Literature Cited

Abbott, J. D., and Gough, R. E. 1987b. Growth and survival of the highbush blueberry in response to root zone flooding. Journal of the American Society for Horticultural Science 112:603-608.

Agehara, S., and Warncke, D. D. 2005. Soil moisture and temperature effects on nitrogen release from organic nitrogen sources. Soil Science Society of America Journal 69:1844-1855.

Aini, Z., Zulkefli, M., and Krishnen, G. 2005. Improvement in soil nutrient status and beneficial microbial populations using compost, plant juice, and home-made fertiliser preparations. Pages 82-87 in: Proceedings of First Scienfific Conference of the International Society of Organic Agriculture Research (ISOFAR), U. Kopke, U. Niggli, D. Newhoff, P. Cornish, W. Lockeretz, and H. Willer, eds.

Askew, D. J., and Laing, M. D. 1993. An adapted selective medium for the quantitative isolation of *Trichoderma* species. Plant Pathology 42:686-690.

Bajwa, R., and Read, D. J. 1986. Utilization of mineral and amino N sources by the ericoid mycorrhizal endophyte *Hymenoscyphus ericae* and by mycorrhizal and non-mycorrhizal seedlings of *Vaccinium*. Transactions of the British Mycological Society 87:269-277.

Ballinger, W. E. 1966. Soil management, nutrition, and fertilizer practices. Pages 132-178 in: Blueberry Culture, P. Eck and N. F. Childers, eds. Rutgers University Press, New Brunswick, NJ.

Bashan, Y., Holguin, G., and Lifshitz, R. 1993. Isolation and characterization of plant growth-promoting rhizobacteria. Pages 331-345 in: Methods in Plant Molecular Biology and Biotechnology, B. R. Glick and J. E. Thompson, eds. CRC Press, Boca Raton, FL.

Biermann, B., and Linderman, R. L. 1981. Quantifying vesicular-arbuscular mycorrhizae: a proposed method towards standardization. New Phytologist 87:61-67.

Bonanomi, G., Antignani, V., Capodilupo, M., and Scala, F. 2009. Identifying the characteristics of organic soil amendments that suppress soilborne plant diseases. Soil Biology and Biochemistry 42:136-144.

Brundrett, M., Bougher, N., Dell, B., Grove, T., *and* Malajczuk, N. 1996. Working with mycorrhizae in forestry and agriculture. *ACIAR Monograph 32. Canberra, Australia: Australian Centre for International Agricultural Research.*

Bulluck, L.R., and Ristaino, J. B. 2002. Effect of synthetic and organic soil fertility amendements on southern blight, soil microbial communities, and yield of processing tomatoes. Phytopathology 92:181-189.

Bulluck, L. R., Brosius, M., Evanylo, G. K., and Ristaino, J. B. 2002. Organic and synthetic fertility amendments influence soil microbial, physical and chemical properties on organic and conventional farms. Applied Soil Ecology 19:147-160.

Burke, R. M., and Cairney, J. W. G. 1998. Carbohydrate oxidases in ericoid and ectomycorrhizal fungi: a possible source of Fenton radicals during the degradation of lignocellulose. New Phytologist 139:637-645.

Cairney, J. W. G., Sawyer N. A., Sharples, J. M., and Meharg, A. A. 2000. Intraspecific variation in nitrogen source utilisation by isolates of the ericoid mycorrhizal fungus *Hymenoscyphus ericae* (Read) Korf and Kernan. Soil Biology & Biochemistry 32:1319-1322.

Conn, K.L., Leci, E., Kritzman, G., and Lazarovits, G. 1998. A quantitative method for determining soil populations of *Streptomyces* and differentiating potential potato scab-inducing strains. Plant Disease 82:631-638.

Courty, P. E., Pritsch, K., Schloter, M., Hartmann, A., and Garbaye, J. 2005. Activity profiling of ectomycorrhiza communities in two forest soils using multiple enzymatic tests. New Phytologist 167:309-319.

Crawford, D. L., Lynch, J. M., Whipps, J. M., and Ousley, M. A. 1993. Isolation and charactarization of actinomycete antagonists of a fungal root pathogen. Applied and Environmental Microbiology 59:3899-3905.

