

Publikationsverzeichnis: Günter Neumann

I Peer-reviewed publications in scientific journals

1. **Neumann, G., El Aschker, A., and Schwemmler, B. (1991):** L-Phenylalanine ammonia-lyase and chalcone synthase in seedlings of *Oenothera*: Plasmotype dependent regulation and tissue specific distribution. *J. Plant Physiol.* 138, 263-269.
2. **Glässgen, W.E., Hofmann, R., Emmerling, M., Neumann, G.D., and Seitz, H.U. (1992):** Structure elucidation of saccharides in anthocyanins and flavonols by means of methylation analysis and gas chromatography. *J. of Chromatography* 598, 81-87.
3. **Neumann, G., and Schwemmler, B. (1993):** Flavonoids from *Oenothera* seedlings: Identification and extranuclear control of their biosynthesis. *J. Plant Physiol.* 142, 95-102.
4. **Neumann G., and Schwemmler B. (1994):** Organ- and tissue-specific biosynthesis of flavonoids in seedlings of *Oenothera odorata* (*Onagraceae*). *Bot. Acta* 107, 95-102.
5. **Azaizeh, H.A., Neumann, G., and Marschner, H. (1995):** Effects of thiamine (vitamin B1) application on bulk soil and rhizosphere microorganisms and on thiamine released from developing bean (*Phaseolus vulgaris* L.) seedlings. *Z. Pflanzenernähr. Bodenk.* 158, 549-556.
6. **Azaizeh, H.A., Neumann, G., and Marschner, H. (1995):** Effects of thiamine on growth rates of *Rhizobium* sp. and diazotrophic bacteria cultivated in vitro at different pH. *Z. Pflanzenernähr. Bodenk.* 158, 557-562.
7. **Azaizeh, H.A., Neumann, G., and Marschner, H. (1996):** Effects of thiamine application and nitrogen fertilizer form on the number of N₂-fixing and total bacteria in the rhizosphere of maize plants. *Z. Pflanzenernähr. Bodenk.* 159, 183-188.
8. **Neumann, G., Azaizeh, H.A., and Marschner, H. (1996):** Thiamine (vitamin B1) seed treatment enhances germination and seedling growth of bean (*Phaseolus vulgaris* L.) exposed to soaking injury. *Z. Pflanzenernähr. Bodenk.* 159, 491-498.
9. **Neumann, G., Preißler, M., Azaizeh, H.A., and Römheld, V. (1999):** Thiamine (vitamin B1) deficiency in germinating seeds of *Phaseolus vulgaris* L. exposed to soaking injury. *Z. Pflanzenernähr. Bodenk.* 162, 295-300.
10. **Neumann, G., Massonneau, A., Martinoia, E., and Römheld, V. (1999):** Physiological adaptations to phosphorus deficiency during proteoid root development in white lupin. *Planta* 208, 373-382.
11. **Neumann, G., Römheld, V. (1999):** Root excretion of carboxylic acids and protons in phosphorus-deficient plants. *Plant and Soil* 211, 121-130.
12. **Neumann, G., Haake, C., and Römheld, V. (1999):** Improved HPLC-method for determination of phytosiderophores in root washings and tissue extracts. *J. Plant Nutr.* 22 (9), 1389-1402.
13. **Neumann, G., Hülster, A., and Römheld V. (1999):** PCDD/PCDF-mobilizing compounds in root exudates of Zucchini. *Organohalogen Compounds* 41, 331-334.
14. **Neumann, G., Massonneau, A., Langlade, N., Dinkelaker, B., Hengeler, C., Römheld, V., and Martinoia, E. (2000):** Physiological aspects of cluster root function and development in phosphorus-deficient white lupin (*Lupinus albus* L.) *Ann.of Bot.* 85, 909-919.

