

เอกสารอ้างอิง

- Alina, K.P and Henryk, P. 1992. Trace element in soils and plants, and 2nd ed. CRC Press, 67-276.
- Beyrouy, C.A., Grigg. B.C., Norwan, R.J., and Wells, B.R. 1994. Nutrient uptake by rice in response to water management. *Plant Nutrition*, 17(1): 39-55.
- Bienfait, H.F. 1985. Regulated redox processes at the plasmalemma of plant root cell and their function in iron uptake. *J. Bioenerg. Biomembr.* 17, 73-83.
- Bienfait, H.F. 1989. Prevention of stress in iron metabolism of plants. *Acta Bot. Neerl.* 38, 105-129.
- Bienfait, F. and Lutge, U. 1988. On the function of two systems that can transfer electrons across the plasma membrane. *Plant Physiol. Biochem.* 26,665-671.
- Brady, N. 1990. Nature and Properties of Soils. Macmillan Publishing Company. New York. pp. 351-397.
- Briat, J.F., Fobisloisy, I., Grignon, N., Lobreaux, S., Pascal, N., Savino, N., Thoiron, S., Vonwiren, N., and Vanwuytswinkel, O. 1995. Cellular and molecular aspects of iron metabolism in plants. *Biol. Cell.* 84:69-81.
- Brown, P.H. and Hu, H. 1996. Phloem mobility of boron in species dependent: evidence for phloem mobility in sorbital-rich species. *Ann. Bot.* 77: 497-505.
- Cassab, G.I. and Varner, J.E. 1988. Cell wall proteins. *Annu. Rev. Plant Physiol. Plant Mol. Biol.* 39, 321-353.
- Cataldo, D.A., McFadden, K. M., Garland, T.R. and Wildung, R. E. 1988. Organic constituents and complexation of nickel (II), iron (III), cadmium (II), and plutonium (IV) in soybean xylem exudates. *Plant Physiol.* 86, 734-739.
- Crowley, D.E., Wang, Y., Reid, C.P.P., and Szaniszlo, P.J. 1991. Mechanisms of iron acquisition from siderophores by microorganisms and plants. *Plant Soil* 130, 179-198.
- Foy, C.D. 1983. The physiology of plant adaptation to mineral stress. *Iowa State J. Res.*

57, 355-319.

- Gerloff, G.C. 1977 Plant efficiencies in the use of N, P and K. In *Plant Adaptation to Mineral Stress in Problem Soil*. Ed. M J Wright. pp 161-174. Cornell University Press, New York.
- Graham, R.D. 1984. Breeding for nutritional characteristics in cereals. In '*Advances in Plant Nutrition*' (P.B. Tinker and A. Lauchli, eds), Vol.1, pp. 57-102. Praeger, New York.
- Grusak, A. P. 2000. Strategies for improving the iron nutritional quality of seed crops: lessons learned from the study of unique iron-hyperaccumulating pea mutants. *Pisum Genetics*, Vol.32.
- Harrison, P.M., and Arosio, P. 1996. The ferritins: molecular properties, iron storage function and cellular regulation. *Biochem. Biophys. Acta*. 1275: 161-203.
- Hartzook, A., Karstadt, D., Naveh, M., and Feldman, S. 1974. Differential iron absorption efficiency of peanut (*Arachis hypogaea* L.) cultivars grown on calcareous soils. *Agron. J.* 66, 114-114.
- Hiei, Y., Ohata, S., Komari, T., Kumashiro, T. 1994. Efficient transformation of rice (*Oryza sativa* L.) mediated by *Agrobacterium* and sequence analysis of the boundaries of the T-DNA. *Plant J.* 6: 271-282.
- Higuchi, K., Kanazawa, K., Nishizawa, N. K., Chino, M., Mori, S. 1994. Purification and characterization of nicotianamine synthase from Fe deficient barley roots. *Plant and soil*. 176: 173-179.
- Higuchi, K., Kanazawa, K., Nishizawa, N. K., Mori, S. 1996. The role of nicotianamine synthase in response to Fe nutrition status in Gramineae. *Plant and soil*. 178: 171-177.
- Hope, A.B. and Stevens, P.G. 1952. Electrical potential differences in bean roots on their relation to salt uptake. *Aust. J. Sci. Res.*, Ser. B5: 335-343.
- Hu, H., Penn, S.G., Lebrilla, C.B. and Brown, P.H. 1997. Isolation and characterization of soluble B complexes in higher plants. *Plant Physiol* 113: 649-665.

