

Liste bibliographique de Bruno DELVAUX

1. Thèse de doctorat

Delvaux B. (1988). Constituants et propriétés de surface des sols dérivés de pyroclastes basaltiques du Cameroun occidental. Approche génétique de leur fertilité. *Thèse, UCL, Unité de Chimie des Interfaces*, 335 p.

2. Contributions à ouvrages collectifs

1. **Delvaux B.** & Herbillon (1994) Alisols. In '*World Reference Base for Soil Resources*', O.C. Spaargaren (Ed.), draft edition, *ISSS-ISRIC-FAO, Roma*: 118-123.
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3. **Delvaux B.**, Agapkina G.I., Bunzl K., Rafferty B., Kliashtorin A., Kruyts N. and Maes E. (1996) Mechanisms controlling radionuclide mobility in forest soils. In: *The radiological consequences of the Chernobyl accident*, A. Karaoglou, G. Desmet, G.N. Kelly and H.G. Menzel (Eds.), *Proceedings of the 1st International Conference, Minsk, Belarus, 18-22 March 1996, Publ. European Commission EUR 16544 EN*: 193-196.
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8. **Delvaux B.** & Brahy V. (2001) Alisols. In *Lecture Notes on The Major Soils of The World*, P. Driessen, J. Deckers, O. Spaargaren & F. Nachtergaele (Eds.), *World Soil Resources Reports, 94, FAO, Rome*: 163-175.
9. **Delvaux B.**, Kruyts N., Maes E. & Smolders E. (2001) Fate of radiocaesium in soil and rhizosphere. In *Trace Elements in the Rhizosphere*, G.R. Gobran, W.W. Wenzel & E. Lombi (Eds.), CRC Press LLC, Boca Raton, Florida: 61-91.
10. Dufey J.E., Genon J.G., Jaillard B., Calba H., Rufyikiri G. & **Delvaux B.** (2001) Cation exchange on plant roots involving Aluminium: experimental and modelling. In *Fate of trace elements in the rhizosphere*, G.R. Gobran, W.W. Wenzel & E. Lombi (Eds.), CRC Press LLC, Boca Raton, Florida: 228-252.
11. Rufyikiri G., Kruyts N., Declerck S., Thiry Y., **Delvaux B.**, Dupré de Boulois H. & Joner E.J. (2005) Uptake, assimilation and translocation of mineral elements in monoxenic cultivation systems. In *In Vitro Culture of Mycorrhizas*, Declerck S.; Strullu D.G. & Fortin, J.A. (Eds.), Springer-Verlag, Heidelberg, Germany: 201-215.
12. Julien J.-L., Charlet L., Dambrine E., **Delvaux B.**, Dufey J.E., Fardeau J.-C., Le Cadre E. & Tessier D. (2005) L'acidification des sols. Cap.23 In *Sols et Environnement*, Girard M.-C., Walter Ch., Remy J.-C., Berthelin J. & J.-L. Morel (Eds.), Dunod, Paris, France: 516-537.

3. Articles (international referees)

3.1. Articles (peer-reviewed) publiés dans des revues scientifiques internationales

Articles publiés ou sous presse (IF 2000 pour les articles 1986-1999) ; IF de l'année de publication pour les articles 2000-2007)