15. **Bagayoko, M., Alvey, S., Neumann, G., Buerkert, A. (2000):** Root-induced increases in soil pH and nutrient availability to field-grown cereals and legumes on acid sandy soils of Sudano-Sahelian West Africa. *Plant Soil* 225, 117-127.
16. **Walch-Liu, P., Neumann, G., Bangerth, F., and Engels, C. (2000):** Rapid effects of nitrogen form on leaf morphogenesis in tobacco. *J. Exp. Botany* 51, 227-237.
17. **Alvey, S., Bagayoko, M., Neumann, G., Buerkert, A. (2001):** Cereal/legume rotation effects in two West African soils under controlled conditions. *Plant Soil* 231, 45-54.
18. **Weber G., Neumann G., Haake C., and Römheld V. (2001):** Determination of phytosiderophores by anion-exchange chromatography with pulsed amperometric detection *J. Chromatogr.* 928A, 171-175.
19. **Massonneau, A., Langlade, N., Leon, S., Smutny J., Vogt, E., Neumann, G., and Martinoia, E. (2001):** Metabolic changes associated with cluster root development in white lupin (*Lupinus albus* L.): relationship between organic acid excretion, sucrose metabolism and energy status. *Planta* 213, 534-542
20. **Walch-Liu P., Neumann G., and Engels C. (2001):** Response of shoot and root growth to supply of different nitrogen forms is not related to carbohydrate and nitrogen status of tobacco plants. *J. Plant Nutr. Soil Sci.* 164, 97-103.
21. **Walch-Liu P., Neumann G., and Engels C. (2001):** Elevated atmospheric CO₂ concentration favours nitrogen partitioning into roots of tobacco plants under nitrogen deficiency by decreasing nitrogen demand of the shoot. *J. Plant Nutr.* 24, 835-854.
22. **Neumann, G., Martinoia, E. (2002):** Cluster roots - an underground adaptation for survival in extreme environments. *Trends in Plant Science* 7 (4), 162-167.
23. **Marschner, P., Neumann, G., Kania, A., Weiskopf, L., and Lieberei, R. (2002):** Spatial and temporal dynamics of the microbial community structure in the rhizosphere of cluster roots of white lupin (*Lupinus albus* L.) *Plant Soil* 246:167-174.
24. **Langlade, N, Messerli, G., Smutny, J., Neumann, G., Martinoia, E., and Massonneau, A. (2002)** ATP-citrate lyase: cloning, heterologous expression and possible implication in organic acid metabolism and excretion. *Plant Cell Environm.* 25, 1561-1569.
25. **Weber, G., Neumann, G., and Römheld, V. (2002):** Speciation of iron coordinated by phytosiderophores using HPLC with pulsed amperometric detection and AAS. *Anal. Bioanal. Chem.* 373, 767-771.
26. **Kania, A., Langlade, N., Martinoia, E., and Neumann, G. (2003):** Phosphorus deficiency-induced modifications in citrate catabolism and in cytosolic pH as related to citrate exudation in cluster roots of white lupin. *Plant Soil* 248, 117-127.
27. **Fiedler, S., Strasser, O., Neumann, G., and Römheld, V. (2004):** The influence of redox conditions in soils on extraplasmatic Fe-loading of plant roots. *Plant Soil* 264, 159-169.
28. **Hajiboland, R., Yang, X.E., Römheld, V., and Neumann, G. (2005):** Effect of bicarbonate on elongation and distribution of organic acids in root and root zone of Zn-efficient and Zn-inefficient rice (*Oryza sativa* L.) genotypes *Environm. Exp. Bot.* 54, 163-173.
29. **Rahayu, Y.S., Walch-Liu, P., Neumann, G., Römheld, V., v.Wirén, N., and Bangerth, F. (2005):** Root-derived cytokinins as long-distance signals for NO₃⁻-induced stimulation of leaf growth. *J. Exp. Bot.* 56, 1143-1153.

