-volume sprayers.* Roskens, L. J. Greenhouse Manager 13(7):81-85. 1994. Provides vendor information for electrostatic sprayers, mist blowers and low volume foggers.
113. *A look at: soil mixing equipment.* Roskens, L. J. Greenhouse Manager 13(9):75-80. 1994.
114. *Machine vision assisted robotic seedling transplanting.* Tai, Y. W.; Ling, P. P.; Ting, K. C. Transactions of the American Society of Agricultural Engineers 37(2):661-667. 1994.
115. *Machine vision inspection system for packinghouse quality control.* Rigney, M. P.; Kranzler, G. A. IN: National proceedings, Forest and Conservation Nursery Associations, p. 181-190. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
116. *Nursery drawings available from the Missoula Technology and Development Center.* Hallman, D. Tree Planters' Notes 45(1):17-20. 1994. Engineering drawings for 53 types of nursery equipment that have been developed or improved by Forest Service nurseries are available.
117. *Paperpot transplanting systems -overview and potential for vegetable production.* Robb, J. G.; Smith, J. A.; Wilson, R. G.; Yonts, C. D. HortTechnology 4(2):166-171. 1994.
118. *Plastic lumber.* Van Veen, K. International Plant Propagators' Society, combined proceedings, 1993, 43:294. 1994. Lumber from recycled plastic was tested for greenhouse benches. It is expensive and difficult to work with, but lasts forever.
119. *Prepare your heating system for winter.* Bartok, J. W., Jr. Greenhouse Manager 13(6):96-97. 1994.
120. *Screens deny specific pests entry to greenhouses.* Bethke, J. A.; Redak, R. A.; Paine, T. D. California Agriculture 48(3): 37-40. 1994.

121 *Sensitivity of a hand-cranked nursery spreader to operator variables.* Parish, R.L. Journal of Environmental Horticulture 12(4):187-190. 1994.

122. *Stretch your heating \$\$\$.* Bartok, J. W., Jr. Greenhouse Grower 11(14):20,22. 1993.

123. *Who needs an environmental-control computer?* Davis, T. Greenhouse Manager 13(9):63-65. 1994. You do if you want hands-off growing, healthier plants and lower utility bills.

(SO) *Greenhouse engineering.* Aldrich, R. A.; Bartok, J. W., Jr. Northeast Regional Agricultural Engineering Service. NRAES-33. 212 p. 1994. Chapters: 1. Greenhouse planning. 2. Greenhouse structures. 3. Materials handling. 4. Greenhouse environment. 5. Equipment for heating and cooling. 6. Environmental modification. 7. Remodeling greenhouses. 8. Energy conservation.

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(SO) *Machinery for horticulture.* Bell, B.; Cousins, S. Farming Press. 295 p. 1991 ~ Chapters: Tractors and power units; Engines; Lubrication and cooling; Starting and charging systems; Transmissions; Steering, wheels and tires; Hydraulic systems; Tractor maintenance; Ploughs and ploughing; Cultivation machinery; Fertilizer distributors; Drills and planters; Sprayers; Grass cutting machinery; Turf care equipment; Glasshouse equipment; Irrigation; Vegetable and fruit machinery; Machinery for estate and grounds maintenance; The workshop; Power for horticulture. ORDER FROM: Diamond Farm Enterprises, P.O. Box 537, Alexandria Bay, NY 13607. Phone (613) 475-1771. Fax: (613) 475-3748. Price: \$39.45 U.S. or \$50.50 Can. (includes S&H).

(SO) *Reforestation equipment.* Hallman, R. USDA Forest Service, Technology and Development Program, Missoula, Montana. Publication No. TE02E 11. 268 p. 1993. Describes equipment for site preparation (mechanical, burning, and chemical), direct seeding, planting, mulching, fertilization, thinning, pruning, prime movers and safety. ORDER FROM: USDA Forest Service, Technology and Development Program, Fort Missoula, MT 59801. Phone: (406) 329-3900. Fax: (406) 329-3719. Free.

Outplanting Performance

124. *A comparison of cell grown and bare-rooted oak and beech seedlings one season after outplanting.* Kerr, G. Forestry 67(4):297-312. 1994.

125. *Comparisons of selected and cloned plantlets against seedlings for rehabilitation of saline and waterlogged discharge zones in Australian agricultural catchments.* Bell, D. T.; McComb, J. A.; van der Moezel, P. G.; Bennett, I. J.; Kabay, E. D. Australian Forestry 57(2):6975. 1994.
126. *Container optimization -field data support container innovation.* Bainbridge, D. A. IN: National proceedings, Forest and Conservation Nursery Associations, p. 98-103. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
127. *The effects of Keithia blight on outplanting performance of western redcedar container seedlings at two reforestation sites in British Columbia-preliminary results.* Trotter, D.; Shrimpton, G.; Kope, H. IN: National proceedings, Forest and Conservation Nursery Associations, p. 195-201. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
- * 128* *Effects of prolonged cold storage on carbohydrate and protein content and field performance of white spruce bareroot seedlings.* Jiang, Y.; Zwiazek, J.; Macdonald, S. E. Canadian Journal of Forest Research 24(7):1369-1375. 1994.
129. *Five year field performance of short day nursery treated Engelmann spruce seedlings in the Nelson Forest Region of British Columbia.* Story, T. L.; Thompson, C. F.; Hawkins, C. D. B. IN: National proceedings, Forest and Conservation Nursery Associations, p. 138-148. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
130. *Impact of aphid damage in a bareroot nursery and seed source on survival and growth of outplanted white fir seedlings in the Sierra Nevada.* Stein, J. D. IN: National proceedings, Forest and Conservation Nursery Associations, p. 245-257. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
131. *Influence of soil fumigation and fungicide application on outplanted ponderosa pine seedlings.* PageDumroese, D. S.; Harvey, A. E. IN: National proceedings, Forest and Conservation Nursery Associations, p. 202212. T.D. Landis and R. K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
- * 132* *Initial moisture stress, budbreak and two-year field performance of three morphological grades of slash pine seedlings.* McGrath, D. A.; Duryea, M. L. New Forests 8(4):335- 350. 1994.

133. ***Long-term stock type trial results in B.C.: Did stock performance meet today's standards?***

Bowden, R.; Scagel, R. G. IN: National proceedings, Forest and Conservation Nursery Associations, p. 92-97. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

134. ***Nursery growing density and container volume affect nursery and field growth of Douglas-fir and lodgepole pine seedlings.*** Simpson, D. G. IN: National proceedings, Forest and Conservation Nursery Associations, p. 104-114. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

135. ***Nursery regimes affect seedling size and outplanting performance of 1+0 ponderosa pine.*** Sloan, J. IN: National proceedings, Forest and Conservation Nursery Associations, p. 168-180. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

136. ***Regeneration procedures of Pinus radiata in the southern Cape Province. Partly: Postplanting mortality and growth of trees in response to the experimental treatments and planting site environment.*** Zwolinski, J. B.; Donald, D. G. M.; van Laar, A.; Groenewald, W. H. South African Forestry Journal 168:7-21. 1994.

137. ***Stock type selection in British Columbia.*** Bowden, R. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 17-20. 1994.

138 ***Survival and growth of Pseudotsuga menziesii seedlings inoculated with biocide-treated soils at planting in a degraded clearcut.*** Colinas, C.; Perry, D.; Molina, R.; Amaranthus, M. Canadian Journal of Forest Research 24(8):1741-1749. 1994.