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2. **Delvaux B.**, Herbillon A.J., Dufey J.E. & Vielvoye L. (1988) Adsorption sélective du potassium par certaines halloysites (10 Å) de sols tropicaux développés sur roches volcaniques. Signification minéralogique. *Comptes Rendus Acad. Sci. Paris*, T 307, série II: 311-317. IF: 0.407
3. **Delvaux B.**, Herbillon A.J. & Vielvoye L. (1989) Characterization of a weathering sequence of soils derived from volcanic ash in Cameroon. Taxonomic and agronomic implications. *Geoderma*, 45: 375-388. IF: 1.068
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7. Fontaine S., **Delvaux B.**, Dufey J.E. & Herbillon A.J. (1989) Potassium exchange behaviour in Caribbean volcanic ash soils under banana cultivation. *Plant and Soil*, 120: 283-290. IF: 1.218
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9. Fontaine S. & **Delvaux B.** (1989) Propriétés d'échange ionique de sols volcaniques de la Martinique. Application à la programmation de la fumure potassique. *Fruits*, 44 (3): 123-133.
10. **Delvaux B.** (1989) Rôle des constituants de sols volcaniques et de leurs propriétés de charge dans le fonctionnement de l'agrosystème bananier au Cameroun. *Fruits*, 44 (6): 309-319.
11. **Delvaux B.** & Guyot Ph. (1989) Caractérisation de l'enracinement du bananier au champ. Incidences sur les relations sol-plante dans les bananeraies intensives de Martinique. *Fruits*, 44 (12): 633-647.
12. **Delvaux B.**, Herbillon A.J., Dufey J.E. & Vielvoye L. (1990) Surface properties and clay mineralogy of hydrated halloysitic soil clays. I. Existence of interlayer specific sites. *Clay Minerals*, 25: 129-139.
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17. Godefroy J., **Delvaux B.** & Dormoy M. (1990) Dynamique des éléments minéraux fertilisants dans un sol d'alluvions montmorillonitiques de Martinique sous culture bananière. Application à la programmation de la fumure. *Fruits*, 45: 543-551.

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91. Titeux H. & **Delvaux B.** (2009) Experimental study of DOC, nutrients and metals release from forest floors developed under beech (*Fagus sylvatica* L.) on a Cambisol and a Podzol. *Geoderma*, 148: 291–298. DOI 10.1016/j.geoderma.2008.10.013. [I.F.: 1.898](#)
92. Delvigne C., Opfergelt S., Cardinal D., **Delvaux B.** & André L. (2009) Distinct silicon and germanium pathways in the soil-plant system: The case studies of banana and horsetails. *Journal of Geophysical Research – Biogeosciences*. Accepted. [I.F.: 2.953](#)

Articles soumis:

1. Titeux H. & **Delvaux B.** Release of dissolved organic carbon, dissolved inorganic nitrogen, ions and metals from forest floor horizons as related to their decomposition stage. Submitted to *Geoderma*.
2. Trum F., Titeux H., Ranger J. & **Delvaux B.** Tree species impacts the forest floor composition and the release of carbon, nitrogen and cationic nutrients. Submitted to *Plant and Soil*.

3. Cornélis J.-Th., Ranger J., Iserentant & **Delvaux B.** Tree species impacts the uptake of silicon by forest vegetation and the release of dissolved silicon to the hydrosphere. Submitted to *Biogeochemistry*.
4. Opfergelt S., de Bournonville G., Cardinal D., André L., Delstanche S. and **Delvaux B.** Impact of soil weathering degree on silicon isotopic fractionation during adsorption onto iron oxides in basaltic ash soils, Cameroon. Submitted to *Geochimica et Cosmochimica Acta*.
5. Opfergelt S., Cardinal D., André L., Delvigne C. and **Delvaux B.** Silicon cycle in the soil-plant system: $\delta^{30}\text{Si}$ and Ge/Si study on basaltic ash soils under banana, Cameroon. Submitted to *Geochimica et Cosmochimica Acta*.