Currey, P. M., Johnson, D. J., Sheppards, L. J., Leiths, I. D., Toberman, H., van der Wal, R., Dawson, L. A, and Artz, R. R. E. 2010. Turnover of labile and recalcitrant soil carbon differ in response to nitrate and ammonium deposition in an ombrotrophic peatland. Global Change Biology 16:2307-2321.

Dick, R.P., Thomas, D. R., and Halvorson, J. J. 1996. Standardized methods, sampling, and sample pretreatment. Page 199 in: Methods for Assessing Soil Quality, J. W. Doran and A. J. Jones, eds. Soil Science Society of America Special Publication 49. Madison, WI.

Doane, T. A., and Horwath, W. R. 2003. Spectrophotometric determination of nitrate with a single reagent. Analytical Letters 36:2713-2722.

Gaskell, M., and Smith, R. 2007. Nitrogen sources for organic vegetable crops. HortTechnology 17:431-441.

Giovannetti, M., and Mosse, B. 1980. An evaluation of techniques for measuring vesicular arbuscular mycorrhizal infection in roots. New Phytologist 84:489-500.

Goulart, B. L., Schroeder, M. L., Demchak, K., Lynch, J. P., Clark, J. R., and Darnell, R. L. 1993. Blueberry mycorrhizae: Current knowledge and future directions. Acta Horticulturae 346:230-239.

Goulart, B. L., Demchak, K., and Yang, W. Q. 1997. Effect of cultural practices on field grown 'Bluecrop' highbush blueberries, with emphasis on mycorrhizal infection levels. Acta Horticulturae 446:271-280.

Gould, W. D., Hagedorn, C., Bardinelli, T. R., and Zablotowicz, R. M. 1985. New selective media for enumeration and recovery of fluorescent pseudomonads from various habitats. Applied Environmental Microbiology 49:28-32.

Grelet, G. A., Meharg, A. A., and Alexander, I. J. 2005. Carbon availability affects nitrogen source utilisation by *Hymenoscyphus ericae*. Mycological Research 109:469-477.

Hadas, A., and Kautsky, L. 1994. Feather meal, a semi-slow-release nitrogen fertilizer for organic farming. Fertilizer Research 38:165-170.

Hambleton, S., and Currah, R. S. 1997. Fungal endophytes from the roots of alpine and boreal Ericaceae. Canadian Journal of Botany 75:157-1581.

Hanson, E. J. 1987. Integrating soil tests and tissue analysis to manage the nutrition of highbush blueberries. Journal of Plant Nutrition 10:1419-1427.

Hanson, E. J., and Hancock, J. F. 1996. Managing the nutrition of highbush blueberries. Michigan State University Extension Bulletin E-2011.

Hanson, E. J., and Mandujano, M. 1997. Nitrification rates in Michigan blueberry soils. Acta Horticulturae 446:507-512.

Hanson, E. 2007. Blueberry nutrition and fertilization options. Proceedings of the 2007 Great Lakes Fruit, Vegetable, & Farm Market EXPO. http://www.glexpo.com/abstracts/2007abstracts/blueberry_II_2007.pdf.

Hass, D., and Defago, G. 2005. Biological control of soil-borne pathogens by fluorescent pseudomonads. Nature Reviews Microbiology 3:307-319.

Haynes, R. J., and Swift, R. S. 1986. The effects of pH and of form and rate of applied iron on micronutrient availability and nutrient uptake by highbush blueberry plants grown in peat or soil. Journal of Horticultural Science 61:287-294.

Highley, T. L. 1997. Carbohydrolase assays. Pages 309-321 in: Methods in plant biochemistry and molecular biology, W. V. Dashek, ed. CRC Press, Boca Raton, FL.

Hobbie, J. E., and Hobbie, E. A. 2006. 15N in symbiotic fungi and plants estimates nitrogen and carbon flux rates in arctic tundra. Ecology 87:816-822.

Hudson, H. J. 1968. The ecology of fungi on plant remains above the soil. New Phytologist 67:837-874.

Hutchison, L. J. 1991. Description and identification of cultures of ectomycorrhizal fungi found in North America. Mycotaxon 42:387-504.

Hutton, B. J., Dixon, K. W., and Sivasithaparam, K. 1994. Ericoid endophytes of western Australian heaths (Epacridaceae). New Phytologist 127:557-566.