139. ***Tree shelters improve establishment on dry sites.*** Bainbridge, D. A. Tree Planters' Notes 45(1):13-16. 1994. TUBEX Treeshelters have proved to be very beneficial for establishment of mesquite, four-winged saltbush, ocotillo, and many other species.

140. ***Use of container stock in mine revegetation.*** Rodgers, J. IN: National proceedings, Forest and Conservation Nursery Associations, p. 233-237. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

(SO) ***Effect of initial seedling morphology and planting practices on field performance of jack pine 6 years after planting.*** Paterson, J. M.; Maki, D.S. Ontario Ministry of Natural Resources, Forest Research Report 130. 15 p. 1994. ORDER FROM: Ontario Forest Research Institute, P.O. Box 969, Sault Ste. Marie, Ontario P6A SNS Canada. Free.

(SO) *Field performance of several tree species and stock types planted in montane forests of coastal British Columbia.* Arnott, J. T.; Pendl, F. T. Canadian Forest Service, Pacific Forestry Centre, Information Report BC-X-347.45 p.1994. ORDER FROM: Canadian Forest Service, Pacific Forestry Centre, 506 W. Burnside Rd., Victoria, B.C. V8Z 1M5 Canada. Free.

(SO) *Growth of short-day treated spruce seedlings planted throughout British Columbia.* Krasowski, M. J.; Letchford, T.; Eastham, A. M. Forestry Canada, and British Columbia Ministry of Forests, FRDA Report 209. 39 p. 1993. ORDER FROM: Forestry Canada, Pacific Forestry Centre, 506 W. Burnside Road, Victoria, B.C. V8Z 1M5 Canada. Free.

(SO) *Root dipping of conifer seedlings shows little benefit in the northern Rocky Mountains.* Sloan, J. P. USDA Forest Service, Intermountain Research Station, Research Paper INT-476. 12 p. 1994. ORDER FROM: USDA Forest Service, Intermountain Forest Research Station, 324 25th St., Ogden, UT 84401. Free.

Pest Management

141 *Antibiotic production by strains of Gliocladium virens and its relation to the biocontrol of cotton seedling diseases.* Howell, C. R.; Stipanovic, R. D.; Lumsden, R. D. Biocontrol Science and Technology 3(4):435-441. 1993.

142. *Antifungal activity of some plant extracts.* Bhat, N.; Sivaprakasam, M. K.; Jeyarajan, R. Indian Journal of Forestry 17(1):10-14. 1994.

143 *Bacteria suppress damping-off caused by Pythium ultimum var. sporangiiferum, and promote growth, in bedding plants.* Harris, A. R.; Schisler, D. A.; Ryder, M. H.; Adkins, P. G. Soil Biology and Biochemistry 26(10):1431-1437. 1994.

144. *Bark consumption by voles in relation to geographic origin of tree species.* Hansson, L. Scandinavian Journal of Forest Research 9(3):288-296. 1994.

145 *Bioassay for dicarboximide resistance in Boggy cinerea.* Moorman, G. W.; Lease, R. J.; Vali, R. J. Plant Disease 78(9): 890-891. 1994.

146. *Biofumigation: isothiocyanates released from Brassica roots inhibit growth of the take-all fungus.* Angus, J. F.; Gardner, P. A.; Kirkegaard, J. A.; Desmarchelier, J. M. Plant and Soil 162(1):107-112. 1994.

147 *Biological control of foot and root rot in pea caused by Fusarium solani with nonpathogenic Fusarium oxysporum isolates.* Oyarzun, P. J.; Postma, J.; Luttkholt, A. J. G.; Hoogland, A. E. Canadian Journal of Botany 72(6):843-852. 1994.

- *148* ***Biological control of Septoria leaf spot of poplar by Phaeotheca dimorphospora.*** Yang, D.; Bernier, L.; Dessureault, M. Plant Disease 78(8):821-825. 1994.
149. ***Combination fungicides - a good idea?*** Simone, G. W. Greenhouse Manager 13(7):111-114. 1994.
- *150* ***Concentration of CO₂ under snow cover and the winter activity of the snow blight fungus Phacidium infestans.*** Vuorinen, M.; Kurkela, T. European Journal of Forest Pathology 23:441-447. 1993.
- *151* ***Control of infection and sporulation of Botrytis cinerea on bean and tomato by saprophytic yeasts.*** Elad, Y.; Kohl, J.; Fokkema, N. J. Phytopathology 84(10):1193-1200. 1994.
152. ***Coumatetralyl efficacy trial against rodents in a young pine plantation at Linwood, Natal Midlands.*** Wirminghaus, J. O.; Schroder, J. South African Forestry Journal 169:21-24. 1994.
153. ***Cyproconazole for control of fusiform rust on loblolly pine seedlings.*** Carey, W.A.; Kelley, W. D. Southern Journal of Applied Forestry 18(3):101-104. 1994.
154. ***Diseases of pines and eucalypts in South Africa associated with Pythium and Phytophthora species.*** Linde, C.; Kemp, G. H. J.; Wingfield, M. J. South African Forestry Journal 169:25-32. 1994.
- *155* ***Dogwood anthracnose: a new disease threatens two native Cornus species.*** Daughtry, M. L.; Hibben, C. R. Annual Review of Phytopathology 32:6173. 1994.
156. ***Economic analysis of two-spotted spider mite management on greenhouse-grown poplars.*** Smith, V. A.; Orr, D. B.; Hart, E. R. Tree Planters' Notes 44(4):154156. 1994.
157. ***Effects of biocontrol agents on plant growth.*** Linderman, R. G. International Plant Propagators' Society, combined proceedings, 1993, 43:249-252. 1994.
- *158* ***Effects of the frequency, timing, and intensity of simulated browsing on growth and mortality of tree seedlings.*** Canham, C. D.; McAninch, J. B.; Wood, D. M. Canadian Journal of Forest Research 24(4):817-825. 1994.
- *159* ***Effects of wetness duration, temperature, and light on infection of black spruce seedlings by Botrytis cinerea.*** Zhang, P. G.; Sutton, J. C. Canadian Journal of Forest Research 24(4): 707-713. 1994.
160. ***Eliminate pathogens to control disease.*** Barnes, L. W. Greenhouse Manager 13(6):94-95. 1994.
- *161* ***Evaluation of microorganisms for biocontrol of Botrytis cinerea in containergrown black spruce seedlings.*** Zhang, P. G.; Sutton, J. C. Canadian Journal of Forest Research 24(7):1312-1316. 1994.

162 *Evaluation of powdered pine bark for control of Meloidogyne arenaria and Heterodera glycines on soybean.* Kokalis-Burelle, N.; Rodriguez-Kabana, R.; Weaver, C. F.; King, P. S. Plant and Soil 162(2):163-168. 1994.

163 *Evaluation of turpentine as a bird repellent seed treatment.* Mason, J.R.; Bonwell, W. R. Crop Protection 12(6): 453-457. 1993.

164. *Film-coating of horticultural seed.* Robani, H. HortTechnology 4(2):104-105. 1994.

165 *Fungal zoospore-mediated delivery of a foreign gene to wheat roots.* Zhang, L.; Mitra, A.; French, R. C.; Langenberg, W. G. Phytopathology 84(7):684-687. 1994.

166 *Genetically based resistance of Eucalyptus marginata to Phytophthora cinnamomi.* Stukely, M. J. C.; Crane, C. E. Phytopathology 84(6):650-656. 1994.

