



LITERATURE CITED



LITERATURE CITED

1. Accoe F., Boeckx, P., Cleemput, O.V., Hofman, G., Zhang, Y., Li, R.H. and C. Guanxiong, 2002. Evolution of $\delta^{13}\text{C}$ signature related to total carbon contents and carbon decomposition rate constants in a soil profile under grassland. *Rapid Communication in Mass Spectrometry*, **16**, 2184-2189.
2. Adachi M., Bekku, Y.S., Konuma, A., Kadir, W.R., Okuda, T. and H.Koizumi, 2005. Required sample size for estimating soil respiration rates in large areas of two tropical forests and of two types of plantation in Malaysia. *Forest Ecology and Management*, **210**, 455-459.
3. Adair E. C., Parton, W. J., Del Grosso, S. J., Silver, W.L., Harmon, M. E., Hall, S. A., Burke, I.C. and S.C. Hart, 2008. Simple three-pool model accurately describes patterns of long-term litter decomposition in diverse climates. *Global Change Biology*, **14**, 2636-2660.
4. Adu J.K. and J.M. Oades, 1978. Physical factors influencing decomposition of organic matter in soil aggregates. *Soil Biology & Biochemistry*, **10**, 109-115.
5. Aerts R. and F. S. Chapin. 2000. The mineral nutrition of wild plants revisited: A re-evaluation of processes and patterns. *Advances in Ecological Research*, **30**, 1-67.
6. Aerts R., 1997. Climate, leaf litter chemistry and leaf decomposition in terrestrial ecosystems: a triangular relationship. *Oikos*, **79**, 439-449.
7. Agren G.I., 2010. Climate Change: Microbial mitigation. *Nature Geo Science*, **3**, 301-303.
8. Agren G.I., Bosatta, E. and J. Balesdent, 1996. Isotopic discrimination during decomposition of organic matter: a theoretical analysis. *Soil Science Society of America Journal*, **60**, 1121-1126.
9. Ahrens D.C., 2001. Essentials of Meteorology: An invitation to the atmosphere. Brooks/Cole/Thomson learning, pp. 464.
10. Alexander M., 1977. Introduction to Soil Microbiology. 2nd ed. John Wiley and Sons, New York.
11. Amthor J.S. and M.A. Huston, 1998. Terrestrial Ecosystem Responses to Global Change: A Research Strategy, Oak Ridge, TN, Oak Ridge National Laboratory, pp 37.
12. Amundson R. and H. Jenny, 1997. On a state factor model of ecosystems. *Bio Science*, **47**, 536-43.
13. Amundson R., 2001. The carbon budget in soils. *Annual review of earth and planetary sciences*, **29**, 535-562.

LITERATURE CITED

14. Anderson J.P.E., 1982. Measurement of CO₂ evolution rates (long-term assay) In: *Methods in Applied Soil Microbiology and Bio Chemistry* (eds. K. Alef & P. Nannipieri), pp. 464-465 Academic press, London.
15. Andrasko K., 1990. *Climate Change and Global Forests: Current Knowledge of Potential Effects, Adaptation and Mitigation Options*. FAO, Forestry Department, Rome.
16. Andren O. and T. Katterer, 2000. ICBM: The introductory carbon balance model for exploration of soil carbon balances. *Ecological Applications*, **7**, 1226-1236.
17. Arai H. and N. Tokuchi, 2010. Factors contributing to greater soil organic carbon accumulation after afforestation in a Japanese coniferous plantation as determined by stable and radioactive isotopes. *Geoderma*, **157**, 243-251.
18. Arrouays D., Saby, N., Walter, C., Lemerrier, B. and C. Schwartz, 2006. Relationships between particle-size and organic carbon in French arable top soils. *Soil use and management*, **22**, 48-51.
19. Austin A.T. and C.L. Ballaré, 2010. Dual role of lignin in plant litter decomposition in terrestrial ecosystems. *Proceedings of the National Academy of Sciences USA*, **107**, 4618-4622.
20. Austin R., Levy, D. and K. Ueda, 1970. *Bamboo [M]*. New York: John Weather hill Inc.
21. Baker D.F., 2007. Reassessing carbon sinks. *Science*, **316**, 1708-1709.
22. Baldock J.A., Oades, J.M., Nelson, P.N., Skene, T.M., Golchin, A. and P. Clarke, 1997. Assessing the extent of decomposition of natural organic materials using solid-state C-13 NMR spectroscopy. *Australian Journal of Soil Research*, **35**, 1061-1083.
23. Balesdent J. and A. Mariotti, 1996. Measurement of soil organic matter turnover using ¹³C natural abundance. In: Boutton TW, Tamasaki PI (Eds). *Mass spectrometry of soils*. Marcell Dekker, New york PP 83-111.
24. Balesdent J., Giardin, C. and A. Mariotti, 1993. Site-related δ¹³C of tree leaves and soil organic matter in a temperate forest. *Ecology*, **74(6)**, 1713-1721.
25. Ball J.B., Pandey, D. and S. Hirai, 2000. Global overview of teak plantations. In: *Regional Seminar on Site, Technology and Productivity of teak plantations*. Chiang Mai, Thailand, pp. 34.
26. Balooni K., 2000. Teak investment programmes: an Indian perspective. *Unasyuva* 201, **51**, 22-28.

LITERATURE CITED

27. Bationo A., J. Kihara, B. Vanlauwe, B. Waswa and J. Kimetu, 2006. Soil organic carbon dynamics, functions and management in West African agro-ecosystems. *Agricultural systems*, 1-13.
28. Batjes N.H. and W.G. Sombroek, 1997. Possibilities for carbon sequestration in tropical and subtropical soils. *Global Change Biology*, **3**, 161-173.
29. Batjes N.H., 1996. Total carbon and nitrogen in the soils of the world, *European Journal of Soil Science*. **47**, 151-163.
30. Batjes N.H., 1999. Management options for reducing CO₂ concentrations in the atmosphere by increasing carbon sequestration in the soil. Dutch National Research Programme on Global Air Pollution and Climate Change & Technical Paper 30 410-200-031. International Soil Reference and Information Centre, Wageningen, pp114.
31. Battle M., Bender, M.L., Tans, P.P., White, J.W.C., Ellis, J.T., Conway, T. and R.J. Francey, 2000. Global carbon sinks and their variability inferred from atmospheric O₂ and δ¹³C. *Science*, **287**, 2467-2470.
32. Behaghel I., 1999. The state of Teak (*Tectona Grandis* L.F) plantations in the world. *Bois Et Forets Des Tropiques*, **262(4)**, 18.
33. Benítez P.C., McCallum, I., Obersteiner, M. and Y. Yamagata. 2007. Global potential for carbon sequestration: Geographical distribution, country risk and policy implications. *Ecological Economics*, **60**, 572-583.
34. Berg B. 2000. Litter decomposition and organic matter turnover in northern forest soils. *Forest Ecology and management*, **133**, 13-22.
35. Berg, B. and R. Laskowski, 2006. Litter Decomposition: a Guide to Carbon and Nutrient Turnover. *Advances in Ecological Research*, **38**, Elsevier, Amsterdam.
36. Bermejo I., Cañellas, I. and A. San Miguel, 2004. Growth and yield models for teak plantations in Costa Rica. *Forest Ecology and Management*, **189**, 97-110.
37. Bernoux M., Cerri, C.C., Neil, C. And F.L. deMoraes, 1998. The use of stable carbon isotopes for estimating soil organic matter turnover rates. *Geoderma*, **82**, 43-58.
38. Bhadwal S. and R. Singh, 2002. Carbon sequestration estimates for forestry options under different land-use scenarios in India. *Current Science*, **83(11)**, 1380-1386.

LITERATURE CITED

39. Bhat K.M., and Hwan Ok Ma, 2004. Teak growers unite. ITTO Tropical Forest Update, 14, 3-5.
40. Bhatia K.K., 1958. A Mixed Teak Forest of Central India. *Journal of Ecology*, **46**, 43-63.
41. Bhattacharya T., Pal, D.K., Mandal, C. and M. Velayutham, 2000. Organic carbon stock in Indian soils and their geographical distribution. *Current Science*, **79**, 655-660.
42. Bhattacharyya T., Chandran, P., Ray, S.K., Pal, D.K., Venugopalan, M.V., Mandal, C. and S. P. Wani, 2007. Changes in levels of carbon in soils over years of two important food production zones of India, *Current Science*, **93**, 1854-1863.
43. Bhattacharyya T., Pal, D.K, Chandran,P., Ray, S.K., Mandal, C. and B. Telpande, 2008. Soil carbon storage capacity as a tool to prioritize areas for carbon sequestration. *Current Science*, **95**, 482-494.
44. Bijaya G.C., 2008. Carbon Sequestration Potential and Uses of *Dendrocalamus strictus*. B.Sc thesis submitted to Forestry of Tribhuwan University, Institute of Forestry, Pokhara Campus, Pokhara, Nepal.
45. Binal A.C., 2008. Developing hyperspectral signatures for tropical tree species growing in shoolpaneshwar wildlife sanctuary, Gujarat, India. Ph.D thesis, The M.S.University of Baroda.
46. Binkley D. and C. Giardina, 1998. Why do trees affect soils in temperate and tropical forests?. The warp and woof of tree/soil interactions. *Biogeochemistry*, **42**, 89-106.
47. Bohn H.L., 1976. Estimate of organic carbon in world soils. *Soil Science Society of America Journal*, **40**, 468-70.
48. Boley J.D., Drew, A.P. and R.E. Andrus, 2009. Effects of active pasture, teak (*Tectona grandis*) and mixed native plantations on soil chemistry in Costa Rica. *Forest Ecology and Management*, **257**, 2254-2261.
49. Bosatta E. and G.I. Ågren, 1997. Theoretical analyses of soil texture effects on organic matter dynamics. *Soil Biology & Biochemistry*, **29**, 1633-1638.
50. Bostrom B., Comstedt, D. and A. Ekblad, 2007. Isotope fractionation and ¹³C enrichment in soil profiles during the decomposition of organic matter. *Oecologia*, **153**, 89-98.