30. **Shen, J., Li, H., Neumann, G., and Zhang, F. (2005):** Nutrient uptake, cluster root formation, and exudation of protons and citrate as affected by localized supply of phosphorus in a split-root system. *Plant Sci.* 168, 837-845.
31. **Wasaki, J., Rothe, A., Kania, A., Neumann, G., Römheld, V., Shinano, T., Osaki, M., and Kandeler, E. (2005):** Root exudation, P acquisition and microbial diversity in the rhizosphere of *Lupinus albus* as affected by P supply and atmospheric CO₂ concentration. *J. Environm. Qual.* 34, 2157-2166 .
32. **Neumann, G., Kohls, S., Landsberg, E., Stock-Oliveira Souza, K. , Yamada, T., and Römheld, V. (2006):** Relevance of glyphosate transfer to non-target plants via the rhizosphere. *J. Plant Diseases and Protection* 20, 963-969.
33. **Akinrinde, E.A., Iroh, I., Obigbesan, G.O., Hilger, T., Römheld, V., and Neumann, G. (2006):** Differential expression of aluminium tolerance mechanisms in cowpea genotypes under phosphorus limitation. *J. Appl. Sci.* 6, 854-859.
34. **Akinrinde, E.A., and Neumann, G. (2006):** Evaluation of differences in tolerance to aluminium toxicity among some tropical cowpea (*Vigna unguiculata*) genotypes. *Pak. J. Biol. Sci.* 9, 954-960.
35. **Astolfi, S., Cesco, S., Zuchi, S., Neumann G., and Römheld, V. (2006):** Sulphur starvation reduces phytosiderophores release by Fe-deficient barley plants. *Soil Sci. Plant Nutr.* 52, 43-48.
36. **Ingwersen, J., Bücherl, B., Neumann, G., and Streck, T (2006):** Experimental modelling of kinetic desorption in Cd hyperaccumulation by *Thlaspi caerulescens*. *J. Env. Qual.* 35, 2055-2065.
37. **Mikutta, C., Neumann, G., and Lang, F. (2006)** Phosphate desorption from goethite in the presence of galacturonate, polygalacturonate and maize mucigel (*Zea mays* L.). *Soil Sci. Soc. Am.* 70, 1730-1740
38. **Weisskopf, L., Abou-Mansour, E., Fromin, N., Tomasi, N., Santelia, D., Edelkott, I., Neumann, G., Aragno, M., Tabacchi, R., and Martinoia, E. (2006):** White Lupin has developed a complex strategy to limit microbial degradation of secreted citrate required for phosphate nutrition. *Plant, Cell Environm.* 29, 919-927.
39. **Akinrinde, E.A., Iroh, L., Obigbesan, G., Hilger, T, Römheld, V., and Neumann, G. (2007):** Influence of phosphorus supply on two cowpea varieties grown on an acidic Alumi-Haplic-Acrisol. *Arch. Agronom. Soil Sci.* 53, 33-38..
40. **Haase, S., Neumann, G., Kania, A., Kuzyakov, Y., Römheld, V. and Kandeler, E. (2007):** Atmospheric CO₂ and the N-nutritional status modifies nodulation, nodule-carbon supply and root exudation of *Phaseolus vulgaris* L. *Soil Biol Biochem.* 39: 2208-2221.
41. **Haase, S., Ruess, L., Neumann, G., Marhan, S., Kandeler, E. (2007):** Low-level herbivory by root-rot nematodes (*Meloidogyne incognita*) modifies root hair morphology and rhizodeposition in host plants (*Hordeum vulgare*) *Plant Soil* 301: 151-164.
42. **Kania, A., Guldner, M., Szabo, B., Kazem, s., Römheld, V., Neumann, G., Morhard, J., Evers, M., and Terlouw, T. (2007):** Functional characterization of the stabilized organic turf grass fertilizer “Marathon”. *Rasen –Turf – Gazon* 1/2007: 192-195.

43. **Wang, B.I., Shen, J.B., Zhang, W.H., Zhang, F.S., and Neumann, G. (2007):** Citrate exudation from white lupin induced by phosphorus deficiency differs from that induced by aluminium. *New Phytol.* 176: 581-589.
44. **Haase, S., Rothe, A., Kania, A., Wasaki, J., Römheld, V., Engels, C., Kandeler, E., and Neumann, G. (2008):** Responses to iron limitation in *Hordeum vulgare* L. as affected by the atmospheric CO₂ concentration. *J. Env. Qual.*,37: 1254-1262.
45. **Bott, S., Tesfamariam, T., Candan, H., Cakmak, I. Römheld, V., and Neumann, G. (2008):** Glyphosate-induced impairment of plant growth and micronutrient status in glyphosate-resistant soybean (*Glycine max* L.). *Plant Soil* 312: 185-194.
46. **Neumann G., George TS., Plassard C. (2009):** Strategies and methods for studying the rhizosphere—the plant science toolbox.. *Plant Soil* 321: 431-456.
47. **Souri, M.K., Neumann, G., Römheld V. (2009):**. Nitrogen forms and water consumption in tomato plants. *Hort. Environ. Biotechnol.* 50:1-7.
48. **Tomasi N, Kretzschmar T, Espen L, Weisskopf L, Fuglsang AT, Palmgren MG, Neumann G, Varanini Z, Pinton R, Martinoia E, Cesco S.(2009):** Plasma membrane H-ATPase-dependent citrate exudation from cluster roots of phosphate-deficient white lupin. *Plant Cell Environ.* 32(5):465-475.
49. **Tesfamariam, T., Bott, S., Cakmak, I. Römheld, V, Neumann G. (2009):** Glyphosate in the rhizosphere—Role of waiting times and different glyphosate binding forms in soils for phytotoxicity to non-target plants *Europ. J. Agronomy* 31: 126–132.
50. **Cesco , S, Neumann, G. Tomasi, N., Pinton, R., Weisskopf L. (2010):** Marschner Review: Release of plant-borne flavonoids into the rhizosphere and their role in plant nutrition. *Plant Soil* 329:1–25.
51. **Neumann, G. (2010):** Mining for nutrients – regulatory aspects of cluster root function and development. *New Phytologist*, 187: 879–882.
52. **Fischer, H., Eckhardt, K.-U., Meyer, A., Neumann, G. Leinweber, P., Fischer, K., Kuzyakov, Y.(2010):** Rhizodeposition of maize: Short-term carbon budget and composition. *Journal of Plant Nutrition and Soil Science*, 173; S. 67-79.
53. **Bott, S., Tesfamariam T., Kania, A., Eman, B. Aslan, N., Römheld, V., Neumann, G. (2011):** Phytotoxicity of glyphosate soil residues re-mobilised by phosphate fertilisation. *Plant Soil*, 315: 2-11.
54. **Gabriel-Neumann, E. Neumann, G., Leggewie, G., George, E. (2011):** Constitutive overexpression of the sucrose transporter SoSUT1 in potato plants increases arbuscular mycorrhiza fungal root colonization under high, but not under low, soil phosphorus availability. *J. Plant Physiol.* 168: 911-919.
55. **Ögüt, M.; Er, F.;and Neumann, G. (2011):** Increased proton extrusion of wheat roots by inoculation with phosphorus solubilising microorganisms *Plant and Soil*, 339: 285-297.
56. **Astolfi S, Zuchi S, Neumann G, Cesco S, di Toppi LS, Pinton R (2011):** Response of barley plants to Fe deficiency and Cd contamination as affected by S starvation. *J Exp Bot.* 63: 1241-1250.
57. **Gweyi-Onyango JP., Tesfamariam T., Neumann G. (2011):** Contrasting responses to phosphorus status by *Arachis pintoi* (Krapov and W.C. Gregory): A lesson for selecting vegetables in Kenyan ecozones. *Asian J. of Agric. Res.* 5:45-55.