- Ishizuka, Y. 1965. Nutrient uptake at different stage of growth. Pages 199-217 in International Rice Research Institute. The mineral nutrition of the rice plant. Proceeding of a symposium at the International Rice Research Institute, February, 1964. The Johns Hopkins Press, Baltimore, Maryland.
- Itai, R., Suzuki, K., Yamaguchi, H., Nakanishi, H., Nishizawa, N. K., Yoshimura, E., Mori, S. 2000. Induced activity of a denine phosphoribosyltransferase (APRT) in iron deficient barley roots: a possible role for phytosiderophore production. *J. Exp. Bot.* 51: 1179-1188.
- Kanazawa, K., Higuchi, K., Nishizawa, N.K., Fushiya, S., Mitsuo, C., and Mori, s. 1994. Nicotianamine aminotransferase activities are correlated to the phytosiderophore secretions under Fe-deficient conditions in Gramineae. *J. Exp. Botany* 45: 1903-1906.
- Kanazawa, K., Higuchi, K., Fushiya, S., Nishizawa, N.K., Chino, M., S., and Mori, s. 1995a. Induction of two enzyme activities involved in the biosynthesis of mugineic acid in Fe-deficient barley roots. In: *abadia J. (ED) Iron nutrition in soil and plants. Kluwer, Dordrecht*, pp 37-41.
- Kanazawa, K., Higuchi, K., Nishizawa, N.K., Fushiya, S., and Mori, S. 1995b. Detection of two distinct isozymes of nicotianamine aminotransferases in Fe-deficient barley root, *J. Exp. Botany* 46, 1241-1244.
- Kawai, S., Itoh, K., and Takagi, S. 1988. Studies on phytosiderophores: Biosynthesis of mugineic acid and 2' deoxymugineic acid in *Hordeum vulgare* L. var. *Minori mugi*. *Tetrahedron Letters* 29, 1053-1056.
- Kochian, L.V. 1991. Mechanism of micronutrient uptake and translocation in plant. In 'Micronutrients in Agriculture's (J.J. Mortvedt, ed.), pp. 229-296. *Soil Sci. Soc. Am. Book Series No. 4*. Madison, WI.
- Lang, A. and Thorp, M.R. 1989. Xylem, phloem and transpiration flows in a grape: application of a technique for measuring the volume of attached fruits to high resolution using archimedes' principle. *J. Exp. Bot.* 40, 1069-1078.

- Leigh, R.A. and Wyn Jones, R.G. 1986. Cellular compartmentation in plant nutrition: the selective cytoplasm and the promiscuous vacuole. In 'Advances in Plant Nutrition 2' (B. Tinker and A. Lauchli, eds.), pp. 249-279. Praeger Scientific, New York.
- Lescure, A.M., Proudhon, D., Pesey, H., Ragland, M., Theil, E.C., and Briat, J. F. 1991. Ferritin gene transcription is regulated by iron in soybean cell cultures. *Proc. Natl. Acad. Sci. USA.* 88: 8222-8226.
- Lindsay, W.L. 1979. Chemical Equilibria in soils John Wiley & Sons, New York, NY.
- Ma, J.F., Kusano, G., Himura, S., and Nomoto, K. 1993. Specific recognition of mugineic acid-ferric complex by barley roots. *Phytochemistry.* 34: 599-603.
- Ma, J.F., Nomoto, K. 1994. Incorporation of label from ^{13}C , ^2H -, and ^{15}N -labeled methionine molecules during the biosynthesis of 2'-deoxymugineic acid in roots of wheat. *Plant Physiol.* 105: 607-610.
- Marchner, H. 1995. Mineral Nutrition of Higher Plants, 2nd ed. Academic Press, New York.
- Marschner, H., Römheld, V., and Kissel, M. 1986. Different strategies in higher plants in mobilization and uptake of iron, *J. Plant Nutr.* 9, 695-697.
- Marschner, H., Treeby, H.M., and Römheld, V. 1989. Role of root induced changes in The rhizosphere for iron acquisition in higher plants. *Z. Pflanzenernähr. Bodenk.* 152a, 197-204.
- Miller, G.W., Jen Hoang, I., Welkie, G.W., and Pushnik, J. C. 1995. Function of iron in plants with special emphasis on chloroplasts and photosynthetic activity.
- Mix, G.P. and Marschner, H. 1976. Calciumgehalte in Fruchten von Paprika, Bohnen, Quitte und Hagebutte im Verlauf des Fruchtwachstums. *Z. Pflanzenernähr. Bodenk.* 139, 551-563.
- Mori, S. and Nishizawa, N. 1987. Methionine as a dominant precursor of phytosiderophores in Gramineae plants. *Plant Cell Physio.* 28: 1081-1092.