LITERATURE CITED

51. Boutton T.W., 1991. Stable carbon isotope ratios of natural materials, I. Sample preparation and mass spectrometric analysis. In: Coleman, D.C., Fry, B. (Eds), Carbon isotope techniques. Academic press, New york, 155-171.
52. Boutton T.W., Archer, S.R., Midwood, A.J., Zitzer, S.F. and R. Bol, 1998. $\delta^{13}\text{C}$ values of soil organic carbon and their use in documenting vegetation change in a subtropical savanna ecosystem. *Geoderma*, **82**, 5-41.
53. Bowling D.R., Pattaki, D.E. and J.T. Randerson, 2008. Carbon isotopes in terrestrial ecosystem pools and CO_2 fluxes. *New Phytologist*, **178**, 24-40.
54. Brenes A.R., and F. Montagnin, 2006. Growth, productivity, aboveground biomass, and carbon sequestration of pure and mixed native tree plantations in the Caribbean lowlands of Costa Rica. *Forest Ecology and Management*, **232**, 168-178.
55. Broadmeadow M., Ray, D., Sing, L. and E. Poulson, 2003. Climate change and British woodland: what does the future hold? Forest Research Annual Reports and Accounts 2002-2003. HMSO, Edinburgh, 70-83.
56. Brown S, and A.E. Lugo, 1990. Tropical secondary forests. *Journal of Tropical Ecology*, **6**, 1-32.
57. Brown S. and A.E. Lugo, 1982. The storage and production of organic matter in tropical forests and their role in the global carbon cycle. *Biotropica*, **14**, 161-187.
58. Brown S., J., Sathaye, M., Cannell, and P. Kauppi, 1996. Management of forests for mitigation of greenhouse gas emissions. In R. T. Watson, M.C. Zinyowera, and R.H. Moss (eds.), *Climate Change 1995: Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses*. Contribution of Working Group II to the Second Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge and New York, Chapter 24.
59. Buringh P., 1984. Organic carbon in soils of the world, The Role of Terrestrial Vegetation in the Global Carbon Cycle: In Measurement by Remote Sensing (Eds. Woodwell G.M). SCOPE. Published by John Wiley & Sons Ltd. 91-109.
60. Bystrakova N., V. Kapos, and, I. Lysenko, 2004. Bamboo Biodiversity. UNEP-WCMC/INBAR.

LITERATURE CITED

61. Carlile M.J., Watkinson, S.C. and G.W. Gooday, 2001. The Fungi. Academic Press, London, UK. pp.588.
62. Chakraborti S.K. and K.S. Gaharwar, 1995. A study on volume estimation for Indian teak. *Indian Forester*, **121(6)**, 503-509.
63. Chand G. and A. Sood, 2008. The influence of some growth regulators on the seed germination of *Dendrocalamus strictus* Nees. *Indian Forester*, **134(3)**, 397-402.
64. Chapin III, F.S. and R.W. Ruess, 2001. The roots of the matter. *Nature*, **411**, 749-752.
65. Chen C.R., Z. H. Xu, and N. J. Mathers, 2004. Soil carbon pools in adjacent natural and plantation forests of subtropical Australia. *Soil Science Society of America Journal*, **68**, 282-291.
66. Chen L., J. Gong, B. Fu, Z.Huang, Y.Huang and L. Gui, 2007. Effect of land use conversion on soil organic carbon sequestration in the loess hilly area, loess plateau of China. *Ecological Research*, **22**, 641-648.
67. Chen X., Hutley, L.B. and D. Eamus, 2005. Soil organic carbon content at a range of north Australian tropical savannas with contrasting site histories. *Plant and Soil*, **268**, 161-171.
68. Chevallier T., Blanchart, E., Albrecht, A. and C. Feller, 2004. The physical protection of soil organic carbon in aggregates: a mechanism of carbon storage in a Vertisol under pasture and market gardening (Martinique, West Indies). *Agriculture Ecosystems & Environment*, **103**, 375-387.
69. Christensen B.T., 1986. Straw incorporation and soil organic matter in macro-aggregates and particle size separates. *Journal of Soil Science*, **37**, 125-135.
70. Ciaia P., Schelhaas, M.J., Zaehle, S., Piao, S.L., Cescatti, A., Liski, J., Luysaert, S., Le-Maire, G., Schulze, E.D., Bouriaud, O., Freibauer, A., Valentini, R. and J. Nabuurs, 2008. Carbon accumulation in European forests. *Nature Geoscience*, **1**, 425-429.
71. Cirman A., Domadenik, P., Koman, M. and T. Redek, 2009. The Kyoto protocol in a global perspective. *Economic and Business Reviews*, **11(1)**, 29-54.
72. Clark D.A., S. Brown, D.W. Kicklighter, J.Q. Chambers, J.R. Thomlinson, J. Ni, and E.A. Holland. 2001. Net primary production in tropical forests: An evaluation and synthesis of existing field data. *Ecological Applications*, **11**, 371-384.

LITERATURE CITED

73. Coomes D.A., Allen, R.B., Scott, N.A., Goulding, C. and P. Beets, 2002. Designing systems to monitor carbon stocks in forests and shrublands. *Forest Ecology and Management*, **5641**, 1-20.
74. Cooperband L., 2002. Building soil organic matter with organic amendments. Center for integrated agricultural systems (CIAS), college of agricultural and life sciences, University of Wisconsin-Madison, pp. 1-13.
75. Corbeels M., 2001. Plant litter and decomposition: General concepts and model approaches, *Net Ecosystem Exchange Workshop Proceedings*, Cooperative Research Centre for Greenhouse Accounting, available at: <http://www.greenhouse.crc.org.au/crc/>.
76. Cordero L.D. and M. Kanninen, 2003. Aboveground biomass of *Tectona grandis* in Costa Rica. *Journal of Tropical Forest Science*, **15(1)**, 199-213.
77. Cornelissen J.H.C., Pérez-Harguindeguy, N., Díaz, S., Grime, J.P., Marzano, B., Cabido, M., Vendramini, F. and B. Cerabolini, 1999. Leaf structure and defence control litter decomposition rate across species and life forms in regional floras on two continents. *New Phytologist*, **143**, 191-200.
78. Cornwell W.K., Cornelissen J.H.C., Amatangelo, K., Dorrepaal, E., Eviner, V.T., Godoy, O., Hobbie, S.E., Hoorens, B., Kurokawa, H., Perez-Harguindeguy, N., Queded, H.M., Santiago, L.S., Wardle, D.A., Wright, I.J., Aerts, R., Allison, S.D., Bodegom, P., Brovkin, V., Chatain, A., Callaghan, T.V., Diaz, S., Garnier, E., Gurvich, D.E., Kazakou, E., Klein, J.A., Read, J., Reich, P.B., Soudzilovskaia, N.A., Vaieretti, M.V.V., and M. Westoby, 2008. Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. *Ecology Letters*, **11**, 1065-1071.
79. Couteaux M.M., Bottner, P. and B. Berg, 1995. Litter decomposition, climate and litter quality. *Trends in Ecology and Evolution*, **10(2)**, 63-66.
80. Cox P.M., Betts, R.A., Jones, C.D., Spall, S.A. and I.J. Totterdell, 2000. Acceleration of global warming due to carbon-cycle feed backs in a coupled climate model. *Nature*, **408**, 184-187.
81. Davidson E. and I.A. Janssens, 2006. Temperature sensitivity of soil carbon decomposition and feed backs to climate change. *Nature*, **440**, 165-173.
82. De Camino R, M.M. Alfaro, and L.F.M. Sage, 1998. Teak (*Tectona grandis*) in Central America: case study for project timber production from hardwood plantations in the tropics and sub-tropics. FAO GCP/INT/628/UK.

LITERATURE CITED

83. De Camino R. V., Alfaro, M.M. and L. F. M. Sage, 2002. Teak (*Tectona grandis*) in Central America. Forest plantations working paper 19, Forest Resources Development Service, Forest Resources, Division, FAO, Rome, pp.28.
84. De Deyn G.B., Cornelissen, J.H.C. and R.D. Bardgett, 2008. Plant functional traits and soil carbon sequestration in contrasting biomes. *Ecological Letters*, **11**, 516–531.
85. Deota B.S., 1991. Geological studies in the south Gujarat Quaternary landscape with special reference to environmental planning and management. Ph.D thesis, The M.S.University of Baroda.
86. Derwisch S., Schwendenmann, L., Olschewski, R. and D. Holscher, 2009. Estimation and Economic evaluation of aboveground carbon storage of *Tectona grandis* plantations in Western panama. *New Forests*, **37**, 227-240.
87. Desjardins T., Andreux, F., Volkoff, B. and C.C. Cerri, 1994. Organic carbon and ¹³C contents in soils and soil size-fractions, and their changes due to deforestation and pasture installation in eastern Amazonia. *Geoderma*, **61**, 103-118.
88. Devi N.B. and P.S. Yadava, 2006. Seasonal dynamics in soil microbial biomass C, N and P in a mixed oak forest ecosystem of Manipur, North-east India. *Applied soil Ecology*, **31**, 220-227.
89. Devi N.B. and P.S. Yadava, 2009. Emission of CO₂ from the soil and immobilization of carbon in microbes in a sub-tropical mixed oak forest ecosystem, Manipur, North-east India. *Current Science*, **96(12)**, 1627-1630.
90. Dinakaran J. and N.S.R. Krishnayya, 2010. Variations in soil organic carbon and litter decomposition across different tropical vegetal cover. *Current Science*, **99(8)**, 1051-1060.
91. Dinakaran J., and N. S. R. Krishnayya, 2008. Variations in type of vegetal cover and heterogeneity of soil organic carbon in affecting sink capacity of tropical soils. *Current Science*, **94**, 1144-1150.
92. Diochon A., Kellman, L. and H. Beltrami, 2009. Looking deeper: An investigation of soil carbon losses following harvesting from a managed northeastern red spruce (*Picea rubens* Sarg.) forest chronosequence. *Forest Ecology and Management*, **257**, 413-420.