58. **Cesco S, Mimmo T, Tonon G, Tomasi N, Pinton R, Terzano R, Neumann G, Weisskopf L, Renella G, Landi L, Nannipieri P (2012):** Plant-borne flavonoids released into the rhizosphere: impact on soil bio-activities related to plant nutrition. A review. *Biol Fertil Soils* 48: 123-149.
59. **Imran M, Kolla M, Römheld V, Neumann G (2013):** Impact of nutrient seed priming on germination, seedling development, nutritional status and grain yield of maize: *J. Plant Nutr.*, in press.
60. **Imran M, Asim M, Römheld V, Neumann G (2013):** Nutrient seed priming improves seedling development and increases grain yield of maize exposed to low root zone temperatures during early growth. *Europ. J. Agron.*49: 141-148.
61. **Akter Z., Weinmann M., Neumann G., Römheld V. (2013):** An *in-vitro* .screening method to study the activity potential of biofertilizers based on *Trichoderma* and *Bacillus* sp. *J. Plant Nutr.* 36: 1439-1452.
62. **Neumann G, Bott S, Ohler MA, Mock H-P, Lippmann R, Grosch R, Smalla K (2014):** Root exudation and root development of lettuce (*Lactuca sativa* L. cv. Tizian) as affected by different soils. *Front Microbiol.* 2014; 5: 2., doi: 10.3389/fmicb.2014.00002
63. **Schreiter S, Ding GC, Heuer H, Neumann G, Sandmann M, Grosch R, Kropf , Smalla K (2014):** Effect of the soil type on the microbiome in the rhizosphere of field-grown lettuce. *Front Microbiol.* 2014 Apr 8;5:144. doi: 10.3389/fmicb.2014.00144.
64. **Akter Z, Neumann G., Römheld V. (2014):** Effects of Biofertilizers on Mn and Zn Acquisition and Growth of Higher Plant: a Rhizobox Experiment. *Journal of Plant Nutrition*, accepted DOI:10.1080/01904167.2014.934478
65. **Wang Z, Straub D, Yang H, Kania A, Shen J, Ludewig U, Neumann G. (2014):** The regulatory network of cluster-root function and development in phosphate-deficient white lupin (*Lupinus albus*) identified by transcriptome sequencing. *Physiol Plant.* 151: 323-38. doi: 10.1111/ppl.12187.
66. **Wang Z., Shen J, Ludewig U, Neumann G. (2014):** A re-assessment of sucrose signalling involved in cluster root formation and function in phosphate-deficient white lupin (*Lupinus albus* L.). *Physiologia Plantarum*, published online. doi: 10.1111/ppl.12311.
67. **Wang, Z., Moshir Rahman A.B.M, Wang G, Ludewig U, Shen J, Neumann.G (2015):** Hormonal interactions during cluster root development in phosphate-deficient white lupin (*Lupinus albus* L.). *Journal of Plant Physiology*, 177:74-82.
68. **Leiser WL,Olatoye M O, Frederick H, Rattunde W, Neumann G, Weltzien , Haussmann G (2015)** No need to breed for enhanced colonization by arbuscular mycorrhizal fungi to improve low-P adaptation of West African sorghums. *Plant Soil* DOI 10.1007/s11104-015-2437-1.
69. **Imran M, Kolla M, Römheld V, Neumann G (2015)** Impact of nutrient seed priming on germination, seedling development, nutritional status and grain yield of maize. *Journal of Plant Nutrition*, 38:12, 1803-1821, DOI:10.1080/01904167.2014.990094
70. **Neumann G. (2016)** The role of ethylene in plant adaptations for phosphate acquisition in soils - A review. *Front. Plant Sci.* 6:1224. doi: 10.3389/fpls.2015.01224