- Mori, S., Nishizawa, N., Hayashi, H., Chino, M., Yoshimura, E., and Ishihara, J. 1991. Why are young rice plants highly susceptible to iron deficiency? *Plant soil*. 130: 143-156.
- Mori, S. and Nishizawa, N. 1989. Identification of barley chromosome no. 4, possible encoder of genes of mugineic acid synthesis from 2_-deoxymugeneic acid using wheat-barley addition line, *Plant cell Physiol*. 30, 1057.
- Mori, S., Nishizawa, N., Fujigaki, K. 1990. Identification of rye chromosome 5R as a carrier of the genes for mugineic acid and relate compounds. *Jpn J. Genet*. 65: 343-352.
- Mori, S. 2001. The role of mugineic acid in iron acquisition: progress in cloning the genes for transgenic rice. *Plant Nutrient Acquisition* (eds. N. Ae, J. Arihara, K. Okada, A. Srinivasan) Springer-Verlag. Tokyo. pp. 120-139.
- Mori, S. 1997. Reevaluation of the genes induced by iron deficiency in barley roots. In: T. Ando et al., (ed) *Plant Nutrition-for sustainable food production and environment*, Kluwer Acad. Publ. Japan, pp. 249-254.
- Mori, S. 1994. Mechanisms of iron acquisition by graminaceous (Stragy II) plants. In: Manthey, J. A., D.E. Crowley, and D. G. Luster (eds.) *Biochemistry of metal micronutrient in the rhizosphere*, Lewis Publishers. London, pp. 225-250.
- Nakanishi, H., Okumara, N., Umehara, Y., Nishizawa, N.K., Chino, M., and Mori, S. 1993. Expression of a gene specific for iron deficiency (*ids3*) in the root of *Hordeum Vulgare*, *Plant Cell Physio*. 34, 401-410.
- Neue, H.U., Lantin, R.S., Cayton, M.T.C., and Autor, N.U. 1990. Screening of rice for adverse soil tolerance. In Genetic Aspects of Plant Mineral Nutrition (N.El Bassam, M. Dambroth and B.C. Loughman, eds.), pp.523-531. Kluwer Academic, Dordrecht
- Nishio, J.N., Taylor, S.E., and Terry, N. 1985. Changes in thylakoid galatolipids and proteins during iron nutrition-mediated chloroplast development. *Plant Physiol*. 77: 705-711.

- Nomoto, K., Yoshioka, H., Arima, M., Takemoto, T., Fushiya, S., and Takagim, S. 1981. Structure of 2'-deoxymugeneic acid, a novel amino acid possessing an iron chelating activity, *Chimia* 35, 249-254.
- Nomoto, K., Sugiura, Y. and Takagi, S. 1987. Mugineic acids, studies on phytosiderophores. In '*Iron Transport in Microbes, Plants and Animals*' (G. Winkelmann *et al.*, eds.), pp. 401-425. Verlag Chemie, Weinheim.
- Ohata, T., Mihashi, S., Nishizawa, N.K., Fushiya, S., Nozoe, S., Chino, M., Mori, S. 1993. Biosynthetic pathway of phytosiderophores in iron-deficient gramineous plants. *Soil Sci Plant Nutr.* 39: 745-749.
- Olsen, R. A., Bennett, J.H., Blume, D. and Brown, J.C. 1981. Chemical aspects of the Fe stress response mechanism in tomatoes. *J.Plant. Nutr.* 3: 905-921.
- Pich, A. and Scholz, G. 1991. Nicotinamine and the distribution of iron into apoplast and symplast of tomato (*Lycopersicon esculentum* Mill.). II. Uptake of iron by protoplasts from the variety Bonner Beste and its nicotianamine-less mutant chloronerva and the compartmentation of iron in leaves. *J. Exp. Bot.* 42, 1517-1523.
- Ponnamperuma, F.N. 1972. In '*Soil Chemistry*'(J. Bremner and G. Chesters, eds.), Dekker, New York (in press).
- Reuter, D.J., Edward, D.G., and Wilhelm, N. S. 2000. Temperate and Tropical Crops. In *Plant analysis an Interpretation manual*. 2nd ed. Reuter, D. J. and Robinson, J. B., Ed. ASPAC, Australian Soil and Plant Analysis Council Inc.
- Römheld, V. 1987. Different strategies for iron acquisition in higher plants, *Plant Physiol.* 70, 231-234.
- Römheld, V. 1991. The role of phytosiderophores in acquisition of iron and other micronutrients in graminaceous species : an ecological approach. In Chen Y. Amd Hadar, Y. (eds.) *Iron Nutrition and Interactions in plants*, Kluwer Acad. Publ. Dodrecht, pp. 159-166.
- Römheld, V. and Marschner, H. 1986. Evidence for a specific uptake system for iron phytosiderophores in roots of grasses, *Plant Physiol.* 80, 175.