LITERATURE CITED

93. Dixon R.K., Solomon, A.M., Brown, S., Houghton, R.A., Trexler, M.C. and J. Wisniewski, 1994. Carbon pools and flux of global forest ecosystems. *Science*, **263**, 185-190.
94. Dubey P., 2009. Role of Indian forest products industry in climate change mitigation: A managerial perspective. *Vikalpa*, **34**, 1-11.
95. Dubey R.M., Das P.K. and R. Choudhury, 2008. An investigation into macro-proliferation of some selected bamboo species of Assam. *Indian Forester*, **134(3)**, 367-378.
96. Dudal R. and J. Deckers, 1993. Soil organic matter in relation to soil productivity. In: Mulongoy, K., Merckx, R. (Eds.), *Soil Organic Matter Dynamics and Sustainability of Tropical Agriculture*. John Wiley and Son, West Sussex, United Kingdom.
97. Dumig A., Schad, P., Rumpel, C., Dignac, M.F. and I. Kogel-Knabner, 2008. Araucaria forest expansion on grassland in the southern Brazilian highlands as revealed by ^{14}C and $\delta^{13}\text{C}$ studies. *Geoderma*, **145**, 143-157.
98. Ehleringer J.R., Buchmann, N. and L.B. Flanagan, 2000. Carbon isotope ratios in belowground carbon cycle processes. *Ecology*, **10(2)**, 412-422.
99. Eswaran H, Berg E.V.D. and P. Reich, 1993. Organic carbon in soils of the world. *Soil Science Society of America Journal*, **57**, 192-94.
100. Eusterhues K., Rumpel, C., Kleber, M. and I. Kogel-Knabner, 2003. Stabilization of soil organic matter by interactions with minerals as revealed by mineral dissolution and oxidative degradation. *Organic Geochemistry*, **34**, 1591-1600.
101. Falkowsski P., Scholes, R.J., Boyle, E., Canadell, J., Canfield, D., Elser, J., Gruber, N., Hibbard, K., Hogberg, P., Linder, S., Mackenzie, F.T., Moore III, B. and T. Pedersen, 2000. The global carbon cycle: A test of our knowledge of earth as a system. *Science*, **290**, 291-296.
102. Feeley R.A., Doney, S.C. and S.R. Cooley. 2009. Ocean acidification: Present conditions and future changes in a high- CO_2 world. *Oceanography*, **22(4)**, 36-47.
103. Feng X., Simpson, A.J., Wilson, K.P., Williams, D.D. and M.J. Simpson, 2008. Increased cuticular carbon sequestration and lignin oxidation in response to soil warming. *Nature Geoscience*, **1**, 836-839.
104. Fierer N., Craine, J.M., McLauchlan, K. and J.P. Schimel, 2005. Litter quality and the temperature sensitivity of decomposition. *Ecology*, **86**, 320-326.

LITERATURE CITED

105. Fölster H. and P.K. Khanna, 1997. Dynamics of nutrient supply in plantation soils. In: Nambiar, E.K.S., Brown, A.G. (Eds.), Management of Soil, Nutrients and Water in Tropical Plantation Forests. ACIAR/CSIRO/CIFOR, ACIAR, Canberra, Australia. pp. 338–378.
106. Fontaine S., Bardoux, G., Abbadie, L. and A. Mariotti, 2004. Carbon input to soil may decrease carbon content. *Ecology Letters*, **7**, 314–320.
107. Fontaine S., Barot, S., Barre, P., Bdioui, N., Mary, B. and C. Rumpel, 2007. Stability of organic carbon in deep soil layers controlled by fresh carbon supply. *Nature*, **450**, 277–280.
108. Fontaine S., Mariotti, A. and L. Abbadie, 2003. The priming effect of organic matter: a question of microbial competition?. *Soil Biology & Biochemistry*, **35**, 837–843.
109. Food and Agriculture Organization of the United Nations (FAO), 2001. World Soil Resources Reports 96: Soil carbon sequestration for land management. FAO, Rome 2001.
110. Forest Survey of India (FSI), 2009. India state of the forest report. Ministry of state environment and forests, New Delhi, pp.1-199.
111. Garten C.T., Cooper, L.W., Post III, W.M. and P.J. Hanson, 2000. Climate controls on forest soil carbon isotope ratios in the southern Appalachian mountains, *Ecology*, **81(4)**, 1108–1119.
112. Garten, C.T., W.M. Post, P.J. Hanson and L.W. Cooper, 1999. Forest soil carbon inventories and dynamics along an elevation gradient in the southern Appalachian Mountains. *Biogeochemistry*, **45**, 115–145.
113. Gartner T.B. and Z.G. Cardon, 2004. Decomposition dynamics in mixed-species litter. *Oikos*, **104**, 230–246.
114. Giardina C.P. and M.G. Ryan, 2000. Evidence that decomposition rates of organic carbon in mineral soil do not vary with temperature. *Nature*, **404**, 858–861.
115. Gill R.A. and I.C. Burke, 1999. Ecosystem consequences of plant life form changes at three sites in the semiarid United States. *Oecologia*, **121**, 551–563.
116. Golley F.B. 1983. Decomposition: In: Golley F.B. (ed.), Ecosystems of the world, 14A, Tropical rainforest ecosystems; structures and function. Elsevier, Amsterdam, 157–166.
117. Goulden M.L., Wofsy, S.C., Harden, J.W., Trumbore, S.E., Crill, P.M., Gower, S.T., Fries, T., Daube, B.C., Fan, S.M., Sutton, D.J., Bezzaz, A. and J.W. Munger, 1998. Sensitivity of boreal forest carbon balance to soil thaw. *Science*, **279**, 214–217.
118. Gruber N., 2009. Fickle trends in the ocean. *Nature*, **458**, 155–156.

LITERATURE CITED

119. Guariguata M.R., Rheingans, R. and F. Montagnini, 1995. Early woody invasion under tree plantations in Costa Rica: implications for forest restoration. *Restoration Ecology*, **3**, 252–260.
120. Gupta A.K., 2008. National bamboo mission: A holistic scheme for development of bamboo sector in Tripura. *Indian Forester*, **134(3)**, 305-313.
121. Gupta M., Saleem, M. and L.M. Gupta, 2009. Forests- A viable options for mitigating climate change. *Indian Forester*, **135(2)**, 252-262.
122. Gupta R.K. and D.L.N. Rao, 1994. Potential of wastelands for sequestering carbon by reforestation. *Current Science*, **66**, 378-380.
123. Han F., Hu, W., Zheng, J., Du, F. and X. Zhang, 2010. Estimating soil organic carbon storage and distribution in a catchment of Loess Plateau, China. *Geoderma*, **154**, 261-266.
124. Hanson P. J., Edwards, N.T., Garten, C.T., and J. A. Andrews, 2000. Separating root and soil microbial contributions to soil respiration: a review of methods and observations. *Biogeochemistry*, **48**, 115–146.
125. Harmon M., Silver, W.L., Fasth, B., Chen, H., Burke, I.C., Partons, W.J., Hart, S.C., Currie, W.S. and Lidet, 2009. Long-term patterns of mass loss during the decomposition of leaf and fine root litter: an intersite comparison. *Global Change Biology*, **15**, 1320-1338.
126. Harner M.J., Crenshaw, C.L., Abelho, M., Stursova, M., Shah, J.J.F. and R.L. Sinsabaugh, 2009. Decomposition of leaf litter from a native tree and an actinorhizal invasive across riparian habitats. *Ecological Applications*, **19(5)**, 1135-1146.
127. Hassink J., 1997. The capacity of soils to preserve organic C and N by their association with clay and silt particles, *Plant and Soil*, **191**, 77–87.
128. Hattenschwiler S., Tiunov, A.V. and S. Scheu, 2005. Biodiversity and litter decomposition in terrestrial ecosystems. *Annual Review of Ecology, Evolution and Systematics*, **36**, 191-218.
129. Hobbie S.E., M. Ogdahl, J. Chorover, O.A. Chadwick, J. Oleksyn, R. Zytkowskiak, and P.B. Reich, 2007. Tree species effects on soil organic matter dynamics: The role of soil cation composition. *Ecosystems*, **10**, 999-1018.
130. Holdridge L.R., 1947. Determination of world plant formations from simple climatic data. *Science*, **105**, 367–68.

LITERATURE CITED

131. Hoorens B., Aerts, R. and M. Stroetenga, 2002. Litter quality and interactive effects in litter mixtures: more negative interactions under elevated CO₂?. *Journal of Ecology*, **90**, 1009-1016.
132. Hopkins D.W. and J.A. Chudek. 1997. Solid-state NMR investigations of organic transformations during the decomposition of plant material in soil. p. 85–94. *In* G. Cadisch and K.E. Giller (ed.) *Driven by nature: Plant litter quality and decomposition*. CAB Int., Wallingford, UK.
133. Horne J.E.M., 1966. Teak in Nigeria. *Nigerian Information Bulletin* (New Series) N^o 16. pp.40.
134. IGBP Terrestrial Carbon Working Group, 1998. The Terrestrial Carbon Cycle: Implications for the Kyoto Protocol. *Science*, **280**, 1393-1394.
135. IPCC 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change* [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp.881.
136. IPCC 2003. *Good practice guidelines for land-use, land-use change forestry*. Edited by Penman J., Gytarsky, M., Hiraishi, T., Krug, T., Kruger, D., Pipatti, R., Buendia, L., Miwa, K., Ngara, T., Tanabe, K. and F. Wagner. Published by the Institute for Global Environmental Strategies (IGES) for the IPCC. pp.599.
137. IPCC, 2005: *IPCC Special Report on Carbon Dioxide Capture and Storage*. Prepared by Working Group III of the Intergovernmental Panel on Climate Change [Metz, B., O. Davidson, H. C. de Coninck, M. Loos, and L. A. Meyer (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 442 pp.
138. Islam K.R. and R.R. Weil, 2000. Land use effects on soil quality in a tropical forest ecosystem of Bangladesh. *Agriculture, Ecosystems and Environment*, **79**, 9-16.
139. Jackson, R.B., Canadell, J., Ehleringer, J.R., Mooney, H.A., Sala, O.E. and E.D. Schulze, 1996. A global analysis of root distributions of terrestrial biomes. *Oecologia*, **108**, 389-411.
140. Jagadamma S. and R. Lal, 2010. Integrating physical and chemical methods for isolating stable soil organic carbon. *Geoderma*, **158**, 322-330.