71. **Bradáčová K, Weber NF, Morad-Talab N, Asim M, Imran M, Weinmann M, Neumann G (2016)** Micronutrients (Zn/Mn), seaweed extracts, and plant growth-promoting bacteria as cold-stress protectants in maize. *Chem. Biol. Technol. Agric.* 3:19 DOI 10.1186/s40538-016-0069-1
72. **Zaytseva O, Neumann G. (2016):** Carbon nanomaterials: production, impact on plant development, agricultural and environmental applications” in *Chemical and Biological Technologies in Agriculture*, 2016. DOI: 10.1186/s40538-016-0070-8
73. **Zaytseva O, Neumann G. (2016):** Differential impact of multi-walled carbon nanotubes on germination and seedling development of *Glycine max*, *Phaseolus vulgaris* and *Zea mays*. *Eur. Chem. Bull.* 5: 202-210.
74. **Zaytseva1 O, Wang Z, Neumann G (2016):** Phytotoxicity of carbon nanotubes in soybean as determined by interactions with micronutrients. *J. Nano Particle Res.* accepted

II Books and Book Contributions

1. **Neumann G. (1992):** Vergleichende Untersuchungen zur Regulation der Flavonoidbiosynthese von *Munzia-Oenotheren* bekannter genetischer Konstitution. Ulrich Grauer Verlag, Stuttgart.
2. **Neumann, G., Azaizeh, H., and Marschner, H. (1994):** Effekte von Saatgutbehandlungen mit Vitamin B1 auf Keimung, Jugendwachstum und die Rhizosphärenmikroflora bei *Phaseolus vulgaris* L. In: Merbach, W. (ed.), 5. Borkheider Seminar zur Ökophysiologie des Wurzelraumes: Mikroökologische Prozesse im system Pflanze – Boden. Teubner, Stuttgart, Leipzig, pp.38-41.
3. **Neumann G., Dinkelaker. B., and Marschner H. (1996):** Kurzzeitige Abgabe organischer Säuren aus Proteoidwurzeln von *Hakea undulata* (Proteaceae). In: Pflanzliche Stoffaufnahme und mikrobielle Wechselwirkungen in der Rhizosphäre. Merbach, W. (ed.), pp. 129-136, B.G. Teubner Verlagsgesellschaft, Stuttgart - Leipzig.
4. **Neumann G., Hülster, A. und Marschner, H. (1996):** Identifizierung PCDD/PCDF mobilisierender Verbindungen in Wurzelexsudaten von Zucchini. In: Berichte Umweltforschung Baden-Württemberg, Projekt "Angewandte Ökologie" 16, Landesanstalt für Umweltschutz Baden-Württemberg (ed.) pp 513-528.
5. **Neumann G., Hülster, A. und Marschner, H. (1997):** Identifizierung Dioxin-mobilisierender Verbindungen in Wurzelexsudaten von Zucchini (*Cucurbita pepo* L.). In: Rhizosphärenprozesse, Umweltsreß und Ökosystemstabilität. 7. Borkheider Seminar zur Ökophysiologie des Wurzelraumes. Merbach, W. (ed.), pp. 167-175. B.G. Teubner Verlagsgesellschaft Stuttgart, Leipzig, 1997.
6. **Dinkelaker, B., Hengeler, C., Neumann, G., Eltrop L., and Marschner, H. (1997):** Root exudates and mobilization of nutrients. In: *Trees - Contributions to modern tree physiology*. Rennenberg, H., Eschrich, W., Ziegler, H. (eds.), pp. 441-452, Backhuys Publishers, Leiden, The Netherlands.
7. **Neumann, G., Hülster, A., and Marschner, H. (1998):** PCDD/PCDF-mobilizing compounds in root exudates of Zucchini. In: *Pesticide bound residues in soil*. Senate

commission for the assessment of chemicals in agriculture (ed.), pp. 133-137. Wiley VCH, Weinheim, Germany.