Jansa, J. and Vosátka, M. 2000. In vitro and post vitro inoculation of micropropagated Rhododendrons with ericoid mycorrhizal fungi. Applied Soil Ecology 15:125-136.

Joanisse, G. D., Bradley, R. L., Preston, C. M., and Munson, A. D. 2007. Soil enzyme inhibition by condense litter tannins may drive ecosystem structure and process: the case of *Kalmia angustifolia*. New Phytologist 175:535-546.

Johansson, M. 2000. The influence of ammonium nitrate on the root growth and ericoid mycorrhizal colonization of *Calluna vulgaris* (L.) Hull from a Danish Heathland. Oecologia 123:418-424.

Jumpponen, A. and Trappe, J. M. 1998. Dark Septate Endophytes: A review of facultative biotrophic root-colonizing fungi. New Phytologist 140:295-310.

Keeler, B. L., Hobbie, S. E., and Kellogg, L. E. 2009. Effects of long-term nitrogen addition on microbial enzyme activity in eight forested and grassland sites: Implications for litter and soil organic matter decomposition. Ecosystems 12:1-15.

Kelley, A. P. 1950. Mycotrophy in Plants. Lectures on the Biology of Mycorrhizae and Related Structures. Chronica Botanica Company, Waltham, MA, USA.

Khan, S. A., Mulvaney, R. A., Ellsworth, T. R., and Boast, C. W. 2007. The myth of nitrogen fertilization for soil carbon sequestration. Journal of Environmental Quality 36:1821-1832.

King, A. D., Hocking, A. D., and Pitt, J. I. 1979. Dichloran-Rose bengal medium for enumeration and isolation of molds from foods. Applied and Envirionmental Microbiology 37:959-964.

Korcak, R. F. 1989. Variation in nutrient requirements of blueberries and other calcifuges. HortScience 573-578.

Kourtev, P. S., Ehrenfeld, J. G., and Haggblom, M. 2002. Exotic plant species alter the microbial community structure and function in the soil. Ecology 83:3152-3166.

Leake, J. R., and Read, D. J. 1991. Experiments with ericoid mycorrhiza. Pages 435-459 in: Methods in microbiology Vol. 23, J. R. Norris, D. J. Read, and A. K. Varma, eds. Academic Press, London, United Kingdom.

Lemoine, M. C., Gianizazzi-Pearson, V., Gianinazzi, S., and Straker, C. J. 1992. Occurrence and expression of acid phosphatase of *Hymenoscyphus ericae* (Read) Korf & Kernan, in isolation or associated with plant roots. Mycorrhiza 1:137-146.

Lindahl, B. D., Finlay, R. D., and Cairney, J. W. G. 2005. Enzyme activities of mycelia in mycorrhizal fungal communites. In: The Fungal Community: Its organization and role in the ecosystem, J. Dighton, J. F. White, and P. Oudemans, eds. CRC Press, Boca Raton, FL.

Linn, D. M., and Doran, J. W. 1984. Effect of water-filled pore space on carbon dioxide and nitrous oxide production in tilled and nontilled soils. Soil Science Society of America Journal 48:1267-1272.

Lucas, R. W., Casper, B. B., Jackson, J. K., and Balser, T. C. 2007. Soil microbial communities and extracellular enzyme activity in the New Jersey Pinelands. Soil Biology and Biochemistry 39:2508-2519.

Liu, B., Gumpertz, M. L., Hu, S., and Ristaino, J. B. 2007. Long-term effects of organic and synthetic soil fertility amendments on soil microbial communities and the development of southern blight. Soil Biology and Biochemistry 39:2302-2316.

McFarlane, J. D. 1999. Iron. Pages 295-302 in Soil Analysis: An Interpretation Manual, K. I. Peverill, L. A. Sparrow, and D. J. Reuter, eds. CSIRO Publishing, Collingwood, Victoria, Austrailia.

McGonigle, T. P., Millers, M. H., Evans, D. G., Fairchild, G. L., and Swan, J. A. 1990. A new method which gives an objective measure of colonization of roots by vesicular-arbuscular mycorrhizal fungi. New Phytologist 115:495-501.

McLauchlan, K. K. and Hobbie, S. E. 2004. Comparison of labile soil organic matter fractionation techniques. Soil Science Society of America Journal 68:1616-1625.