LITERATURE CITED

- ✓ 141. Jagadamma S., Lal, R., Ussiri, D.A.N., Trumbore, S.E. and S. Mestelan, 2010. Evaluation of structural chemistry and isotopic signatures of refractory soil organic carbon fraction isolated by wet oxidation methods. *Biogeochemistry*, **98**, 29-44.
- ✓ 142. Jandl R., M. Lindner, L. Vesterdal, B. Bauwens, R. Baritz, F. Hagedorn, D. W. Johnson, K. Minkinen, and K. A. Byrne, 2007. How strongly can forest management influence soil carbon sequestration?. *Geoderma*, **137**, 253-268.
- ✓ 143. Jenny H. and S.P. Raychaudhuri, 1960. Effect of Climate and Cultivation on Nitrogen and Organic Matter Reserves in Indian Soils. ICAR, New Delhi, India, pp.126.
- ✓ 144. Jha M.N., Gupta, M.K., Alok, S. and K. Rajesh, 2003. Soil organic carbon store in different forests in India. *Indian Forester*, **129(6)**, 714-724.
- ✓ 145. Jiménez J.J. and R. Lal, 2006. Mechanisms of carbon sequestration in soils of latin America. *Critical Reviews in Plant Sciences*, **25**, 337-365.
146. Jimenez J.J., Lal, R., Leblanc, H.A., Russob, R.O. and Y. Rau, 2008. The soil C pool in different agroecosystems derived from the dry tropical forest of Guanacaste, Costa Rica. *Ecological Engineering*, **34**, 289-299.
147. Jin H., Sun, O.J. and J. Liu, 2010. Changes in soil microbial biomass and community structure with addition of contrasting types of plant litter in a semiarid grassland ecosystem. *Journal of Plant Ecology*, **3(3)**, 209-217.
148. Jobbagy E.G. and R.B. Jackson, 2000. The vertical distribution of soil organic carbon and its relation to climate and vegetation. *Ecological Applications*, **10**, 423-426.
149. Johansson M.B. 1995. The chemical composition of needle and leaf litter from Scots pine, Norway spruce and white birch in Scandinavian forests. *Forestry*, **68**, 49-62.
150. Johnson N.C. and D.A. Wedin, 1997. Soil carbon, nutrients, mycorrhizae during conversion of dry tropical forest to grassland. *Ecological Applications*, **7(1)**, 171-182.
151. Johnston C.A., Groffman, P.G., Breshears, D.D., Cardon, Z.G., Currie, W., Emanuel, W., Gaudinski, J., Jackson, R.B., Lajtha, K., Nadelhoffer, K., Nelson, D., Mac Post, W., Retallack, G. and L. Wielopolski, 2004. Carbon cycling in soil. *Frontiers in Ecology and Environment*, **2**, 522-528.

LITERATURE CITED

152. Jones T.H., Thompson, L.J., Lawton, J.H., Bezemer, T.M., Bardgett, R.D., Blackburn, T.M., Bruce, K.D., Cannon, P.F., Hall, G.S., Hartley, S.E., Howson, G., Jones, C.G., Kampichler, C., Kandeler, E. and D.A. Ritchie, 1998. Impacts of rising atmospheric carbon dioxide on model terrestrial ecosystems. *Science*, **280**, 441-443.
153. Jonsson M. and D.A. Wardle, 2008. Context dependency of litter-mixing effects on decomposition and nutrient release across a long-term chronosequence. *Oikos*, **117**, 1674-1682.
154. Kadambi K., 1972. Silviculture and management of teak. Bulletin 24, School of Forestry, Stephen F. Austin State University, Texas. pp.25.
155. Kane E.S., Valentine, D.W., Schuur, E.A.G. and K. Dutta, 2005. Soil carbon stabilization along climate and stand productivity gradients in black spruce forests of interior Alaska. *Canadian Journal of Forest Research*, **35**, 2118-2129.
156. Kanowski J., Catterall, C.P. and G.W. Wardell-Johnson, 2005. Consequences of broad scale timber plantations for biodiversity in cleared rainforest landscapes of tropical and subtropical Australia. *Forest Ecology and Management*, **208**, 359-372.
157. Kaul M., G., Mohren, M.J. and V. K. Dadhwal, 2010. Carbon storage and sequestration potential of selected tree species in India. *Mitigation and Adaptation Strategy for Global Change*, **15**, 489-510.
158. Keel C.Y. 1975. Ecology of Azotobacter in Bamboo forest soil. *Korean Journal of Microbiology*, **13**, 1-23.
159. Keeley J.E. and W.J. Bond, 1999. Mast flowering and semelparity in bamboos: the bamboo fire cycle hypothesis. *American Naturalist*, **154**, 383-391.
160. Keith A.M., Wal, R.V.D., Brooker, R.W., Osler, G.H.R., Chapman, S.J., Burslem, R.P. and D.A. Elston, 2008. Increasing litter species richness reduces variability in a terrestrial decomposer system. *Ecology*, **89**, 2657-2664.
161. Keller T. and I. Hakansson, 2010. Estimation of reference bulk density from soil particle size distribution and soil organic matter content. *Geoderma*, **154**, 398-406.
162. Kelty M.J., 2006. The role of species mixtures in plantation forestry. *Forest Ecology and Management*, **233**, 195-204.
163. Kemmitt S.J., Lanyon, C.V., Waite, I.S., Wen, Q., Addiscott, T.M., Bird, N.R.A., O'Donnell, A.G. and P.C. Brookes, 2008. Mineralization of native soil organic matter is not regulated by the size, activity or composition of the soil microbial biomass – a new perspective. *Soil Biology & Biochemistry*, **40**, 61-73.

LITERATURE CITED

164. Kemmitt S.J., Wright, D., Goulding, K.W.T. Jones, D.L. 2006. pH regulation of carbon and nitrogen dynamics in two agricultural soils. *Soil Biology & Biochemistry*, **38**, 898-911.
165. Kern J.S., 1994. Spatial patterns of soil organic carbon in the contiguous United States. *Soil Science Society of America Journal*, **58**, 439-55.
166. Keswani P., 2001. Silviculture and management of teak In : Genetics and silviculture of teak(eds.) A.K. Mandal, and S.A. Ansari, International Book Distributor, Dehra Dun, India. 27-40.
167. Khanduri, V.P., Lanundanga, and J. Vanlalremkimi, 2008. Growing stock variation in teak (*Tectona grandis*) forest stands of Mizoram, India. *Journal of Forestry Research*, **19(3)**, 204-208.
168. Kicklighter D.W., Bondeau, A., Schloss, A.L., Kaduk, J., Mcquire, A.D., and participants of the Potsdam NPP model intercomparison, 1999. Comparing global models of terrestrial net primary productivity (NPP): global pattern and differentiation by major biomes. *Global Change Biology*, **5**, 16-24.
169. Kilmer V.J. and L.T. Alexander, 1949. Methods of making mechanical analysis of soils. *Soil Science*, **58**, 15-24.
170. Kirby K.R. and C. Potvin, 2007. Variation in carbon storage among tree species: Implications for the management of a small-scale carbon sink project. *Forest Ecology and Management*, **246**, 208-221.
171. Kirschbaum M.U.F., 2000. Will changes in soil organic matter act as a positive or negative feedback on global warming?. *Biogeochemistry*, **48**, 21-51.
172. Kishwan J., Pandey R. and V.K. Dadhwal, 2009. India's forest and tree cover: contribution as a carbon sink, Technical paper No 130, Indian council of forestry research and education (ICFRE), 1-12.
173. Knabner I.K., 2002. The macromolecular organic composition of plant and microbial residues as inputs to soil organic matter. *Soil Biology & Biochemistry*, **34**, 139-162.
174. Koegel-Knabner I., 2002. The macromolecular organic composition of plant and microbial residues as inputs to soil organic matter. *Soil Biology & Biochemistry*, **34**, 139-162.
175. Korhonen R., K. Pingoud, I. Savolainen, and R. Matthews, 2002. The role of carbon sequestration and the tonne-year approach in fulfilling the objective of climate convention. *Environmental Science & Policy*, **5**, 429-441.

LITERATURE CITED

- ✓ 176. Korner C. 1998. A re-assessment of high elevation treeline positions and their explanation. *Oecologia*, **115**, 445–459.
177. Kosugi Y., Mitani, T., Itoh, M., Noguchi, S., Tani, M., Matsuo, N., Takanashi, S., Ohkubo, S. and A. R. Nik, 2007. Spatial and temporal variation in soil respiration in a Southeast Asian tropical rainforest. *Agricultural and Forest Meteorology*, **147**, 35-47.
178. Kraenzel M., Castillo, A., Moore, T. and C. Potvin, 2003. Carbon storage of harvest-age teak (*Tectona grandis*) plantations, Panama. *Forest Ecology and Management*, **173**, 213-225.
- ✓ 179. Kramer C., and G. Gleixner, 2006. Variable use of plant- and soil-derived carbon by microorganisms in agricultural soils. *Soil Biology & Biochemistry*, **38**, 3267–3278.
180. Kramer M.G., Solinns, P., Sletten, R.S. and P.K. Swart, 2003. N isotope fractionation and measures of organic matter alteration during decomposition. *Ecology*, **84**, 2021-2025.
181. Krull E.S., Baldock, J.A. and J.O. Skjemstad, 2003. Importance of mechanisms and processes of the stabilization of soil organic matter for modeling carbon turnover. *Functional Plant Biology*, **30**, 207-222.
- ✓ 182. Krull E.S., Bestland, E.A.L., Skjemstad, J.O. and J.F. Parr, 2006. Geochemistry ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, ^{13}C NMR) and residence times of South Australia: Implications of soil genesis. *Geoderma*, **132**, 344-360.
- ✓ 183. Kucharik C.J., Brye, K.R., Norman, J.M., Foley, J.A., Gower, S.T. and L.G. Bundy, 2001. Measurements and modeling of carbon and nitrogen cycling in agroecosystems of southern Wisconsin: Potential for SOC sequestration during the next 50 years. *Ecosystems*, **4**, 237–258.
184. Kula E., 2010. Afforestation with carbon sequestration and land use policy in Northern Ireland. *Land Use Policy*, **27**, 749-752.
185. Kumar A., B.G. Marcot, and A. Saxena, 2004. Tree species diversity and distribution patterns in tropical forests of Garo Hills. *Current Science*, **91**, 1370-1381.
- ✓ 186. Kumar B., 2007. Technical issue of Geological CO₂ sequestration in Basalt Formations of India. In: Carbon capture and storage technology, R&D initiatives In India. Department of Science and Technology, New Delhi, pp.167.
187. Kumar G.P., A.A. Murkute, S. Gupta, and S.B. Singh, 2009. Carbon sequestration with special reference to agroforestry in cold deserts of Ladakh. *Current Science*, **97**, 1063-1068.