8. **Neumann, G., George, E., and Römheld, V. (1998):** White lupin - a model plant to study mechanisms involved in root-induced mobilization of sparingly available P-sources. In: International Workshop on role of environmental and biological factors in acquisition of toxic and essential elements by plants. Research institute of Pomology and Floriculture, Skierniewice, Poland, pp.27-34.
9. **Neumann, G., George, E., and Römheld, V. (1998):** Zur Regulation der P-Mangel induzierten Abgabe organischer Säuren aus Proteoidwurzeln der Weißlupine. In: Pflanzenernährung, Wurzeleistung und Exsudation. 8. Borkheider Seminar zur Ökophysiologie des Wurzelraumes, Merbach, W. (ed.),pp. 221-229. B.G. Teubner Verlagsgesellschaft Stuttgart, Leipzig, 1998.
10. **Nicolic, M., Römheld, V., and Neumann, G. (1998):** Does the leaf apoplast modulate the occurrence of iron deficiency chlorosis in *Vicia faba* L. In: Stamenkovic, S. (ed.) Proceedings of 2nd Balkan Symposium on field crops. Vol 2.Ecology and physiology, cultural practices, Institute of field and vegetable crops, Novi Sad, Yugoslavia, pp 35-38.
11. **Engels, C., Neumann, G., Gahoonia, T., George, E., and Schenk, M. (2000):** Assessment of the ability of roots for nutrient acquisition. In: Root Methods. A Handbook. Smit, AL., Bengough, A.G., Engels, C., Van Noordwijk, M., Pellerin, S., Van de Geijn, S.C. (eds.),pp 403-459 Springer, Heidelberg, Germany.
12. **Neumann, G., Römheld, V. (2000):** The release of root exudates as affected by the plant physiological status. In: Pinton, R., Varanini, Z., Nannipieri, Z. (eds.) The Rhizosphere: Biochemistry and organic substances at the soil-plant interface. pp.41-89 Marcel Dekker, New York.
13. **Neumann G., Schulze C. George E., and Römheld V.(2001):** Acquisition of phosphorus in potato (*Solanum tuberosum* L. cv. Désirée) with altered carbohydrate partitioning between shoot and roots. In Plant Nutrition: Food security and sustainability of agro-ecosystems through basic and applied research. XIV International Plant Nutrition Colloquium. pp 134-135. Kluwer Academic Publishers, Dordrecht.
14. **Rahayu Y.S., Walch-Liu P., Neumann G., v. Wirén N., Römheld, and V. Bangerth, F. (2001):** Effects of long-term and short-term supply of NO₃ or NH₄ on cytokinin levels and leaf expansion rate in tomato (*Lycopersicon esculentum* L. cv. Moneymaker) In Plant Nutrition: Food security and sustainability of agro-ecosystems through basic and applied research. XIV International Plant Nutrition Colloquium. pp 134-135. Kluwer Academic Publishers, Dordrecht.
15. **Zhang J., Neumann G., and George E. (2001):** Organic acid exudation by roots of Norway spruce grown in hydroponic culture or in soil. In Plant Nutrition: Food security and sustainability of agro-ecosystems through basic and applied research. XIV International Plant Nutrition Colloquium. pp 564-565. Kluwer Academic Publishers, Dordrecht.
16. **Kania, A., Neumann, G., Cesco, S., Pinton. R., and Römheld, V. (2001):** Use of plasma membrane vesicles for examination of phosphorus deficiency-induced root excretion of citrate in cluster roots of white lupin (*Lupinus albus* L.). In Plant Nutrition: Food security and sustainability of agro-ecosystems through basic and applied research. XIV International Plant Nutrition Colloquium. pp 546-547. Kluwer Academic Publishers, Dordrecht.
17. **Paponov A., Bondarenko Y., Neumann G., and Engels C. (2001):** Effect of nitrogen supply on individual kernel weight and ¹⁴C partitioning in kernels of maize during lag phase