Michelsen, I. K. Schmidt, S. J., Quarmby, C. and Sleep D. 1996. Leaf 15N abundance of subarctic plants provides field evidence that ericoid, ectomycorrhizal and non- and arbuscular mycorrhizal species access different sources of soil nitrogen. Oecologia 105:53-63.

Montalba, R., Arriagada, C., Alvear, M., and Zúniga, G. E. 2010. Effects of conventional and organic nitrogen fertilizers on soil microbial activity, mycorrhizal colonization, leaf antioxidant content, and *Fusarium* wilt in highbush blueberry. (*Vaccinium corymbosum* L.). Scientia Horticulturae 125:775-778.

Moore, J. N., and Pavlis, G. 1979. Effect of organic mulches on highbush blueberry production in Arkansas. HortScience 14:129 (abstract).

Nelson, D. W. 1983. Determination of ammonium in KCl extracts of soils by the salicylate method. Communications in Soil Science and Plant Analysis 14:1051-1062.

Orhan, E., Esitken, A., Ercisli, S., Turan, M., and Sahin, Fikrettin. 2006. Effects of plant growth promoting rhizobacteria (PGPR) on yield, growth, and nutrient contents in organically growing raspberry. Scientia Horticulturae 111:38-43.

Paul, E. A., Morris, S. J., and Bohm, S. 2001. The determination of soil C pool sizes and turnover rates: biophysical fractionation and tracers. Pages 193-205 in: Assessment Methods for Soil Carbon, R. Lal, J. M. Kimble, R. F. Follett, and B. A. Stewart, eds. CRC Press, Boca Raton, FL.

Postma, J., Schilder, M. T., Bloem, J., and van Leeuwen-Haagsma W. K. 2008. Soil suppressiveness and functional diversity of the soil microflora in organic farming systems. Soil Biology and Biochemistry 40:2394-2406.

Prosser, J. L., and Nicol, G. W. 2008. Relative contributions of archaea and bacteria to aerobic ammonia oxidation in the environment. Environmental Microbiology 10:2931-2941.

Read, D. J. 1996. The structure and function of the ericoid mycorrhizal root. Annals of Botany 77: 365-374.

Read, D. J., and Perez-Moreno, J. 2003. Mycorrhizas and nutrient cycling in ecosystems – a journey towards relevance? New Phytologist 157:475-492.

Read, D. J., Leake, J. L. and Perez-Moreno, J. 2004. Mycorrhizal fungi as drivers of ecosystem processes in heathland and boreal forest biomes. Canadian Journal of Botany 82:1243-1263.

Rice, A. V., and Currah, R. S. 2002. New perspectives on the niche and holomorph of the myxotrichoid hyphomycete, *Oidiodendron maius*. Mycological Research 106:1463-1467.

Robertson, G. P., Wedin, D., Groffman, P. M., Blair, J. M., Holland, E. A., Nadelhoffer, K. J., and Harris, D. 1999. Soil carbon and nitrogen availability. Nitrogen mineralization, nitrification, and soil respiration potentials. Pages 258-271 in: Standard Soil Methods for Long-Term Ecological Research, G. P. Robertson, D. C. Coleman, C. S. Bledsoe, and P. Sollins, eds. Oxford University Press, Inc. New York.

Saiya-Cork, K. R., Sinsabaugh, R. L., and Zak, D. R. 2002. The effects of long term nitrogen deposition on extracellular enzyme activity in an *Acer saccharum* forest soil. Soil Biology and Biochemistry 34:1309-1315.

Sanbrook, J., Fritsch, E. F., and Maniastis, T. 1989. Molecular Cloning: A Laboratory Manual, 2nd edition. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.

Scagel, C. F. 2003. Mycorrhizal status of sand-based cranberry (*Vaccinium macrocarpon*) bogs in southern Oregon. Small Fruits Review 2:31-41.

Scagel, C. F. 2005. Inoculation with ericoid mycorrhizal fungi alters fertilizer use of highbush blueberry cultivars. HortScience 40:786-794.

Scagel, C. F., and Yang, W. Q. 2005. Cultural variation and mycorrhizal status of blueberry plants in NW Oregon commercial production fields. International Journal of Fruit Science 5:85-111.

Sewell, G. W. F. 1959. The ecology of fungi in Calluna-heathland Soils. New Phytologist 58:5-15.