LITERATURE CITED

188. Laik R., Kumar, K., Das, D.K. and O.P. Chaturvedi, 2009. Labile soil organic matter pools in a calciorthent after 18 years of afforestation by different plantations. *Applied Soil Ecology*, **42**, 71-78.
189. Lal R., 2003. Carbon sequestration in dryland ecosystems. *Environment and Management*, **33**, 528-544.
190. Lal R., 2004a. Carbon sequestration, Terrestrial. *Encyclopedia of Energy*, **1**, 289-298.
191. Lal R., 2004b. Soil carbon sequestration to mitigate climate change. *Geoderma*, **123**, 1-22.
192. Lal R., 2004c. Soil carbon sequestration in India. *Climatic Change*, **65(3)**, 277-296.
193. Lal R., 2005. Forest soils and carbon sequestration. *Forest Ecology and Management*, **220**, 242-258.
194. Lal R., 2008. Soil carbon stocks under present and future climate with specific reference to European Eco-regions. *Nutrient Cycling and Agroecosystems*, **81**, 113-127.
195. Lal R., Kimble, J., Levine, E. and C. Whitman, 1995. World soils and greenhouse effect: an overview. In: Soils and global change. (Eds. Lal, R., Kimble, J., Levine, E. and Stewart, B.A.). Advances in Soil Sciences, CRC Press. Boca Raton, FL, pp 1-7.
196. Lal R., M. Griffin, J. Apt, L. Lave, and M. G. Morgan, 2004. Managing Soil Carbon. *Science*, **304**, 393.
197. Lamb D. and P. Lawrence, 1993. Mixed species plantations using high value rainforest trees in Australia. In: Lieth, H., Lohmann, M. (Eds.), Restoration of Tropical Forest Ecosystems. Kluwer Academic Publishers, Holanda, pp. 101-108.
198. Landsberg J.J. and S.T. Gower, 1997. Applications of physiological ecology to forest management. Academic Press, San Diego. 354pp.
199. Langer U., Böhme, L. and F. Böhme, 2004. Classification of soil microorganisms based on growth properties: a critical view of some commonly used terms. *Journal of Plant Nutrition and Soil Science—Zeitschrift für Pflanzenernährung und Bodenkunde*, **167**, 267-269.
200. Lemma B., D.B. Kleja I. Nilsson, and M. Olsson, 2006. Soil carbon sequestration under different exotic tree species in the southwestern highlands of Ethiopia. *Geoderma*, **136**, 886-898.

LITERATURE CITED

201. Lesikar B., Hallmak, C., Melton, R. and B. Harris, 2005. On-site waste water treatment systems: Soil particle analysis procedure. Texas cooperative extension: The Texas A & M University system. pp.18.
202. Lettens S., Vos, B., Quataert, P., Wesemael, B. van, Muys, B. and J. Van Orshoven, 2007. Variable carbon recovery of Walkley-Black analysis and implications for national soil organic carbon accounting. *European Journal of Soil Science*, **58**, 1244-1253.
203. Lewis S.L., Gonzalez, G.L., Sonke, B., Baffoe, K.A., Baker, T.R., Ojo, L.O., Phillips, O.L., Reitsma, J.M., White, L., Comiskey, J.A., Marie-Noel, Djuikouo, K., Ewango, C.E.N., Feldpausch, T. R., Hamilton, A.C., Gloor, M., Hart, T., Hladik, A., Lloyd, J., Lovett, J.C., Makana, J.R., Malhi, A.Y., Mbago, F.M., Ndangalasi, H.J., Peacock, J., Peh, K.S.H., Sheil, D., Sunderland, T., Swaine, M.D., Talpin, J., Taylor, D., Thomas, S.C., Votere, R. and H. Woll, 2009. Increasing carbon storage in intact African tropical forests. *Nature*, **457**, 1003-1006.
204. Li Z., Fu, M. and D. Xu, 2003. Bamboo ecosystem and carbon dioxide sequestration. *Journal of Bamboo Research*, **22(4)**, 1-6.
205. Liu L., King, J., Booker, F.L., Giardina, C.P., Allen, H.L. and S. Hu, 2009. Enhanced litter input rather than changes in litter chemistry drive soil carbon and nitrogen cycles under elevated CO₂: a microcosm study. *Global Change Biology*, **15**, 441-453.
206. Lobovikov M., Paudel, S., Piazza, M., Ren, H. and J. Wu, 2007. World Bamboo Resources: A thematic study prepared in the framework of the Global Forest Resources Assessment 2005. Food and Agriculture Organisations of United Nations: pp. 73.
207. Lorenz K., and Lal, R., 2010. Carbon sequestration in forest ecosystems, Springer Dordrecht Heidelberg London New York, pp.27.
208. Lorenz K., Lal, R., Preston, C. M. and K.G.J. Nierop, 2007. Strengthening the soil organic carbon pool by increasing contributions from recalcitrant aliphatic bio (macro) molecules. *Geoderma*, **142**, 1-10.
209. Lorenz K., Preston, C.M., Raspe, S., Morrison, I.K. and K.H Feger, 2000. Litter decomposition and humus characteristics in Canadian and German spruce ecosystems: information from tannin analysis and ¹³C CPMAS NMR. *Soil Biology & Biochemistry*, **32**, 779-792.
210. Luo Y., 2007. Terrestrial carbon cycle feedback to climate warming, *Annual Review of Ecology, Evolution and Systematics*, **38**, 683-712.

LITERATURE CITED

211. Luo, Y., and X. Zhou, 2006. Soil respiration and the environment, Academic Press is an imprint of Elsevier 30 Corporate Drive, Suite 400, Burlington, MA 01803, USA. pp.315.
212. Lutzow M.V., Knabner, I.K., Ekschmitt, K., Flessa, H., Guggenberger, G., Matzner, E. and B. Marschner, 2007. SOM fractionation methods: Relevance to functional pools and to stabilization mechanisms. *Soil Biology & Biochemistry*, **39**, 2183-2207.
213. Lutzow M.V., Knabner, I.K., Ekschmitt, K., Metzger, E., Guggenberger, G., Marschner, B. and H. Flessa, 2006. Stabilization of organic matter in temperate soils: Mechanisms and their relevance under different soil conditions- a review. *European Journal of Soil Science*, **57**, 426-445.
214. Luysaert S., Schulze, E.D., Borner, A., Knohl, A., Hessenmoller, D., Law, B.E., Ciais, P. and J. Grace, 2008. Old-growth forests as global carbon sinks. *Nature*, **455**, 213-215.
215. Magnani F., Mencuccini, M., Borghetti, M., Berbigier, P., Berninger, F., Delzon, S., Grelle, A., Hari, P., Jarvis, P.G., Kolari, P., Kowalski, A.S., Lankreijer, H., Law, B.E., Lindnorth, A., Loustau, D., Manca, G., Moncreieff, J.B., Rayment, M., Tedeschi, V., Valentini, R. and J. Grace, The human foot print in the carbon cycle of temperate and boreal forests. *Nature*, **447**, 848-850.
216. Mahaney W.M., 2010. Plant controls on decomposition rates: the benefits of restoring abandoned agricultural lands with native prairie grasses. *Plant and Soil*, **330**, 91-101.
217. Malhi Y, Baldocchi D.D. and P.G. Jarvis, 1999. The carbon balance of tropical, temperate and boreal forests. *Plant, Cell & Environment*, **22(6)**, 715-740.
218. Malhi Y. and O. Phillips, 2005. Tropical Forests and Global Atmospheric change, Oxford University Press, New York, pp. 260.
219. Manhas R.K., Negi, J.D.S., Kumar, R. and P.S. Chauhan, 2006. Temporal assessment of growing stock, biomass and carbon stock of Indian forests. *Climatic Change*, **74**, 191-221.
220. Martin A., Mariotti, A., Balesdent, J., Lavelle, P. and R. Vuattoux, 1990. Estimate of organic matter turnover rate in a savanna soil by ¹³C natural abundance measurements. *Soil Biology & Biochemistry*, **22(4)**, 517-523.

LITERATURE CITED

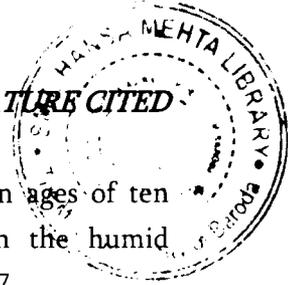
221. Martinelli L.A., Pessenda, L.C.R., Espinoza, E., Camargo, P.B., Telles, E.C., Cerri, C.C., Victoria, R.L., Aravena, R., Richey, J. and S. Trumbore, 1996. Carbon-13 variation with depth in soils of Brazil and climate change during the Quaternary. *Oecologia*, **106**, 376-381.
222. Matamala R., Gonzaler-Meler, M.A., Jastrow, J.D., Norby, R.J. and W.H. Schlesinger, 2003. Impacts of fine root turnover on forest NPP and soil C sequestration potential. *Science*, **302**, 1385-1387.
223. McDowell N., 2002. Developing countries to gain from carbon- trading fund. *Nature*, **420**, 4.
224. Meier C. L. and W.D. Bowman, 2008. Links between plant litter chemistry, species diversity, and below-ground ecosystem function, *Proceedings of National Academy of Sciences of USA*, **105**, 19780-19785.
225. Melillo J.M., A.D McGuire, D.W. Kicklighter, B. Moore III, C.J. Vorosmarty, and A. Schloss, 1993. Global climate change and terrestrial net primary production. *Nature*, **363**, 234-240.
226. Merh S.S., 1995. Geology of Gujarat. Geological Society of India, Bangalore, 1995, 1-18.
227. Metherell, A.K., L.A. Harding, C.V. Cole, and W.J. Parton. 1993. CENTURY Soil organic matter model environment. Technical documentation. Agroecosystem version 4.0. Great Plains System Research Unit Technical Report No. 4. USDA-ARS, Fort Collins, Colorado, USA.
228. Meyers P.A., 1994. Preservation of elemental and isotopic source identification of sedimentary organic matter. *Chemical Geology*, **114**, 289-302.
229. Mikhailova E.A. and C.J. Post, 2006. Organic carbon stocks in the Russian chernozem. *European Journal of Soil Science*, **57**, 330-336.
230. Montagnini F., 2000. Accumulation in above-ground biomass and soil storage of mineral nutrients in pure and mixed plantations in humid tropical lowland. *Forest Ecology and Management*, **134**, 257-270.
231. Montagnini F., Gonzalez, E., Porras, C. and R. Rheingans, 1995. Mixed and pure forest plantations in the humid neotropics: a comparison of early growth, pest damage and establishment costs. *Commonwealth Forestry Reviews*, **74 (4)**, 306-313.
232. Morisada K., Ono, K. and H. Kanomata, 2004. Organic carbon stock in forest soils in Japan. *Geoderma*, **119**, 21-32.