- and grain filling. *In.*: Horst W.J. et al. (eds.): Plant nutrition – Food security and sustainability of Agro-ecosystems. Kluwer Academic Publishers, Netherlands, pp. 122-123.
18. **Neumann, G. Römheld, V. (2002):** Root-induced changes in the availability of nutrients in the rhizosphere. *In:* Plant Roots The Hidden Half, 3rd ed. Waisel Y., Eshel, A., Kafkafi U. eds. pp.617-649, Marcel Dekker, New York.
 19. **Imran, M., Neumann, G., Römheld, V. (2004):** Nutrient seed priming improves germination rate and seedling growth under submergence stress at low temperature. International Research on FoodSecurity, Natural Resource Management and Rural Development Cuvillier Verlag Göttingen.
 20. **Neumann G. (2005):** Rhizodeposition: Composition and Quantitative Aspects. *In:* Encyclopedia of Plant and Crop Science, R. M. Goodman (ed.) Marcel Dekker, New York, USA.
 21. **Neumann G, Römheld V. 2005:** Rhizosphere research: A historical perspective from a plant scientist's viewpoint. *In:* Hartmann A, Schmid M, Wenzel W, Hinsinger P (eds), Rhizosphere 2004 – A tribute to Lorenz Hiltner. GSF-Report, Munich, Neuherberg, Germany. pp. 35-37.
 22. **Claassen N., Castañeda-Ortiz N., Neumann G., Gweyi-Onyango J., and Rao, I.M. (2005):** Root exudation of organic acids and/or acid phosphatase cannot explain phosphorus mobilization by *Arachis pintoii*. *In:* Li C.J et al. (eds.), Plant nutrition for food security, human health and environmental protection, pp. 486-487, Tsinghua University Press, Beijing, China
 23. **Guldner, M, Yamada, T., Eker, S., Cakmak, I., Özturk, L., Kania, A., Weißhaar, C., Ye, F., Neumann, G., and Römheld, V. (2005):** Release of foliar-applied glyphosate into the rhizosphere and its possible effects on non-target organisms. *In:* Hartmann A, Schmid M, Wenzel W, Hinsinger P, eds, Rhizosphere 2004: A Tribute to Lorenz Hiltner. GSF-Report, Munich, Neuherberg, Germany, pp. 220.
 24. **Hinsinger, P., Jaillard, B., Jones, D.L., Neumann, G., Römheld, V., and Wenzel W.W. (2005):** Rhizosphere – a challenging environment for the acquisition of nutrients and trace elements by plant roots. *In:* Li C.J. et al. (eds.), Plant nutrition for food security, human health and environmental protection, pp. 40-41. Tsinghua University Press, Beijing, China.
 25. **Römheld, V., Neumann, G. (2005):** The rhizosphere: Definition and perspectives. *In:* Hartmann A, Schmid M, Wenzel W, Hinsinger P, eds, Rhizosphere 2004: A Tribute to Lorenz Hiltner. GSF-Report, Munich, Neuherberg, Germany, pp. 47-49.
 26. **Römheld, V., Guldner, M., Yamada, T., Özturk, L., Cakmak, I., and Neumann, G. (2005):** Relevance of glyphosate in the rhizosphere of non-target plants in orchards for plant health. *In:* Li CJ, Zhang FS, Dobermann A, Hinsinger P, Lambers H, Li XL, Marschner P, Maene L, McGrath S, Oenema O, Peng SB, Rengel Z, Shen QR, Welch R, v. Wirén N, Yan XL, Zhu YG (eds), Plant nutrition for food security, human health and environmental protection. Tsinghua University Press, Beijing, PR China, pp. 476-477.
 27. **Tesfamariam, T., Römheld, V., and Neumann, G. (2005):** Phosphorus-deficiency induced root exudation of carboxylates contributes to molybdenum acquisition in the rhizosphere of leguminous plants. *In:* Hartmann A, Schmid M, Wenzel W, Hinsinger P (eds), Rhizosphere 2004 – A tribute to Lorenz Hiltner. GSF-Report, Munich, Neuherberg, Germany.
 28. **Neumann, G. (2006):** Root exudates and organic composition of plant roots. *In:* Luster, J.; Finlay, R. (eds.) et al. *Handbook of Methods used in Rhizosphere Research*. Swiss Federal

Institute for Forest, Snow, and Landscape Research, Birmensdorf, Switzerland, online at www.rhizo.at/handbook

29. **Römheld, V., Neumann, G. (2006):** The Rhizosphere: Contributions of the soil-root interface to sustainable soil systems. In: Uphoff, N.; Ball, N.A.S.; Fernandes, E.; Herren, H.; Husson, O.; Laing, M.; Palm, C.; Thies, J. (eds), *Biological Approaches to Sustainable Soil Systems*, pp.92-107, CRC-Press, Oxford, UK
30. **Neumann, G. (2007):** Root exudates and nutrient cycling. In: *Soil Biology Vol. 10*. Marschner P., Rengel Z. (eds.) *Nutrient cycling in Ecosystems*. Springer, Berlin Heidelberg, pp.123-157.
31. **Neumann, G., and Römheld, V. (2007):** The release of root exudates as affected by the plant physiological status. In: Pinton, R., Varanini, Z., Nannipieri, Z. (eds.) *The Rhizosphere: Biochemistry and organic substances at the soil-plant interface*. 2nd ed. CRC Press, pp.23- 72
32. **Akter, Z., Weinmann, M., Neumann, G., and Römheld, V. (2007):** Entwicklung eines schnellen Bio-Tests zur Untersuchung des Wirkungspotentials von mikrobiellen Pflanzenstärkungsmitteln. Development of a Rapid Bio-Test to Study the Activity Potential of Biofertilizers], in: S. Zikeli, W. Claupein, S. Dabbert, B. Kaufmann, T. Müller und A. Valle Zárate, (eds.). *Zwischen Tradition und Globalisierung . 9. Wissenschaftstagung Ökologischer Landbau*, Universität Hohenheim, Deutschland, 20.-23. März 2007, <http://orgprints.org/10742>
33. **Römheld, V., Jiménez-Becker, S., Neumann, G., Gweyi-Onyango, J.P., Puelschen, L., Spreer, W., and Bangerth, F. (2008):** Non-nutritional fertigation effects as a challenge for improved production and quality in horticulture. In: *Fertigation: Optimizing the utilisation of water and nutrients*. International Potash Institute, Horgen, Switzerland., pp-103-115.
34. **Bott S., Tesfamariam T., Neumann G., Römheld V. (2010):** Glyphosatherbizide in der Rhizosphere Verlag Grauer; Stuttgart Steuerungsfaktoren von Rhizosphärenprozessen; S. 54-62.
35. **Neumann, G. and Römheld, V. (2012):** Rhizosphere chemistry in relation to plant nutrition. In: *Marschner's mineral nutrition of higher plants*, 3rd Ed., Marschner , P. Ed., Elsevier, Academic Press, San Diego CA, USA, pp. 347-368.