Sinsabaugh, R. L., Antibus, R. K., Linkins, A. E., McClaughety, C. A., Rayburn, L., Repert, D., and Weiland, T. 1993. Wood decomposition: Nitrogen and phosphoros dynamics in relation to extracellular enzyme activity. Ecology 74:1586-1593.

Sinsabaugh, 2005. Fungal enzymes at the community scale. Pages 349-360 in: The Fungal Community: Its Organization and Role in the Ecosystem, J. Dighton, J. F. White, and P. Oudemans, eds. CRC Press, New York, NY.

Sinsabaugh, R. L., Carreiro, M. M., and Repert, D. A. 2002. Allocation of extracellular enzymatic activity in relation to litter composition, N deposition, and mass loss. Biogeochemistry 60:1-24.

Sinsabaugh, R. L., Lauber, C. L., Weintraub, M. N., Ahmed, B., Allison, S. D., Crenshaw, C., Contosta, A. R., Cusack, D., Frey, S., Gallo, M. E., Gartner, T. B., Hobbie, S. E., Holland, K., Keeler, B. L., Powers, J. S., Stursova, M., Takacs-Vesback, C., Waldrop, M. P., Wallenstein, M. D., Zak, D. R., and Zeglin, L. H. 2008. Stoichiometry of soil enzymes at global scale. Ecology Letters 11:1252-1264.

Sinsabaugh, R. L. 2010. Phenol oxidase, peroxidase and organic matter dynamics of soil. Soil Biology and Biochemistry 42:391-404.

Sokolovski, S. G., Meharg, A. A., and Haathuis, F. J. M. 2002. *Calluna vulgaris* root cells show increased capacity for amino acid uptake when colonized with the mycorrhizal fungus *Hymenoscyphus ericae*. New Phytologist 155:525-530.

Sollins, P., Glassman, C., Paul, E., Swanston, C., Kajtha, K., Heil, J., and Elliot, E. T. 1999. Soil carbon and nitrogen - pools and fractions. Pages 89-114 in: Standard Soil Methods for Long-Term Ecological Research, G. P. Robertson, D. C. Coleman, C. S. Bledsoe, and P. Sollins, eds. Oxford University Press, Inc. New York.

Spiers, J. M. 1986. Root distribution of 'Tifblue' rabbiteye blueberry as influenced by irrigation, incorporated peatmoss, and mulch. Journal of American Society for Horticultural Science 111:877-880.

Stackpoole, S. M., Workmaster, B. A. A., Jackson, R. D. and Kosola, K. R. 2008. Nitrogen conservation strategies of cranberry plants and ericoid mycorrhizal fungi in an agroecosystem. Soil Biology & Biochemistry 40:2736-2742.

Stevens, C. M., Goulart, B. L., Demchak, K., Hancock, J. F., Dalpé, Y., and Yang, W. Q. 1997. The presence, isolation and characterization of ericoid mycorrhizal symbionts in two native and two commercial *Vaccinium* populations in central Pennsylvania. Acta Horticulturae 46:411-420.

Stoyke, G., and Currah, R. S. 1991. Endophytic fungi from the mycorrhizae of alpine ericoid plants. Canadian Journal of Botany 69:347-352.

Stribley, D. P., and Read, D. J. 1974. The biology of mycorrhiza in the Ericaceae. IV. The effect of mycorrhizal infection on uptake of 15 N from labeled soil by *Vaccinium macrocarpon* Ait. New Phytologist 73:1149-1155.

Stribley, D.P., Read, D.J., and Hunt., R. 1975. The biology of mycorrhiza in the Ericaceae V. The effects of mycorrhizal infection, soil type and partial soil-sterilization (by gamma-irradiation) on growth of cranberry (*Vaccinium macrocarpon* Ait.). New Phytologist 75:119-130.

Stribley, D. P., and Read, D. J. 1976. The biology of mycorrhiza in the Ericaceae VI. The effects of mycorrhizal infection and concentration of ammonium nitrogen on growth of cranberry (*Vaccinium macrocarpon* Ait.) in sand culture. New Phytologist 77:63-72.

Stribley, D. P., and Read, D. J. 1980. The biology of mycorrhiza in the Ericaceae. VII. The relationship between mycorrhizal infection and the capacity to utilize simple and complex organic nitrogen sources. New Phytologist 86:365-371.