LITERATURE CITED

233. Muller-Landau H.C., 2009. Sink in the African jungle, *Nature*, **457**, 969-970.
234. Myers N., Mittermeier, R.A., Mittermeier, C.G., da Fonseca, G.A.B. and J. Kent. 2000. Biodiversity hotspots for conservation priorities. *Nature* **403**, 853-858.
235. Nabuurs G.J., Masera, O., Andrasko, K., Benitez-Ponce, P., Boer, R., Dutschke, M., Elsidig, E., Ford-Robertson, J., Frumhoff, P., Karjalainen, T., Krankina, O., Kurz, W.A., Matsumoto, M., Oyantcabal, W., Ravindranath, N.H., Sanz Sanchez, M.A., and X. Zhang, 2007: Forestry. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
236. Nath V., Pal, R.S. and S.K. Banerjee, 2008. Bamboo: its distribution, production, habitat and agroforestry potential. *Indian Forester*, **134(3)**, 387-396.
237. National Oceanic and Atmospheric Administration (NOAA), 2011, Mauna loa monthly mean CO₂. Earth Systems Research Laboratory (ESRL). <http://co2now.org/>.
238. Nature news, 2006. Capturing carbon. *Nature*, **442**, 601-602.
239. Neider R., and D.K. Benbi, 2008. Carbon and Nitrogen in terrestrial environment, Springer Science + Business Media B.V. 430p.
240. Nepstad D.C., Carvalho, C.R., Davidson, E.A., Jipp, P.H., Letebvre, P.A., Negreiros, G.H., Silva, E.D., Stone, T.A., Trumbore, S.E. and S. Vieira, 1994. The role of deep roots in the hydrological and carbon cycles of Amazonian forests and pastures. *Nature*, **372**, 666-669.
241. Nilson S. and W. Schopfhauser, 1995. The carbon sequestration potential of a global afforestation program. *Climatic Change*, **30**, 267-293.
242. Niu X. and S.W. Duiker, 2006. Carbon sequestration potential by afforestation of marginal agricultural land in the Midwestern U.S. *Forest Ecology and Management*, **223**, 415-427.
243. Oelbermann M., R. P. Voroney and A.M. Gordon, Carbon sequestration in tropical and temperate agroforestry systems: a review with examples from Costa Rica and southern Canada. *Agriculture Ecosystems and Environment*, **104**, 359-377.

LITERATURE CITED

244. Olschewski R. and P.C. Benitez, 2010. Optimizing joint production of timber and carbon sequestration of afforestation projects. *Journal of Forest Economics*, **16**, 1-10.
245. Olson J.S., 1963. Energy storage and the balance of producers and decomposers in ecological systems. *Ecology*, **44(2)**, 322-331.
246. Orwin K.H., Wardle, D.A. and L.G. Greenfield, Ecological consequences of carbon substrate identity and diversity in a laboratory study. *Ecology*, **87**, 580-593.
247. Ostertag R., Mari 'n-Spiotta, E., Silver, W.L. and J. Schulten, 2008. Litterfall and Decomposition in Relation to Soil Carbon Pools Along a Secondary Forest Chronosequence in Puerto Rico. *Ecosystems*, **11**, 701-714.
248. Pal D.K., T. Bhattacharyya, P. Srivastava, P. Chandran and S. K. Ray, 2009. Soils of the Indo-Gangetic Plains: their historical perspective and management. *Current Science*, **96**, 1193-1202.
249. Pandey D., 1998. Forest plantation areas, 1995. Report of the FAO project GCP/INT/628/UK. pp.94.
250. Pandey D., and Brown, C., 2000. Teak: a global overview. *Unasylva* **201**, **51**, 3-13.
251. Parfitt R.L. Ross, C., Schipper, L.A., Claydon, J.J., Baisden, W.T., and G. Arnold, 2010. Correcting bulk density measurements made with driving hammer equipment. *Geoderma*, **157**, 46-50.
252. Paudel S. and J.P. Sah, 2003. Physiochemical characteristics of soil in tropical sal (*Shroea robusta* Gaert.) forests in eastern Nepal. *Himalayan Journal of Sciences*, **1(2)**, 107-110.
253. Paul K.I. Polglase, P.J., Nyakuengama, J.G. and P.K. Khanna, 2002. Change in soil carbon following afforestation. *Forest Ecology and Management*, **168**, 241-257.
254. Pavia D.L., Lampman, G.M. and G.S. Kriz, 2001. Introduction to spectroscopy: A guide for students of organic chemistry. Thomson learning, Inc, USA. pp.579.
255. Perez D., and M. Kanninen, 2003. Aboveground biomass of *Tectona grandis* plantations in Costa Rica. *Journal of Tropical Forest Science*, **15**, 199-213.
256. Perez-Harguindeguy N., Diaz, S., Cornelissen, J.H.C., Vendramini, F., Cabido, M. and A. Castellanos, 2000. Chemistry and toughness predict leaf litter decomposition rates over a wide spectrum of functional types and taxa in central Argentina. *Plant and Soil*, **218**, 21-30.



257. Petit B., and F. Montagnini, Growth equations and rotation ages of ten native tree species in mixed and pure plantations in the humid neotropics. *Forest Ecology and Management*, **199**, 243–257.
258. Piao S., Fang, J., Ciais, P., Peylin, P., Huang, Y., Sitch, S. and T. Wang, 2009. The carbon balance of terrestrial ecosystems in china. *Nature*, **458**, 1009-1013.
259. Pidwirny M. and J. Gullledge, 2009. "Carbon cycle." In: Encyclopedia of Earth. Eds. Cutler J. Cleveland (Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment).
260. Pidwirny M., S. Draggan, and M. McGinley, 2007. Terrestrial biome In: Encyclopedia of Earth. Eds. Cutler J. Cleveland (Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment). http://www.eoearth.org/article/Terrestrial_biome
261. Piotta D., Viquez, E., Montagnini, F. and M. Kanninen, 2004. Pure and mixed forest plantations with native species of the dry tropics of Costa Rica: a comparison of growth and productivity. *Forest Ecology and Management*, **190**, 359– 372.
262. Post W.M., and Kwon, K.C., 2000. Soil carbon sequestration and land-use change: Processes and Potential. *Global Change Biology*, **6**, 317–328.
263. Post W.M., Emmanuel, W. R, Zinke, P.J. and A.G. Stangenberger, 1982. Soil carbon pools and world life zones. *Nature*, **298**, 156–59.
264. Post W.M., R.C. Izaurralde, L.K. Mann, and N. Bliss, 2001. Monitoring and verifying changes of organic carbon in soil. *Climatic Change*, **51**, 73-99.
265. Potter C., Klooster, S., Hiatt, S., Fladeland, M., Genovese, V. and G. Peggy, 2007. Satellite-derived estimates of potential carbon sequestration through afforestation of agricultural lands in the United States. *Climatic Change*, **80**, 323-336.
266. Powers J.S. and W.H. Schlesinger, 2002. Geographic and vertical patterns of stable carbon isotopes in tropical rain forest soils of Costa Rica. *Geoderma*, **109**, 141-160.
267. Prabhu N., 2003. Teak in Kerala: Past, present and future. Proc. International Conference on Quality Timber Products of Teak from Sustainable Forest Management held at Kerala Forest Research Institute, Peechi, India.

LITERATURE CITED

268. Prentice I.C., 2001. The Carbon Cycle and Atmospheric Carbon Dioxide. Climate Change 2001: The Scientific Basis IPCC, Cambridge University Press, Cambridge, UK, 183–237.
269. Preston C.M., 1996. Applications of NMR to soil organic matter analysis: History and perspectives. *Soil Science*, **161**, 144–166.
270. Preston C.M., Hempfling, R., Schulten, H.R., Schnitzer, M., Trofy, J.A., and D.E. Axelson, 1994. Characterization of organic matter in a forest soil of coastal British Columbia by NMR and pyrolysis field ionization mass spectrometry. *Plant and Soil*, **158**, 69–82.
271. Preston C.M., Trofymow, J.A., Sayer, B.G. and J.C. Niu, 1997. ¹³C nuclear magnetic resonance spectroscopy with cross-polarization and magic-angle spinning investigation of the proximate-analysis fractions used to assess litter quality in decomposition studies. *Canadian Journal of Botany*, **75**, 1601-1613.
272. Raich J.W. and A. Tufekcioglu, 2000. Vegetation and soil respiration: correlation and controls. *Biogeochemistry*, **48**, 71-90.
273. Raich J.W. and W.H. Schlesinger, 1992. The global carbon dioxide flux in soil respiration and its relationship to vegetation and climate. *Tellus*, **44B**, 81-99.
274. Raich W., Potter, C.S. and D. Bhagawati, 2002. Interannual variability in global soil respiration, 1980–94. *Global Change Biology*, **8**, 800–812.
275. Ramachandran A., Jayakumar, S., Haroon, R.M., Bhaskaran, A. and D. I. Arockiasamy. 2007. Carbon sequestration: estimation of carbon stock in natural forests using geospatial technology in the Eastern Ghats of Tamil Nadu, India. *Current Science*, **92(3)**, 323-331.
276. Ratnayake R.R., Seneviratne, G. and S. A. Kulasooriya, 2008. Characterization of clay bound organic matter using activation energy calculated by weight loss on ignition method. *Current Science*, **95(6)**, 763-766.
277. Reay D., 2007. Spring time for sinks. *Nature*, **446**, 727-728.
278. Reeves D.W., 1997. The role of soil organic matter in maintaining soil quality in continuous cropping systems. *Soil Tillage & Research*, **43**, 131-167.
279. Reich P.B., Walters, M.B. and D.S. Ellsworth, 1997. From tropics to tundra: Global convergence in plant functioning. *Proceedings of the National Academy of Science (USA)*, **94**, 13730-13734.

LITERATURE CITED

280. Reimer P.J., Baillie, M.G.L., Bard, E., Bayliss, A., Beck, J.W., Blackwell, P.G., Brong Ramsey, C., Bucks, C.E., Burr, G.S., Edwards, R.L., Friedrich, M., Grootes, P.M., Guilderson, T.P., Hajdas, I., Heatons, T.J., Hogg, A.G., Hughen, K.A., Kaiser, K.F., Kromer, B., McCormac, F.G., Manning, S.W., Reimer, R.W., Richards, D.A., Southon, J.R., Talamo, S., Turney, C.S.M., Vander, Plicht J., and C.E. Weyhenmeyer, 2009. Intcal09 and marine09 radiocarbon age calibration curves, 0–50,000 years cal BP. *Radiocarbon*, **51(4)**, 1111-1150.
281. Richards A.E., Dalal, R.C. and S. Schmidt, 2007. Soil carbon turnover and sequestration in native subtropical tree plantations. *Soil Biology & Biochemistry*, **39**, 2078-2090.
282. Richter D.D., Markewitz, D., Trumbore, S.E. and C.G. Wells, 1999. Rapid accumulation and turnover of soil carbon in a re-establishing forest. *Nature*, **400**, 56-58.
283. Romanovskaya A.A., 2006. Organic carbon in long-fallow lands of Russia. *Eurasian Journal of Soil Science*, **39**, 44-52.
284. Rossi J., Govaerts, A., De Vos, B., Verbist, B., Vervoort, A., Poesen, J., Muys, B. and J. Deckers, 2009. Spatial structures of soil organic carbon in tropical forests—A case study of Southeastern Tanzania. *Catena*, **77**, 19-27.
285. Rubino M., Lubritto, C., D'Onofrio, A., Terrasi, F., Glexiner, G. and M.F. Cotrufo, 2007. An isotopic method for testing the influence of leaf litter quality on carbon fluxes during decomposition. *Oecologia*, **154**, 155-166.
286. Rumpel C., Chaplot, V., Chabbi, V., Largeau, C. and C. Valentine, 2008. Stabilization of HF- soluble and HCl resistant organic matter in sloping tropical soils under slash and burn agriculture. *Geoderma*, **145**, 347-354.
287. Rumpel C., Eusterhues, K. and I. Kogel-Knabner, 2004. Location and chemical composition of stabilized organic carbon in topsoil and subsoil horizons of two acid forest soils. *Soil Biology & Biochemistry*, **36**, 177-190.
288. Rumpel C., Kogel-Knabner, I. and F. Bruhn, 2002. Vertical distribution, age, and chemical composition of organic carbon in two forest soils of different pedogenesis. *Organic Geochemistry*, **33**, 1131-1142.