167 *Growth of Gremmeniella abietina on artificial media simulating the effects of mineral nutrient imbalance of Scots pine.* Ylimartimo, A.; Haansuu, P. European Journal of Forest Research 23:372-384. 1993.

168. *Guess who's coming to dinner.* Geistlinger, L. American Nurseryman 180(3):48-53. 1994. An overview of some recent research on preventing deer damage.

169 *The host pathogen system of Gremmeniella abietina (Lagerb.) Morelet and Scots pine; effects of non pathogenic phyllosphere fungi, acid rain and environmental factors.* Ranta, H.; Neuvonen, Sp. New Phytologist 128(1):63-69. 1994.

170 *The in vitro screening of 118 Trichoderma isolates for antagonism to Rhizoctonia solani and an evaluation of different environmental sites of Trichoderma as sources of aggressive strains.* Askew, D. J.; Laing, M. D. Plant and Soil 159(2):277-281. 1994.

171 *Insect fauna of coniferous seed cones: diversity, host plant interactions, and management.* Turgeon, J. J.; Roques, A.; de Groot, P. Annual Review of Entomology 39:179-212. 1994.

172. *Inspecting a plant for problems: what to look for.* Madden, R. E. International Plant Propagators' Society, combined proceedings, 1993, 43:55-59. 1994.

173. *Integrated management of greenhouse crops - a conceptual and potentially practical model.* Clarke, N. D.; Shipp, J. L.; Jarvis, W. R.; Papadopoulos, A. P.; Jewett, T. J. HortScience 29(8):846-849. 1994.

174. *Keeping it clean: how nurseries depend on clean operations to meet quarantines.* Cuny, H. Nursery Manager 10(12):50, 52. 1994.

175. *Lady beetlemania: fan or foe.* Rentner, J.; Flint, M. L.; Dreistadt, S.; Gary, N; Parrella, M. P. Greenhouse Grower 12(2): 26-28, 30. 1994. How effective are lady beetles as biological control agents?
176. *Living mulches suppress aphids in broccoli.* Costello, M. J.; Altieri, M. A. California Agriculture 48(4):24-28. 1994. An interplanting of low-grown grass was tested as an alternative to pesticides in broccoli fields.
- *177* *Mortality among hybrid poplar clones in a stool bed following leaf rust caused by Melampsora medusae . sp. deltoidae.* Newcombe, G.; Chastagner, G. A.; Schuette, W.; Stanton, B. J. Canadian Journal of Forest Research 24(9):1984-1987. 1994.
- *178* *Mutational analysis of gliotoxin production by the biocontrol fungus Gliocladium virens in relation to suppression of Pythium damping-off.* Wilhite, S. E.; Lumsden, R. D.; Straney, D. C. Phytopathology 84(8):816-821. 1994.
- *179* *The occurrence and pathogenicity of uni- and binucleate Rhizoctonia and Pythiaceae fungi among conifer seedlings in Finnish forest nurseries.* Lilja, A. European Journal of Forest Pathology 24(3):181-192. 1994.
- *180* *Paclobutrazol protects black spruce seedlings against predisposition to gray mold induced by high temperature and drought.* Zhang, P. G.; Sutton, J. C.; Fletcher, R. A. Canadian Journal of Forest Research 24(5):1033-1038. 1994.
181. *Permethrin nursery spray protects pine seedlings against regeneration weevils.* Tigner, T. C. IN: National proceedings, Forest and Conservation Nursery Associations, p. 83. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM- 257. 1994.
182. *Pest management. What's available? What's effective?* Lindquist, R. K. Greenhouse Manager 13(7):107-110. 1994.
183. *Plant health care vs. integrated pest management.* Powell, C. C. Nursery Manager 10(6):72-73. 1994.
- *184* *Population dynamics of Fusarium species on oil palm seeds following chemical and heat treatments.* Flood, J.; Mepsted, R.; Cooper, R. M. Plant Pathology 43:177-182. 1994.
185. *Potential use of quadrivalent selenium as a systemic deer- browsing repellent: a cautionary note.* Jobidon, R.; Prevost, M. Northern Journal of Applied Forestry 11(2):63-64. 1994.

- *186* *Pythium irregularare associated with Pinus seedling death on previously cultivated lands.* Linde, C.; Kemp, G. H. J.; Wingfield, M. J. Plant Disease 78(10):1002-1005. 1994.
- *187* *Soil bacteria selected for suppression of Rhizoctonia solani, and growth promotion, in bedding plants.* Harris, A. R.; Schisler, D. A.; Correll, R. L.; Ryder, M. H. Soil Biology and Biochemistry 26(9):1249-1255. 1994.
- *188* *The susceptibility of Scots pine seedlings to Gremmeniella abietina: effect of growth phase, cold and drought stress.* Petaisto, R. L.; Kurkela, T. European Journal of Forest Pathology 23:385-399. 1993.
189. ***Tag-team approach to fungicides.*** Simone, G. W. Greenhouse Manager 13 (10):74-75.1994. Growers need to learn more about complementary use of various products.
190. ***Take control with bio-controls, part 1.*** Gill, S. Greenhouse Grower 12(2):20, 22-24. 1994. Biological control of fungus gnats.
191. ***Treatment of container seedlings in the nursery against large pine weevil.*** Tervo, L.; Kangas, J.; Kuikka, M.; Sarantila, R. Tree Planters' Notes 45(1):59. 1994.
192. ***Two new rusts show up in the Pacific Northwest.*** Peerbolt, A. The Digger 38(6):34-35. 1994.
193. ***Update on fungicides.*** James, B. L. International Plant Propagators' Society, combined proceedings, 1993, 43:373-375. 1994.
- *194* *Use of genetic fingerprinting and random amplified polymorphic DNA to characterize pathotypes of Fusarium oxysporum f. sp. ciceris infecting chickpea.* Kelly, A.; Alcala-Jimenez, A. R.; Bainbridge, B. W.; Heale, J. B.; PerezArtes, E.; Jimenez-Diaz, R. M. Phytopathology 84(11):1293-1298. 1994.
195. ***Using sticky traps to monitor insects.*** Robb, K. Greenhouse Manager 13(8):9394. 1994.
196. ***Why you should consider using smoke fumigants.*** Brock, D. Greenhouse Manager 13(7):77-78. 1994. 4 smokes are available for greenhouse use and are labeled for most greenhouse crops. Re-entry interval can be as little as 4 hours.

(SO) *Managing diseases in greenhouse crops.* Jarvis, W. R. American Phytopathological Society. 288 p. 1992. Chapters: Greenhouse structures and equipment; Growing systems; The greenhouse environment and crop protection; Environmental stress and predisposition to disease; Eliminating inoculum; Limiting disease spread; Disease escape; Resistant germ plasm; Biological Control; Integrated disease management.

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(SO) *Pests of landscape trees and shrubs: an integrated pest management guide.* Dreistadt, S. H.; Clark, J. K.; Flint, M. L. University of California, Division of Agriculture and Natural Resources, Publication 3359. 327 p. 1994. Chapters: Designing an IPM program; Growing healthy trees and shrubs; Insects, mites, and snails and slugs; Diseases; Abiotic disorders; Weeds; Nematodes; Problem solving tables.

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Pesticides

197. *Evaluation of GLEAMS and PRZM for predicting pesticide leaching under field conditions.* Zacharias, S.; Heatwole, C. D. Transactions of the American Society of Agricultural Engineers 37(2):439-451. 1994.

198. *Greenhouse pesticide application safety training.* Panter, K. L. HortTechnology 4(3):299-301. 1994.