3.2. Articles (peer-reviewed) publiés dans des actes de congrès internationaux

1. **Delvaux B.**, Lassoudière A., Perrier X. & Marchal J. (1984) Une méthodologie d'étude des relations sol-plante-techniques culturales : résultats pour la culture bananière camerounaise. *Proceedings of the VIth International Colloquium for the Optimization of Plant Nutrition, Montpellier, France, août 1984*: p. 847-856. Poster.
2. **Delvaux B.** (1990) Weathering stage, clay mineralogy and charge properties of volcanic ash soils from Cameroon. Implications for the management of their fertility. *Transactions of the XIVth International Congress of Soil Science, Kyoto, Japan*, vol. VII: p. 22-27. Oral communication.
3. Herbillon A.J., **Delvaux B.**, Rouiller J. & Ngakanou D. (1990) Halloysites from tropical ash derived soils as minerals at the border between high activity and low activity clays. *Proceedings IXth International Soil Classification Workshop, Alma Ata, USSR, 11-19 september 1989*: p. 320-329. **Invited conference**.
4. Deckers J., **Delvaux B.** & Dudal R. (1994) Contrasting properties of Acric, Alic, Lixic and Luvic soils. *XVth World Congress of Soil Science Accapulco, Mexico, July 1994; Transactions of the congress*, vol. 6A: p. 834-838. **Invited conference**.
5. **Delvaux B.** & Herbillon A.J. (1995) Pathways of mixed-layer kaolin-smectite formation in soils. In '*Clays control the environment*', Editors. G.J. Churchman, R.W. Fitzpatrick & R.A. Eggleton, *Proceedings of the Xth International Clay Conference, Adelaide, Australia, July 1993*: p. 457-461. Oral communication.
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7. Brahy V. & **Delvaux B.** (1997) Current soil processes in a Haplic Alisol - Dystric Cambisol loess derived toposequence. *International Symposium on Soil System Behaviour in Time and Space, Vienna, Austria, November 19-21 1997*, Editors A. Brandstetter, W.W. Wenzl, S. Scharz & W.E.H. Blum, *Mitteilungen der Österreichischen Bodenkundlichen Gesellschaft*, Heft 55: p. 201-204. Oral communication.
8. **Delvaux B.**, Declerck S. & Schadeck S. (1999) Properties and management of soils in relation with environmental friendly sustainable banana production. *Proceedings of the 1st International Workshop on production of organic and environmentally friendly banana, International Network for the Improvement of Banana and Plantain (INIBAP), 26-29 July 1998, San José, Costa Rica*. In Press. **Invited conference**.
9. **Delvaux B.** (1999) Banana cropping systems: characterisation, dynamics and modelling in view of improving the management of soil fertility. **Introducing paper, Chairman** of the Workshop n°4 'Production Systems', *Bananas and Food security. Les productions bananières: un enjeu économique majeur pour la sécurité alimentaire*. 1st International symposium, Douala, Cameroon, 10-14 November 1998: p. 637-645. **Invited conference**.
10. **Delvaux B.**, Kruyts N. & Bouchama H. (2000) FES-RES speciation of radiocesium in soils as a prerequisite to predict Cs⁺ mobility in the rhizosphere. In: "*Distribution and Speciation of Radionuclides in the Environment*", J. Inaba, S. Hisamatsu & Y. Ohtsuka Eds., IES, Japan, 2000, International Workshop on Distribution and Speciation of Radionuclides in the Environment, Rokkasho, Aomori, Japan, 11-13 octobre 2000: p. 181-187. **Invited conference**.
11. Rufyikiri G., Thiry Y., **Delvaux B.** & Declerck S. (2002) Relative extent of uranium accumulation and translocation by an arbuscular fungus *Glomus intraradices* under root organ culture conditions. In Borretzen P., Jolle T., Strand P. (Eds), *Proceedings of the International Conference on Radioactivity in the Environment*, 1-5 September 2002, Principality of Monaco, pp. 608-614.

3.3. Articles (peer-reviewed) publiés dans des actes d'ateliers/colloques internationaux

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2. Thiry Y. & **Delvaux B.** (1997) Effects of organic acids on the radiocaesium retention by clay minerals. *Proceedings of the XXVIIth meeting of the European Society for new methods in agricultural research , Working Group 3 "Soil-plant relationships", Ghent, Belgium, 29 August - 2 September 1997*, Editor M.H. Gerzabek, *Österreichisches Forschungszentrum Seibersdorf Ges.m.b.H.*: p. 135-141. Oral communication.
3. Kruyts N. & **Delvaux B.** (1997) Influence of clay mineralogy on the rhizospheric mobilization of radiocaesium in forest acid soils derived from loessic sands. *Proceedings of the XXVIIth meeting of the European Society for new methods in agricultural research , Working Group 3 "Soil-plant relationships", Ghent, Belgium, 29 August - 2 September 1997*, Editor M.H. Gerzabek, *Österreichisches Forschungszentrum Seibersdorf Ges.m.b.H.*: p. 156-162. Oral communication.
4. Maes E. & **Delvaux B.** (1997) Influence of the nature of clay minerals on $^{137}\text{Cs}^+$ fixation in a weathering sequence of sandy soils: validation of a model based on mica weathering. *Proceedings of the XXVIIth meeting of the European Society for new methods in agricultural research , Working Group 3 "Soil-plant relationships", Ghent, Belgium, 29 August - 2 September 1997*, Editor M.H. Gerzabek, *Österreichisches Forschungszentrum Seibersdorf Ges.m.b.H.*: p. 142-148. Oral communication.