LITERATURE CITED

289. Russell A.E., Raich, J.W., Valverde-Barrantes, O.J. and R.F. Fisher, 2007. Tree species effects on soil properties in experimental plantations in tropical moist forests. *Soil Science Society of America Journal*, **71**(4), 1389-1397.
290. Ryan M.G. and B.E. Law, 2005. Interpreting, measuring, and modeling soil respiration. *Biogeochemistry*, **73**, 3-27.
291. Sabine C.L., Feely, R.A., Gruber, N., Key, R.M., Lee, K., Bullister, J.L., Wanninkhof, R., Wong, C.S., Wallace, D.W.R., Tilbrook, B., Millero, F.J., Peng, T., Kozyr, A., Ono, T. and A.F. Rios, 2004. The oceanic sink for anthropogenic CO₂. *Science*, **305**, 367-371.
292. Sabnis, S.D. and J.C. Amin, 1992. Eco-Environmental studies of Sardar Sarovar Environs. The M.S. University of Baroda. *Environment Series*, **2**, 1-388.
293. Sanaullah M., Chabbi, A., Lemaire, G., Charrier, X. and C. Rumpel, 2009. How does plant leaf senescence of grassland species influence decomposition kinetics and litter compounds dynamics?. *Nutrient cycling in Agroecosystems*. **88**, 159-171.
294. Santilli M., P. Moutinho, S. Schwartzman, D. Nepstad, L. Curran, and C. Nobbre, 2005. Tropical deforestation and Kyoto protocol. *Climatic Change*, **71**, 267-276.
295. Santruckova H., Bird, M.I., Frouz, J., Sustr, V. and K. Tajovsky, 2000. Natural abundance of ¹³C in leaf litter as related to feeding activity of soil invertebrates and microbial mineralization. *Soil Biology & Biochemistry*, **32**, 1793-1797.
296. Sayer E.J., Powers, J.S., and E.V.J. Tanner, 2007. Increased litterfall in tropical forests boosts the transfer of soil CO₂ to atmosphere. *PLoS ONE*, **12**, e1299.
297. Sayyad E., S. M. Hosseini, J. Mokhtari, R. Mahdavi, S. G. Jalali, M. Akbarinia, and M. Tabari, 2006. Comparison of growth, nutrition and soil properties of pure and mixed stands of *Populus deltoides* and *Alnus subcordata*. *Silva Fennica*, **40**, 27-35.
298. Schiermeier Q., 2001. Cycle studies see carbon sinks rise to prominence. *Nature*, **414**, 385.
299. Schimel D., Mellilo, J., Tian, H., McGuire, A.D., Kicklighter, D., Kittel, T., Rosenbloom, N., Running, S., Thornton, P., Ojima, D., Parton, W., Kelly, R., Sykey, M., Neilson, R. and B. Rizzo, 2000. Contribution of increasing CO₂ and climate to carbon storage by ecosystems in the United States. *Science*, **287**, 2004-2006.

LITERATURE CITED

300. Schimel D.S., 1995. Terrestrial ecosystems and the carbon cycle. *Global Change Biology*, **1**, 77-91.
301. Schimel D.S., Parton, W.J., Kittel, T.G.F. Ojima, D.S. and C.V. Cole, 1990. Grassland biogeochemistry: links to atmospheric processes. *Climatic Change*, **17**, 3-25.
302. Schlesinger W.H., 1991. *Biogeochemistry: An Analysis of Global Change*. Academic Press, London.
303. Schlesinger W.H. and J.A. Andrews, 2000. Soil respiration and the global carbon cycle. *Biogeochemistry*, **48**, 7-20.
304. Schlesinger W.H., 1977. Carbon balance in terrestrial detritus. *Annual Review of Ecology, Evolution, and Systematics*, **8**, 51-81.
305. Schlesinger W.H., 1990. Evidence from chronosequence studies for a low carbon storage potential of soils. *Nature*, **348**, 232-234.
306. Schlesinger W.H., 1999. Carbon sequestration in soils. *Science*, **284**, 2095.
307. Schumacher B.A., 2002. Methods for the determination of total organic carbon (TOC) in soils and sediments, Ecological Risk Assessment Support Center Office of Research and Development US. Environmental Protection Agency, pp.23.
308. Schwendenmann L. and E. Pendall, 2008. Response of soil organic matter dynamics to conversion from tropical forest to grassland as determined by long-term incubation. *Biology & Fertility of Soils*, **44**, 1053-1062.
309. Schwendenmann L., and E. Pendall., 2006. Effects of forest conversion into grassland on soil aggregate structure and carbon storage in Panama: evidence from soil carbon fractionation and stable isotopes. *Plant and soil*, **288**, 217-232.
310. Scott H.J., 1999. Characteristics of soils in the tropical rainforest biome of Biosphere 2 after 3 years. *Ecological Engineering*, **13**, 95-106.
311. Scurlock J.M.O., 1999. Bamboo: An Overlooked Biomass Resource?, Oak Ridge National Laboratory Oak Ridge, Tennessee 37831-6422 managed by Lockheed Martin Energy Research Corp. for the U.S. Department of Energy, pp. 23.
312. Seneviratne G., 2000. Litter quality and nitrogen release in tropical agriculture: a synthesis. *Biology and Fertility of Soils*, **31**, 60-64.
313. Shrestha B.M., Singh, B.R., Sitaula, B.K., Lal, R. and R.M. Bajracharya, 2007. Soil Aggregate- and Particle-Associated Organic Carbon under Different Land Uses in Nepal. *Soil Science Society of America Journal*, **71**, 1194-1203.

LITERATURE CITED

314. Shrestha B.M., Sitaula, B.K., Singh, B.R. and R.M. Bajracharya, 2004. Soil organic carbon stocks in soil aggregates under different land use systems in Nepal. *Nutrient Cycling in Agroecosystems*, **70**, 201-213.
315. Shukla P.K., 2009. Nutrient dynamics of Teak plantations and their impact on soil productivity - A case study from India, XIII World Forestry Congress Buenos Aires, Argentina, 18 – 23 October, 1-11.
316. Siegenthaler U. and J. L. Sarmiento, 1993. Atmospheric carbon dioxide and the ocean. *Nature*, **359**, 119-125.
317. Silverstein R.M. and F.X. Webster, F.X., 2002. Proton Magnetic Resonance Spectrometry In: Spectrometric identification of Organic Compounds. John Wiley and sons, Inc New York, 144-216.
318. Singh O., Sharma, D.C. and J.K. Rawat, 1993. Production and decomposition of leaf litter in SAL, Teak, Eucalyptus and Poplar forests in Uttar Pradesh. *Indian Forester*, **119 (2)**, 112-121.
319. Six G., Guggenberger, G., Paustian, K., Haumaier, L., Elliott, E.T. and W. Zech, 2001. Sources and composition of soil organic matter fractions between and within soil aggregates. *European Journal of Soil Science*, **52**, 607-618.
320. Six J. and J.D. Jastrow, 2002. Organic matter turnover. *Encyclopedia of soil science*, 936-942.
321. Six J., Callewaert, P., Degryze, S., Morris, S.J., Gregorich, E.G., Paul, E.A. and K. Paustian 2002. Measuring and understanding carbon storage in afforested soils by physical fractionation. *Soil Science Society of America Journal*, **66**, 1981-1987.
322. Six J., Elliot, E.T., Paustian, K. and J.W. Doran, 1998. Aggregation and soil organic matter accumulation in cultivated and native grassland soils. *Soil Science Society of America Journal*, **62**, 1367-1377.
323. Six J., Elliott, E.T. and K. Paustian, 2000. Soil macroaggregate turnover and microaggregate formation: a mechanism for C sequestration under no-tillage agriculture. *Soil Biology & Biochemistry*, **32**, 2099-2103.
324. Skaggs T.H., Arya, L.M., Shouse, P.J. and B.P. Mohanty, 2001. Estimating particle-size distribution from limited soil texture data. *Soil Science Society of America Journal*, **65**, 1038-1044.
325. Sombroek W.G., Nachtergaele, F.O. and A. Hebel, 1993. Amounts, dynamics and sequestering of carbon in tropical and subtropical soils. *Ambio*, **22**, 417-426.
326. Stern N., 2007. The price of change: Economics of climate change. *IAEA bulletin*, **48(2)**, 25-28.