- Römheld, V. and Marschner, H. 1990. Genotypical differences among graminaceous species in release of phytosiderophores and uptake of iron phytosiderophores. *Plant Soil*. 123, 147-153.
- Saxena, M.C., Malhotra, R.S. and Singh, K.B. 1990. Iron deficiency in chickpea in the Mediterranean region and its control through resistant genotypes and nutrient application. *Plant Soil*. 123, 251-254.
- Scholz, G., Becker, R., Stephan, U.W., Rudolph, A. and Pich, A. 1988. The regulation of iron uptake and possible functions of nicotinamine in higher plants. *Biochem. Physiol. Pflanzen* 183, 257-269.
- Shojima, S., Nishizawa, N.K., Mori, S. 1989. Establishment of a cell free system for the biosynthesis of nicotinamine. *Plant cell Physiol*. 30: 673-677.
- Shojima, S., Nishizawa, N.K., Fushiya, S., Nozoe, S., Irifune, T., Mori, S. 1990. Biosynthesis pathway of phytosiderophores in iron-deficient gramineous plants. *Plant Physiol*. 93: 1497-1503.
- Smith, B.N. 1984. Iron in higher plants : storage and metabolic rate. *J. Plant Nutr.* 7, 759-766.
- Sugiura, Y., Tanaka, H., Mino, Y., Ishida, T., Ota, N., Inoue, M., Nomoto, K., Yoshioka, H., Takemoto, T. 1981. Structure, properties, and transport mechanism of iron (III) complex of mugineic acid, a possible phytosiderophore. *J. Am Chem. Soc.* 103: 6979-6982.
- Takagi, S. 1993. Production of phytosiderophores. pp. 111-131. In: L.L. Barton and B. C. Hemming (eds.), *Iron Iron Chelation in Plants and Soil Microorganisms*. Academic Press, New York, NY.
- Takagi, S. 1976. Naturally occurring iron-chelating compounds in oat- and rice-root washings. *Soil Sci. Plant Nutr.* 22. 423-433.
- Takagi, S., Nomoto, K., and Takemoto, T. 1984. Physiological aspect of mugineic acid, a possible phytosiderophore of graminaceous plants. *J. Plant. Nutr.* 9: 176-180.
- Terry, N. 1980. Limiting factors in photosynthesis. I. Use of iron stress to control photochemical capacity in vivo. *Plant Physiol*. 65, 114-120.

- Terry, N. 1990. Nature and Properties of Soils. Macmillan Publishing Company. New York. pp. 351-397.
- Terry, N. and Abadia, J. 1986. Function of iron in chloroplasts. *J. Plant Nutr.* 9 : 609-646.
- Terry, N. and Low, G. 1982. Leaf Chlorophyll content and its relation to the intracellular location of iron. *J. Plant Nutr.* 5, 301-310.
- White, M.C., Decker, A.M. and Chaney, R.L. 1981a. Metal complexation in xylem fluid, I. Chemical composition of tomato and soybean stem exudates. *Plant Phhysiol.* 67: 301-310.
- White, M.C., Decker, A.M. and Chaney, R.L. 1981b. Metal complexation in xylem fluid, II. Theoretical equilibrium model and computational computer program. *Plant Physiol.* 67: 301-310.
- Wink, M. 1993. The plant vacuole: a multifunctional compartment. *J. Exp. Bot.* 44 Suppl., 231-246.
- Wood, L.J., Murray, B.J., Okatan, Y. and Nooden, L.D. 1986. Effect of petiole phloem distribution on starch and mineral distribution in senescing soybean leaves. *Am. J. Bot.* 73: 1377-1383.
- Yoshida, S., Forno, D., Cock, J. and Gomez, K. 1976. Laboratory manual for Physiological Studies of Rice, 3rd eds. The International Rice Research Institute. Los Banos, Philippines. Pp. 14-16.