199. *Nurseries and the Worker Protection Standard - a discussion.* Artman, J. D. IN: National proceedings, Forest and Conservation Nursery Associations, p. 8082. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

200. *Selecting and calibrating low-volume sprayers.* Bartok, J. W., Jr. IN: National proceedings, Forest and Conservation Nursery Associations, p. 191-194. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

Seedling Harvesting and Storage

201. *Grading specifications of ponderosa pine seedlings at Lucky Peak Nursery.* Sloan, J. IN: National proceedings, Forest and Conservation Nursery Associations, p. 270-272. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

202. *Using manmade snow to protect outdoor perennials.* Poynter, M. International Plant Propagators' Society, combined proceedings, 1993, 43:258. 1994.

Seedling Physiology and Morphology

203. *Abscisic acid analogs reduce planting stress in newly planted seedlings.* Grossnickle, S. C.; Folk, R. S. IN: National proceedings, Forest and Conservation Nursery Associations, p. 213-221. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.

204 *Adaptive significance of intermittent shoot growth in Douglas-fir seedlings.* Kaya, Z.; Adams, W. T.; Campbell, R. K. Tree Physiology 14(11):1277-1289. 1994.

205. *Can foliage water content measurements replace freezer tests in determining a safe lifting time for frozen storage of conifer seedlings?* Krasowski, M. J.; Caputa, A.; Hawkins, C. D. B. IN: National proceedings, Forest and Conservation Nursery Associations, p. 260-266. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994

206. *Cold storage of conifer seedlings: an update from the British Columbia perspective.* Camm, E. L.; Goetze, D. C.; Silim, S. N.; Lavender, D. P. Forestry Chronicle 70(3):311-316. 1994. Reviews research on the effects of different methodological parameters of the cold storage process (lifting date, storage temperature, moisture, light) on a number of physiological aspects of the trees (root growth potential, photosynthesis, stress resistance).

207 *The consequences of freezing temperatures followed by high irradiance on in vivo chlorophyll fluorescence and growth in Picea abies.* Welander, N. T.; Gemmel, P.; Hellgren, O.; Ottosson, B. Physiologia Plantarum 91(1):121-127. 1994.

208. *Dormancy - what we know (and don't know).* Dennis, F. G., Jr. HortScience 29(11):1249-1255. 1994.

209. *Ecology and physiology of establishment of eucalypt seedlings from seed: a review.* Stoneman, G. L. Australian Forestry 57(1):11-30. 1994.

210 *Effect of population, environment, and maturation on the frost hardiness of yellow-cedar (Chamaecyparis nootkatensis).* Hawkins, B. J.; Russell, J.; Shortt, R. Canadian Journal of Forest Research 24(5):945-953. 1994.

211. *Effect of root pinching on growth patterns of blue oak (Quercus douglasii H. & A.) seedlings.* Koukoura, Z.; Menke, J. Phyton 34(1):109-118. 1994.

212. *Effect of short-term storage of shoot tips from black spruce container seedlings on the estimation of bud initiation and needle primordia number.* Templeton, C. W. G.; Colombo, S. J.; Odum, K. D. Ontario Ministry of Natural Resources, Forest Research Report 128. 7 p. 1992.
- *213* *Effects of defoliation, nitrogen nutrition, and temperature on leafing and root carbohydrates of birch seedlings.* Raitio, H.; Paukkonen, K.; Kauppi, A. Canadian Journal of Forest Research 24(9):1914-1920. 1994.
- *214* *Effects of freeze-thaw injury on parameters of distributed electrical circuits of stems and needles of Scots pine seedlings at different stages of acclimation.* Repo, T.; Zhaang, M. I. N.; Ryypoo, A.; Vapaavuori, E.; Sutinen, S. Journal of Experimental Botany 45(275):823-833. 1994.
215. *Effects of short day treatments on development and physiology of Picea spp. seedlings.* Hawkins, C. D. B.; Krasowski, M. J. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 41. 1994.
- *216* *Evaluation of potential evaporation as a means to infer loblolly pine seedlings physiological response to a given microclimate.* Valiguar, R. A.; Messina, M. G. Forest Ecology and Management 67(1-3):241-255. 1994.
- *217* *Fall acclimation patterns of interior spruce seedlings and their relationship to changes in vegetative storage proteins.* Binnie, S. C.; Grossnickle, S. C.; Roberts, D. R. Tree Physiology 14(10):1107-1120. 1994.
218. *Frost hardness and cold-storage tolerance of the root system of Picea sitchensis, Pseudotsuga menziesii, Larix kaempferi and Pinus sylvestris bare-root seedlings.* McKay, H. M. Scandinavian Journal of Forest Research 9(3):203-213. 1994.
- *219* *Frost injury prediction model for Douglas fir seedlings in the Pacific Northwest.* Timmis, R.; Flewellings, J.; Talbert, C. Tree Physiology 14(7-9):855-869. 1994.
- *220* *Frost tolerance and bud dormancy of container-grown yellow birch, red oak and sugar maple seedlings.* Calme, S.; Bigras, F. J.; Margolis, H. A.; Hebert, C. Tree Physiology 14(12):1313-1325. 1994.
221. *Good, bad or ugly: genetic induced variation of container nursery-cultured interior spruce?* Hawkins, C. D. B.; Krasowski, M. J. Forest Nursery Association of British Columbia, proceedings of 1993 meeting, p. 43-50. 1994.
- *222* *The growth of shoots and lateral roots of Quercus robur L. seedlings following simulated undercutting.* Harmer, R.; Walden K. E. New Forests 8(4):351-362. 1994.

223 *Hydraulic and osmotic properties of spruce roots.* Rudinger, M.; Hallgren, S. W.; Steudle, E.; Schulze, E. D. Journal of Experimental Botany 45(279):14131425. 1994.

224 *Influence of photoperiod and temperature on growth, gas exchange, and cold hardiness of yellow cypress stocklings.* Puttonen, P.; Arnott, J. T. Canadian Journal of Forest Research 24(8):1608-1616. 1994.

225 *Interior spruce seedlings compared with emblings produced from somatic embryogenesis. 1. Nursery development, fall acclimation, and over-winter storage.* Grossnickle, S. C.; Major, J. E.; Folk, R. S. Canadian Journal of Forest Research 24(7):1376-1384. 1994.

226 *Interior spruce seedlings compared with emblings produced from somatic embryogenesis. 11. Stock quality assessment prior to field planting.* Grossnickle, S. C.; Major, J. E. Canadian Journal of Forest Research 24(7):13851396. 1994.

227 *Interior spruce seedlings compared with emblings produced from somatic embryogenesis. III. Physiological response and morphological development on a reforestation site.* Grossnickle, S. C.; Major, J. E. Canadian Journal of Forest Research 24(7): 1397-1407. 1994.

228 *Lateral root formation in pine seedlings. L Sources of stimulating and inhibitory substances.* Atzmon, N.; Salomon, E.; Reuveni, O.; Riov, J. Trees: Structure and Function 8(6):268-272. 1994.

229 *Lateral root formation in pine seedlings. 11. The role of assimilates.* Atzmon, N.; Reuveni, O.; Riov, J. Trees: Structure and Function 8(6):273-277. 1994.

230 *Leaf growth, photosynthesis and tissue water relations of greenhouse-grown Eucalyptus marginata seedlings in response to water deficits.* Stoneman, G. L.; Turner, N. C.; Dell, B. Tree Physiology 14(7-9):633-646. 1994.