4. Abstracts de conférences

4.1. Conférences internationales

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2. **Delvaux B.** & Herbillon A.J. (1989) Mineralogy and surface properties of some halloysite-rich soil clays. *Abstracts of the IXth International Clay Conference, Strasbourg, France*: p. 107. Poster.
3. **Delvaux B.**, Tessier D; & Herbillon A.J. (1989) Microstructure of halloysite and kaolinite rich materials from Western Cameroon volcanic soils as influenced by compensating cations (K, Mg). *Abstracts of the IXth International Clay Conference, Strasbourg, France*: p. 108. Poster.
4. Deckers J., **Delvaux B.** & Dudal R. (1994) Contrasting properties of Luvic versus Alic, and of Lixic versus Acric soils, a pragmatic approach. *XVth World Congress of Soil Science, Accapulco, Mexico, July 1994; Transactions of the congress, Vol. 6B*: p. 111-112. Poster.
5. Hennebert P., Tessens E., **Delvaux B.** & Tourenne D. (1994) Testing a modified FAO land evaluation method in Burundi. *XVth World Congress of Soil Science, Accapulco, Mexico, July 1994; Transactions of the congress, Vol. 6B*: p. 398-399. Poster.
6. Froment P., Kruyts N. & **Delvaux B.** (1995) Fixation of radiocaesium by 2:1 clay minerals in various K-Ca scenarios. In *Euroclay'95, Clays and Clay Materials Sciences, VIIIth Meeting of the European Clay Groups, Leuven, 1995*. Abstracts: p. 308-309. Poster.
7. Maes E., Thiry Y. & **Delvaux B.** (1995) Fixation of radiocaesium in an acid brown forest soil. In *Euroclay'95, Clays and Clay Materials Sciences, VIIIth Meeting of the European Clay Groups, Leuven, 1995*. Abstracts: p. 299-300. Poster.
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10. Brahy V. & **Delvaux B.** (1996) Cationic denudation in a toposequence luvisol-podzoluvisol under a broad-leaf forest. *IInd International Symposium 'Effect of mineral-organic-microorganisms interactions on soil and freshwater environments', Nancy, France, 3-6 September 1996*, Abstracts: p. 5. Poster.
11. Kruyts N. & **Delvaux B.** (1996) Evaluation of radiocaesium interception potential by plant roots in a forest soil. *IInd International Symposium 'Effect of mineral-organic-microorganisms interactions on soil and freshwater environments', Nancy, France, 3-6 September 1996*, Abstracts: p. 15. Oral communication.
12. Maes E. & **Delvaux B.** (1996) Fixation of radiocaesium traces in a weathering sequence mica -> hydroxy interlayered vermiculite as influenced by organics. *IInd International Symposium 'Effect of mineral-organic-microorganisms interactions on soil and freshwater environments', Nancy, France, 3-6 September 1996*, Abstracts: p. 17. Oral communication.
13. Brahy V. & **Delvaux B.** (1996) Dynamic of a loess-derived soil toposequence: characterization of soils and experimental design. *Xth International Working Meeting on Soil Micromorphology, Moscow, Russia, 8-13 July, 1996*. Abstracts: p. 22. Oral communication.
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15. Declerck S., Bottu P., Ouwerx C, Mestdagh M., Corbisier-Colson A.-M. & **Delvaux B.** (1997) Short-term cold storage and N₂ drying of in vitro produced spores of an arbuscular mycorrhizal fungi entrapped in alginate beds. *Proceedings of the International Workshop Bioencapsulation VI, Barcelona, Spain, August 30 - September 1, 1997*: p. 140-144. Poster.
16. Schadeck S., Risede J.-M. & **Delvaux B.** (1998) Banana root rot disease caused by *Cylindrocladium* sp. as related to soil type. *XVIth World Congress of Soil Science, Montpellier, France, 20-26 August 1998*. Summaries, Vol.II: p. 754. Oral communication.
17. Brahy V. & **Delvaux B.** (1998) Current acidification processes in a loess derived soil toposequence under forest in central Belgium. *XVIth World Congress of Soil Science, Montpellier, France, 20-26 August 1998*. Summaries, Vol.II: p. 610. Poster.
18. Kruyts N., Maes E. & **Delvaux B.** (1998) Radiocaesium absorption by plant roots in a forest podzol: relationship with trace Cs fixation properties and clay mineralogy. *XVIth World Congress of Soil Science, Montpellier, France, 20-26 August 1998*. Summaries, Vol.II: p. 782. Poster.
19. Bartoli F., Burtin G., Philippy R, Schouller E., Tekely P., Hernandez-Moreno J. & **Delvaux B.** (1998) Physical properties of volcanic soils: the poorly-ordered Al-Si effect. *XVIth World Congress of Soil Science, Montpellier, France, 20-26 August 1998*. Summaries, Vol.I: p. 82. Poster.