LITERATURE CITED

327. Stuvier M. and P.J. Reimer, 1993. Extended ^{14}C database and revised CALIB 3.0 ^{14}C age calibration program. *Radiocarbon*, **35(1)**, 215-230.
328. Subramanian K., Gadball, V.M., Rambabu, N. and M. Jha, 1995. Effects of culling on planting stock production in teak nursery. *Indian Forester*, **121(6)**, 465-468.
329. Subramanian K., Mandal, A.K., Rambabu, N., Chundamannil, M. and B. Nagarajan, B. 2000. Site, technology and productivity of teak plantations in India. In: Enters, T. and C.T.S. Nair, (eds.) *Site, technology and productivity of teak plantations*. FORSPA Publication No. 24/2000. F.A.O., Bangkok. 51-68.
330. Sundquist E.T., 1993. The global carbon dioxide budget. *Science*, **259**, 934-41.
331. Sundrapandian S.M. and P.S. Swamy, 1999. Litter production and leaf litter decomposition of selected tree species in tropical forests at Kodayar in the Western Ghats, India. *Forest Ecology and Management*, **123**, 231-244.
332. Swift M.J. and Heal, O.W. and J.M. Anderson. 1979. Decomposition in terrestrial ecosystems. Blackwell scientific publications, Oxford.
333. Takahashi S., Nakagami, K., Sakanoue, S., Itano, S. and H. Kitita, 2007. Soil organic carbon storage in grazing pasture converted from forest on Andosol soil. *Grassland Science*, **53**, 210-216.
334. The Royal Society 2005. Ocean Acidification Due to Increasing Atmospheric Carbon Dioxide, The Clyvedon Press Ltd., Cardiff, UK.
335. Thornley J.H.M. and M.G.R. Cannell, 2001. Soil carbon storage response to temperature: an Hypothesis. *Annals of Botany*, **87**, 591-598.
336. Troup R. S., 1921. The silviculture of Indian trees Vol.II, Clarendon Press, Oxford. 697-769.
337. Trumbore S. E., Chadwick, O. A., and R. Amundson, 1996. Rapid exchange between soil carbon and atmospheric carbon dioxide driven by temperature change. *Science*, **272**, 393-396.
338. Trumbore S., 2000. Age of soil organic matter and soil respiration: Radiocarbon constraints on belowground carbon dynamics. *Ecological Applications*, **10(2)**, 399-411.
339. Trumbore S.E., Davidson, E.A., deCamargo, P.B., Nepstad, D.C. and L.A. Martinelli, 1995. Below ground cycling of carbon in forests and pastures of eastern Amazonia. *Global Biogeochemical Cycles*, **9**, 515-528.

LITERATURE CITED

340. Trumper K., Bertzky, M., Dickson, B., van der Heijden, G., Jenkins, M. and P. Manning, 2009. The Natural Fix? The role of ecosystems in climate mitigation. A UNEP rapid response assessment. United Nations Environment Programme, UNEPWCMC, Cambridge, UK.
341. Tschakert P., 2001. Human dimensions of carbon sequestration: a political ecology approach to soil fertility management and desertification control in the Old Peanut Basin of Senegal. *Arid Lands Newsletter* May-June 2001.
342. U.S. Department of Energy, 2005. DOE Mission: Carbon cycling and Sequestration. Genomics: GTL Roadmap.
343. Usuga J.C.L., Torob, J.A.R., Alzateb, M.V.R., and Á. J. L. Tapiasc, 2010. Estimation of biomass and carbon stocks in plants, soil and forest floor in different tropical forests. *Forest Ecology and Management*, **260**, 1906-1913.
344. Valentini R., Matteucci, G., Dolman, A.J., Schulze, E.D., Rebmann, C., Moors, E.J., Granier, A., Gross, P., Jensen, N.O., Pilegaard, K., Lindroth, A., Grelle, A., Bernhofer, C., Grunwald, T., Aubinet, M., Ceulemans, R., Kowalski, A.S., Vesala, T., Rannik, U., Berbigier, P., Loustau, D., Guomundsson, J., Thorgeirsson, H., Ibrom, A., Morgensten, K., Clement, R., Moncrieff, J., Montagnani, L., Minerbi, S. and P.G. Jarvis, 2000. Respiration as the main determinant of carbon balance in European forests. *Nature*, **404**, 861-864.
345. van Keulen H., 2001. Tropical soil organic matter modelling: problems and prospects. *Nutrient Cycling in Agroecosystems* **61(1-2)**, 33-39.
346. Vanlauwe B., 2004. Integrated soil fertility management research at TSBF: the framework, the principles, and their application. In: Bationo, A. (Ed.), *Managing Nutrient Cycles to Sustain Soil Fertility in Sub-Saharan Africa*. Academy Science Publishers, Nairobi, Kenya.
347. Veenendaal E.M., Kolle, O. and J. Lloyd, 2004. Seasonal variation in energy fluxes and carbon dioxide exchange for a broad-leaved semi-arid savanna (Mopane woodland) in Southern Africa. *Global Change Biology*, **10**, 318-328.
348. Velayutham M., Pal, D.K. and T. Bhattacharyya, 2000. Organic carbon stock in soils of India. In *Global Climatic Change and Tropical Ecosystems* (R. Lal, J.M. Kimble and B.A. Stewart, Eds.) Lewis publishers, Boca Raton, F.L. 71-96.

LITERATURE CITED

349. Vieira S., Trumbore, S., Camargo, P.B., Selhorst, D., Chambers, J.Q., Higuchi, N. and L.A. Martinelli, 2005. Slow growth rates of Amazonian trees: Consequences for carbon cycling. *Proceedings of National Academy of Sciences of USA*, **102**, 18502-18507.
350. Walkley A. and I.A. Black, 1934. An examination of the Degtjareff method for determining soil organic matter and proposed modifications of the chromic acid titration method. *Soil Science*, **37**, 29-38.
351. Wang D.D., Shi, X.Z., Lu, X.X., Wang, H.J., Yu, D.S., Sun, W.X. and Y.C. Zhao, 2010. Response of soil organic carbon spatial variability to the expansion of scale in the uplands of Northeast China. *Geoderma*, **154**, 302-310.
352. Wang Q., Wang, S. and Y. Huang, 2008. Comparisons of litter fall, litter decomposition and nutrient return in a monoculture *Cunninghamia lanceolata* and a mixed stand in southern china. *Forest Ecology and Management*, **255**, 1210-1218.
353. Wang S., M.Huang, X.Shao, R.A.Mickler, K.Li, and J.Ji, 2004. Vertical distribution of organic carbon in China. *Environmental Management*, **33**, S200-S209.
354. Wang S., Tian, H., Liu, J. and S. Pan, 2003. Pattern and change of soil organic carbon storage in china: 1960s- 1980s. *Tellus*, **55B**, 416-427.
355. Wang Y, and R. Amundson, 1996. Radiocarbon dating of soil organic matter. *Quaternary Research*, **45**, 282-288.
356. Wang Y. and Y.P. Hseich, 2002. Uncertainties and prospects in the study of the soil carbon dynamics. *Chemosphere*, **49**, 791-804.
357. Webster E.A., Hopkins, D.W., Chudek, J.A., Haslam, S.F.I., Simek, M. and T. Picek, 2001. The Relationship between Microbial Carbon and the Resource Quality of Soil Carbon. *Journal of Environmental Quality*, **30**, 147-150.
358. West K., 2008. Essential chemistry: Carbon chemistry, Chelsea House An imprint of Infobase Publishing 132 West 31st Street New York NY 10001, pp.117.
359. White K.J., 1991. Teak: some aspects of research and development. RAPA Publication. pp. 53.
360. Whittaker R. H. and G.E. Likens 1975. The biosphere and man. In: Lieth, H. and Whittaker, R. H. (eds), *Primary Productivity of the Biosphere*. Ecol. Stud. 14, 305-328, Springer-Verlag, Berlin, Heidelberg, New York.

LITERATURE CITED

361. Winogradsky S., 1924. Sur la microflora autochtone de la terre arable. *Comptesrendus hebdomadaires des seances de l'Academie des Sciences* (Paris) D, **178**, 1236–1239.
362. Wisniewskil J., R. K. Dixon, J.D. Kinsrnan, R. Neil Sampson, and A.E. Lugo, 1993. Carbon dioxide sequestration in terrestrial ecosystems. *Climate Research*, **3**, 1-5.
363. Witt C., Gaunt, J.L., Glaicia, C.C., Ottow, J.C.G. and H.U. Neue, 2000. A rapid chloroform-fumigation extraction method for measuring soil microbial biomass carbon and nitrogen in flooded rice soils. *Biology and Fertility of Soil*, **30**, 510-519.
364. Wynn J.G., Harden, J.W. and T.I. Fries, 2006. Stable carbon isotope depth profiles and soil organic carbon dynamics in the lower Mississippi basin. *Geoderma*, **131**, 89-109.
365. Xiao C., Janssens, I.A., Liu, P., Zhou, Z. and O.J. Sun, 2007. Irrigation and enhanced soil carbon input effects on below-ground carbon cycling in semi arid temperate grasslands. *New Phytologist*, **174**, 835-846.
366. Yadava M.G. and R. Ramesh, 1999. Speleothems - Useful Proxies for Past Monsoon Rainfall. *Journal of Scientific and Industrial research*, **58**, 339-348.
367. Yang Q., Duan, Z., Wang, Z., He, K., Sun, Q. and Z. Peng, 2008. Bamboo resources, utilization and ex-situ conservation in Xishuangbanna, South-eastern China. *Journal of Forestry Research*, **19(1)**, 79-83.
368. Yi Z., S.Fi, W. Yi, G.Zhou, J.Mo, D.Zhang, M.Ding, X.Wang, and L.Zhou., 2007. Partisioning soil respiration of subtropical forests with different successional stages in south China. *Forest Ecology and Management*, **243**, 178-186.
369. Yimer F., Ledin, S. and A. Abdelkadir, 2006. Soil organic carbon and total nitrogen stocks as affected by topographic aspect and vegetation in the Bale Mountains, Ethiopia. *Geoderma*, **135**, 335-344.
370. Yohannes Y., Shibistova, O., Abatea, A., Fetened, M. and G. Guggenberger, 2011. Soil CO₂ efflux in an Afromontane forest of Ethiopia as driven by seasonality and tree species. *Forest Ecology and Management*, **261**, 1090-1098.
371. Zhang D., Hui, D., Luo, Y. and G. Zhou, 2008. Rates of litter decomposition in terrestrial ecosystems: global patterns and controlling factors. *Journal of plant ecology*, **1(2)**, 85-93.

LITERATURE CITED

372. Zhang X., and D. Xu, 2003. Potential carbon sequestration in china's forests. *Environmental Science and Policy*, **6**, 421-432.
373. Zhou B., Fu, M., Xie, J., Yang X. and Z. Li, 2005. Ecological functions of bamboo forest: Research and Application. *Journal of Forestry Research*, **16(2)**, 143-147.
374. Zhou G., Liu, S., Li, Z., Zhang, D., Tang, X., Zhou, C., Yan, J. and J. Mo, 2006. Old-growth forests can accumulate carbon in soils. *Science*, **314**, 1417.
375. Zimmer M., 2002. Is decomposition of woodland leaf litter influenced by its species richness?. *Soil Biology & Biochemistry*, **34**, 277-284.
- ✓ 376. Zimov S.A., Schuur, E.A.G. and F. S. Chapin III, 2006. Permafrost and the Global Carbon Budget. *Science*, **312**, 1612-1613.