231 *Maturation in Douglas fir: L Changes in stem, branch and foliage characteristics associated with ontogenetic aging.* Ritchie, G. A.; Keeley, J. W. Tree Physiology 14(11):1245-1259. 1994.

232 *Maturation in Douglas fir: IL Maturation characteristics of genetically matched Douglas-fir seedlings, rooted cuttings and tissue culture plantlets during and after 5 years of field growth.* Ritchie, G. A.; Duke, S. D.; Timmis, R. Tree Physiology 14(11):1261-1275. 1994.

233 *Mechanical stress during dormancy stimulates stem growth of Scots pine seedlings.* Valinger, E.; Lundqvist, L.; Sundberg, B. Forest Ecology and Management 67(1-3):299-303. 1994.

- *234* *Occurrence of lenticels in roots of Scots pine seedlings in different growth conditions.* Aronen, T. S.; Haggman, H. M. Journal of Plant Physiology 143(3):325-329. 1994.
235. *The operational seedling testing program at Weyerhaeuser.* Tanaka, Y.; Brotherton, P.; Hostetter, S.; Dyce, S.; Chapman, D.; Belanger, J.; Johnson, B.; Duke, S. IN: National proceedings, Forest and Conservation Nursery Associations, p. 255-259. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
236. *Rapid assessment of nursery stock viability using a portable gas analysis system: a component of Ontario's seedling quality assessment program.* Colombo, S. J.; Templeton, C. W. G.; Sampson, P. IN: National proceedings, Forest and Conservation Nursery Associations, p. 222-228. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
- *237* *Red spruce seedling gas exchange in response to elevated CO₂, water stress, and soil fertility treatments.* Samuelson, L. J.; Seiler, J. R. Canadian Journal of Forest Research 24(5):954- 959. 1994.
238. *Regeneration procedures of *Pinus radiata* in the southern Cape Province. Part IV: Characteristic of planting stock.* Zwolinski, J. B.; Donald, D. G. M.; van Laar, A. South African Forestry Journal 168:1-6. 1994.
239. *The response of temperate tree seedlings grown in elevated CO₂ to extreme temperature events.* Bassow, S. L.; McConaughay, K. D. M.; Bazzaz, F. A. Ecological Applications 4(3):593-603. 1994.
240. *The root of the matter: why roots of container plants are more susceptible to temperature damage.* Borland, J. American Nurseryman 180(1):127-133. 1994.
241. *Root system modification in the nursery: terminology of cultural practices.* Menes, P.; McDonough, T. Ontario Ministry of Natural Resources, Nursery Note 129. 5 p. 1994.
242. *Short day nursery treatment promotes photosynthesis in interior spruce seedlings: summary of poster.* Hawkins, C. D. B.; Eng, R. Y. N.; Krasowski, M. J. IN: National proceedings, Forest and Conservation Nursery Associations, p. 267-269. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
- *243* *Starch synthesis and localization in post-germination *Pinus edulis* seedlings.* Murphy, J. B.; Hammer, M. F. Canadian Journal of Forest Research 24(7):1457-1463. 1994.

244. *Summer plant culling criteria of interior spruce: keeping the bad and throwing the good?*

McClaren, E. L.; Krasowski, M. J.; Hawkins, C. D. B. IN: National proceedings, Forest and Conservation Nursery Associations, p.115128. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257.1994.

245 *Synchronous changes in tissue water parameters of mature foliage from well-watered and periodically droughted tree seedlings.*

Abrams, M. D.; Kubiske, M. E. Journal of Experimental Botany 45(271):171-177. 1994.

246 *Viability tests for estimating root cold tolerance of black spruce seedlings.*

Bigras, F. J.; Calme, S. Canadian Journal of Forest Research 24(5):1039-1048.1994.

(SO) *Frost and other climate-related damage of forest trees in the prairie provinces.*

Hiratsuka, Y.; Zalasky, H. Forestry Canada, Northern Forestry Centre, Information Report NOR-X-331. 25 p. 1993. ORDER FROM: Forestry Canada, Northern Forestry Centre, 5320 - 122 Street, Edmonton, Alberta T6H 3S5 Canada. Free.

(SO) *Winter freezing injury and frost acclimation in planted coniferous seedlings: a literature review and case study from northeastern British Columbia.* Krasowski, M. J.; Herring, L. J.; Letchford, T. Forestry Canada, and British Columbia Ministry of Forests, FRDA Report 206. 36 p. 1993. ORDER FROM: Forestry Canada, Pacific Forestry Centre, 506 W. Burnside Road, Victoria, B.C. V8Z 1M5 Canada. Free.

Seeds

247. *Accelerated aging of Sitka spruce seeds.*

Chaisurisri, K.; Edwards, D. G. W.; El-Kassaby, Y. A. Silvae Genetics 42(6):303- 308. 1993.

248. *After-ripening requirement, dormancy and germination in rowan (*Sorbus aucuparia* L.).*

Basharuddin, J.; Smith, M. L. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 1-5. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

249. *Artificial ripening of early-collected Scots pine cones and cones attached to branches.*

Sahlen, K.; Bergsten, U. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 113-120. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

250. *Barriers to germination of Larix occidentalis and Larix lyallii seeds.* Shearer, R. C.; Carlson, C. E. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 127-132. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
251. *Biological seed treatments using Trichoderma harzianum for horticultural crops.* Taylor, A. G.; Harman, G. E.; Nielsen, P. A. HortTechnology 4(2):105109. 1994.
252. *Chemical treatments for horticultural seeds.* Rushing, K. W. HortTechnology 4(2):109-110. 1994.
253. *Cleaning hardwood and shrub seed.* Karrfalt, R. P. IN: National proceedings, Forest and Conservation Nursery Associations, p. 278-279. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
254. *Combination of dormancy-breaking and storage for tree seeds: new strategies for hardwood species.* Muller, C. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 79-85. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
255. *A comparison of 5 degrees C and 15 degrees C as dormancy breakage treatments for Sitka spruce seeds (Picea sitchensis).* Jones, S. K.; Bergsten, U.; Gosling, P. G. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 51-55. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
256. *Determination of seed moisture content in Pinus contorta L. by low resolution pulsed NMR.* Nygren, M.; Preston, C. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 97-102. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
257. *Determination of the major cause of seed dormancy of Pinus bungeana Zucc.* Dong, L. F.; Shao, c. B.; Liu, G. Z.; Du, X. L. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 31-36. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
258. *Dormancy release of tree and shrub seeds using a compost activator pretreatment.* Cullum, F. J.; Gordon, A. G. International Plant Propagators' Society, combined proceedings, 1993, 43:125-130. 1994.

259. *Establishing and maintaining a seed orchard.* Lovelace, R. International Plant Propagators' Society, combined proceedings, 1993, 43:495-496. 1994.

260 *Evidence that ethylene, light and abscisic acid interact to inhibit germination in the recalcitrant seeds of Quercus robur L.* Finch-Savage, W. E.; Clay, H. A. Journal of Experimental Botany 45(278):1295-1299. 1994.

261 *Factors affecting the incidence of black seed rot in slash pine.* Fraedrich, S. W.; Miller, T.; Zarnoch, S. J. Canadian Journal of Forest Research 24(8):17171725. 1994.

262. *Field propagation of light sensitive species by seed.* Buzzo, R. J. International Plant Propagators' Society, combined proceedings, 1993, 43:289-291. 1994.