20. Rufyikiri G., Dufey J. & **Delvaux B.** (1998) Aluminium effect on water and nutrient uptake by four banana cultivars. *XVIth World Congress of Soil Science, Montpellier, France, 20-26 August 1998*. Summaries, Vol.II: p. 785. Poster.
21. **Delvaux B.** & Declerck S. (1998) Properties and management of soils in relation with environmental friendly sustainable banana production. *Abstracts of the International Workshop on production of organic and environmentally friendly banana, International Network for the Improvement of Banana and Plantain (INIBAP), 26-29 July 1998, San José, Costa Rica*: p. 5. **Invited conference.**
22. **Delvaux B.** (1998) Banana cropping systems: characterization, dynamics and modelling in view of improving the management of soil fertility. Introducing paper, Chairman of the Workshop n°4 'Production Systems', *Ist International symposium "Bananas and food security", 10-14 November 1998, Douala, Cameroon*. Abstracts: p. 20. **Invited conference.**
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24. Draye X., **Delvaux B.** and Swennen R. (1998) Breeding from root architecture: first lessons from banana. *International Symposium Molecular Physiology II: Engineering Crops for Hostile Environments, IACR-Rothamsted, 14-16 December 1998*. Abstracts: p. 21. Oral communication.
25. **Delvaux B.**, Maes E., Thiry Y. & Kruyts N. (1999) Fate of radiocaesium in forests and forest soils: a review, in *Proceedings of the 5th International Conference on the Biogeochemistry of Trace Elements, 11-15 July 1999, Vienna*, Editors W.W. Wenzel, D.C. Adriano, B. Alloway, H.E. Doner, C. Keller, N.W. Lepp, M. Mench, R. Naidu, G.M. Pierzynski: p. 66-67. **Invited conference.**
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27. Kruyts N., Sandri C. & **Delvaux B.** (1999) Rhizospheric mobilisation of radiocaesium in forest soils differing in weathering stage, clay mineralogy and organic matter content. in *Proceedings of the 5th International Conference on the Biogeochemistry of Trace Elements, 11-15 July 1999, Vienna*, Editors W.W. Wenzel, D.C. Adriano, B. Alloway, H.E. Doner, C. Keller, N.W. Lepp, M. Mench, R. Naidu, G.M. Pierzynski: p. 162-163. Oral presentation.
28. Titeux, H., Brahy, V. & **Delvaux, B.** (1999) Cu(II) complexation capacity of litter leachates and soil solutions in acid forest soils, in *Proceedings of the 5th International Conference on the Biogeochemistry of Trace Elements, 11-15 July 1999, Vienna*, Editors W.W. Wenzel, D.C. Adriano, B. Alloway, H.E. Doner, C. Keller, N.W. Lepp, M. Mench, R. Naidu, G.M. Pierzynski: p. 374-375. Oral presentation.
29. Thiry Y., Gommers A. & **Delvaux B.** (1999) Variations of radiocaesium bioavailability in bulk and rhizosphere soils as influenced by willow plant growth. in *Proceedings of the 5th International Conference on the Biogeochemistry of Trace Elements, 11-15 July 1999, Vienna*, Editors W.W. Wenzel, D.C. Adriano, B. Alloway, H.E. Doner, C. Keller, N.W. Lepp, M. Mench, R. Naidu, G.M. Pierzynski: p. 188-189. Poster.
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31. Kruyts N., Heine Ch., Vandenhove H. & **Delvaux B.** (2001) Wetting/drying cycles of K⁺-saturated smectite reduce the mobility of radiocaesium in the rhizosphere. *Proceedings of the VIth International Conference on the Biogeochemistry of Trace Elements, 29 July - 2 August 2001, Guelph, Ontario, Canada, University of Guelph*, p.559.
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34. Titeux H., de Cirugeda Helle O. & **Delvaux B.** (2001) Incubation-leaching experiments: a simple method to assess the mechanisms of metals and cations mobilization from the forest floor. *Proceedings of the XVth International Symposium on Environmental Biogeochemistry "Biogeochemical Processes and Cycling of Elements in the Environment", 11-15 September, 2001, Wroclaw, Poland*.
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36. Brahy, V. & **Delvaux B.** (2001) Disappearance of andic properties in belgian acid forest soils after liming. International Workshop *Volcanic soils: properties processes and land use*, Ponta Delgada (Azores), 3-7 October 2001, Abstracts: p. 46.
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54. Titeux H. & **Delvaux B.** (2005) Impact of mineral weathering and clay formation on organo-mineral interactions in podzolic and andic soils. *XIIIth International Clay Conference – Clay sphere: past, present and future –*, Tokyo, August 21-27, 2005. Program with abstracts: p. 69. Invited lecture (key note address).