III Other Publications

1. **Yusran, Safrizal, Weinmann M., Neumann G., Müller T., Römheld V.(2007):** Improved mycorrhization in Tomato by soil inoculation with *Pseudomonas* sp. Proradix®. Tropentag 2007 – Book of Abstracts; S. 508
2. **Yusran, Weinmann M., Neumann G., Römheld V., Müller T. (2008):** Use of plant growth-promoting rhizobacteria to improve mycorrhisation, nutrient acquisition and plant health of tomato affected by soilborne pathogens. Deutscher Tropentag 2008 – Book of Abstracts; S. 193.
3. **Yusran, Weinmann M., Neumann G., Römheld V., Müller T.(2008):** Suppression of soilborne pathogens by selected bioeffectors in onion (*Allium ascalanicum* L.). Limburgerhof/Speyer; Jahrestagung der Deutschen Gesellschaft für Pflanzenernährung 2008 – Kurzfassung der Poster; S. 23
4. **Yusran, Weinmann M., Neumann G., Römheld V., Müller T. (2008):** Isolation and screening of *Pseudomonas fluorescens* isolates from Indonesian soils against *Fusarium oxysporum* Schlecht f. sp.

- radicis-lycopersici Jarvis and Shomaker. Deutscher Tropentag 2008 – Book of Abstracts; S. 214
5. **Römheld V., Neumann G. Bott S., Tesfamariam T.(2008):** Fehler mit Totalherbiziden vermeiden. DLZ Agrarmagazin, 9; S. 44-47
 6. **Yusran, Weinmann M., Neumann G., Römheld V., Müller T.(2008) .** Contribution of *Pseudomonas proradix*® and *Bacillus amyloliquefaciens* FZB42 on healthy plant growth of tomato affected by soil sickness Deutscher Tropentag 2008 – Book of Abstracts; S. 98.
 7. **Bakonyi N., Donath S., Weinmann M., Neumann G., Müller T., Römheld V. (2008):** Assessing commercial bio-fertilisers for improved phosphorus availability. Use of rapid screening tests. Jahrestagung der Deutschen Gesellschaft für Pflanzenernährung 2008 – Kurzfassung der Poster; S. 1
 8. **Imran M., Müller T., Römheld V., Neumann G. (2010):** Nutrient seed priming enhances soil productivity under abiotic stress conditions. Book of Abstracts - International Conference on Soil Fertility and Soil Productivity; S. 81
 9. **Neumann G, Römheld, V, Afzal. J, Bott S, Tesfamariam T (2012):** Kulturschäden – Was passiert an der Wurzel ? DLG Mitteilg. 2: 26-29.
 10. **Neumann G. (2012):** Sicherheitsbewertung – generell unbedenklich ? DLG Mitteilg. 2: 30-31
 11. **Neumann G. (2012):** In: Hohe Erträge wurzeln tief. Das kleine Wurzelwerk von Rapool. Rapool Ring GmbH, Isernhagen, Germany
 12. **Olatoye MO., Leiser WL., Frederick H., Rattunde W., Parzies H.K¹, Weinmann M., Neumann G., Haussmann B I G. (2012):** The importance of crown root angle and mycorrhiza on adaptation of Sorghum genotypes from West Africa to low-P soils. Deutscher Tropentag 2012. Book of Abstracts.
 13. **Neumann G. (2014):** Bedeutung, Funktion und Biologie der Rapswurzel. Inform 2: 4-6.
 14. **Neumann G, Jauß H, Asim M, Charles I. Nwankwo CI (2014):** Gesucht – Gefunden Signalwirkungen von Nährstoffen und ihre Bedeutung für Düngung und Wurzelentwicklung von Raps. Raps 32: 34-37.
 15. **Neumann G. (2015):** Das Bodenleben zählt. DLZ Agrarmagazin 10/15: 64-66
 16. **Neumann G (2016):** Glyphosat Diskussion: Gezielterer Einsatz statt Verbot. Mühle + Mischfutter 153: 465-466.