263. *Genetic control of germination parameters of Douglas-fir, Sitka spruce, western redcedar, and yellow-cedar and its impact on container nursery production.* El-Kassaby, Y. A.; Chaisurisri, K.; Edwards, D. G. W.; Taylor, D. W. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 37-42. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

264. *A germination protocol for small seed lots.* Munson, R. H.; Nicholson, R. G. Journal of Environmental Horticulture 12(4): 223-226. 1994.

265 *Incubation, drying, and separation method to separate viable from non-viable, artificially-aged seeds of Pinus roxburghii Sart.* Vanangamudi, K.; Zope, J. S.; Vozzo, J. A.; Elam, W. W. IN: Dormancy and barriers to germination, proceedings of an international symposium of ILTFRO Project Group P2-04-00, p. 141-148. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

266. *Loblolly pine seed dormancy: the relationship between protein synthesis in the embryo and megagametophyte and the loss of seed dormancy.* Gifford, D. J. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 43-49. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

267. *The occurrence of seed-borne fungi on forest tree seeds in the years 19861991.* Prochazkova, Z. Communicationes Instituti Forestalis Cechoslovaca 17:107123. 1991.

268. *Overcoming dormancy in loblolly pine (Pinus taeda L.).* Bonner, F. T.; Harrington, C. A. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 17-22. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

269. *Overcoming dormancy in maple seeds without stratification.* Wiegrefe, S. J. North American Regions Plant Propagator 6(3):8-11. Reprinted from Landscape Plant News 5(2). 1994.
- *270* *Plant-derived smoke: an effective seed pre-treatment.* Baxter, J. M.; Van Staden, J. Plant Growth Regulation 14(3):279- 282. 1994.
271. *Predicting seed longevity for four forest tree species with orthodox seeds.* Bonner, F. T. Seed Science and Technology 22(2):361-370. 1994.
272. *Propagation of Acacias and Eucalypts.* Blakemore, S. D. International Plant Propagators' Society, combined proceedings, 1993, 43:317-319. 1994.
273. *Removal of dead filled seeds and invigoration of viable seeds -a review of a seed conditioning concept used on conifers in Sweden.* Bergsten, U. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 7-15. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
274. *Respiration of tree seeds.* Leadem, C. L. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 57-66. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
275. *Seed treatment.* Clayton, P. B. IN: Application technology for crop protection, p. 329-349. G.A. Matthews and E.C. Hislop, eds. CAB International. 1993. Reviews equipment for applying chemicals to seeds for disease and pest control.
276. *Seeds are the biological potential in Argentine's forestry - germination and dormancy in forest-seeds.* Yacubson. D. IN: Dormancy and barriers to germination, proceedings of an international symposium of ILTFRO Project Group P2-04-00, p. 149-152. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.
277. *Spin-drying soaked tree seed before prechilling improves seed handling.* Gosling, P. G.; Jones, S. K.; Gardiner, A. S. Tree Planters' Notes 45(1):32-35.1994.
- *278* *"Target moisture content" prechill overcomes the dormancy of temperate conifer seeds.* Jones, S. K.; Gosling, P. G. New Forests 8(4):309-321. 1994.
279. *Tetrazolium staining viability seed test using color image processing.* Howarth, M. S.; Stanwood, P. C. Transactions of the American Society of Agricultural Engineers 36(6):1937-1940. 1993.

280. *The use of the IDS-treatment on southern pine seeds and its effect on seed costand efficiency in the seedbed.* McRae, J. B.; Bergsten, U.; Lycksell, S. IN: National proceedings, Forest and Conservation Nursery Associations, p. 73-79. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
281. *Variation in germination parameters-within and among populations of Pacific silver fir on Vancouver Island.* Davidson, R. IN: Dormancy and barriers to germination, proceedings of an international symposium of IUFRO Project Group P2-04-00, p. 23-30. D.G.W. Edwards, ed. Held April 23-26, 1991, Victoria, B.C., Canada. Forestry Canada, Pacific Forestry Centre. 1993.

Soil Management and Growing Media

282. *Bareroot seedling culture without fumigation: experience at Armintrout's Nursery.* Armintrout, D. IN: National proceedings, Forest and Conservation Nursery Associations, p. 19. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
283. *Bark- and peat-amended spent mushroom compost for containerized culture of shrubs.* Chong, C.; Cline, R. A.; Rinker, D. Lo HortScience 29(7):781-784. 1994.
284. *Basamid use and results in the Hayward State Nursery.* Borkenhagen, J.E. IN: National proceedings, Forest and Conservation Nursery Associations, p.1618. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
285. *Chemical alternatives to methyl bromide.* Carey, W. A. IN: National proceedings, Forest and Conservation Nursery Associations, p. 4-11. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
286. *Compost companies with green roots.* Goldstein, N. BioCycle 35(5):41-44, 46-47. 1994.
287. *Compost happens.* Kuipers, W. American Nurseryman 180(11): 51-55. 1994. A Michigan landscape company turns organic waste disposal legislation into an opportunity for a new venture.
288. *Container nursery plant culture in waxed corrugated cardboard media.* Chong, C. International Plant Propagators' Society, combined proceedings, 1993, 43:491-494. 1994.
289. *Digging into composts.* Scott, M.; Bragg, N. International Plant Propagators' Society, combined proceedings, 1993, 43:150-156. 1994. Discussions on alternatives to peat, in light of growing environmental concerns over its use.

290. ***Manufacturing soil at container nursery.*** Welti, M. BioCycle 35(5):48-50. 1994.
291. ***Mechanical container filling alters texture and water retention of peat growth media.*** Heiskanen, J. HortTechnology 4(3):286-288. 1994.
292. ***Methyl bromide regulation... all crops should not be treated equally.*** Yarkin, C.; Sunding, D.; Zilberman, D.; Siebert, J. California Agriculture 48(3):10-15. 1994.
293. ***Nurseries find new value in composted products.*** Hoitink, H. A. J.; Grebus, M. E. BioCycle 35(5):51-52. 1994.
294. ***Organic soil amendments as potential alternatives to methyl bromide for control of soilborne pathogens in forest tree nurseries.*** Kannwischer-Mitchell, M. E.; Barnard, E. L.; Mitchell, D. J.; Fraedrich, S. W. IN: National proceedings, Forest and Conservation Nursery Associations, p.12-15. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
295. ***Selecting the right cover crop gives multiple benefits.*** Ingels, C.; Van Horn, M.; Bugg, R. L.; Miller, P. R. California Agriculture 48(5):43-48. 1994.
296. ***Soil fertility and management for culturing hardwood seedlings.*** Davey, C. B. South, D. B. IN: National proceedings, Forest and Conservation Nursery Associations, p. 38-49. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
297. ***Soil fumigants provide multiple benefits; alternatives give mixed results.*** McHenry, M.; Buzo, T.; Kretsch, J.; Kaku, S.; Otomo, E.; Ashcroft, R.; Lange, A.; Kelley, K. California Agriculture 48(3):22-28. 1994.
298. ***Steam sterilization of growing media.*** Bartok, J. W., Jr. IN: National proceedings, Forest and Conservation Nursery Associations, p.162-164. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
299. ***The use of composted tree chippings as a potting medium.*** Rayner, J.; Arnold, C. International Plant Propagators' Society, combined proceedings, 1993, 43:89-94. 1994.
300. ***Using compost on liner beds.*** Hendricks, B. International Plant Propagators' Society, combined proceedings, 1993, 43:455-456. 1994.

301. *Wildflower establishment in seedbeds created from an industrial co product and co-composted municipal waste.* Pill, W. G.; Smith, W. G.; Frett, J. J.; Devenney, D. Journal of Environmental Horticulture 12(4):193-197. 1994.