Tabatabai, M. A., Ekenler, M., and Senwo, Z. N. 2010. Significance of enzyme activities in soil nitrogen mineralization. Communications in Soil Science and Plant Analysis 41:595-605.

Thormann, M. N. 2006. The role of fungi in boreal peatlands. Pages 101-123 in: Ecological Studies 188. Boreal Peatland Ecosystems, R. K. Wieder and D. H. Vitt, eds.

Timonen, S., and Sen, R. 1998. Heterogeneity of fungal and plant enzyme expression in intact Scots Pine-*Suillus bovinus* and *–Paxillus involutus* mycorrhizospheres developed in natural forest humus. New Phytologist 138:355-366.

Torsvik, V., Salte, K., Sorheim, R., and Goksoyr, J. 1990. Comparison of phenotypic diversity and DNA heterogeneity in a population of soil bacteria. Applied and Environmental Microbiology 56:776–781.

Treseder, K. K., and Vitousek, P. M. 2001. Effects of soil nutrient availability on investment of N and P in Hawaiian rain forests. Ecology 82:946-954.

Treseder, K. 2004. A meta-analysis of mycorrhizal responses to nitrogen, phosphorus, and atmospheric CO2 in field studies. New Phytologist 164:347-355.

Valenzuela-Estrada, L. R., Vera-Caraballo, V., Ruch, L. E., and Eissenstat, D. M. 2008. Root anatomy, morphology, and longevity among root orders in *Vaccinium corymbosum* (Ericaceae). American Journal of Botany 95:1506-1514.

Van Bruggen, A. H. C. and Semenov, A. M. 2000. In search of biological indicators for soil health and disease suppression. Applied Soil Ecology 15:13-24.

Vander Kloet, S. P. 1980. The taxonomy of the highbush blueberry, *Vaccinium corymbosum*. Canadian Journal of Botany 58:1187-1201.

Vargas Gil, S., Pastor, S., and March, G. J. 2007. Quantitative isolation of biocontrol agents *Trichoderma* spp., *Gliocladium* spp., and actinomycetes from soil with culture media. Microbiological Research 164:196-205.

Vohník, M., Lukancic, S., Bahor, E., Regvar, M., Vosátka, M, and Vodník, D. 2003. Inoculation of *Rhododendron* cv. Belle-Heller with two strains of *Phailocephala fortinii* in two different substrates. Folia Geobotanica 38:191-200.

Vohnik, M., Burdikova, Z., Albrechtova, J. and Vosatka, M. 2009. Testate amoebae (Arcellinida and Euglyphida) vs. ericoid mycorrhizal and DSE fungi: A possible novel interaction in the mycorrhizosphere of ericaceous plants? Microbial Ecology 57:203-214.

Walker, J. F., Johnson, L. C. Simpson, N. B., Bill, M., and Jumpponen, A. 2010. Application of fungistatics in soil reduces N uptake by an arctic ericoid shrub (*Vaccinium vitis-idaea*). Mycologia 102:822-834.

Weintraub, M. N. and Schimel, J. P. 2003. Interactions between carbon and nitrogen minealization and soil organic matter chemistry in Arctic Tundra Soil. Ecosystems 6:129-143.

Wurzburger, N., and Hendrick, R. L. 2007. Rhododendron thickets alter N cycling and soil extracellular enzyme activities in Appalachian hardwood forests. Pedobiologia 50:563-576.

Xiao, G., and Berch, S. M. 1999. Organic nitrogen use by salad ericoid mycorrhizal fungi from northern Vancouver Island and impacts on growth in vitro of Gaultheria shallon. Mycorrhiza 9:145-149.

Yang, W. Q. 1999. Assessing Nitrogen Acquisition of Ericoid Mycorrhizae in Highbush Blueberry (*Vaccinium corymbosum* L.). PhD dissertation, The Pennsylvania State University.

Yang, W. Q., Goulart, B. L., Demchak, K., and Li, Y. 2002. Interactive effects of mycorrhizal inoculation and organic soil amendments on nitrogen acquisition and growth of highbush blueberry. Journal of American Society for Horticultural Science 127:742-748.

Zimenko, T. G., and Revinskaya, L. S. 1972. Influence of humidity and temperature on the activity of microorganisms in peat-bog soils. Mikrobiologiya 41:891-895.