55. Delfosse T., Elsass F. & **Delvaux B.** (2005) Amorphous Al-hydroxy-sulphate minerals in S-impacted andosols. *XIIIth International Clay Conference – Clay sphere: past, present and future* –, Tokyo, August 21-27, 2005. Program with abstracts: p. 70. Oral communication.
56. Pochet G. & **Delvaux B.** (2005) Hydric properties of brown halloysitic soils as related to clay mineralogy and charge properties. *XIIIth International Clay Conference*, Tokyo, August 21-27, 2005. *13th International Clay Conference – Clay sphere: past, present and future* –, Tokyo, August 21-27, 2005. Program with abstracts: p. 123. Poster.
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60. Opfergelt S., Delstanche S., Cardinal D., André L. & **Delvaux B.** (2006) Silicon isotopic fractionation in a tropical soil-plant system. *EOS Trans. AGU*, 87(52), Fall Meet. Suppl., *AGU Fall Meeting 2006*, San Francisco. Abstract V21B-0580.
61. Opfergelt S., Delmelle Ph., Boivin P. & **Delvaux B.** (2006) Water saturation of hydrothermal smectite-rich clay might have promoted slope instability prior to the 1998 debris avalanche at Casita volcano, Nicaragua. *EOS Trans. AGU*, 87(52), Fall Meet. Suppl., *AGU Fall Meeting 2006*, San Francisco. Abstract.
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4.2. Colloques et ateliers internationaux, nationaux et régionaux

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5. Rapports techniques

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2. **Delvaux B.** (1990) Rapport de mission en Colombie; *Projet N° CI 1-0378-F (EDB) (CEE-DGXII) FNCC-ICA-IRFA/CIRAD, 27 mai-12 juin 1990, IRFA*.
3. **Delvaux B.** (1990) Rapport de visites des plantations de la S.C.B., Côte d'Ivoire, 17-23 juin 1990, IRFA.
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5.3. Rapports internes (UCL)

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5.4. Rapports de convention de recherche

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5.5. Divers

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Certifié sincère et véritable, Louvain-la-Neuve, le 10 janvier 2009

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