(SO) *Canadian peat harvesting and the environment.* Keys, D. North American Wetlands Conservation Council (Canada), Issues Paper no. 1992-3. 29 p. 1992. ORDER FROM: Secretariat, North American Wetlands Conservation Council (Canada), Suite 200, 1750 Courtwood Crescent, Ottawa, Ontario K2C 2135 Canada. Free.

Tropical Forestry and Agroforestry

302. *Comparison of root pruning systems of seedlings and plantlets of Acacia Senegal (L.) Willd.* Palma, B.; Vogt, G.; Neville, P. Phyton 55:137-146. 1994.

303 *Distillery effluent - a potential resource for irrigating forest seed beds.* Pandey, D. K.; Soni, P. Ambio 23(4-5):267-268. 1994.

304 *Effect of salinity, temperature, and growth regulators on the germination and early seedling growth of Atriplex griffithii var. stocksii.* Khan, M. A.; Rizvi, Y. Canadian Journal of Botany 72(4):475-479. 1994.

305. *Effects of growth regulators on seed germination and seedling growth of neem (Azadirachta indica).* Kumaran, K.; Palani, M.; Jerlin, R.; Surendran, C. Journal of Tropical Forest Science 6(4):529-532. 1994.

306. *Effects of two different growth regulators on the growth and water relations of Acacia mangium seedlings.* Abod, S. A.; Yap, S. W. Journal of Tropical Forest Science 6(4):489-501. 1994.

307 *Growth stimulation of Hopea spp. (Dipterocarpaceae) seedlings following ectomycorrhizal inoculation with an exotic strain of Pisolithus tinctorius.* Yazid, S. M.; Lee, S. S.; Lapeyrie, F. Forest Ecology and Management 67(1-3):339-343. 1994.

308 *Improved germination of the seeds of whistling pine (Casuarina equisetifolia) Forst and Forst (Casuarinaceae) by various presowing treatments.* Eze, J. M. O.; Ahonsi, M. O. Agronomie 13(10):889-894. 1993.

309 *The influence of vesicular-arbuscular mycorrhizal fungi on the nitrogen fixation of nursery-grown Ethiopian acacias estimated by the ^{15}N natural abundance method.* Michelsen, A.; Sprent, J. I. Plant and Soil 160(2):249-257. 1994.

310. *Propagation of Cassia fistula, Cassia nodosa and Cassia siamea by air layering using indole butyric acid.* Misra, K. K.; Jaiswal, H. R. Indian Journal of Forestry 17(1):71-72. 1994.

- *311* *The response of seedlings of two dipterocarp species to nutrient additions and ectomycorrhizal infection.* See, L. S.; Alexander, I. J. Plant and Soil 163(2):299-306. 1994.
- *312* *Responses of Casuarina equisetifolia to inoculation with Glomus fasciculatum and/or Frankia.* VasanthaKrishna, M.; Bagyaraj, D. J.; Nirmalnath, P. J. Forest Ecology and Management 68(2-3):399-402. 1994.
313. *Untapped potential: native species for reforestation.* Butterfield, R. P.; Fisher, R. F. Journal of Forestry 92(6):37-40. 1994. In Costa Rica, tests of native tropical hardwoods are revealing their potential for high productivity plantations.
314. *Water relations and gas exchange of mycorrhizal Leucaena leucocephala seedlings.* Dixon, R. K.; Rao, M. V.; Garg, V. K. Journal of Tropical Forest Science 6(4):542-552. 1994.
- ## Vegetative Propagation and Tissue Culture
315. *The adventitious rooting of vegetative cuttings using hydropropagation.* Wilkinson, R. I. International Plant Propagators' Society, combined proceedings, 1993, 43:41-47. 1994.
316. *Alternative methods for sterilization and cutting disinfection.* McClelland, M. T.; Smith, M. A. L. International Plant Propagators' Society, combined proceedings, 1993, 43:526-530. 1994.
317. *Basics of propagation by cuttings: light.* Maynard, B. K. International Plant Propagators' Society, combined proceedings, 1993, 43:445-449. 1994.
318. *Basics of propagation by cuttings-temperature.* Preece, J. E. International Plant Propagators' Society, combined proceedings, 1993, 43:441-444. 1994.
319. *Basics of propagation by cuttings -timing: age-related effects on adventitious root formation.* Geneve, R. L. International Plant Propagators' Society, combined proceedings, 1993, 43:450-454. 1994.
320. *Commercialization potential of somatic embryogenesis in black spruce tree improvement.* Adams, G. W.; Doiron, M. G.; Park, Y. S.; Bonga, J. M.; Charest, P. J. Forestry Chronicle 70(5):593-598. 1994.
321. *The concept of a limiting rooting morphogen in woody stem cuttings.* Wilson, P. J. Journal of Horticultural Science 69(4):591-600. 1994.
322. *Cost of production in commercial micropropagation and research strategies.* de Fossard, Ro A. International Plant Propagators' Society, combined proceedings, 1993, 43:131-140. 1994.

- *323* *Differentiation of poplar and willow clones using RAPD fingerprints.* Lin, D.; Hubbes, M.; Zsuffa, L. Tree Physiology 14(10):1097-1105. 1994.
- *324* *Effect of different media on vegetative propagation of Prosopis juliflora cuttings under solar powered mist.* Wojtusik, T.; Boyd, M. T.; Felker, P. Forest Ecology and Management 67(1-3):267-271. 1994.
- *325* *Effect of genotype and cutting type on the vegetative propagation of the pine hybrid (Pinus brutia (Ten) x Pinus halepensis (Mill)).* Panetsos, K.; Scaltsoyiannes, A.; Alizoti, P. Annales des Sciences Forestieres 51(5):447-454. 1994.
326. *Effects of reduced humidity and paclobutrazol on acclimatization of tissue-cultured plants.* Henderson, K. P.; Taji, A. M.; Williams, R. R. International Plant Propagators' Society, combined proceedings, 1993, 43:97-102. 1994.
327. *Factors affecting Clematis rooting.* Erwin, J.; Schwarze, D. North American Regions Plant Propagator 6(1):22-24. 1994.
328. *Forever young: controlling the juvenility of your stock plants may be the key to getting outstanding results in cutting propagation.* Barnes, B. American Nurseryman 180(1):51-52, 54, 56-58. 1994.
329. *Hot-water treatment and indole-3-butyric acid stimulates rooting and shoot development of tropical ornamental cuttings.* Hata, T. Y.; Hara, A. H.; Nagao, M. A.; Hu, B. K. S. HortTechnology 4(2):159-162. 1994.
- *330* *In vitro micropropagation of Afghan pine.* Sen, S.; Magallenes-Cedeno, M. E.; Kamps, R. H.; McKinley, C. R.; Newton, R. J. Canadian Journal of Forest Research 24(6):1248-1252. 1994.
331. *Intensive cultivation of Taxus species for the production of Taxol.* Wheeler, N. C.; Piesch, R. F. International Plant Propagators' Society, combined proceedings, 1993, 43:222-227. 1994.
332. *Is IBA an effective promoter of root formation on cuttings of Eucalyptus grandis?* Carter, A. S.; Slee, M. U. International Plant Propagators' Society, combined proceedings, 1993, 43:109-113. 1994.
333. *Magnolia propagation.* Lane, C. G. International Plant Propagators' Society, combined proceedings, 1993, 43:163-167. 1994.
334. *Micropropagation of Pacific dogwood.* Edson, J. L.; Wenny, D. L.; Leege-Brusven, A. HortScience 29(11):1355-1356. 1994.

335. *Production of Douglas fir, Pseudotsuga menziesii (Mirb.) Franco, rooted cuttings for reforestation by Weyerhaeuser Company.* Ritchie, G. A. International Plant Propagators' Society, combined proceedings, 1993, 43:284-288. 1994.
336. *Propagation medium moisture level and rooting of woody stem cuttings.* Wright, R. D.; Rein, W. H.; Seder, J. R. International Plant Propagators' Society, combined proceedings, 1993, 43:424-428. 1994.
- *337* *Regeneration of plants from leaf explants of micropopulated clonal Eucalyptus grandis.* Laine, E.; David, A. Plant Cell Reports 13:473-476. 1994.
- *338* *Rooting of baldcypress cuttings.* Pezeshki, S. R.; DeLaune, R. D. New Forests 8(4):381-386. 1994.
339. *Rooting trials in branch cuttings of Acacia nilotica (L.) Del.* Gurumurti, K.; Jayachandran, C. K.; Thirunavoukkarasu, M. Indian Journal of Forestry 17(2):112-118. 1994.
340. *Storage and production of selected conifers from hardwood cuttings.* Barnes, H. W. International Plant Propagators' Society, combined proceedings, 1993, 43:397-399. 1994.
341. *Strategies in commercial micropropagation.* de Fossard, R. A. International Plant Propagators' Society, combined proceedings, 1993, 43:261-266. 1994. Finding the best culture media.
342. *Timber species propagation.* Porada, H. International Plant Propagators' Society, combined proceedings, 1993, 43:81-85. 1994.
343. *Understanding vegetative propagation.* Howard, B. International Plant Propagators' Society, combined proceedings, 1993, 43:157-162. 1994. An understanding of plant physiology can improve success.
344. *The use of Velcro strips for rooting.* Selemón, B. International Plant Propagators' Society, combined proceedings, 1993, 43:296. 1994. Wounding with tight velcro strips before cuttings were taken gave some success.
- *345* *Variations in rooting ability of cuttings and in seed characteristics of five populations of Juniperus communis var. depressa from subarctic Quebec.* Houle, G.; Babeux, P. Canadian Journal of Botany 72(4):493-498. 1994.
346. *What's new in the biology of adventitious root formation.* Davies, F. T., Jr. International Plant Propagators' Society, combined proceedings, 1993, 43:382-384. 1994.

Water Management and Irrigation

347. *The basics of nursery irrigation systems.* Regan, R. P. The Digger 38(6):2225. 1994.

348. *A delicate balance.* Biernbaum, J. Greenhouse Grower 12(1):88, 90, 93, 94. 1994. How do soluble salts, alkalinity, and nutrients affect your water?

349. *Government regulations and nursery accreditation.* Smith, I. International Plant Propagators' Society, combined proceedings, 1993, 43:117-121. 1994. Focusing on water management in Australian nurseries.

350. *Herbicide runoff from ornamental container nurseries.* Keese, R. J.; Camper, N. D.; Whitwell, T.; Riley, M. B.; Wilson, P. C. Journal of Environmental Quality 23(2):320-324. 1994.

351. *How to interpret nutrient levels.* Biernbaum, J. Greenhouse Grower 11(14):56, 58, 60, 62. 1993.

352. *Intermittent sprinkler irrigation reduces water loss from container-grown plants.* Karam, N. S.; Niemiera, A. X.; Wright, R. International Plant Propagators' Society, combined proceedings, 1993, 43:240-243. 1994.

353. *Movement, dissipation, and impacts of isoxaben (Snapshot TG) in nursery runoff water.* Wilson, C.; Bandary, R.; Whitwell, T.; Riley, M. International Plant Propagators' Society, combined proceedings, 1993, 43:408-412. 1994.

354. *The potential for leaching of agrichemicals used in crop production: a national perspective.* Kellogg, R. L.; Maizel, M. S.; Goss, D. W. Journal of Soil and Water Conservation 49(3):294-298. 1994.

355. *A protected diffusion zone (PDZ) to conserve soluble production chemicals.* Green, J. L.; Kelly, S.; Blackburn, B.; Robbins, J.; Briggs, B.; Briggs, D. International Plant Propagators' Society, combined proceedings, 1993, 43:253-257. 1994. A Closed, Insulated Pallet System or the "Conserver" decrease waste discharge and deliver them to plant at an appropriate time.

356. *Protecting groundwater from pesticide contamination: making it work for you.* Greenfield, V. B. The Digger 38(9):24-27, 29-30. 1994. Using the groundwater vulnerability table, the pesticide properties database and the soils sensitivity ratings to evaluate management practices that may influence water quality.

357. *Protecting groundwater while recycling nutrients.* Maynard, A. A. BioCycle 35(5):40. 1994.

358. *Put your water through analysis.* Biernbaum, J. Greenhouse Grower 11(13):32, 34-36. 1993.

359. ***Reduction of nitrates in nursery surface and ground water.*** Amos, R. R. International Plant Propagators' Society, combined proceedings, 1993, 43:244-248. 1994.
360. ***Sprinkler irrigation management and scheduling for diverse container-grown plants.*** Regan, R. IN: National proceedings, Forest and Conservation Nursery Associations, p. 229-232. T.D. Landis and R.K. Dumroese, ed. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-257. 1994.
361. ***Treat your water right.*** Biernbaum, J. Greenhouse Grower 12(2):31, 33-35. 1994. Some commonly used treatment practices to improve water quality.
362. ***Water and fertilizer rate reduction.*** Dole, J. M. Greenhouse Grower 11(13):24,27-28. 1993.
363. ***Wetting agents and gels - where they have a purpose.*** Bilderback, T. International Plant Propagators' Society, combined proceedings, 1993, 43:421-423. 1994.
- (SO) ***50 ways farmers can protect their groundwater.*** Hirschi, M. C.; Simons, F. W.; Peterson, D.; Giles, E. University of Illinois, Cooperative Extension, North Regional Extension Publication 522. 189 p. 1994. ORDER FROM: University of Illinois, Ag Publication Office, 69-IR Mumford Hall, Urbana, IL 61801. Phone (217) 333-2007. Fax: (217) 244-7503. Price: \$5.00.
- (SO) ***Managing pesticides and nitrogen in southern pine nurseries and some ways to reduce the potential for groundwater contamination.*** South, D. B. Auburn University, School of Forestry, Departmental Series 14. 18 p. 1994. ORDER FROM: Auburn University, School of Forestry, Auburn, AL 36830. Free.

Weed Control

364. ***Adsorption, desorption, and leaching of oryzalin in container media and soil.*** Wehtje, G. R.; Gilliam, C. H.; Hajek, B. F. HortScience 29(7):824. 1994.
365. ***Are herbicide mixtures useful for delaying the rapid evolution of resistance? A case study.*** Wrubel, R. P.; Gressel, J. Weed Technology 8(3):635-648. 1994.
366. ***Effects of a DCPA/napropamide herbicide tank mix on germinants of seven hardwood species in tree nursery beds.*** Porterfield, J. D.; Odell, J. D.; Huffman, G. R. Tree Planters' Notes 44(4):149-153. 1994.
367. ***Evaluation of selected herbicides on field-grown woody ornamentals.*** Reeder, J. A.; Gilliam, C. H.; Wehtje, G. R.; South, D. B.; Keever, G. J. Journal of Environmental Horticulture 12(4):236-240. 1994.